Environmental Restoration
University of California
Environmental Restoration Project, MS M992
Los Alamos, New Mexico 87545
505-667-0808/FAX 505-665-4747

U. S. Department of Energy
Los Alamos Area Office, MS A316
Environmental Restoration Program
Los Alamos, New Mexico 87544
505-667-7203/FAX 505-665-4504

LIBRARY COPY

Date: November 18, 1997
Refer to: EM/ER:97-486

NOV 1997

Dr. Stu Dinwiddie
NMED-HRMB
P.O. Box 26110
Santa Fe, NM 87502

SUBJECT: RESPONSE TO REQUEST FOR SUPPLEMENTAL INFORMATION FOR VCA COMPLETION REPORT FOR PRSs 0-030(l), 0-030(m), and 0-033(a) IN TA-0 (FORMER OU 1071)

Dear Dr. Dinwiddie:

Enclosed is the Los Alamos National Laboratory's Response to the New Mexico Environment Department Hazardous and Radioactive Bureau's Request for Supplemental Information for Voluntary Corrective Action Completion Report for Potential Release Sites 0-030(l), 0-030(m), and 0-033(a) in Technical Area 0.

If you have any questions, please contact Gary McMath at (505) 665-4969 or Bonnie Koch at (505) 665-7202.

Sincerely,

Brad Martin for
Julie A. Canepa, Program Manager
LANL/ER Project

Sincerely,

for Theodore J. Taylor, Program Manager
DOE/LAAO

JC/TT/ss

Enclosures (1) Response to Request for Supplemental Information for VCA Completion Report for PRSs 0-030(l), 0-030(m), and 0-033(a) in TA-0 (former OU 1071)

6962

Cy (w/enc.):
D. Griswold, AL-ERD, MS A906
J. Harry, EES-5, MS M992
B. Koch, LAAO, MS A316
G. McMath, EM/ER, MS E525
D. Neleigh, EPA, R.6, 6PD-N
C. Rodriguez, CIO/ER, MS M769
T. Taylor, LAAO, MS A316
J. White, ESH-19, MS K490
S. Dinwiddie, NMED-HRMB
M. Leavitt, NMED-GWQB
J. Parker, NMED-HRMB
G. Saums, NMED-SWQB
S. Yanicak, NMED-AIP, MS J993
EM/ER File (CT# C376), MS M992
RPF, MS M707

Information Only (w/o enc.):
T. Baca, EM, MS J591
T. Glatzmaier, DDEES/ER, MS M992
T. Longo, DOE-HQ, EM-453
D. McInroy, EM/ER, MS M992
J. Plum, LAAO, MS A316
S. Rae, ESH-18, MS K497
G. Rael, AL-ERD, MS A906
J. Vozella, LAAO, MS A316
EM/ER File, MS M992

RESPONSE TO
REQUEST FOR SUPPLEMENTAL INFORMATION FOR PRSs 0-030(l, m) and 0-033(a)

INTRODUCTION

To facilitate review of this response, the New Mexico Environmental Department's (NMED) comments are included verbatim. Los Alamos National Laboratory's (LANL) responses follow each NMED comment.

PRS 0-030(l), Zia Warehouses Septic System, OU 1114

NMED Comment

1. *LANL should include the soil boring logs and field screening results of soil samples obtained during the RFI.*

LANL Response

1. Soil boring logs were not prepared for PRS 0-030(l). The field screening results of soil samples collected at PRS 0-030(l) are presented in Attachment A of this response. These results include the following: concentrations of VOCs detected in air with a photoionizing detector as each sample was collected, the radionuclide counts per minute for both alpha radiation (using a Ludlum™ Model 139 survey meter with an air proportional detector) and beta/gamma radiation (using an Eberline™ ESP-1 rate meter with a HP260 pancake probe) for each soil sample. The percent of combustible gas and oxygen was also monitored in two representative samples.

NMED Comment

2. *To support the NFA or further action decisions, LANL should provide the analytical data obtained during the VCA and any other pertinent supporting documentation.*

LANL Response

2. All analytical data (including inorganic, radionuclide, and organic results) exceeding UTLs, EQLs, and background threshold limits, are presented in Tables C-1 through C-6 in Appendix C of the VCA Completion Report for PRSs 0-030(l, m) and 0-033(a).

Analytical data equal to or less than UTLs, EQLs, or background threshold limits obtained during the VCA for PRS 0-030(l) are presented in Attachment B of this response. If a table in Appendix C had a mistake or the sample presented in Tables C-1 through C-6 showed only the detected concentrations of analytes and not the nondetected analytes, the table is resubmitted in Attachment B as "Amended" to show all detected and nondetected analytes for the samples presented.

For all samples that were not included in any table because they did not contain any analytes with detected concentrations (for organics) or concentrations exceeding background (for radionuclides and inorganics), a new table has been added to Attachment B as "Table X, Part II". The following list shows the tables included in Attachment B and gives specific comments pertaining to each table.

- TABLE C-1 (AMENDED): *Samples With At Least One Inorganic Analyte Concentration Exceeding Background Threshold Concentrations In Site-Characterization Samples From PRS 0-030(l)*

  Comment: This is a resubmittal of Table C-1 in Appendix C of the VCA Completion Report for PRSs 0-030(l, m) and 0-033(a) because LANL discovered that the location of sample 0100-95-0490 was misplaced in the table. Also, LANL should have footnoted the table to indicate that all samples at PRS 0-030(l) had at least one analyte detected over the background threshold limit, thus all inorganic data was already presented in the original Table C-1.

detect over EQL. However, LANL only included the detected analytes and not the nondetected analytes for each sample. LANL has included these organic analytes in Table C-6, Part II. Because of the volume of organic analytes analyzed but not detected, only one table is being presented with all confirmatory organic data not previously shown in Table C-6.

NMED Comment

3. Pages 14 & 15, Table 2.1.4-1: LANL should include the sampling depths in this table.

LANL Response

3. The sampling depths for all samples (including VOCs, SVOCs, PCBs, pesticides, XRF metals, TAL metals, and radionuclides) collected at PRS 0-030(l) are presented in Attachment C.

NMED Comment

4. Page 27, Field Activities: LANL should explain why no confirmatory samples were obtained from beneath the vitrified clay pipe.

LANL Response

4. No confirmatory samples were collected from beneath the vitrified clay pipe because the contaminants that were detected under the pipe, in the tank, and in the outfall did not exceed 1 on the hazard index (part of a human health screening assessment). Therefore, no additional samples were necessary.

NMED Comment

5. Page 30, Inorganics: LANL should include the XRF field screening results and the depths at which the soils were screened.

LANL Response

5. The field screening results for XRF metals for PRS 0-030(l) are presented in LANL's response to NMED comment 2 and in Table C-1 (Amended), Table C-4 (Amended), and Table C-4, Part II. These tables are included in Attachment B of this response. The screening depths for all XRF metals samples for PRS 0-030(l) are presented in Attachment C.

NMED Comment

6. Page 32, Evaluation of Organics: LANL should provide all the organic results in Table 2.3.2-3.

LANL Response

6. Section 2.3.2.2 is the evaluation of organic analytes from the confirmatory samples taken at PRS 0-030(l). The text describing Table 2.3.2-3 should have read as follows:

> Two confirmatory samples (0100-95-4318 and 0100-95-4319) from PRS 0-030(l) were analyzed for VOCs, SVOCs, pesticides, and PCBs. Two analytes, DDE and DDT, were detected in sample 0100-95-4318. The results are shown in Table 2.3.2-3. For all data associated with these two samples containing concentrations of at least one organic analyte greater than EQL, see Appendix C, Table C-6. Sample 0100-95-4319 did not contain any organic analytes greater than EQLs; thus, it was not presented in Table C-6.

For all organic data associated with the two confirmatory samples for PRS 0-030(l), see LANL's response to comment 2 and Table C-6, Part II in Attachment B of this response.

NMED Comment

7. Page 34, Conclusions and Recommendations:

a. LANL should obtain and submit confirmatory samples from beneath the septic tank and exiting pipe to a laboratory for inorganic analyses. Field screening (XRF) is not acceptable for determining the nature or extent of contamination.

b. LANL should obtain confirmatory samples from beneath the removed piping.

LANL Response

7. A confirmatory sample was sent offsite to a laboratory for inorganic analyses from this PRS.

Four confirmatory samples were collected from beneath the excavated septic tank (samples 0100-95-0694, 0100-95-0695, 0100-95-0700, and 0100-95-0701). These four samples were collected from two locations; location 00-04318, the approximate center of the excavation, and 00-04319, the south end of the excavation. Sample 0100-95-0701 was collected from location 00-04318 and sent to an off-site laboratory for TAL metals analysis using EPA SW 846 methods. No metals were detected in the sample at concentrations greater than background screening values. No confirmatory sample were collected from below the tank's exit piping because the contaminants that were detected in the tank and in the outfall did not exceed 1 on the hazard index during the human health screening assessment.

LANL also included the data obtained from the XRF analyses of samples 0100-95-0694 and 0100-95-0695 in the background comparisons and screening assessment section on page 30 of the VCA Completion Report for PRSs 0-030(l, m) and 0-030(a). At this site both XRF and TAL metals procedures were used to determine the concentrations of metals in samples. The XRF procedure tends to yield higher concentrations than the TAL metals procedure because XRF is an analysis of the total sample while the TAL metal analysis uses a nitric acid dissolution (which is a partial dissolution). Therefore, the XRF procedure usually gives a more conservative (on the high side) result for metals in a sample than the TAL metal procedures. Because the only inorganic concentration greater than background screening values was from the sample analyzed using XRF analytical procedures, we included the data in the human health screening assessment.

PRS 0-030(m), Incinerator Building Septic System, OU 1114

NMED Comment

8. LANL should include the soil boring logs and field screening results of soil samples obtained during the RFI.

LANL Response

8. Soil boring logs were not taken for PRS 0-030(m). The field screening results of soil samples taken at PRS 0-030(m) are presented in Attachment D of this response. These results include the following: concentrations of VOCs detected in air with a photoionizing detector as each sample was collected, the radionuclide counts per minute for both alpha radiation (using a Ludlum™ Model 139 survey meter with an air proportional detector) and beta/gamma radiation (using an Eberline™ ESP-1 rate meter with a HP260 pancake probe) for each soil sample. The percent of combustible gas and oxygen was also monitored in two representative samples.

NMED Comment

9. To support the NFA or further action decisions, LANL should provide the analytical data obtained during the VCA and any other pertinent supporting documentation.

LANL Response

9. All analytical data (including inorganic, radionuclide and organic results) exceeding UTLs, EQLs, and background threshold limits can be located in Table C-7 through Table C-12 in Appendix C of the VCA Completion Report for PRSs 0-030(l, m) and 0-033(a).

Analytical data equal to or less than UTLs EQLs, or background threshold limits obtained during the VCA for 0-030(m) are presented in Attachment E of this response. If a table in Appendix C had a mistake or the sample presented in Tables C-1 through C-6 showed only the detected concentrations of analytes and not the nondetected analytes, the table is resubmitted in Attachment E as "Amended" to show all detected and nondetected analytes of the samples presented.

For all samples that were not included in any table because they did not contain any analytes with detected concentrations (for organics) or concentrations exceeding background (for radionuclides and inorganics), a new table has been added to Attachment E as "Table X, Part II". The following list shows the tables included in Attachment E and gives specific comments pertaining to each table.

- TABLE C-7 (AMENDED): *Samples With At Least One Inorganic Analyte Concentration Exceeding Background Threshold Concentrations In Site-Characterization Samples From PRS 0-030(m)*

  Comment: This is a resubmittal of Table C-7 from Appendix C of the VCA Completion Report for PRSs 0-030(l, m) and 0-033(a). LANL should have footnoted the table to indicate that all inorganic data collected from PRS 0-030(m) was included in this table because all samples had at least one analyte detected over the background threshold limit. Therefore, LANL has renamed and footnoted Table C-7.

- TABLE C-8, PART II: *Radionuclides Data Equal To Or Less Than Background Threshold Concentrations In Site-Characterization Samples From PRS 0-030(m)*

  Comment: This is a table to augment the information presented in Table C-8 in Appendix C of the VCA Completion Report for PRSs 0-030(l, m) and 0-033(a). All data not previously shown in Table C-8 for PRS 0-030(m) are included in this table.

- TABLE C-9 (AMENDED): *Samples With At Least One Organic Analyte Concentration Exceeding EQLs In Site-Characterization Samples From PRS 0-030(m)*

  Comment: This is a resubmittal of Table C-9 from Appendix C of the VCA Completion Report for PRSs 0-030(l, m) and 0-033(a). LANL should have footnoted the table to indicate that all organic data collected from PRS 0-030(m) was included in the this table because all samples had at least one analyte detected over the EQL. Therefore, LANL has renamed and footnoted Table C-9.

- TABLE C-10 (AMENDED): *Inorganic XRF Data For All Confirmatory Samples From PRS 0-030(m)*

  Comment: This is a resubmittal of Table C-10 in Appendix C of the VCA Completion Report for PRSs 0-030(l, m) and 0-033(a). Usually LANL presents all sample data results for all inorganic analytes for any given sample that has at least one detect over the background threshold concentration. LANL should have footnoted the table to indicate that all inorganic XRF data collected from PRS 0-030(m) was included in this table because all samples had at least one analyte detected over the background threshold limit. Therefore, LANL has renamed and footnoted Table C-10.

- TABLE C-11 (AMENDED): *Samples With At Least One Radionuclide Concentration Exceeding Background Threshold Concentrations In Confirmatory Samples From PRS 0-030(m)*

  Comment: This is a resubmittal of Table C-11 in Appendix C of the VCA Completion Report for PRSs 0-030(l, m) and 0-033(a). Usually LANL presents all sample data results for all radionuclide analytes for any given sample that has at least one detect over the background threshold concentration. LANL should have footnoted the table to indicate that all radionuclide data collected from PRS 0-030(m) was included in this table because all samples had at least one analyte detected over the background threshold limit. Therefore, LANL has renamed and footnoted Table C-11.

- TABLE C-12 (AMENDED): *Organics Data From Confirmatory Samples From PRS 0-030(m)*

  Comment: LANL discovered a mistake in the original Table C-12. Usually LANL presents all sample data results for all organic analytes for any given sample that has at least one detect over EQL. However, LANL only included the detected analytes and not the nondetected analytes for each sample. LANL has included these organic analytes in Table C-12 (Amended). Because of the volume of organic analytes analyzed but not detected, only one table is being presented with all confirmatory organic data not previously shown in Table C-12.

NMED Comment

10. LANL should include the sampling depths in the sampling results tables and "Summary of Samples Collected."

LANL Response

10. The sampling depths for all PRS 0-030(m) samples analyzed for VOCs, SVOCs, PCBs, pesticides, XRF metals, TAL metals, and radionuclides are presented in Attachment F.

NMED Comment

11. LANL should include the analytical results for all the constituents analyzed in each sample, not just those above UTLs, SALs, or EQLs.

LANL Response

11. As stated in LANL's response to NMED Comment 9, all analytical data for PRS 0-030(m) can be found in either Tables C-7 through C-12 or Attachment E.

NMED Comment

12. Page 55, Field Activities:

a. LANL should obtain confirmatory samples for beneath the removed vitrified clay pipe.

b. LANL should obtain and submit confirmatory samples from beneath the septic tank and exiting pipe to a laboratory for inorganic analyses. Field screening (XRF) is not acceptable for determining the nature and extent of contamination.

LANL Response

12a. At least 3 to 5 ft of soil was removed from below the vitrified clay pipe as the tank was removed. Even if the pipe had leaked, the soil surrounding the pipe has already been removed. Therefore, no confirmatory samples need to be collected.

12b. It was established during the RFI for PRS 0-030(m) that TAL analyses were sufficiently consistent with XRF analyses such that XRF analyses could be used to define the nature and extent of contamination at the site. XRF analysis overestimates inorganic concentrations in the ranges of concentrations detected at PRS 0-030(m). Comparing laboratory and XRF analytical results from four sample locations at PRS 0-030(m) demonstrated that laboratory concentrations exceeded the XRF concentrations in only five of 64 analyses (two arsenic, one copper, one lead, and one zinc). This is consistent with the fact that the XRF procedure tends to yield higher concentrations than the TAL metals procedure because XRF is an analysis of the total sample while the TAL metal analysis uses a nitric acid dissolution (which is a partial dissolution). Because XRF analysis tends to overestimate inorganic concentrations compared to TAL metals analysis it can be used to conservatively define nature and extent.

A risk assessment was conducted on the two confirmatory samples and three samples collected below the inlet and outlet pipes near the tank to determine whether additional sampling was necessary to confirm the sufficiency of the VCA. All of these samples would be within the same exposure unit since they are within a 100- by 50-ft area. Although the soil around the inlet and outlet pipes was removed during the VCA, this evaluation demonstrates that no significant human health threat remains even if concentrations near the pipes are assumed the same as before the VCA.

Residential risk estimates were calculated by comparing the maximum COPC concentration to the US EPA Region 9 PRG. A PRG represents a concentration associated with a hazard quotient of 1 for noncarcinogens and a cancer risk of 1×10^{-6} for carcinogens. PRGs are based on default residential land-use assumptions for a child and the following exposure pathways:

- incidental ingestion of soil,
- inhalation of volatilized COPCs or resuspended dust, and
- dermal contact with COPCs in soil.

An analyte was considered a COPC if it was detected in any sample at a value greater than 0.1 times SAL The maximum values for radionuclides were detected in confirmatory samples and are discussed in text.

The results of the concentration-to-PRG ratio comparison are shown below in Table 1. The hazard index is less than one indicating the potential dose is below the threshold of toxicity for noncarcinogenic health effects. The estimated lifetime excess cancer risk is 2×10^{-6} which is well within the range of acceptable cancer risk specified by EPA in the National Contingency Plan and proposed in RCRA Subpart S, (i.e., the range of 10^{-4} to 10^{-6}). Thus, no additional confirmatory samples are warranted for PRS 0-030(m).

TABLE 1

RESULTS OF THE CONCENTRATION-TO-PRG RATIO COMPARISON

NONCARCINOGENIC COPC	MAXIMUM CONCENTRATION (mg/kg)	PRG (mg/kg)	CONC/PRG
Lead	77.8	400	0.2
Uranium	35.4	230	0.2
Hazard Index			0.4
Carcinogenic COPC			
Benzo(a)anthracene	0.082 J [a]	0.61	0.13
Benzo(a)pyrene	0.089 J	0.061	1.5
Benzo(b)fluoranthene	0.081 J	0.61	0.13
Indeno(1,2,3-cd)pyrene	0.065 J	0.61	0.11
DDE	0.16	1.3	0.12
DDT	0.28	1.3	0.21
Lifetime Cancer Risk			2×10^{-6}

[a] "J" signifies that the analyte was positively identified and the associated numerical value is estimated to be more uncertain than would normally be expected for that analysis.

PRS 0-033(a), Fuel Oil Underground Storage Tank, OU 1114

NMED Comment

13. LANL should include the soil boring logs and field screening results of soil samples obtained during the RFI.

LANL Response

13. The soil boring logs for PRS 0-033(a) are included in Attachment G of this response. Because it was already known that the UST was going to be removed before the RFI for this area, field screening was not conducted at this PRS.

NMED Comment

14. LANL should provide a figure indicating the locations of samples obtained during the RFI.

LANL Response

14. As stated above in LANL's response to NMED comment 13, no samples were taken at this PRS because it was already known that the UST would be removed.

NMED Comment

15. LANL should provide a copy of the NMED UST Bureau's approval letter in the RFI.

LANL Response

15. A copy of the NMED UST Bureau's approval letter for removal of this UST is presented in Attachment H.

NMED Comment

16. Page 62, Remedial Implementation: LANL should provide the referenced NMED UST Bureau 45-day site assessment report which details closure activities.

LANL Response

16. The NMED UST Bureau 45-day site assessment report should have been included in Appendix B of the VCA Completion Report for PRSs 0-030(l, m) and 0-033(a). The 45-day site assessment report is included in Attachment I of this response.

NMED Comment

17. Page E-1, Appendix E: LANL should provide the closure form or worksheet as indicated.

LANL Response

17. The closure form/worksheet for this UST is provided in Attachment J of this response. The sampling depths for all samples (including: VOCs, SVOCs, PCBs, pesticides, XRF metals, TAL metals, and radionuclides) taken at PRS 0-030(l) are presented in Attachment C.

ATTACHMENT A

PRS 0-030(I) Field Screening Results

Sample ID	PID (ppm)	Alpha (cpm)	Beta/Gamma (cpm)	CGI (%LEL)	Oxygen (%)
0100-95-0456	0	NDA	100	NA	NA
0100-95-0458	0	NDA	90	0	20.5
0100-95-0459	0	NDA	100	0	20.4
0100-95-0490	0	NDA	NDA	NA	NA
0100-95-0514	NA	NDA	110	NA	NA
0100-95-0519	NA	NDA	90	NA	NA
0100-95-0525	0	NDA	80	NA	NA
0100-95-0627	0	NDA	100	NA	NA
0100-95-0667	0	NDA	80	NA	NA
0100-95-0668	0	NDA	100	NA	NA
0100-95-0669	NA	NDA	100	NA	NA
0100-95-0670	NA	NDA	100	NA	NA
0100-95-0671	0	NDA	90	NA	NA
0100-95-0672	NA	NDA	100	NA	NA
0100-95-0690	0	NDA	NDA	NA	NA
0100-95-0691	0	NDA	NDA	NA	NA
0100-95-0692	0	NDA	NDA	NA	NA
0100-95-0693	0	NDA	NDA	NA	NA
0100-95-0694	0	NDA	NDA	NA	NA
0100-95-0695	0	NDA	NDA	NA	NA
0100-95-0700	0	NDA	NDA	NA	NA
0100-95-0701	0	NDA	NDA	NA	NA
0100-95-0702	0	NDA	183	NA	NA
0100-95-0703	0	NDA	145	NA	NA

Notes:
PID - photo ionization detector
ppm - parts per million
cpm - counts per minute
NDA - no detectable activity
CGI - combustible gas indicator
LEL - lower explosive limit

ATTACHMENT B

TABLE C-1 AMENDED

SAMPLES WITH AT LEAST ONE INORGANIC ANALYTE CONCENTRATION EXCEEDING BACKGROUND THRESHOLD CONCENTRATIONS IN SITE-CHARATERIZATION SAMPLES FROM PRS 0-030(I)*

		ANTIMONY (mg/kg)	ARSENIC (mg/kg)	BARIUM (mg/kg)	CADMIUM (mg/kg)	CALCIUM (mg/kg)	CHROMIUM (mg/kg)	COPPER (mg/kg)	IRON (mg/kg)
	SAL[a]	31	N/A[b]	5 300	38	N/A	211	2 800	N/A
LABORATORY ANALYSIS									
LOCATION ID	SAMPLE ID	ANTIMONY (mg/kg)	ARSENIC (mg/kg)	BARIUM (mg/kg)	CADMIUM (mg/kg)	CALCIUM (mg/kg)	CHROMIUM (mg/kg)	COPPER (mg/kg)	IRON (mg/kg)
UTL[c]	n/a[d]	1	7.82	315	2.7	6 120	19.3	15.5	21 300
00-04423	0100-95-0627	0.7506	3.4	90.2362	0.4879	2199.1876	6.5033	23.3709	9167.3488
00-04321	0100-95-0669	0.73	2.5	117	0.5	3 060	11.8	38.7	10 700
00-04324	0100-95-0670	1.2	7.8	925	2.3	10 900	35.9	247	33 100
00-04325	0100-95-0671	0.73	4.8	214	0.99	3 760	24.3	82.4	16 300
XRF[e] ANALYSIS									
LOCATION ID	SAMPLE ID	ANTIMONY (mg/kg)	ARSENIC (mg/kg)	BARIUM (mg/kg)	CADMIUM (mg/kg)	CALCIUM (mg/kg)	CHROMIUM (mg/kg)	COPPER (mg/kg)	IRON (mg/kg)
UTL	n/a	1.59[f]	10.81[f]	828.9[f]	1.7	8 380	71.07[f]	15.5	48 640
00-04423	0100-95-0668	-4	-4	256	-3	5 860	24.9	24.3	15 800
00-04325	0100-95-0671	-4	-4	410	-4	5 980	57	44.5	17 600
00-04321	0100-95-0669	-4	-4	318	-3	8 250	25.9	63.4	18 900
00-04324	0100-95-0670	-4	-4	1 254	3.43	27 100	114	291	43 000
00-04240	0100-95-0459	-4	-4	250	-3	5 260	-12	21.5	18 200
00-04222	0100-95-0514	-4	-4	205	-3	5 130	26.2	33.9	14 900
00-04226	0100-95-0519	-4	10.4	236	-3	5 290	25.9	17.9	15 200
00-04230	0100-95-0456	10	-4	571	-4	6 950	19	52.1	22 800
00-04230	0100-95-0672	-4	-4	140	-4	2 080	21.8	-8	13 300
00-04239	0100-95-0458	-4	12.5	301	-3	8 580	12.7	62	19 600
00-04310	0100-95-0490	-4	-4	212	-3	5 900	-12	12	13 990

TABLE C-1 AMENDED (CONTINUED)

SAMPLES WITH AT LEAST ONE INORGANIC ANALYTE CONCENTRATION EXCEEDING BACKGROUND THRESHOLD CONCENTRATIONS IN SITE-CHARATERIZATION SAMPLES FROM PRS 0-030(I)*

		LEAD (mg/kg)	MAGNESIUM (mg/kg)	MERCURY (mg/kg)	NICKEL (mg/kg)	SILVER (mg/kg)	THALLIUM (mg/kg)	URANIUM (mg/kg)	ZINC (mg/kg)
	SAL	400	N/A	23	1 500	380	5.4	230	23 000
LABORATORY ANALYSIS									
LOCATION ID	SAMPLE ID	LEAD (mg/kg)	MAGNESIUM (mg/kg)	MERCURY (mg/kg)	NICKEL (mg/kg)	SILVER (mg/kg)	THALLIUM (mg/kg)	URANIUM (mg/kg)	ZINC (mg/kg)
UTL	n/a	23.3	4 610	0.1	15.2	N/A	1	N/A	50.8
00-04423	0100-95-0627	29.0662[f]	1403.3863	0.2781	5.6026	0.1876	1.4	NA[g]	107.3113
00-04321	0100-95-0669	27.4	2 090	0.84	9.9	0.45	2.3	NA	108
00-04324	0100-95-0670	101	12 400	0.05	85.4	1.3	1.9	NA	604
00-04325	0100-95-0671	55.4	5 350	0.01	30.1	0.99	1.3	NA	238
XRF ANALYSIS									
LOCATION ID	SAMPLE ID	LEAD (mg/kg)	MAGNESIUM (mg/kg)	MERCURY (mg/kg)	NICKEL (mg/kg)	SILVER (mg/kg)	THALLIUM (mg/kg)	URANIUM (mg/kg)	ZINC (mg/kg)
UTL	n/a	56[f]	N/A	0.1	15.2	N/A	N/A	6.73[f]	146.2[f]
00-04423	0100-95-0668	38.6	NA	-5	-13	NA	NA	-8	139
00-04325	0100-95-0671	41.8	NA	-5	-13	NA	NA	-8	154
00-04321	0100-95-0669	37.8	NA	-5	20.8	NA	NA	-8	146
00-04324	0100-95-0670	177	NA	10.4	111	NA	NA	8.61	773
00-04240	0100-95-0459	34.4	NA	-5	-13	NA	NA	9.63	72.5
00-04222	0100-95-0514	31.6	NA	-5	-13	NA	NA	-8	65.8
00-04226	0100-95-0519	26.5	NA	-5	-13	NA	NA	-8	76.1
00-04230	0100-95-0456	161	NA	-5	-13	NA	NA	12.5	364

TABLE C-1 AMENDED (CONTINUED)

SAMPLES WITH AT LEAST ONE INORGANIC ANALYTE CONCENTRATION EXCEEDING BACKGROUND THRESHOLD CONCENTRATIONS IN SITE-CHARATERIZATION SAMPLES FROM PRS 0-030(I)*

00-04230	0100-95-0672	18.6	NA	-5	-13	NA	NA	-8	51.5
00-04239	0100-95-0458	44.4	NA	-5	13.1	NA	NA	-8	105
00-04310	0100-95-0490	28	NA	-5	-13	NA	NA	13	68

*All samples at PRS 0-030(I) have at least one analyte detected over the background threshold limit.

[a] SAL = Screening action level.

[b] N/A = Not available.

[c] UTL = Upper tolerance limit.

[d] n/a = Not applicable.

[e] XRF = X-ray flourescence spectroscopy.

[f] = Background value taken from Longmire, Duffy, and Reneau, (Longmire et al. 1993, 0958) "Preliminary Background Elemental Concentrations In Bandelier Tuff and Selected Soil Series, 1993," Los Alamos National Laboratory unpublished report.

[g] NA = Not analyzed.

TABLE C-2 AMENDED

SAMPLES WITH AT LEAST ONE RADIONUCLIDE CONCENTRATION EXCEEDING BACKGROUND THRESHOLD CONCENTRATIONS IN SITE-CHARACTERIZATION SAMPLES FROM PRS 0-030(I)

LOCATION ID	SAMPLE ID	AMERICIUM -241 (pCi/g)	BARIUIM-140 (pCi/g)	CERIUM-144 (pCi/g)	CESIUM-137 (pCi/g)	COBALT-60 (pCi/g)	EUROPIUM-152 (pCi/g)	NEPTUNIUM -237 (pCi/g)
UTL[a]	n/a[b]	N/A[c]	N/A	N/A	N/A	N/A	N/A	N/A
SAL[d]	n/a	22	N/A	56	5.1	1.1	2.6	1.9
00-04239	0100-95-0458	0.0709	0.0901	-0.0085	-0.0307	-0.0288	0.234	0.017
00-04310	0100-95-0490	0.152	0.128	-0.0207	-0.0176	-0.0073	0.164	-0.0292
00-04324	0100-95-0670	-0.036	0.269	0	-0.037	0.081	-0.385	0.093

TABLE C-2 AMENDED (CONTINUED)

SAMPLES WITH AT LEAST ONE RADIONUCLIDE CONCENTRATION EXCEEDING BACKGROUND THRESHOLD CONCENTRATIONS IN SITE-CHARACTERIZATION SAMPLES FROM PRS 0-030(I)

LOCATION ID	SAMPLE ID	RUTHENIUM -106 (pCi/g)	SODIUM-22 (pCi/g)	PLUTONIUM -238 (pCi/g)	PLUTONIUM -239/240 (pCi/g)	URANIUM-234 (pCi/g)	URANIUM 238 (pCi/g)	URANIUM 235 (pCi/g)
UTL[a]	n/a[b]	0.052	N/A	N/A	0.052	N/A	N/A	N/A[c]
SAL[d]	n/a	24	1.3	27	24	13	67	1.1
00-04239	0100-95-0458	0.311	-0.0204	0	0.09	N/A	N/A	N/A
00-04310	0100-95-0490	-0.0562	-0.0018	0	0.145	1.068	1.088	0.045
00-04324	0100-95-0670	NA[e]	-0.005	NA[e]	NA	1.59	1.41	0.083

[a] UTL = Upper tolerance limit.

[b] n/a = Not applicable.

[c] N/A = Not available.

[d] SAL = Screening action level.

[e] NA = Not analyzed.

TABLE C-2, PART II
RADIONUCLIDE DATA EQUAL TO OR LESS THAN BACKGROUND THRESHOLD CONCENTRATIONS IN SITE-CHARACTERIZATION SAMPLES FROM PRS 0-030(I)

SAMPLE ID	LOCATION ID	Begin Depth	End Depth	Units	Request #	Method	Matrix	Analyte Description	Sample Results	Uncertainty	Units
0100-95-0459	00-04240	48	54	in.	868	AM241	SOIL	Americium-241	0.009	0.0025	pCi/g
0100-95-0459	00-04240	48	54	in.	868	GSCAN	SOIL	Americium-241	0.0333	0.122	pCi/g
0100-95-0459	00-04240	48	54	in.	868	GSCAN	SOIL	Barium-140	-0.0836	0.102	pCi/g
0100-95-0459	00-04240	48	54	in.	868	GSCAN	SOIL	Cerium-144	-0.0048	0.057	pCi/g
0100-95-0459	00-04240	48	54	in.	868	GSCAN	SOIL	Cobalt-60	-0.018	0.0142	pCi/g
0100-95-0459	00-04240	48	54	in.	868	GSCAN	SOIL	Cesium-137	0.032	0.0131	pCi/g
0100-95-0459	00-04240	48	54	in.	868	GSCAN	SOIL	Europium-152	0.13	0.0651	pCi/g
0100-95-0459	00-04240	48	54	in.	868	GSCAN	SOIL	Sodium-22	0.0155	0.014	pCi/g
0100-95-0459	00-04240	48	54	in.	868	GSCAN	SOIL	Neptunium-237	0.0068	0.0199	pCi/g
0100-95-0459	00-04240	48	54	in.	868	ISOPU	SOIL	Plutonium-238	0	0.005	pCi/g
0100-95-0459	00-04240	48	54	in.	868	ISOPU	SOIL	Plutonium-239, -240	0.02	0.005	pCi/g
0100-95-0459	00-04240	48	54	in.	868	GSCAN	SOIL	Ruthenium-106	0.137	0.105	pCi/g
0100-95-0459	00-04240	48	54	in.	1123	ISOU	SOIL	Uranium-234	0.86	0.062	pCi/g
0100-95-0459	00-04240	48	54	in.	1123	ISOU	SOIL	Uranium235, -236	0.038	0.008	pCi/g
0100-95-0459	00-04240	48	54	in.	1123	ISOU	SOIL	Uranium-238	0.82	0.0595	pCi/g
0100-95-0514	00-04222	0	6	in.	823	GSCAN	SOIL	Americium-241	0.017	0.091	pCi/g
0100-95-0514	00-04222	0	6	in.	823	GSCAN	SOIL	Barium-140	-0.051	0.126	pCi/g
0100-95-0514	00-04222	0	6	in.	823	GSCAN	SOIL	Cerium-144	-0.049	0.0807	pCi/g
0100-95-0514	00-04222	0	6	in.	823	GSCAN	SOIL	Cobalt-60	0.01	0.0314	pCi/g
0100-95-0514	00-04222	0	6	in.	823	GSCAN	SOIL	Cesium-137	0.184	0.0429	pCi/g
0100-95-0514	00-04222	0	6	in.	823	GSCAN	SOIL	Europium-152	0.136	0.115	pCi/g
0100-95-0514	00-04222	0	6	in.	823	GSCAN	SOIL	Sodium-22	0.012	0.0294	pCi/g
0100-95-0514	00-04222	0	6	in.	823	GSCAN	SOIL	Neptunium-237	-0.06	0.0261	pCi/g
0100-95-0514	00-04222	0	6	in.	823	GSCAN	SOIL	Ruthenium-106	0.253	0.198	pCi/g
0100-95-0519	00-04226	0	6	in.	823	GSCAN	SOIL	Americium-241	-0.007	0.0187	pCi/g
0100-95-0519	00-04226	0	6	in.	823	GSCAN	SOIL	Barium-140	0.078	0.114	pCi/g
0100-95-0519	00-04226	0	6	in.	823	GSCAN	SOIL	Cerium-144	-0.046	0.0506	pCi/g
0100-95-0519	00-04226	0	6	in.	823	GSCAN	SOIL	Cobalt-60	0.005	0.028	pCi/g
0100-95-0519	00-04226	0	6	in.	823	GSCAN	SOIL	Cesium-137	0.093	0.0318	pCi/g
0100-95-0519	00-04226	0	6	in.	823	GSCAN	SOIL	Europium-152	-0.044	0.127	pCi/g
0100-95-0519	00-04226	0	6	in.	823	GSCAN	SOIL	Sodium-22	0.039	0.0258	pCi/g
0100-95-0519	00-04226	0	6	in.	823	GSCAN	SOIL	Neptunium-237	0.019	0.0236	pCi/g
0100-95-0519	00-04226	0	6	in.	823	GSCAN	SOIL	Ruthenium-106	-0.01	0.156	pCi/g
0100-95-0668	00-04423	60	72	in.	784	GSCAN	SOIL	Americium-241	0.013	0.038	pCi/g
0100-95-0668	00-04423	60	72	in.	784	GSCAN	SOIL	Barium-140	0.058	0.078	pCi/g
0100-95-0668	00-04423	60	72	in.	784	GSCAN	SOIL	Cerium-144	-0.085	0.063	pCi/g
0100-95-0668	00-04423	60	72	in.	784	GSCAN	SOIL	Cobalt-60	-0.01	0.018	pCi/g
0100-95-0668	00-04423	60	72	in.	784	GSCAN	SOIL	Cesium-137	0.016	0.015	pCi/g
0100-95-0668	00-04423	60	72	in.	784	GSCAN	SOIL	Europium-152	0.164	0.086	pCi/g

TABLE C-2, PART II
RADIONUCLIDE DATA EQUAL TO OR LESS THAN BACKGROUND THRESHOLD CONCENTRATIONS IN SITE-CHARACTERIZATION SAMPLES FROM PRS 0-030(I)

0100-95-0668	00-04423	60	72	in.	784	GSCAN	SOIL	Sodium-22	0.017	0.018	pCi/g
0100-95-0668	00-04423	60	72	in.	784	GSCAN	SOIL	Neptunium-237	-0.034	0.023	pCi/g
0100-95-0668	00-04423	60	72	in.	784	GSCAN	SOIL	Ruthenium-106	0.014	0.134	pCi/g
0100-95-0669	00-04321	48	60	in.	785	GSCAN	SOIL	Americium-241	-0.006	0.094	pCi/g
0100-95-0669	00-04321	48	60	in.	785	GSCAN	SOIL	Barium-140	-0.03	0.108	pCi/g
0100-95-0669	00-04321	48	60	in.	785	GSCAN	SOIL	Cerium-144	-0.006	0.093	pCi/g
0100-95-0669	00-04321	48	60	in.	785	GSCAN	SOIL	Cobalt-60	-0.03	0.03	pCi/g
0100-95-0669	00-04321	48	60	in.	785	GSCAN	SOIL	Cesium-137	0.032	0.024	pCi/g
0100-95-0669	00-04321	48	60	in.	785	GSCAN	SOIL	Europium-152	0.011	0.123	pCi/g
0100-95-0669	00-04321	48	60	in.	785	GSCAN	SOIL	Sodium-22	0.019	0.027	pCi/g
0100-95-0669	00-04321	48	60	in.	785	GSCAN	SOIL	Neptunium-237	-0.022	0.029	pCi/g
0100-95-0669	00-04321	48	60	in.	785	GSCAN	SOIL	Ruthenium-106	0.05	0.201	pCi/g
0100-95-0671	00-04325	12	18	in.	785	GSCAN	SOIL	Americium-241	-0.096	0.127	pCi/g
0100-95-0671	00-04325	12	18	in.	785	GSCAN	SOIL	Barium-140	-0.127	0.121	pCi/g
0100-95-0671	00-04325	12	18	in.	785	GSCAN	SOIL	Cerium-144	0.296	0.107	pCi/g
0100-95-0671	00-04325	12	18	in.	785	GSCAN	SOIL	Cobalt-60	0.023	0.025	pCi/g
0100-95-0671	00-04325	12	18	in.	785	GSCAN	SOIL	Cesium-137	0.027	0.027	pCi/g
0100-95-0671	00-04325	12	18	in.	785	GSCAN	SOIL	Europium-152	-0.02	0.136	pCi/g
0100-95-0671	00-04325	12	18	in.	785	GSCAN	SOIL	Sodium-22	-0.004	0.03	pCi/g
0100-95-0671	00-04325	12	18	in.	785	GSCAN	SOIL	Neptunium-237	0.052	0.038	pCi/g
0100-95-0671	00-04325	12	18	in.	785	GSCAN	SOIL	Ruthenium-106	-0.228	0.226	pCi/g
0100-95-0672	00-04230	72	78	in.	785	GSCAN	SOIL	Americium-241	0.036	0.021	pCi/g
0100-95-0672	00-04230	72	78	in.	785	GSCAN	SOIL	Barium-140	0.077	0.088	pCi/g
0100-95-0672	00-04230	72	78	in.	785	GSCAN	SOIL	Cerium-144	0.078	0.057	pCi/g
0100-95-0672	00-04230	72	78	in.	785	GSCAN	SOIL	Cobalt-60	-0.016	0.026	pCi/g
0100-95-0672	00-04230	72	78	in.	785	GSCAN	SOIL	Cesium-137	-0.012	0.018	pCi/g
0100-95-0672	00-04230	72	78	in.	785	GSCAN	SOIL	Europium-152	0	0.85	pCi/g
0100-95-0672	00-04230	72	78	in.	785	GSCAN	SOIL	Sodium-22	0.028	0.025	pCi/g
0100-95-0672	00-04230	72	78	in.	785	GSCAN	SOIL	Neptunium-237	-0.017	0.024	pCi/g
0100-95-0672	00-04230	72	78	in.	785	GSCAN	SOIL	Ruthenium-106	-0.145	0.171	pCi/g

TABLE C-3, PART II
ORGANIC DATA EQUAL TO OR LESS THAN EQLs IN SITE-CHARATERIZATION SAMPLES FROM PRS 0-030(I)

SAMPLE ID	LOCATION ID	Begin Depth	End Depth	Units	Request #	Method	Matrix	Analyte Description	Sample Results	Units	Qual.
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Nitroaniline[4-]	710	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Nitrophenol[4-]	860	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Benzyl Alcohol	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Bromophenyl-phenylether[4-]	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	PESTPCB	SOIL	Heptachlor Epoxide	1.84	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Azobenzene	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	PESTPCB	SOIL	Endosulfan Sulfate	3.57	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Dimethylphenol[2,4-]	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Methylphenol[4-]	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Dichlorobenzene[1,4-]	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Chloroaniline[4-]	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Oxybis(1-chloropropane)[2,2'-]	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Phenol	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	PESTPCB	SOIL	Aroclor-1260	35.7	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	PESTPCB	SOIL	Aroclor-1254	35.7	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Bis(2-chloroethyl)ether	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Bis(2-chloroethoxy)methane	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	PESTPCB	SOIL	Aroclor-1221	72.4	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	PESTPCB	SOIL	Aroclor-1232	35.7	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Bis(2-ethylhexyl)phthalate	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Di-n-octylphthalate	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Hexachlorobenzene	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Anthracene	140	ug/kg	J
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Trichlorobenzene[1,2,4-]	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Dichlorophenol[2,4-]	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Dinitrotoluene[2,4-]	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	PESTPCB	SOIL	Aroclor-1248	35.7	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	PESTPCB	SOIL	Aroclor-1016	35.7	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Pyrene	78	ug/kg	J
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Dimethyl Phthalate	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Dibenzofuran	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Benzo(g,h,i)perylene	290	ug/kg	J
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Indeno(1,2,3-cd)pyrene	320	ug/kg	J
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Benzo(b)fluoranthene	430	ug/kg	
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Fluoranthene	73	ug/kg	J
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Benzo(k)fluoranthene	360	ug/kg	

TABLE C-3, PART II
ORGANIC DATA EQUAL TO OR LESS THAN EQLs IN SITE-CHARATERIZATION SAMPLES FROM PRS 0-030(I)

0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Acenaphthylene	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Chrysene	850	ug/kg	
0100-95-0669	00-04321	48	60	in.	782	PESTPCB	SOIL	Aldrin	1.84	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	PESTPCB	SOIL	BHC[alpha-]	1.84	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	PESTPCB	SOIL	BHC[beta-]	1.84	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	PESTPCB	SOIL	BHC[delta-]	1.84	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	PESTPCB	SOIL	Endosulfan II	3.57	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	PESTPCB	SOIL	DDT[4,4'-]	16.4	ug/kg	P
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Benzo(a)pyrene	430	ug/kg	
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Dinitrophenol[2,4-]	860	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	PESTPCB	SOIL	Chlordane[alpha-]	1.84	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	PESTPCB	SOIL	Chlordane[gamma-]	1.84	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Dibenz(a,h)anthracene	91	ug/kg	J
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Dinitro-2-methylphenol[4,6-]	860	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	PESTPCB	SOIL	Aroclor-1242	35.7	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	PESTPCB	SOIL	Endrin Ketone	5.26	ug/kg	P
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Dichlorobenzene[1,3-]	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Benzo(a)anthracene	300	ug/kg	J
0100-95-0669	00-04321	48	60	in.	782	PESTPCB	SOIL	BHC[gamma-]	1.84	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Chloro-3-methylphenol[4-]	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	PESTPCB	SOIL	Dieldrin	3.57	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Dinitrotoluene[2,6-]	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Aniline	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Nitrosodimethylamine[N-]	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Nitroso-di-n-propylamine[N-]	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Benzoic Acid	1700	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Hexachloroethane	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Chlorophenyl-phenyl[4-] Ether	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	PESTPCB	SOIL	Endrin	3.57	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	PESTPCB	SOIL	Methoxychlor[4,4'-]	18.4	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	PESTPCB	SOIL	DDD[4,4'-]	11.4	ug/kg	P
0100-95-0669	00-04321	48	60	in.	782	PESTPCB	SOIL	DDE[4,4'-]	7.78	ug/kg	
0100-95-0669	00-04321	48	60	in.	782	PESTPCB	SOIL	Endrin Aldehyde	35.7	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	PESTPCB	SOIL	Heptachlor	1.84	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Hexachlorocyclopentadiene	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Isophorone	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	PESTPCB	SOIL	Toxaphene (Technical Grade)	184	ug/kg	U

TABLE C-3, PART II
ORGANIC DATA EQUAL TO OR LESS THAN EQLs IN SITE-CHARATERIZATION SAMPLES FROM PRS 0-030(I)

0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Acenaphthene	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Diethylphthalate	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Di-n-butylphthalate	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Phenanthrene	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Butylbenzylphthalate	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Nitrosodiphenylamine[N-]	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Fluorene	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Hexachlorobutadiene	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Pentachlorophenol	860	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Trichlorophenol[2,4,6-]	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Nitroaniline[2-]	860	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Nitrophenol[2-]	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Naphthalene	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Methylnaphthalene[2-]	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Chloronaphthalene[2-]	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Dichlorobenzidine[3,3'-]	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Methylphenol[2-]	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Dichlorobenzene[1,2-]	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Chlorophenol[2-]	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Trichlorophenol[2,4,5-]	860	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	PESTPCB	SOIL	Endosulfan I	1.84	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Nitrobenzene	360	ug/kg	U
0100-95-0669	00-04321	48	60	in.	782	SEMIN	SOIL	Nitroaniline[3-]	860	ug/kg	U

TABLE C-4 AMENDED

SAMPLES WITH AT LEAST ONE INORGANINC ANALYTE CONCENTRATION EXCEEDING BACKGROUND THRESHOLD CONCENTRATIONS IN CONFIRMATORY SAMPLES FROM PRS 0-030(I)

		ANTIMONY (mg/kg)	ARSENIC (mg/kg)	BARIUM (mg/kg)	CADMIUM (mg/kg)	CALCIUM (mg/kg)	CHROMIUM (mg/kg)	COPPER (mg/kg)	IRON (mg/kg)	LEAD (mg/kg)
	SAL[a]	31	N/A[b]	5 300	38	N/A	211	2 800	N/A	400
UTL[c]	n/a[d]	1.59[e]	10.81[e]	828.9[e]	1.7	8 380	71.07[e]	15.5	N/A	23.3
LOCATION ID	SAMPLE ID									
00-04318	0100-95-0694	-4	-4	151	-3	0.22	-12	-8	1.331	23
00-04319	0100-95-0695	-4	-4	65	-3	0.35	-12	11	1.257	23

TABLE C-4 AMENDED (CONTINUED)

SAMPLES WITH AT LEAST ONE INORGANINC ANALYTE CONCENTRATION EXCEEDING BACKGROUND THRESHOLD CONCENTRATIONS IN CONFIRMATORY SAMPLES FROM PRS 0-030(I)

		MANGANESE (mg/kg)	MERCURY (mg/kg)	NICKEL (mg/kg)	POTASSIUM (mg/kg)	SELENIUM (mg/kg)	THALLIUM (mg/kg)	THORIUM (mg/kg)	URANIUM (mg/kg)	ZINC (mg/kg)
	SAL	3200	23	1 500	N/A	380	5.4	N/A	230	23 000
UTL	n/a	714	0.1	15.2	N/A	N/A	N/A	6.73[e]	5.45	50.8
LOCATION ID	SAMPLE ID									
00-04318	0100-95-0694	308	-5	-13	3.13	- 4	903	22	-8	57
00-04319	0100-95-0695	345	-5	19	3.48	- 4	776	19	-8	69

[a] SAL = Screening action level.

[b] N/A = Not available.

[c] UTL = Upper tolerance limit.

[d] n/a = Not applicable.

[e] = Background value taken from Longmire, Duffy, and Reneau, (Longmire et al. 1993, 0958) "Preliminary Background Elemental Concentrations In Bandelier Tuff and Selected Soil Series, 1993," Los Alamos National Laboratory unpublished report.

TABLE C-4, PART II

INORGANIC DATA EQUAL TO OR LESS THAN BACKGROUND THRESHOLD CONCENTRATIONS IN CONFIRMATORY DATA FROM PRS 0-030(I)

		ANTIMONY (mg/kg)	ARSENIC (mg/kg)	BARIUM (mg/kg)	CADMIUM (mg/kg)	CALCIUM (mg/kg)	CHROMIUM (mg/kg)	COPPER (mg/kg)	IRON (mg/kg)	LEAD (mg/kg)
	SAL[a]	31	N/A[b]	5 300	38	N/A	211	2 800	N/A	400
LOCATION ID	SAMPLE ID									
UTL[c]	n/a[d]	1	7.82	315	2.7	6 120	19.3	15.5	21300	23.3
00-04318	0100-95-0701	3.3	1.6	31.5	0.06	1060	2.8	4.1	6240	6.7

TABLE C-4, PART II (CONTINUED)

INORGANIC DATA EQUAL TO OR LESS THAN BACKGROUND THRESHOLD CONCENTRATIONS IN CONFIRMATORY DATA FROM PRS 0-030(I)

		MANGANESE (mg/kg)	MERCURY (mg/kg)	NICKEL (mg/kg)	POTASSIUM (mg/kg)	SELENIUM (mg/kg)	THALLIUM (mg/kg)	THORIUM (mg/kg)	URANIUM (mg/kg)	ZINC (mg/kg)
	SAL	3200	23	1 500	N/A	380	5.4	N/A	230	23 000
LOCATION ID	SAMPLE ID									
UTL	n/a	N/A	0.1	15.2	N/A	N/A	1	N/A	N/A	50.8
00-04318	0100-95-0701	204	0.1	2.8	850	0.63	0.44	N/A	N/A	33.2

[a] SAL = Screening action level.

[b] N/A = Not available.

[c] UTL = Upper tolerance limit.

[d] n/a = Not applicable.

TABLE C-5 AMENDED

SAMPLES WITH AT LEAST ONE RADIONUCLIDE CONCENTRATION EXCEEDING BACKGROUND THRESHOLD CONCENTRATIONS IN CONFIRMATORY SAMPLES FROM PRS 0-030(I)*

LOCATION ID	SAMPLE ID	ACTINIUM-228 (pCi/g)	AMERICIUM -241 (pCi/g)	BARIUIM-140 (pCi/g)	BISMUTH-211 (pCi/g)	BISMUTH-212 (pCi/g)	BISMUTH-214 (pCi/g)	CADMIUM-109 (pCi/g)	CERIUM-139 (pCi/g)
UTL[a]	n/a[b]	N/A[c]	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SAL[d]	n/a	N/A	22	N/A	N/A	N/A	N/A	N/A	56
00-04318	0100-95-0694	1.42	0.0611	0.0561	3.16	1.4	1.03	2.08	0.0063
00-04319	0100-95-0695	1.5	-0.118	0.0502	3.22	1.23	1.07	1.81	-0.0208
00-04318	0100-95-0700	NA	NA	NA	NA	NA	NA	NA	NA

TABLE C-5 AMENDED (CONTINUED)

SAMPLES WITH AT LEAST ONE RADIONUCLIDE CONCENTRATION EXCEEDING BACKGROUND THRESHOLD CONCENTRATIONS IN CONFIRMATORY SAMPLES FROM PRS 0-030(I)*

LOCATION ID	SAMPLE ID	CERIUM-144 (pCi/g)	CESIUM-134 (pCi/g)	CESIUM-137 (pCi/g)	COBALT-57 (pCi/g)	COBALT-60 (pCi/g)	EUROPIUM-152 (pCi/g)	LANTHANUM -140 (pCi/g)	LEAD-210 (pCi/g)
UTL[a]	n/a[b]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	n/a	56	1.9	5.1	1.1	1.1	2.6	N/A	N/A
00-04318	0100-95-0694	-0.019	-0.0017	0.012	-0.0067	-0.0148	-0.0248	5.31	0.696
00-04319	0100-95-0695	0.0089	-0.0016	-0.0053	0.124	0	-0.0684	-14.1	0
00-04318	0100-95-0700	NA	NA	NA	NA	NA	NA	NA	NA

TABLE C-5 AMENDED (CONTINUED)

RADIONUCLIDES WITH CONCENTRATIONS THAT EXCEED BACKGROUND THRESHOLD CONCENTRATIONS IN CONFIRMATORY DATA FOR PRS 0-030(I)*

LOCATION ID	SAMPLE ID	LEAD-211 (pCi/g)	LEAD-212 (pCi/g)	LEAD-214 (pCi/g)	MANGANESE -54 (pCi/g)	MERCURY-203 (pCi/g)	NEPTUNIUM -237 (pCi/g)	POTASSIUM-40 (pCi/g)	PROTACT-INIUM-231 (pCi/g)
UTL	n/a	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SAL	n/a	N/A	N/A	N/A	3.5	N/A	1.9	N/A	N/A
00-04318	0100-95-0694	0.135	1.46	1.15	-0.0193	0	-0.22	28	2
00-04319	0100-95-0695	-0.268	1.43	1.14	0.0092	0.0144	0.523	29.7	2.18
00-04318	0100-95-0700	NA	NA	NA	NA	NA	NA	NA	NA

TABLE C-5 AMENDED (CONTINUED)

RADIONUCLIDES WITH CONCENTRATIONS THAT EXCEED BACKGROUND THRESHOLD CONCENTRATIONS IN CONFIRMATORY DATA FOR PRS 0-030(I)*

LOCATION ID	SAMPLE ID	PROTACT-INIUM-233 (pCi/g)	PROTACT-INIUM-234 (pCi/g)	PROTACT-INIUM-234M (pCi/g)	RADIUM-223 (pCi/g)	RADIUM-224 (pCi/g)	RADIUM-226 (pCi/g)	RADON-219 (pCi/g)	RUTHENIUM -106 (pCi/g)
UTL	n/a	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.052
SAL	n/a	N/A	N/A	N/A	N/A	N/A	1.9	N/A	24
00-04318	0100-95-0694	0.0037	0.208	10.3	0.154	3.31	3.29	0.247	-0.0774
00-04319	0100-95-0695	0.0228	0.063	2.34	0.128	3.58	1.84	-0.0457	-0.122
00-04318	0100-95-0700	NA	NA	NA	NA	NA	NA	NA	NA

TABLE C-5 AMENDED (CONTINUED)

RADIONUCLIDES WITH CONCENTRATIONS THAT EXCEED BACKGROUND THRESHOLD CONCENTRATIONS IN CONFIRMATORY DATA FOR PRS 0-030(I)*

LOCATION ID	SAMPLE ID	SELENIUM-75 (pCi/g)	SODIUM-22 (pCi/g)	STRONTIUM-85 (pCi/g)	THALLIUM-208 (pCi/g)	THORIUM-227 (pCi/g)	THORIUM-234 (pCi/g)	TIN-113 (pCi/g)	URANIUM 235 (pCi/g)
UTL	n/a	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SAL	n/a	N/A	1.3	4.4	N/A	N/A	N/A	N/A	1.1
00-04318	0100-95-0694	-0.0106	0.0047	-0.0831	0.517	-0.173	-1.52	-0.0039	-0.026
00-04319	0100-95-0695	-0.0133	-0.04	-0.069	0.466	0.127	-1.92	-0.0143	-0.057
00-04318	0100-95-0700	NA	NA	NA	NA	NA	NA	NA	NA

TABLE C-5 AMENDED (CONTINUED)

RADIONUCLIDES WITH CONCENTRATIONS THAT EXCEED BACKGROUND THRESHOLD CONCENTRATIONS IN CONFIRMATORY DATA FOR PRS 0-030(I)*

LOCATION ID	SAMPLE ID	YTTRIUM-88 (pCi/g)	ZINC-65 (pCi/g)	PLUTONIUM -238 (pCi/g)	PLUTONIUM-239/240 (pCi/g)	TRITIUM (pCi/g)
UTL	n/a	N/A	N/A	0.014	0.052	N/A
SAL	n/a	N/A	N/A	27	24	260
00-04318	0100-95-0694	0.0118	0.0667	0.0158	0.169	NA
00-04319	0100-95-0695	0.0243	-0.0389	0.002	0.002	NA
00-04318	0100-95-0700	NA	NA	NA	NA	511

*All samples at PRS 0-030(I) have at least one analyte detected over the background threshold limit

[a] UTL = Upper tolerance limit.

[b] n/a = Not applicable.

[c] N/A = Not available.

[d] SAL = Screening action level.

[e] NA = Not analyzed.

TABLE C-6, PART II
ORGANICS DATA FROM CONFIRMATORY SAMPLES FRO PRS 0-030(I)

SAMPLE ID	LOCATION ID	Begin Depth	End Depth	Units	Request #	Method	Matrix	Analyte Description	Sample Results	Units	Qual.
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Nitroaniline[4-]	680	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Nitrophenol[4-]	820	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Benzyl Alcohol	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Bromophenyl-phenylether[4-]	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	PESTPCB	SOIL	Heptachlor Epoxide	1.75	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Azobenzene	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	PESTPCB	SOIL	Endosulfan Sulfate	3.4	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Dimethylphenol[2,4-]	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Methylphenol[4-]	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Dichlorobenzene[1,4-]	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Chloroaniline[4-]	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Oxybis(1-chloropropane)[2,2'-]	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Phenol	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	PESTPCB	SOIL	Aroclor-1260	34	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	PESTPCB	SOIL	Aroclor-1254	34	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Bis(2-chloroethyl)ether	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Bis(2-chloroethoxy)methane	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	PESTPCB	SOIL	Aroclor-1221	69	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	PESTPCB	SOIL	Aroclor-1232	34	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Bis(2-ethylhexyl)phthalate	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Di-n-octylphthalate	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Hexachlorobenzene	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Anthracene	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Trichlorobenzene[1,2,4-]	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Dichlorophenol[2,4-]	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Dinitrotoluene[2,4-]	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	PESTPCB	SOIL	Aroclor-1248	34	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	PESTPCB	SOIL	Aroclor-1016	34	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Pyrene	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Dimethyl Phthalate	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Dibenzofuran	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Benzo(g,h,i)perylene	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Indeno(1,2,3-cd)pyrene	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Benzo(b)fluoranthene	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Fluoranthene	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Benzo(k)fluoranthene	340	ug/kg	U

TABLE C-6, PART II
ORGANICS DATA FROM CONFIRMATORY SAMPLES FRO PRS 0-030(I)

0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Acenaphthylene	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Chrysene	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	PESTPCB	SOIL	Aldrin	1.75	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	PESTPCB	SOIL	BHC[alpha-]	1.75	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	PESTPCB	SOIL	BHC[beta-]	1.75	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	PESTPCB	SOIL	BHC[delta-]	1.75	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	PESTPCB	SOIL	Endosulfan II	3.4	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	PESTPCB	SOIL	DDT[4,4'-]	33.6	ug/kg	
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Benzo(a)pyrene	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Dinitrophenol[2,4-]	820	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	PESTPCB	SOIL	Chlordane[alpha-]	1.75	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	PESTPCB	SOIL	Chlordane[gamma-]	1.75	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Dibenz(a,h)anthracene	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Dinitro-2-methylphenol[4,6-]	820	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	PESTPCB	SOIL	Aroclor-1242	34	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	PESTPCB	SOIL	Endrin Ketone	3.4	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Dichlorobenzene[1,3-]	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Benzo(a)anthracene	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	PESTPCB	SOIL	BHC[gamma-]	1.75	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Chloro-3-methylphenol[4-]	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	PESTPCB	SOIL	Dieldrin	3.4	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Dinitrotoluene[2,6-]	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Aniline	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Nitrosodimethylamine[N-]	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Nitroso-di-n-propylamine[N-]	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Benzoic Acid	1600	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Hexachloroethane	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Chlorophenyl-phenyl[4-] Ether	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	PESTPCB	SOIL	Endrin	3.4	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	PESTPCB	SOIL	Methoxychlor[4,4'-]	17.5	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	PESTPCB	SOIL	DDD[4,4'-]	3.4	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	PESTPCB	SOIL	DDE[4,4'-]	14.1	ug/kg	
0100-95-0694	00-04318	60	66	in.	1351	PESTPCB	SOIL	Endrin Aldehyde	3.4	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	PESTPCB	SOIL	Heptachlor	1.75	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Hexachlorocyclopentadiene	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Isophorone	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	PESTPCB	SOIL	Toxaphene (Technical Grade)	175	ug/kg	U

TABLE C-6, PART II
ORGANICS DATA FROM CONFIRMATORY SAMPLES FRO PRS 0-030(I)

0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Acenaphthene	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Diethylphthalate	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Di-n-butylphthalate	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Phenanthrene	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Butylbenzylphthalate	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Nitrosodiphenylamine[N-]	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Fluorene	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Carbazole	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Hexachlorobutadiene	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Pentachlorophenol	820	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Trichlorophenol[2,4,6-]	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Nitroaniline[2-]	820	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Nitrophenol[2-]	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Naphthalene	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Methylnaphthalene[2-]	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Chloronaphthalene[2-]	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Dichlorobenzidine[3,3'-]	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Methylphenol[2-]	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Dichlorobenzene[1,2-]	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Chlorophenol[2-]	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Trichlorophenol[2,4,5-]	820	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	PESTPCB	SOIL	Endosulfan I	1.75	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Nitrobenzene	340	ug/kg	U
0100-95-0694	00-04318	60	66	in.	1351	SEMIN	SOIL	Nitroaniline[3-]	820	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Nitroaniline[4-]	670	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Nitrophenol[4-]	810	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Benzyl Alcohol	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Bromophenyl-phenylether[4-]	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	PESTPCB	SOIL	Heptachlor Epoxide	1.73	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Azobenzene	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	PESTPCB	SOIL	Endosulfan Sulfate	3.36	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Dimethylphenol[2,4-]	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Methylphenol[4-]	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Dichlorobenzene[1,4-]	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Chloroaniline[4-]	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Oxybis(1-chloropropane)[2,2'-]	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Phenol	340	ug/kg	U

TABLE C-6, PART II
ORGANICS DATA FROM CONFIRMATORY SAMPLES FRO PRS 0-030(I)

0100-95-0695	00-04319	60	66	in.	1351	PESTPCB	SOIL	Aroclor-1260	33.6	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	PESTPCB	SOIL	Aroclor-1254	33.6	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Bis(2-chloroethyl)ether	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Bis(2-chloroethoxy)methane	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	PESTPCB	SOIL	Aroclor-1221	68.3	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	PESTPCB	SOIL	Aroclor-1232	33.6	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Bis(2-ethylhexyl)phthalate	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Di-n-octylphthalate	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Hexachlorobenzene	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Anthracene	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Trichlorobenzene[1,2,4-]	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Dichlorophenol[2,4-]	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Dinitrotoluene[2,4-]	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	PESTPCB	SOIL	Aroclor-1248	33.6	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	PESTPCB	SOIL	Aroclor-1016	33.6	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Pyrene	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Dimethyl Phthalate	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Dibenzofuran	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Benzo(g,h,i)perylene	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Indeno(1,2,3-cd)pyrene	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Benzo(b)fluoranthene	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Fluoranthene	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Benzo(k)fluoranthene	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Acenaphthylene	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Chrysene	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	PESTPCB	SOIL	Aldrin	1.73	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	PESTPCB	SOIL	BHC[alpha-]	1.73	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	PESTPCB	SOIL	BHC[beta-]	1.73	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	PESTPCB	SOIL	BHC[delta-]	1.73	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	PESTPCB	SOIL	Endosulfan II	3.36	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	PESTPCB	SOIL	DDT[4,4'-]	3.36	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Benzo(a)pyrene	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Dinitrophenol[2,4-]	810	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	PESTPCB	SOIL	Chlordane[alpha-]	1.73	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	PESTPCB	SOIL	Chlordane[gamma-]	1.73	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Dibenz(a,h)anthracene	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Dinitro-2-methylphenol[4,6-]	810	ug/kg	U

TABLE C-6, PART II
ORGANICS DATA FROM CONFIRMATORY SAMPLES FRO PRS 0-030(I)

0100-95-0695	00-04319	60	66	in.	1351	PESTPCB	SOIL	Aroclor-1242	33.6	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	PESTPCB	SOIL	Endrin Ketone	3.36	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Dichlorobenzene[1,3-]	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Benzo(a)anthracene	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	PESTPCB	SOIL	BHC[gamma-]	1.73	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Chloro-3-methylphenol[4-]	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	PESTPCB	SOIL	Dieldrin	3.36	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Dinitrotoluene[2,6-]	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Aniline	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Nitrosodimethylamine[N-]	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Nitroso-di-n-propylamine[N-]	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Benzoic Acid	1600	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Hexachloroethane	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Chlorophenyl-phenyl[4-] Ether	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	PESTPCB	SOIL	Endrin	3.36	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	PESTPCB	SOIL	Methoxychlor[4,4'-]	17.3	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	PESTPCB	SOIL	DDD[4,4'-]	3.36	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	PESTPCB	SOIL	DDE[4,4'-]	3.36	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	PESTPCB	SOIL	Endrin Aldehyde	3.36	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	PESTPCB	SOIL	Heptachlor	1.73	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Hexachlorocyclopentadiene	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Isophorone	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	PESTPCB	SOIL	Toxaphene (Technical Grade)	173	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Acenaphthene	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Diethylphthalate	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Di-n-butylphthalate	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Phenanthrene	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Butylbenzylphthalate	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Nitrosodiphenylamine[N-]	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Fluorene	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Carbazole	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Hexachlorobutadiene	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Pentachlorophenol	810	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Trichlorophenol[2,4,6-]	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Nitroaniline[2-]	810	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Nitrophenol[2-]	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Naphthalene	340	ug/kg	U

TABLE C-6, PART II
ORGANICS DATA FROM CONFIRMATORY SAMPLES FRO PRS 0-030(I)

0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Methylnaphthalene[2-]	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Chloronaphthalene[2-]	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Dichlorobenzidine[3,3'-]	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Methylphenol[2-]	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Dichlorobenzene[1,2-]	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Chlorophenol[2-]	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Trichlorophenol[2,4,5-]	810	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	PESTPCB	SOIL	Endosulfan I	1.73	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Nitrobenzene	340	ug/kg	U
0100-95-0695	00-04319	60	66	in.	1351	SEMIN	SOIL	Nitroaniline[3-]	810	ug/kg	U

ATTACHMENT C

PRS 0-030(I) Sample Summary

Sample ID	Location ID	Location Description	Depth (ft)	VOCs	SVOCs	PCBs	Pest.	XRF Metals	TAL Metals	Rad.[a]
0100-95-0456[b]	00-04230	Outside Tank (Composite)	4-4.5	X		X		X		X
0100-95-0458	00-04239	Inside Tank	4-4.5	X	X	X	X	X		X
0100-95-0459	00-04240	Inside Tank	4-4.5	X	X	X	X	X		X
0100-95-0490	00-04310	Below Inlet Pipe ~40 ft N. of Tank	4-4.5	X	X	X	X	X		X
0100-95-0514	00-04222	Outfall Channel	0-0.5		X	X	X	X		X
0100-95-0519	00-04226	Outfall Channel	0-0.5		X	X	X	X		X
0100-95-0525 [b]	00-04321	Inside Tank	2.2-3.2	X		X				X
0100-95-0627	00-04423	Below Inlet Pipe ~20 ft N. of Tank [d]	5-6						X	
0100-95-0667 [b]	00-04321	Inside Tank (Dupl. of 0525)	2.2-3.2	X		X				X
0100-95-0668	00-04423	Below Inlet Pipe ~20 ft N. of Tank [E]	5-6	X	X	X	X	X		X
0100-95-0669	00-04321	Inside Tank	4-5	X	X	X	X	X	X	X
0100-95-0670	00-04324	Inside Tank	4-5	X	X	X	X	X	X	X
0100-95-0671	00-04325	Inside Inlet at N. Side of Tank	1-1.5	X	X	X	X	X	X	X
0100-95-0672	00-04230	Outside and Below Tank (Composite)	6-6.5	X	X	X	X	X		X
0100-95-0690[c]	00-04316	Waste Characterization	0-3	X	X	X	X		X	X
0100-95-0691 [c]	00-04317	Waste Characterization	0-0.5	X	X	X	X		X	X
0100-95-0692 [c]	n/a [f]	Waste Characterization	n/a	X	X	X	X		X	X
0100-95-0693 [c]	n/a	Waste Characterization	n/a	X	X	X	X		X	X

PRS 0-030(I) Sample Summary

Sample ID	Location ID	Location Description	Depth (ft)	VOCs	SVOCs	PCBs	Pest.	XRF Metals	TAL Metals	Rad.[a]
0100-95-0694	00-04318	Below Tank Confirmatory	5-5.5	X	X	X	X	X		X
0100-95-0695	00-04319	Below Tank Confirmatory	5-5.5	X	X	X	X	X		X
0100-95-0700	00-04318	Below Tank Confirmatory	5-5.5							X
0100-95-0701	00-04318	Below Tank Confirmatory	5-5.5						X	
0100-95-0702	n/a	Concrete from Inside Tank Bottom	n/a							X
0100-95-0703	n/a	Vitrified Clay from Inlet Pipeline	n/a							X

[a] Radiological analyses consisted of any one or all of the following: gross alpha/beta/gamma, tritium, gamma spec./scan, AM241, and isotopic uranium/plutonium.

[b] Some analyses were cancelled and sampleswere recollected at bottom of tank.

[c] Samples also analyzed for TCLP metals and organics.

[d] 10% Metals sample.

[e] 10% Tritium sample.

[f] Not applicable.

ATTACHMENT D

PRS 0-030(m) Field Screening Results

Sample ID	PID (ppm)	Alpha (cpm)	Beta/Gamma (cpm)	CGI (%LEL)	Oxygen (%)
0100-95-0454	0	NDA	110	NA	NA
0100-95-0461	0	NDA	100	0	20.4
0100-95-0462	NA	NDA	100	NA	NA
0100-95-0463	0	NDA	100	0	20.4
0100-95-0464	0	NDA	100	0	20.5
0100-95-0465	0	NDA	100	0	20.4
0100-95-0466	0	NDA	100	0	20.5
0100-95-0467	0	NDA	100	0	20.3
0100-95-0480	0	NDA	NDA	NA	NA
0100-95-0481	0	NDA	NDA	NA	NA
0100-95-0482	0	NDA	NDA	NA	NA
0100-95-0483	0	NDA	NDA	NA	NA
0100-95-0486	0	NDA	NDA	NA	NA
0100-95-0526	0	0	100	NA	NA
0100-95-0628	0	NDA	100	NA	NA
0100-95-0673	0	NDA	400	NA	NA
0100-95-0674	0	NDA	110	NA	NA
0100-95-0676	0	NDA	110	NA	NA
0100-95-0677	0	NDA	110	NA	NA
0100-95-0696	0	NDA	200	NA	NA
0100-95-0697	0	NDA	200	NA	NA
0100-95-0698	0	NDA	NDA	NA	NA
0100-95-0699	0	NDA	200	NA	NA
0100-95-0914	0	NDA	NDA	NA	NA
0100-95-0915	0	NDA	NDA	NA	NA

Notes:
PID - photo ionization detector
ppm - parts per million
cpm - counts per minute
NDA - no detectable activity
CGI - combustible gas indicator
LEL - lower explosive limit

ATTACHMENT E

TABLE C-7 AMENDED

SAMPLES WITH AT LEAST ONE INORGANIC ANLYTE CONCENTRATION EXCEEDING BACKGROUND THRESHOLD CONCENTRATION IN SITE-CHARACTERIZATION SAMPES FROM PRS 0-30(m)*

		ANTIMONY (mg/kg)	ARSENIC (mg/kg)	BARIUM (mg/kg)	BERYLLIUM (mg/kg)	CADMIUM (mg/kg)	CHROMIUM (mg/kg)	COPPER (mg/kg)	LEAD (mg/kg)	MERCURY (mg/kg)	NICKEL (mg/kg)	SILVER (mg/kg)	URANIUM (mg/kg)	ZINC (mg/kg)
	SAL[a]	31	N/A[b]	5 300	N/A	38	211	2 800	400	23	1 500	380	230	23 000
LABORATORY ANALYSIS														
LOCATION ID	SAMPLE ID	ANTIMONY (mg/kg)	ARSENIC (mg/kg)	BARIUM (mg/kg)	BERYLLIUM (mg/kg)	CADMIUM (mg/kg)	CHROMIUM (mg/kg)	COPPER (mg/kg)	LEAD (mg/kg)	MERCURY (mg/kg)	NICKEL (mg/kg)	SILVER (mg/kg)	URANIUM (mg/kg)	ZINC (mg/kg)
UTL[c]	n/a[d]	1	7.82	315	1.95	2.7	19.3	15.5	23.3	0.1	15.2	N/A	N/A	50.8
00-04245	0100-95-0466	3.9	5.3	250	1.1	3.8	14.8	520(J)[g]	289	3.1	169.23	2.5537	NA[f]	645(J)
00-04322	0100-95-0526	3.24	4.48	244	9.964	16.76	26.34	4 404.18	1 650	29.2	145.76	7.1	NA	1 519.75
00-04322	0100-95-0628	9.5	5.3	350	8.1	11.9	21.2	853	444	32.2	20.6	9.6	NA	2 980
00-04426	0100-95-0673	22.3	10.4	228	2.7	121	84.3	3120	12 600	0.08	1 110	17.5	NA	951

TABLE C-7 AMENDED (CONTINUED)

SAMPLES WITH AT LEAST ONE INORGANIC ANLYTE CONCENTRATION EXCEEDING BACKGROUND THRESHOLD CONCENTRATION IN SITE-CHARACTERIZATION SAMPES FROM PRS 0-30(m)*

		ANTIMONY (mg/kg)	ARSENIC (mg/kg)	BARIUM (mg/kg)	BERYLLIUM (mg/kg)	CADMIUM (mg/kg)	CHROMIUM (mg/kg)	COPPER (mg/kg)	LEAD (mg/kg)	MERCURY (mg/kg)	NICKEL (mg/kg)	SILVER (mg/kg)	URANIUM (mg/kg)	ZINC (mg/kg)
	SAL[a]	31	N/A[b]	5 300	N/A	38	211	2 800	400	23	1 500	380	230	23 000
XRF[e] ANALYSIS														
LOCATION ID	SAMPLE ID	ANTIMONY (mg/kg)	ARSENIC (mg/kg)	BARIUM (mg/kg)	BERYLLIUM (mg/kg)	CADMIUM (mg/kg)	CHROMIUM (mg/kg)	COPPER (mg/kg)	LEAD (mg/kg)	MERCURY (mg/kg)	NICKEL (mg/kg)	SILVER (mg/kg)	URANIUM (mg/kg)	ZINC (mg/kg)
UTL	n/a	1.59[h]	10.81[h]	828.9[h]	N/A	1.7	71.07[h]	15.5	56[h]	0.1	15.2	N/A	6.7[h]	146.2[h]
00-04305	0100-95-0480	<4	11	462	NA	<3	19	17	80	<5	17	NA	<8	113
00-04305	0100-95-0481	<4	<4	221	NA	<3	<12	8	15	<5	<13	NA	<8	51
00-04306	0100-95-0482	<4	<4	274	NA	<3	<12	16	31	<5	<13	NA	<8	79
00-04326	0100-95-0677	<4	<4	331	NA	3.13	32.8	97.9	77.8	<5	20.1	NA	35.4	237
00-04322	0100-95-0526	22.5	<4	854	NA	17.7	105	2557	768	41.8	14.1	NA	201	1 904
00-04426	0100-95-0673	8.85	<4	552	NA	7.87	77.6	979	317	<5	<13	NA	90	736
00-04326	0100-95-0674	4.3	<4	404	NA	<3	44.9	28.6	75.8	<5	<13	NA	31.5	224
00-04326	0100-95-0676	<4	<4	396	NA	<3	44.5	65.9	96.5	<5	<13	NA	25.9	265
00-04245	0100-95-0464	21.4	<4	624	NA	6.56	52.8	267	499	<5	<13	NA	39.5	975

TABLE C-7 AMENDED (CONTINUED)

SAMPLES WITH AT LEAST ONE INORGANIC ANLYTE CONCENTRATION EXCEEDING BACKGROUND THRESHOLD CONCENTRATION IN SITE-CHARACTERIZATION SAMPES FROM PRS 0-30(m)*

		ANTIMONY (mg/kg)	ARSENIC (mg/kg)	BARIUM (mg/kg)	BERYLLIUM (mg/kg)	CADMIUM (mg/kg)	CHROMIUM (mg/kg)	COPPER (mg/kg)	LEAD (mg/kg)	MERCURY (mg/kg)	NICKEL (mg/kg)	SILVER (mg/kg)	URANIUM (mg/kg)	ZINC (mg/kg)
	SAL	31	N/A	5 300	N/A	38	211	2 800	400	23	1 500	380	230	23 000
XRF ANALYSIS														
LOCATION ID	SAMPLE ID	ANTIMONY (mg/kg)	ARSENIC (mg/kg)	BARIUM (mg/kg)	BERYLLIUM (mg/kg)	CADMIUM (mg/kg)	CHROMIUM (mg/kg)	COPPER (mg/kg)	LEAD (mg/kg)	MERCURY (mg/kg)	NICKEL (mg/kg)	SILVER (mg/kg)	URANIUM (mg/kg)	ZINC (mg/kg)
UTL	n/a	1.59[h]	10.81[h]	828.9[h]	N/A	1.7	71.07[h]	15.5	56[h]	0.1	15.2	N/A	6.7[h]	146.2[h]
00-04243	0100-95-0463	18.1	<4	596	NA	3.79	50.8	95.9	371	<5	<13	NA	11.7	626
00-04242	0100-95-0461	49.3	4.13	700.2	NA	5.59	40.5	72.9	306	<5	<13	NA	8.83	1 605
00-04327	0100-95-0454	<4	<4	70.3	NA	<3	3.94	<8	27.9	<5	<13	NA	9.23	73.2
00-04307	0100-95-0483	<4	<4	549	NA	<3	27	27	97	7	<13	NA	9	170
00-04307	0100-95-0486	7	<4	233	NA	<3	<12	<8	47	<5	<13	NA	8	82
00-04246	0100-95-0465	13	<4	623	NA	<3	33	64	191	<5	21	NA	<8	381
00-04243	0100-95-0462	21.7	22.4	731	NA	13	57.5	200	422	<5	20.3	NA	118	2 297

*All samples at PRS 0-030(m) have at least one analyte detected over the background threshold limit.

[a] SAL = Screening action level.

[b] N/A = Not available.

[c] UTL = Upper tolerance limit.

[d] n/a = Not applicable.

[e] XRF = X-ray flourescence spectroscopy

[f] NA = Not analyzed.

[g] J = The analyte was positively identified, but the associated numerical value is only an approximate concentration of the analyte in the sample.

[h] Background value taken from Longmire, Duffy, and Reneau, (Longmire et al. 1993, 0958) "Preliminary Background Elemental Concentrations In Bandelier Tuff and Selected Soil Series, 1993," Los Alamos National Laboratory unpublished report.

TABLE C-8, PART II
RADIONUCLIDES DATA EQUAL TO OR LESS THAN BACKGROUND THRESHOLD CONCENTRATIONS IN SITE-CHARACTERIZATION SAMPLES FROM PRS 0-030(m)

SAMPLE ID	LOCATION ID	Begin Depth	End Depth	Units	Request #	Method	Matrix	Analyte Description	Sample Results	Uncertainty	Units
0100-95-0467	00-04246	90	108	in.	868	H3	SOIL	Tritium	1580		pCi/l
0100-95-0673	00-04426	126	132	in.	792	GSCAN	SOIL	Americium-241	0.292	0.193	pCi/g
0100-95-0673	00-04426	126	132	in.	792	GSCAN	SOIL	Barium-140	-0.232	0.091	pCi/g
0100-95-0673	00-04426	126	132	in.	792	GSCAN	SOIL	Cerium-144	-0.065	0.126	pCi/g
0100-95-0673	00-04426	126	132	in.	792	GSCAN	SOIL	Cobalt-60	0.01	0.018	pCi/g
0100-95-0673	00-04426	126	132	in.	792	GSCAN	SOIL	Cesium-137	0.065	0.021	pCi/g
0100-95-0673	00-04426	126	132	in.	792	GSCAN	SOIL	Europium-152	0.043	0.098	pCi/g
0100-95-0673	00-04426	126	132	in.	792	GSCAN	SOIL	Sodium-22	0.021	0.02	pCi/g
0100-95-0673	00-04426	126	132	in.	792	GSCAN	SOIL	Neptunium-237	-0.007	0.029	pCi/g
0100-95-0673	00-04426	126	132	in.	792	GSCAN	SOIL	Ruthenium-106	-0.198	0.15	pCi/g
0100-95-0673	00-04426	126	132	in.	1123	ISOPU	SOIL	Plutonium-238	0.146	0.014	pCi/g
0100-95-0673	00-04426	126	132	in.	1123	ISOPU	SOIL	Plutonium-239	49.559	2.898	pCi/g
0100-95-0673	00-04426	126	132	in.	1123	ISOU	SOIL	Uranium-234	56.351	3.3575	pCi/g
0100-95-0673	00-04426	126	132	in.	1123	ISOU	SOIL	Uranium235, -236	2.432	0.202	pCi/g
0100-95-0673	00-04426	126	132	in.	1123	ISOU	SOIL	Uranium-238	56.793	3.3835	pCi/g

TABLE C-9 AMENDED

SAMPLES WITH AT LEAST ONE ORGANIC ANALYTE CONCENTRATION EXCEEDING EQLs[a] IN SITE-CHARACTERIZATION SAMPLES FROM PRS 0-030(m)*

LOCATION ID	SAMPLE ID	ACENAPHTHENE (mg/kg)	ALDRIN (mg/kg)	ANTHRACENE (mg/kg)	BENZO[a] ANTHRACENE (mg/kg)	BENZO[a] PYRENE (mg/kg)	BENZO[b] FLUORANTHENE (mg/kg)
SAL[b]	n/a[c]	360	0.026	19	0.61	0.061	0.61
00-04327	0100-95-0454	0.41(U)[d]	0.002(U)	0.41(U)	0.41(U)	0.41(U)	0.41(U)
00-04242	0100-95-0461	0.65(U)	0.00292(U)	0.45(J)[e]	0.46(J)	0.32(J)	0.28(J)
00-04243	0100-95-0462	0.14(J)	0.00874	0.15(J)	0.62(U)	0.62(U)	0.62(U)
00-04243	0100-95-0463	1.5(U)	0.00248(U)	1.1	0.91	0.59	0.65
00-04245	0100-95-0464	0.68(U)	0.00253(U)	0.31(J)	0.23(J)	0.19(J)	0.26(J)
00-04246	0100-95-0465	0.86	0.0029(U)	0.77	0.63	0.41(J)	0.45(J)
00-04305	0100-95-0480	0.36(U)	0.0924(U)	0.36(U)	0.36(U)	0.36(U)	0.36(U)
00-04305	0100-95-0481	0.3(U)	0.00177(U)	0.34(U)	0.34(U)	0.34(U)	0.34(U)
00-04306	0100-95-0482	0.30(U)	0.00179(U)	0.35(U)	0.35(U)	0.35(U)	0.35(U)
00-04307	0100-95-0483	0.44(U)	0.022(U)	0.44(U)	0.5	0.45	0.37(J)
00-04307	0100-95-0486	0.4(U)	0.021(U)	0.4(U)	0.4(U)	0.4(U)	0.4(U)
00-04322	0100-95-0526	0.52(U)	0.0055(U)	0.52(U)	0.52(U)	0.52(U)	0.52(U)
00-04426	0100-95-0673	0.43(U)	0.0022(U)	0.43(U)	0.43(U)	0.43(U)	0.43(U)
00-04326	0100-95-0674	0.43(U)	0.022(U)	0.062(J)	0.11(J)	0.1(J)	0.1(J)
00-04326	0100-95-0676	0.45(U)	0.045(U)	0.11(J)	0.19(J)	0.18(J)	0.15(J)
00-04326	0100-95-0677	0.41(U)	0.021(U)	0.046(J)	0.082(J)	0.089(J)	0.081(J)

TABLE C-9 AMENDED (CONTINUED)

SAMPLES WITH AT LEAST ONE ORGANIC ANALYTE CONCENTRATION EXCEEDING EQLs[a] IN SITE-CHARACTERIZATION SAMPLES FROM PRS 0-030(m)*

LOCATION ID	SAMPLE ID	BENZO[g,h,i] PERYLENE (mg/kg)	BENZO[k] FLUORANTHENE (mg/kg)	BIS(2-ETHYLHEXYL) PHTHALATE (mg/kg)	CHLORDANE [ALPHA-] (mg/kg)	CHLORDANE [GAMMA-] (mg/kg)	CHRYSENE (mg/kg)
SAL	n/a	N/A[f]	6.1	32	0.34	0.34	24
00-04327	0100-95-0454	0.41(U)	0.41(U)	0.41(U)	0.002(U)	0.002(U)	0.41(U)
00-04242	0100-95-0461	0.24(J)	0.34(J)	0.57(U)	0.0695	0.00292(U)	0.53(J)
00-04243	0100-95-0462	0.62(U)	0.62(U)	0.62(U)	0.0111	0.00318(U)	0.14(J)
00-04243	0100-95-0463	0.48(J)	0.82	0.48(U)	0.0199	0.0123	1.2
00-04245	0100-95-0464	0.49(J)	0.23(J)	0.49(U)	0.024	0.00253(U)	0.34(J)
00-04246	0100-95-0465	0.3(J)	0.46(J)	0.56(U)	0.0029(U)	0.0029(U)	0.89
00-04305	0100-95-0480	0.36(U)	0.36(U)	0.36(U)	0.00399	9.24(U)	0.15(J)
00-04305	0100-95-0481	0.34(U)	0.34(U)	0.34(U)	0.00177(U)	0.00177(U)	0.34(U)
00-04306	0100-95-0482	0.35(U)	0.35(U)	0.35(U)	0.00179(U)	0.00179(U)	0.35(U)
00-04307	0100-95-0483	0.21(J)	0.44(U)	0.44(U)	0.022(U)	0.022(U)	0.44(U)
00-04307	0100-95-0486	0.4(U)	0.4(U)	0.41(U)	0.021(U)	0.021(U)	0.4(U)
00-04322	0100-95-0526	0.52(U)	0.52(U)	0.14(J)	0.0027(U)	0.0027(U)	0.52(U)
00-04426	0100-95-0673	0.43(U)	0.43(U)	0.43(U)	0.013(U)	0.0022(U)	0.43(U)
00-04326	0100-95-0674	0.092(J)	0.11(J)	0.43(U)	0.022(U)	0.022(U)	0.12(J)
00-04326	0100-95-0676	0.15(J)	0.17 (J)	0.45(U)	0.045(U)	0.045(U)	0.2(J)
00-04326	0100-95-0677	0.073(J)	0.072(J)	0.41(U)	0.021(U)	0.021(U)	0.097(J)

TABLE C-9 AMENDED (CONTINUED)

SAMPLES WITH AT LEAST ONE ORGANIC ANALYTE CONCENTRATION EXCEEDING EQLs[a] IN SITE-CHARACTERIZATION SAMPLES FROM PRS 0-030(m)*

LOCATION ID	SAMPLE ID	DDD [p,p'-][g] (mg/kg)	DDE [p,p'-][h] (mg/kg)	DDT [p,p'-][i] (mg/kg)	DI-N-BUTYL PHTHALATE (mg/kg)	DI-N-OCTYL PHTHALATE (mg/kg)	DIBENZO-FURAN (mg/kg)
SAL	n/a	1.9	1.3	1.3	6 500	1 300	260
00-04327	0100-95-0454	0.0092	0.018	0.053	0.41(U)	0.41(U)	0.41(U)
00-04242	0100-95-0461	11	0.786	0.619	0.57(U)	0.57(U)	0.3(J)
00-04243	0100-95-0462	2.04	0.167	0.11	1.3	0.62(U)	0.62(U)
00-04243	0100-95-0463	6.54	0.232	0.689	0.48(U)	0.48	0.76
00-04245	0100-95-0464	6.25	0.364	0.263	0.43(J)	0.49(U)	0.26(J)
00-04246	0100-95-0465	17.5	0.358	0.312	0.56(U)	0.56(U)	0.58
00-04305	0100-95-0480	0.594	0.0993	0.672	0.36(U)	0.36(U)	0.36(U)
00-04305	0100-95-0481	0.00994	0.0049	0.0161	0.34(U)	0.34(U)	0.34(U)
00-04306	0100-95-0482	0.00826	0.0116	0.029	0.35(U)	0.35(U)	0.35(U)
00-04307	0100-95-0483	0.44	0.099	0.24	0.44(U)	0.44(U)	0.44(U)
00-04307	0100-95-0486	0.0995	0.0426	0.073	0.4(U)	0.4(U)	0.4(U)
00-04322	0100-95-0526	3.8(U)	0.26(U)	3.2(U)	2.6	0.52(U)	0.52(U)
00-04426	0100-95-0673	0.42(U)	0.2(U)	0.42(U)	0.43(U)	0.43(U)	0.43(U)
00-04326	0100-95-0674	0.23	0.33	0.66	0.075(J)	0.43(U)	0.43(U)
00-04326	0100-95-0676	0.26	0.3	1.1	0.45(U)	0.45(U)	0.45(U)
00-04326	0100-95-0677	0.095	0.16	0.28	0.41(U)	0.41(U)	0.41(U)

TABLE C-9 AMENDED (CONTINUED)

SAMPLES WITH AT LEAST ONE ORGANIC ANALYTE CONCENTRATION EXCEEDING EQLs[a] IN SITE-CHARACTERIZATION SAMPLES FROM PRS 0-030(m)*

LOCATION ID	SAMPLE ID	DIBENZO[a,h] ANTHRACENE (mg/kg)	DICHLORO BENZENE (1,4) [p-] (mg/kg)	DIELDRIN (mg/kg)	ENDOSULFAN I (mg/kg)	ENDRIN (mg/kg)
SAL	n/a	0.061	7.4	0.028	3.3	20
00-04327	0100-95-0454	0.41(U)	0.41(U)	0.004(U)	0.002(U)	0.004(U)
00-04242	0100-95-0461	0.57(U)	0.57(U)	0.00567(U)	0.00292(U)	0.179
00-04243	0100-95-0462	0.62(U)	0.62(U)	0.0133	0.00318(U)	0.0443
00-04243	0100-95-0463	0.48	0.48(U)	0.00481(U)	0.0288	0.0618
00-04245	0100-95-0464	0.49(U)	0.49(U)	0.00491(U)	0.00253(U)	0.0718
00-04246	0100-95-0465	0.16(J)	0.56(U)	0.00563(U)	0.0029(U)	0.00563(U)
00-04305	0100-95-0480	0.36(U)	0.36(U)	0.179(U)	0.0924(U)	0.00402
00-04305	0100-95-0481	0.34(U)	0.34(U)	0.00343(U)	0.00177(U)	0.00343(U)
00-04306	0100-95-0482	0.35(U)	0.35(U)	0.00347(U)	0.00179(U)	0.00347(U)
00-04307	0100-95-0483	0.44(U)	0.44(U)	0.043(U)	0.022(U)	0.043(U)
00-04307	0100-95-0486	0.4(U)	0.4(U)	0.04(U)	0.021(U)	0.04(U)
00-04322	0100-95-0526	0.52(U)	0.34(J)	0.0052(U)	0.0027(U)	0.017(U)
00-04426	0100-95-0673	0.43(U)	0.43(U)	0.0042(U)	0.0022(U)	0.01(U)
00-04326	0100-95-0674	0.43(U)	0.43(U)	0.044(U)	0.022(U)	0.044(U)
00-04326	0100-95-0676	0.45(U)	0.45(U)	0.09(U)	0.045(U)	0.09(U)
00-04326	0100-95-0677	0.41(U)	0.41(U)	0.041(U)	0.021(U)	0.041(U)

TABLE C-9 AMENDED (CONTINUED)

SAMPLES WITH AT LEAST ONE ORGANIC ANALYTE CONCENTRATION EXCEEDING EQLs[a] IN SITE-CHARACTERIZATION SAMPLES FROM PRS 0-030(m)*

LOCATION ID	SAMPLE ID	ENDRIN ALDEHYDE (mg/kg)	ENDRIN KETONE (mg/kg)	FLUORANTHENE (mg/kg)	FLUORENE (mg/kg)	HEPTACHLOR (mg/kg)	HEPTACHLOR EPOXIDE (mg/kg)
SAL	n/a	20	20	2 600	300	0.099	0.049
00-04327	0100-95-0454	0.004(U)	0.004(U)	0.41(U)	0.41(U)	0.002(U)	0.002(U)
00-04242	0100-95-0461	0.00567(U)	0.00569	1.7	0.61	0.00363	0.00292(U)
00-04243	0100-95-0462	0.00617(U)	0.00617(U)	0.43(J)	0.17(J)	0.00318(U)	0.00898
00-04243	0100-95-0463	0.00481(U)	0.00481(U)	3.3	1.5	0.00248(U)	0.00248(U)
00-04245	0100-95-0464	0.00491(U)	0.00491(U)	0.92	0.56	0.00253(U)	0.00253(U)
00-04246	0100-95-0465	0.00563(U)	0.00563(U)	2.5	1	0.0029(U)	0.0029(U)
00-04305	0100-95-0480	0.0213	0.179(U)	0.24(J)	0.36(U)	0.0924(U)	0.0924(U)
00-04305	0100-95-0481	0.00343(U)	0.00343(U)	0.34(U)	0.34(U)	0.00177(U)	0.00177(U)
00-04306	0100-95-0482	0.00347(U)	0.00347(U)	0.35(U)	0.35(U)	0.00179(U)	0.00179(U)
00-04307	0100-95-0483	0.043(U)	0.043(U)	0.56	0.44(U)	0.022	0.022(U)
00-04307	0100-95-0486	0.04(U)	0.04(U)	0.053(J)	0.4(U)	0.021(U)	0.021(U)
00-04322	0100-95-0526	0.01(U)	NA[j]	0.12(J)	0.52(U)	0.012(U)	0.01(U)
00-04426	0100-95-0673	0.0042(U)	NA	0.12(J)	0.43(U)	0.0022(U)	0.004(U)
00-04326	0100-95-0674	0.0057	0.044(U)	0.27(J)	0.43(U)	0.022(U)	0.022(U)
00-04326	0100-95-0676	0.09(U)	0.09(U)	0.47	0.45(U)	0.045(U)	0.045(U)
00-04326	0100-95-0677	0.041(U)	0.041(U)	0.2(J)	0.41(U)	0.021(U)	0.021(U)

TABLE C-9 AMENDED (CONTINUED)

SAMPLES WITH AT LEAST ONE ORGANIC ANALYTE CONCENTRATION EXCEEDING EQLs[a] IN SITE-CHARACTERIZATION SAMPLES FROM PRS 0-030(m)*

LOCATION ID	SAMPLE ID	INDENO [1,2,3-cd] PYRENE (mg/kg)	METHYL NAPHTHALENE [2-] (mg/kg)	METHYL PHENOL [4-] (mg/kg)	NAPHTHALENE (mg/kg)	PHENANTHRENE (mg/kg)	PYRENE (mg/kg)
SAL	n/a	0.61	n/a	330	800	n/a	2 000
00-04327	0100-95-0454	0.41(U)	0.41	0.41	0.41	0.41	0.41
00-04242	0100-95-0461	0.26(J)	0.33	0.36	0.43	2.3	1.8
00-04243	0100-95-0462	0.62(U)	0.28	0.55	0.2	0.65	0.37
00-04243	0100-95-0463	0.48	0.68	0.8	1.2	5.1	4.6
00-04245	0100-95-0464	0.14(J)	0.39	0.39	0.69	1.6	1
00-04246	0100-95-0465	0.29(J)	0.56	0.37	1.1	3.5	3.3
00-04305	0100-95-0480	0.36(U)	0.36	0.36	0.36	0.18	0.25
00-04305	0100-95-0481	0.34(U)	0.34	0.34	0.34	0.34	0.34
00-04306	0100-95-0482	0.35(U)	0.35	0.35	0.35	0.35	0.35
00-04307	0100-95-0483	0.17(J)	0.44	0.44	0.44	0.57	0.43
00-04307	0100-95-0486	0.4(U)	0.4	0.4	0.4	0.4	0.045
00-04322	0100-95-0526	0.52(U)	0.63	4.6	0.29	0.22	0.13
00-04426	0100-95-0673	0.43(U)	0.18	0.59	0.11	0.16	0.13

TABLE C-9 AMENDED (CONTINUED)

SAMPLES WITH AT LEAST ONE ORGANIC ANALYTE CONCENTRATION EXCEEDING EQLs[a] IN SITE-CHARACTERIZATION SAMPLES FROM PRS 0-030(m)*

LOCATION ID	SAMPLE ID	INDENO [1,2,3-cd] PYRENE (mg/kg)	METHYL NAPHTHALENE [2-] (mg/kg)	METHYL PHENOL [4-] (mg/kg)	NAPHTHALENE (mg/kg)	PHENANTHRENE (mg/kg)	PYRENE (mg/kg)
SAL	n/a	0.61	n/a	330	800	n/a	2 000
00-04326	0100-95-0674	0.082(J)	0.43	0.43	0.43	0.21	0.16
00-04326	0100-95-0676	0.14(J)	0.45	0.45	0.45	0.34	0.27
00-04326	0100-95-0677	0.065(J)	0.41	0.41	0.41	0.14	0.13

*All samples at PRS 0-030(m) have at least one analyte detected over their associated EQL.

[a] EQLs = Estimated quantitation limits.

[b] SAL = Screening action level.

[c] n/a = Not applicable.

[d] U = Undected quantity.

[e] J = Estimated quantity.

[f] N/A = Not available.

[g] DDD = Dichlorodiphenyldichloroethane.

[h] DDE = Dichlorodiphenyldichloroethylene.

[i] DDT = Dichlorodiphenyltrichloroethane.

[j] NA = Not analyzed.

TABLE C-10 AMENDED

INORGANIC XRF[a] DATA FOR ALL CONFIRMATORY SAMPLES FROM PRS 0-030(m)*

		ANTIMONY (mg/kg)	ARSENIC (mg/kg)	BARIUM (mg/kg)	CADMIUM (mg/kg)	CALCIUM (mg/kg)	CHROMIUM (mg/kg)	COPPER (mg/kg)	IRON (mg/kg)	LEAD (mg/kg)
	SAL[b]	31	N/A[e]	5 300	38	N/A	211	2 800	N/A	400
UTL[c]	n/a[d]	1.59[f]	10.81[f]	828.9[f]	1.7	8 380	71.07[f]	15.5	N/A	56 [f]
LOCATION ID	SAMPLE ID									
00-04371	0100-95-0914	-4	5.34	163	-3	0.22	-12	33.1	1.34	32.6
00-04372	0100-95-0915	-4	-4	93.8	-3	0.201	-12	55.8	1.15	32.2

TABLE C-10 AMENDED (CONTINUED)

INORGANIC XRF[a] DATA FOR ALL CONFIRMATORY SAMPLES FROM PRS 0-030(m)*

		MANGANESE (mg/kg)	MERCURY (mg/kg)	NICKEL (mg/kg)	POTASSIUM (mg/kg)	SELENIUM (mg/kg)	THALLIUM (mg/kg)	THORIUM (mg/kg)	URANIUM (mg/kg)	ZINC (mg/kg)
	SAL	3200	23	1 500	N/A	380	5.4	N/A	230	23 000
UTL	n/a	N/A	0.1	15.2	N/A	N/A	N/A	6.73[f]	N/A	146.2[f]
LOCATION ID	SAMPLE ID									
00-04371	0100-95-0914	249	-5	17.2	3.09	- 4	1037	14.1	20.4	332
00-04372	0100-95-0915	208	-5	-13	3.19	- 4	776	17.2	-8	130

*All samples at PRS 0-030(m) have at least one analyte detected over the background threshold limit.

[a] XRF = X-ray flourescence spectroscopy.

[b] SAL = Screening action level.

[e] N/A = Not available.

[c] UTL = Upper tolerance limit.

[d] n/a = Not applicable.

[f] = Background value taken from Longmire, Duffy, and Reneau, (Longmire et al. 1993, 0958) "Preliminary Background Elemental Concentrations In Bandelier Tuff and Selected Soil Series, 1993," Los Alamos National Laboratory unpublished report.

TABLE C-11, AMENDED
SAMPLES WITH AT LEAST ONE RADIONUCLIDE CONCENTRATION EXCEEDING BACKGROUND THRESHOLD CONCENTRATIONS IN CONFIRMATORY SAMPLES FROM PRS 0-030(m)

SAMPLE ID	LOCATION ID	Begin Depth	End Depth	Units	Request #	Method	Matrix	Analyte Desccription	Sample Results	Uncertainty	Units
0100-95-0914	00-04371	132	138	in.	1612	AM241	SOIL	Americium-241	0.027	0.007	pCi/g
0100-95-0914	00-04371	132	138	in.	1612	GSCAN	SOIL	Actinium-228	1.54	0.0999	pCi/g
0100-95-0914	00-04371	132	138	in.	1612	GSCAN	SOIL	Americium-241	-0.0174	0.0381	pCi/g
0100-95-0914	00-04371	132	138	in.	1612	GSCAN	SOIL	Annihilation Rad.	0.0801	0.0344	pCi/g
0100-95-0914	00-04371	132	138	in.	1612	GSCAN	SOIL	Barium-140	0.268	0.239	pCi/g
0100-95-0914	00-04371	132	138	in.	1612	GSCAN	SOIL	Bismuth-211	3.08	0.235	pCi/g
0100-95-0914	00-04371	132	138	in.	1612	GSCAN	SOIL	Bismuth-212	0.512	0.546	pCi/g
0100-95-0914	00-04371	132	138	in.	1612	GSCAN	SOIL	Bismuth-214	0.965	0.0784	pCi/g
0100-95-0914	00-04371	132	138	in.	1612	GSCAN	SOIL	Cadmium-109	1.95	0.419	pCi/g
0100-95-0914	00-04371	132	138	in.	1612	GSCAN	SOIL	Cerium-139	-0.0097	0.0115	pCi/g
0100-95-0914	00-04371	132	138	in.	1612	GSCAN	SOIL	Cerium-144	-0.13	0.0773	pCi/g
0100-95-0914	00-04371	132	138	in.	1612	GSCAN	SOIL	Cobalt-57	-0.0027	0.0081	pCi/g
0100-95-0914	00-04371	132	138	in.	1612	GSCAN	SOIL	Cobalt-60	-0.0163	0.0172	pCi/g
0100-95-0914	00-04371	132	138	in.	1612	GSCAN	SOIL	Cesium-134	-0.0054	0.0159	pCi/g
0100-95-0914	00-04371	132	138	in.	1612	GSCAN	SOIL	Cesium-137	0.0216	0.0144	pCi/g
0100-95-0914	00-04371	132	138	in.	1612	GSCAN	SOIL	Europium-152	-0.016	0.0348	pCi/g
0100-95-0914	00-04371	132	138	in.	1612	GSCAN	SOIL	Mercury-203	-0.0053	0.0181	pCi/g
0100-95-0914	00-04371	132	138	in.	1612	GSCAN	SOIL	Potassium-40	31.3	1.21	pCi/g
0100-95-0914	00-04371	132	138	in.	1612	GSCAN	SOIL	Lanthanum-140	-19.5	14.9	pCi/g
0100-95-0914	00-04371	132	138	in.	1612	GSCAN	SOIL	Manganese-54	-0.0037	0.0155	pCi/g
0100-95-0914	00-04371	132	138	in.	1612	GSCAN	SOIL	Sodium-22	0.0153	0.0147	pCi/g
0100-95-0914	00-04371	132	138	in.	1612	GSCAN	SOIL	Neptunium-237	0.551	0.118	pCi/g
0100-95-0914	00-04371	132	138	in.	1612	GSCAN	SOIL	Protactinium-231	2.42	0.44	pCi/g
0100-95-0914	00-04371	132	138	in.	1612	GSCAN	SOIL	Protactinium-233	0.0144	0.0227	pCi/g
0100-95-0914	00-04371	132	138	in.	1612	GSCAN	SOIL	Protactinium-234M	10.1	4.7	pCi/g
0100-95-0914	00-04371	132	138	in.	1612	GSCAN	SOIL	Lead-210	0.703	0.894	pCi/g
0100-95-0914	00-04371	132	138	in.	1612	GSCAN	SOIL	Lead-211	0.268	0.308	pCi/g
0100-95-0914	00-04371	132	138	in.	1612	GSCAN	SOIL	Lead-212	1.5	0.0714	pCi/g
0100-95-0914	00-04371	132	138	in.	1612	GSCAN	SOIL	Lead-214	1.16	0.0705	pCi/g
0100-95-0914	00-04371	132	138	in.	1612	GSCAN	SOIL	Radium-223	0.0973	0.238	pCi/g
0100-95-0914	00-04371	132	138	in.	1612	GSCAN	SOIL	Radium-224	3.82	0.533	pCi/g
0100-95-0914	00-04371	132	138	in.	1612	GSCAN	SOIL	Radium-226	3.66	0.58	pCi/g
0100-95-0914	00-04371	132	138	in.	1612	GSCAN	SOIL	Radon-219	0.204	0.141	pCi/g
0100-95-0914	00-04371	132	138	in.	1612	GSCAN	SOIL	Ruthenium-106	0	0.138	pCi/g
0100-95-0914	00-04371	132	138	in.	1612	GSCAN	SOIL	Selenium-75	-0.0015	0.0167	pCi/g

TABLE C-11, AMENDED
SAMPLES WITH AT LEAST ONE RADIONUCLIDE CONCENTRATION EXCEEDING BACKGROUND THRESHOLD CONCENTRATIONS IN CONFIRMATORY SAMPLES FROM PRS 0-030(m)

0100-95-0914	00-04371	132	138	in.	1612	GSCAN	SOIL	Tin-113	-0.0312	0.0162	pCi/g
0100-95-0914	00-04371	132	138	in.	1612	GSCAN	SOIL	Strontium-85	-0.126	0.0267	pCi/g
0100-95-0914	00-04371	132	138	in.	1612	GSCAN	SOIL	Thorium-227	-3.18	0.149	pCi/g
0100-95-0914	00-04371	132	138	in.	1612	GSCAN	SOIL	Thorium-234	3.19	0.447	pCi/g
0100-95-0914	00-04371	132	138	in.	1612	GSCAN	SOIL	Thallium-208	0.482	0.0363	pCi/g
0100-95-0914	00-04371	132	138	in.	1612	GSCAN	SOIL	Uranium-235	-0.214	0.0193	pCi/g
0100-95-0914	00-04371	132	138	in.	1612	GSCAN	SOIL	Yttrium-88	-0.02	0.0267	pCi/g
0100-95-0914	00-04371	132	138	in.	1612	GSCAN	SOIL	Zinc-65	-0.011	0.0355	pCi/g
0100-95-0914	00-04371	132	138	in.	1612	ISOPU	SOIL	Plutonium-238	0.004	0.015	pCi/g
0100-95-0914	00-04371	132	138	in.	1612	ISOPU	SOIL	Plutonium-239	0.112	0.015	pCi/g
0100-95-0915	00-04372	132	138	in.	1612	AM241	SOIL	Americium-241	0.025	0.006	pCi/g
0100-95-0915	00-04372	132	138	in.	1612	GSCAN	SOIL	Americium-241	0.0608	0.0366	pCi/g
0100-95-0915	00-04372	132	138	in.	1612	GSCAN	SOIL	Annihilation Rad.	0.102	0.033	pCi/g
0100-95-0915	00-04372	132	138	in.	1612	GSCAN	SOIL	Barium-140	0.2	0.0656	pCi/g
0100-95-0915	00-04372	132	138	in.	1612	GSCAN	SOIL	Bismuth-211	3.16	0.223	pCi/g
0100-95-0915	00-04372	132	138	in.	1612	GSCAN	SOIL	Bismuth-212	1.56	0.449	pCi/g
0100-95-0915	00-04372	132	138	in.	1612	GSCAN	SOIL	Bismuth-214	0.987	0.0761	pCi/g
0100-95-0915	00-04372	132	138	in.	1612	GSCAN	SOIL	Cadmium-109	1.81	0.435	pCi/g
0100-95-0915	00-04372	132	138	in.	1612	GSCAN	SOIL	Cerium-139	-0.0038	0.01	pCi/g
0100-95-0915	00-04372	132	138	in.	1612	GSCAN	SOIL	Cerium-144	0.0278	0.0707	pCi/g
0100-95-0915	00-04372	132	138	in.	1612	GSCAN	SOIL	Cobalt-57	-0.0025	0.00755	pCi/g
0100-95-0915	00-04372	132	138	in.	1612	GSCAN	SOIL	Cobalt-60	0.0028	0.0166	pCi/g
0100-95-0915	00-04372	132	138	in.	1612	GSCAN	SOIL	Cesium-134	-0.0162	0.0148	pCi/g
0100-95-0915	00-04372	132	138	in.	1612	GSCAN	SOIL	Cesium-137	-0.0045	0.0133	pCi/g
0100-95-0915	00-04372	132	138	in.	1612	GSCAN	SOIL	Europium-152	0.0127	0.0326	pCi/g
0100-95-0915	00-04372	132	138	in.	1612	GSCAN	SOIL	Mercury-203	0.0432	0.0215	pCi/g
0100-95-0915	00-04372	132	138	in.	1612	GSCAN	SOIL	Potassium-40	29.6	1.13	pCi/g
0100-95-0915	00-04372	132	138	in.	1612	GSCAN	SOIL	Lanthanum-140	-0.432	0.429	pCi/g
0100-95-0915	00-04372	132	138	in.	1612	GSCAN	SOIL	Manganese-54	0.0173	0.0145	pCi/g
0100-95-0915	00-04372	132	138	in.	1612	GSCAN	SOIL	Sodium-22	-0.002	0.0148	pCi/g
0100-95-0915	00-04372	132	138	in.	1612	GSCAN	SOIL	Neptunium-237	0.529	0.127	pCi/g
0100-95-0915	00-04372	132	138	in.	1612	GSCAN	SOIL	Protactinium-231	1.58	0.401	pCi/g
0100-95-0915	00-04372	132	138	in.	1612	GSCAN	SOIL	Protactinium-233	0.0036	0.0217	pCi/g
0100-95-0915	00-04372	132	138	in.	1612	GSCAN	SOIL	Protactinium-234M	0.31	3.6	pCi/g
0100-95-0915	00-04372	132	138	in.	1612	GSCAN	SOIL	Lead-210	0.975	0.883	pCi/g
0100-95-0915	00-04372	132	138	in.	1612	GSCAN	SOIL	Lead-211	0.249	0.294	pCi/g
0100-95-0915	00-04372	132	138	in.	1612	GSCAN	SOIL	Lead-212	1.44	0.0679	pCi/g

TABLE C-11, AMENDED
SAMPLES WITH AT LEAST ONE RADIONUCLIDE CONCENTRATION EXCEEDING BACKGROUND THRESHOLD CONCENTRATIONS IN CONFIRMATORY SAMPLES FROM PRS 0-030(m)

0100-95-0915	00-04372	132	138	in.	1612	GSCAN	SOIL	Lead-214	1.13	0.0674	pCi/g
0100-95-0915	00-04372	132	138	in.	1612	GSCAN	SOIL	Radium-223	-0.177	0.21	pCi/g
0100-95-0915	00-04372	132	138	in.	1612	GSCAN	SOIL	Radium-224	3.06	0.498	pCi/g
0100-95-0915	00-04372	132	138	in.	1612	GSCAN	SOIL	Radium-226	4.11	0.567	pCi/g
0100-95-0915	00-04372	132	138	in.	1612	GSCAN	SOIL	Radon-219	0.0762	0.135	pCi/g
0100-95-0915	00-04372	132	138	in.	1612	GSCAN	SOIL	Ruthenium-106	-0.0383	0.125	pCi/g
0100-95-0915	00-04372	132	138	in.	1612	GSCAN	SOIL	Selenium-75	0.0029	0.014	pCi/g
0100-95-0915	00-04372	132	138	in.	1612	GSCAN	SOIL	Tin-113	-0.0557	0.0145	pCi/g
0100-95-0915	00-04372	132	138	in.	1612	GSCAN	SOIL	Strontium-85	-0.074	0.0204	pCi/g
0100-95-0915	00-04372	132	138	in.	1612	GSCAN	SOIL	Thorium-227	-2.89	0.139	pCi/g
0100-95-0915	00-04372	132	138	in.	1612	GSCAN	SOIL	Thorium-234	4.18	0.444	pCi/g
0100-95-0915	00-04372	132	138	in.	1612	GSCAN	SOIL	Thallium-208	0.382	0.0343	pCi/g
0100-95-0915	00-04372	132	138	in.	1612	GSCAN	SOIL	Uranium-235	-0.249	0.0194	pCi/g
0100-95-0915	00-04372	132	138	in.	1612	GSCAN	SOIL	Yttrium-88	0.0142	0.0159	pCi/g
0100-95-0915	00-04372	132	138	in.	1612	GSCAN	SOIL	Zinc-65	-0.0183	0.0348	pCi/g
0100-95-0915	00-04372	132	138	in.	1612	ISOPU	SOIL	Plutonium-238	0.027	0.006	pCi/g
0100-95-0915	00-04372	132	138	in.	1612	ISOPU	SOIL	Plutonium-239	0.574	0.044	pCi/g

TABLE C-12, AMENDED
ORGANICS DATA FROM CONFIRMATORY SAMPLES FROM PRS 0-030(m)

SAMPLE ID	LOCATION ID	Begin Depth	End Depth	Units	Request#	Method	Matrix	Analyte Description	Sample Results	Units	Qual.
0100-95-0914	00-04371	132	138	in.	1611	PESTPCE	SOIL	Heptachlor Epoxide	2	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	PESTPCE	SOIL	Endosulfan Sulfate	4	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	PESTPCE	SOIL	Aroclor-1260	40	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	PESTPCE	SOIL	Aroclor-1254	40	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	PESTPCE	SOIL	Aroclor-1221	80	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	PESTPCE	SOIL	Aroclor-1232	40	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	PESTPCE	SOIL	Aroclor-1248	40	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	PESTPCE	SOIL	Aroclor-1016	40	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	PESTPCE	SOIL	Aldrin	2	ug/kg	J
0100-95-0914	00-04371	132	138	in.	1611	PESTPCE	SOIL	BHC[alpha-]	2	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	PESTPCE	SOIL	BHC[beta-]	2	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	PESTPCE	SOIL	BHC[delta-]	2	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	PESTPCE	SOIL	Endosulfan II	4	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	PESTPCE	SOIL	DDT[4,4'-]	4	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	PESTPCE	SOIL	Chlordane[alpha-]	2	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	PESTPCE	SOIL	Chlordane[gamma-]	2	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	PESTPCE	SOIL	Aroclor-1242	40	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	PESTPCE	SOIL	BHC[gamma-]	2	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	PESTPCE	SOIL	Dieldrin	4	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	PESTPCE	SOIL	Endrin	4	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	PESTPCE	SOIL	Methoxychlor[4,4'-]	20	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	PESTPCE	SOIL	DDD[4,4'-]	4	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	PESTPCE	SOIL	DDE[4,4'-]	4	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	PESTPCE	SOIL	Endrin Aldehyde	4	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	PESTPCE	SOIL	Heptachlor	2	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	PESTPCE	SOIL	Toxaphene (Technical Grade)	200	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	PESTPCE	SOIL	Endosulfan I	2	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Nitroaniline[4-]	1400	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Nitrophenol[4-]	4000	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Benzyl Alcohol	3200	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Bromophenyl-phenylether[4-]	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Azobenzene	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Dimethylphenol[2,4-]	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Methylphenol[4-]	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Dichlorobenzene[1,4-]	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Chloroaniline[4-]	3200	ug/kg	U

TABLE C-12, AMENDED
ORGANICS DATA FROM CONFIRMATORY SAMPLES FROM PRS 0-030(m)

0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Oxybis(1-chloropropane)[2,2'-]	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Phenol	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Pyridine	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Bis(2-chloroethyl)ether	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Bis(2-chloroethoxy)methane	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Bis(2-ethylhexyl)phthalate	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Di-n-octylphthalate	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Hexachlorobenzene	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Anthracene	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Trichlorobenzene[1,2,4-]	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Dichlorophenol[2,4-]	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Dinitrotoluene[2,4-]	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Pyrene	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Dimethyl Phthalate	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Dibenzofuran	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Benzo(g,h,i)perylene	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Indeno(1,2,3-cd)pyrene	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Benzo(b)fluoranthene	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Fluoranthene	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Benzo(k)fluoranthene	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Acenaphthylene	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Chrysene	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Benzo(a)pyrene	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Dinitrophenol[2,4-]	4000	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Dibenz(a,h)anthracene	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Dinitro-2-methylphenol[4,6-]	4000	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Dichlorobenzene[1,3-]	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Benzo(a)anthracene	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Chloro-3-methylphenol[4-]	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Dinitrotoluene[2,6-]	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Aniline	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Nitrosodimethylamine[N-]	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Nitroso-di-n-propylamine[N-]	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Benzoic Acid	8000	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Hexachloroethane	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Chlorophenyl-phenyl[4-] Ether	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Hexachlorocyclopentadiene	800	ug/kg	U

TABLE C-12, AMENDED
ORGANICS DATA FROM CONFIRMATORY SAMPLES FROM PRS 0-030(m)

0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Isophorone	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Acenaphthene	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Diethylphthalate	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Di-n-butylphthalate	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Phenanthrene	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Butylbenzylphthalate	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Nitrosodiphenylamine[N-]	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Fluorene	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Carbazole	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Hexachlorobutadiene	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Pentachlorophenol	4000	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Trichlorophenol[2,4,6-]	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Nitroaniline[2-]	4000	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Nitrophenol[2-]	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Naphthalene	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Methylnaphthalene[2-]	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Chloronaphthalene[2-]	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Dichlorobenzidine[3,3'-]	1600	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Benzidine	1600	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Methylphenol[2-]	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Dichlorobenzene[1,2-]	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Chlorophenol[2-]	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Trichlorophenol[2,4,5-]	4000	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Nitrobenzene	800	ug/kg	U
0100-95-0914	00-04371	132	138	in.	1611	SEMIN	SOIL	Nitroaniline[3-]	4000	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	PESTPCE	SOIL	Heptachlor Epoxide	1.9	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	PESTPCE	SOIL	Endosulfan Sulfate	3.9	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	PESTPCE	SOIL	Aroclor-1260	39	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	PESTPCE	SOIL	Aroclor-1254	39	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	PESTPCE	SOIL	Aroclor-1221	78	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	PESTPCE	SOIL	Aroclor-1232	39	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	PESTPCE	SOIL	Aroclor-1248	39	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	PESTPCE	SOIL	Aroclor-1016	39	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	PESTPCE	SOIL	Aldrin	1.9	ug/kg	J
0100-95-0915	00-04372	132	138	in.	1611	PESTPCE	SOIL	BHC[alpha-]	1.9	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	PESTPCE	SOIL	BHC[beta-]	1.9	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	PESTPCE	SOIL	BHC[delta-]	1.9	ug/kg	U

TABLE C-12, AMENDED
ORGANICS DATA FROM CONFIRMATORY SAMPLES FROM PRS 0-030(m)

0100-95-0915	00-04372	132	138	in.	1611	PESTPCE	SOIL	Endosulfan II	3.9	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	PESTPCE	SOIL	DDT[4,4'-]	3.9	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	PESTPCE	SOIL	Chlordane[alpha-]	1.9	ug/kg	J
0100-95-0915	00-04372	132	138	in.	1611	PESTPCE	SOIL	Chlordane[gamma-]	1.9	ug/kg	J
0100-95-0915	00-04372	132	138	in.	1611	PESTPCE	SOIL	Aroclor-1242	39	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	PESTPCE	SOIL	BHC[gamma-]	1.9	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	PESTPCE	SOIL	Dieldrin	3.9	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	PESTPCE	SOIL	Endrin	3.9	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	PESTPCE	SOIL	Methoxychlor[4,4'-]	19	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	PESTPCE	SOIL	DDD[4,4'-]	3.9	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	PESTPCE	SOIL	DDE[4,4'-]	3.9	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	PESTPCE	SOIL	Endrin Aldehyde	3.9	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	PESTPCE	SOIL	Heptachlor	1.9	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	PESTPCE	SOIL	Toxaphene (Technical Grade)	190	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	PESTPCE	SOIL	Endosulfan I	1.9	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Nitroaniline[4-]	1400	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Nitrophenol[4-]	3900	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Benzyl Alcohol	3100	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Bromophenyl-phenylether[4-]	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Azobenzene	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Dimethylphenol[2,4-]	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Methylphenol[4-]	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Dichlorobenzene[1,4-]	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Chloroaniline[4-]	3100	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Oxybis(1-chloropropane)[2,2'-]	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Phenol	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Pyridine	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Bis(2-chloroethyl)ether	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Bis(2-chloroethoxy)methane	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Bis(2-ethylhexyl)phthalate	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Di-n-octylphthalate	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Hexachlorobenzene	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Anthracene	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Trichlorobenzene[1,2,4-]	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Dichlorophenol[2,4-]	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Dinitrotoluene[2,4-]	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Pyrene	780	ug/kg	U

TABLE C-12, AMENDED
ORGANICS DATA FROM CONFIRMATORY SAMPLES FROM PRS 0-030(m)

0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Dimethyl Phthalate	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Dibenzofuran	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Benzo(g,h,i)perylene	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Indeno(1,2,3-cd)pyrene	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Benzo(b)fluoranthene	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Fluoranthene	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Benzo(k)fluoranthene	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Acenaphthylene	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Chrysene	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Benzo(a)pyrene	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Dinitrophenol[2,4-]	3900	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Dibenz(a,h)anthracene	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Dinitro-2-methylphenol[4,6-]	3900	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Dichlorobenzene[1,3-]	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Benzo(a)anthracene	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Chloro-3-methylphenol[4-]	1600	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Dinitrotoluene[2,6-]	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Aniline	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Nitrosodimethylamine[N-]	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Nitroso-di-n-propylamine[N-]	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Benzoic Acid	7800	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Hexachloroethane	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Chlorophenyl-phenyl[4-] Ether	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Hexachlorocyclopentadiene	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Isophorone	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Acenaphthene	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Diethylphthalate	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Di-n-butylphthalate	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Phenanthrene	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Butylbenzylphthalate	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Nitrosodiphenylamine[N-]	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Fluorene	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Carbazole	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Hexachlorobutadiene	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Pentachlorophenol	3900	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Trichlorophenol[2,4,6-]	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Nitroaniline[2-]	3900	ug/kg	U

TABLE C-12, AMENDED
ORGANICS DATA FROM CONFIRMATORY SAMPLES FROM PRS 0-030(m)

0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Nitrophenol[2-]	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Naphthalene	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Methylnaphthalene[2-]	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Chloronaphthalene[2-]	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Dichlorobenzidine[3,3'-]	1600	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Benzidine	1600	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Methylphenol[2-]	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Dichlorobenzene[1,2-]	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Chlorophenol[2-]	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Trichlorophenol[2,4,5-]	3900	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Nitrobenzene	780	ug/kg	U
0100-95-0915	00-04372	132	138	in.	1611	SEMIN	SOIL	Nitroaniline[3-]	3900	ug/kg	U

ATTACHMENT F

PRS 0-030(m) Sample Summary

Sample ID	Location ID	Location Description	Depth (ft)	VOCs	SVOCs	PCBs	Pest.	XRF Metals	TAL Metals	Rad.[a]
0100-95-0454	00-04327 [b]	Outside and Below Tank (Composite)	10.5-11	X	X	X		X		X
0100-95-0461	00-04242	Inside Tank	7.5-9	X	X	X	X	X		X
0100-95-0462	00-04243	Inside Tank (Dupl. of 0463)	7.5-9	X	X	X	X	X		X
0100-95-0463	00-04243	Inside Tank	7.5-9	X	X	X	X	X		X
0100-95-0464	00-04245	Inside Tank	7.5-9	X	X	X	X	X		X
0100-95-0465	00-04246	Inside Tank	7.5-9	X	X	X	X	X		X
0100-95-0466	00-04245	Inside Tank (10% Metals)	7.5-9						X	
0100-95-0467	00-04246	Inside Tank (10% Tritium)	7.5-9							X
0100-95-0480	00-04305	Inside Outlet Pipe ~95 ft E. of Tank	11-11.2	X	X	X		X		X
0100-95-0481	00-04305	Below Outlet Pipe ~95 ft E. of Tank	11.3-11.5	X	X	X		X		X
0100-95-0482	00-04306	Below Outlet Pipe ~220 ft E. of Tank	11.3-11.5	X	X	X		X		X
0100-95-0483	00-04307	Inside Outlet Pipe S. of Tank	5.5-6	X	X	X		X		X
0100-95-0486	00-04307	Below Outlet Pipe S. of Tank	6-6.5	X	X	X		X		X
0100-95-0526[c]	00-04322	Below Tank	10.5-11	X	X	X		X	X	X
0100-95-0628	00-04322	Below Tank (10% Metals)	10.5-11						X	
0100-95-0673	00-04426	Below Tank	10.5-11	X	X	X		X	X	X
0100-95-0674	00-04326	Inside Inlet Pipe	5.5-6	X	X	X		X		X
0100-95-0676	00-04326	Inside Inlet Pipe (Dupl. of 0674)	5.5-6	X	X	X		X		X
0100-95-0677	00-04326	Below Inlet Pipe 1 ft N. of Tnk	6.5-7	X	X	X		X		X

PRS 0-030(m) Sample Summary

Sample ID	Location ID	Location Description	Depth (ft)	VOCs	SVOCs	PCBs	Pest.	XRF Metals	TAL Metals	Rad.[a]
0100-95-0696 [d]	00-04331	Waste Characterization	5-11	X	X	X			X	X
0100-95-0697 [d]	00-04332	Waste Characterization	5-11	X	X	X			X	X
0100-95-0698 [d]	00-04333	Waste Characterization	5-11	X	X	X			X	X
0100-95-0699 [d]	00-04334	Waste Characterization	5-11	X	X	X			X	X
0100-95-0914	00-04371	Below Tank Confirmatory	11-11.5	X	X	X		X		X
0100-95-0915	00-04372	Below Tank Confirmatory	11-11.5	X	X	X		X		X

[a] Radiological analyses consisted of any one or all of the following: gross alpha/beta/gamma, tritium, gamma spec./scan, AM241, and isotopic uranium/plutonium.

[b] Sample represents composite of locations 00-04327, 04328 and 04329.

[c] Samples also analyzed for TCLP metals.

[d] Sample also analyzed for corrosivity, reacitvity, free liquid and TCLP metals and organics.

ATTACHMENT G

LOS ALAMOS NATIONAL LABORATORY ENVIRONMENTAL RESTORATION PROGRAM

SAMPLE MANAGEMENT FACILITY | **CORE SAMPLE LOG**

Borehole ID [illegible] TA/OU [illegible] Drill Depth From [illegible] To 35 Page 1 of 2

Driller Mike Henke Box #(s) NA Start Date/Time 1215 / 12-4-95 End Date/Time 1430 / 12-4-95

Drilling Equip./Method HSA 7 1/4" I.D. Sampling Equip./Method Continuous Split Spoon

All Samples From This Location Will Be Filmed I.D. # 00-014373

Depth (feet)	Recovery (feet per feet / %)	Field Analytical Sample Number	Field Screening Results	Top/Bottom of Core in Box	Lithology-Petrology - Soil	Graphic Log	Lithologic Unit	Notes
0					Fill Material From 0-033 Tank Excavation. This Material Was Not Sampled			
10	2.0/2.0 100%	0100-95-0916	OVM-0.0 α=ND β/γ=ND	NA	Run #1, 10.3'-11.2', 1145, Sample Taken From 11.0 Ft. Loose To Consolidated, Very Lt. Gray To White Tuff. Strong Odor, Wet To Dry, Powdery Appearance.			Sample For TPH Only Via Chem Van Method 418.1
12	2.0/2.0 100%	0100-95-0917	OVM-84 α=NDA β/γ=	NA	Run #2, 14.7-16.7, 1320, Sample Collected From The 15 Ft. Mark. Core Is Loose To Consolidated, Loose Grading To Consolidated. Light Gray To Dark Gray Tuff. No Pumice Visible Present. Core Is Wet Grading To Dry.			TPH Via Chem Van.
15								
	2.0/2.0 100%	0100-95-0918	OVM-24 α=NDA β/γ=NDA	NA	Run #3, 18.0-20.4, 1520, Sample Collected From The 20 Ft. Mark, Same Lithology As The Last Two Samples.			
					Stop Drilling 1530, 12-4-95			
20	2.0/2.0 100%	0100-95-0919	OVM-49 α=NDA β/γ=NDA	NA	Run #4, 23.0'-25.0', 1040, Sample Was Collected At The 25 Ft. Mark. Cohesive Consolidated, Dark Grey To Light Gray Pumice Poor Ash Flow Tuff, Hydrocarbon Odor, Damp.			Weather For 12/5 Is Cool, ~ 65°F, Slight Breeze, Some High Clouds, No Precipitation.
25	2.0/2.0 100%	0100-95-0920	OVM-14 α=ND β/γ ND	NA	Run #5, 29-31 Ft. 1150 Sampled From The 30 Ft. Interval. Core Is Consolidated, Cohesive, Pumice Poor Ashflow Tuff Gray To Light Brown. Wet. Phenocrysts To 2mm. Slight Hydrocarbon Odor.			Break For Lunch 1200
30								
	2.0/2.0 100%	0100-95-0921	OVM-ND α=ND β/γ=ND	NA	Run #6, 34-35½, 1420, Sample From The 35 Ft. Interval. Cohesive, Consolidated, Brown. Clayey Tuff, Platy Structure, Little Visible Pumice, No Flow Odor, Wet.			1430, Stop Drilling For The Day.
35								

Weather: Sunny, Some High Clouds, No Breeze ~ 68°F (Noon)

Boring 001 Drilled Through Center of The Excavation, With The Tank Used To Ex.

Prepared by D. Frank Date 12-4-95 Checked By Alex Mora Date 12-20-95

LOS ALAMOS NATIONAL LABORATORY ENVIRONMENTAL RESTORATION PROGRAM

SAMPLE MANAGEMENT FACILITY

CORE SAMPLE LOG

Borehole ID 001 TA/OU 00 Drill Depth From 35 To 40 Page 2 of 2

Driller M. HENKE Box #(s) NA Start Date/Time 1500/12-4-95 End Date/Time 1500/12-4-95

Drilling Equip./Method NA, [illegible] Sampling Equip./Method CONTINUOUS SPLIT SPOON.

Depth (feet)	Recovery (feet per feet / %)	Field Anaytical Sample Number	Field Screening Results	Top/Bottom of Core in Box	Lithology-Petrology - Soil	Graphic Log	Lithologic Unit	Notes
35	2.0/2.0 100%	0100-95 0922	VOM: ND α = ND β/γ = ND	NA	FILL #7, 38-40, 1550, SAMPLED AT 40' CONSOLIDATED, COHESIVE LT BROWN TO LT GRAY TUFF. SOMEWHAT PLATY STRUCTURE NO VISIBLE CLASTS OR PUMICE, MOIST.			
40					FINISH DRILLING FOR THE DAY			
45								
50								

Prepared by D. FRANK Date 12-4-95 Checked By MARK MORA Date 12-20-95

LOS ALAMOS NATIONAL LABORATORY ENVIRONMENTAL RESTORATION PROGRAM

SAMPLE MANAGEMENT FACILITY | **CORE SAMPLE LOG**

Borehole ID 02 TA/OU O, FU-1 Drill Depth From 0 To 10 Page 1 of 4

Driller STEWART BROSS Box #(s) NA Start Date/Time 12-11-95/1000 End Date/Time 12-11-95/1100

Drilling Equip./Method 6" HOLLOW STEEM AUGER Sampling Equip./Method CONTINUOUS CORE BARREL

Depth (feet)	Recovery (feet per feet / %)	Field Anaytical Sample Number	Field Screening Results	Top/Bottom of Core In Box	Lithology-Petrology - Soil	Graphic Log	Lithologic Unit	Notes
0	3.5/5.0 RUN 1	0100-95 0923 at 3'	PID: 0	NA	0-6" TOPSOIL ROOTS, GRASS 6"-1.5' CRUSHED TUFF, REDDISH YELLOW (7.5 YR 7/6) 1.5-2.0' STRONG BROWN (3/4, 7.5YR) CLAY. DRY. LOW PLASTICITY. 2.0-2.4' LIGHT BROWN (6/4, 7.5YR) WEATHERED CLAYEY TUFF. DRY. 2.4'-3.5' GRAY (6N) TUFF, CRUSHED SLIGHTLY MOIST 3.5-5.0' NR. BARREL PLUGGED WITH CLAY.			1000
5	5.0/5.0 RUN 2	0100-95 0924 at 8'	PID: 0		5.0 - 10.0 MODERATELY WELDED IGNIMBRITE, WITH VITRIC AND DEVITRIFIED PUMICE, AND MODERATE TO RICH IN PHENOCRYSTS. SLIGHTLY TO WELL INDURATED. - 20% PUMICE LAPILLI, VITRIFIED AND DEVITRIFIED, BROWN (5/3, 7.5YR), RANGING FROM 0.3 mm TO 2.5 cm, AVERAGING 2.0 cm. - 30% PHENOCRYST, QUARTZ (90%), FELDSPARS (5%), SANIDINE (2%), OTHERS (3%). QTZ IS ANGULAR, CLEAR, RANGING FROM 0.1 TO 0.3 mm, AND AVERAGING 0.2 mm IN SIZE. - LITHICS NOT VISIBLE. - MATRIX IS LIGHT REDDISH BROWN (5YR6/3), ash, MODERATELY COHESIVE.			1030
10								

Prepared by ALEX MORA Date 12-18-95 Checked By [signature] Date 12/20/95

LOS ALAMOS NATIONAL LABORATORY ENVIRONMENTAL RESTORATION PROGRAM

SAMPLE MANAGEMENT FACILITY | **CORE SAMPLE LOG**

Borehole ID 02 TA/OU 0, FU-1 Drill Depth From 10 To 20 Page 2 of 4

Driller STUART BROSS Box #(s) NA Start Date/Time 12-11-95/1100 End Date/Time 12-11-95/1430

Drilling Equip./Method 6" HOLLOW STEM AUGER Sampling Equip./Method CONTINUOUS CORE BARREL

Depth (feet)	Recovery (feet per feet / %)	Field Analytical Sample Number	Field Screening Results	Top/Bottom of Core in Box	Lithology-Petrology - Soil	Graphic Log	Lithologic Unit	Notes
10	5.0/5.0	0100-95 0925 at 12'	PID: 0	NA	10-15 MODERATELY WELDED IGNIMBRITE V. TUFFACEOUS PINK DEVITRIFIED PUMICE, AND RICH IN PHENOCRYST. WELL INDURATED.			1100
11	RUN 3	0100-95 0926 at 13'			- 5% LITHIC LITHIC, VITRIFIED TUFF DEVITRIFIED LIGHT GRAY (7/N) RANGING FROM 2 TO 3 cm AND MEASURING 3 cm IN SIZE.			
12		0			- 35% PHENOCRYSTS. QUARTZ (90%) SEMI TRANSPARENT CLEAR, 1 TO 3 mm AND 2 mm AVERAGE IN SIZE. OTHER NOT IDENTIFIED PHENOCRYSTS (10%)			
13		0			- LITHICS NOT VISIBLE			
14					- MATRIX GRAY (5/N) ASH SLIGHTLY TO MODERATELY COHESIVE.			
15	5.0/5.0	0100-95 0927 at 17'	PID: 0	NA	15-20 SLIGHTLY WELDED IGNIMBRITE WITH VITRIFIED PUMICE AND MODERATE TO RICH IN PHENOCRYSTS SLIGHTLY INDURATED.			1300
16	RUN 4	0100-95 0928 at 19'			- 10% PUMICE, VITRIC, GRAY (5/N), RANGING FROM 4 TO 1 cm AND AVERAGING 3 cm IN SIZE.			
17		0			- 15% PHENOCRYSTS, QUARTZ (80%), CLEAR NODULES 1 mm IN SIZE. SANIDINE (5%) BLUISH, AVERAGING 1 mm IN SIZE. OTHER UNIDENTIFIED (15%)			
18					- LITHICS NOT OBSERVED			
19					- MATRIX WEAK RED (2.5 YR 5/3), ASH, MODERATELY COHESIVE.			
20								

Prepared by ALEX MORA Date 12-18-95 Checked By [signature] Date 12/21/95

LOS ALAMOS NATIONAL LABORATORY ENVIRONMENTAL RESTORATION PROGRAM

SAMPLE MANAGEMENT FACILITY | **CORE SAMPLE LOG**

Borehole ID 02 **TA/OU** 0, FU 1 **Drill Depth From** 20' **To** 30' **Page** 3 **of** 4

Driller STEWART BROS **Box #(s)** NA **Start Date/Time** 12-11-95/1400 **End Date/Time** 12-11-95/1430

Drilling Equip./Method 6" HOLLOW STEM AUGER **Sampling Equip./Method** CONTINUOUS CORE BARREL

Depth (feet)	Recovery (feet per feet / %)	Field Anaytical Sample Number	Field Screening Results	Top/Bottom of Core In Box	Lithology-Petrology - Soil	Graphic Log	Lithologic Unit	Notes
20	5.0/5.0	0100-95 0929	PID:0		20-25 S.M.A. EXCEPT: POMICES ARE STAINED.			1400
21	RUN 5	at 23.5'						
22								
23								
24	0	0						
25								
26	5.0/5.0 RUN 6	0100-95 0930 at 28'	PID:0		25-30 SLIGHTLY TO MODERATELY WELDED IGNIMBRITE WITH VITRIFIED PUMICE AND MODERATE PHENOCRYST CONTENT. WELL INDURATED. - 10% PUMICE LAPILLI, VITRIFIED, BROWN (7.5YR 5/2) RANGING FROM 1 TO 4 CM AND AVERAGING 3 CM IN SIZE. - 20% PHENOCRYSTS, QUARTZ (30%) CLEAR, 1 TO 4 mm and AVERAGING 2mm IN SIZE - LITHICS NOT OBSERVED. - MATRIX IS REDDISH GRAY (5YR, 5/2), ASH, MODERATELY COMPACT.			1420 28' FRACTURE 45° STAINED REDDISH.
27								
28								
29								
30								

Prepared by ALEX MORA **Date** 12-18-95 **Checked By** [signature] **Date** 12/20/95

LOS ALAMOS NATIONAL LABORATORY ENVIRONMENTAL RESTORATION PROGRAM

SAMPLE MANAGEMENT FACILITY | **CORE SAMPLE LOG**

Borehole ID 02 **TA/OU** 0, FU-1 **Drill Depth From** 30' **To** 40' **Page** 4 **of** 4

Driller STEWART BROSS **Box #(s)** NA **Start Date/Time** 12-11-95/1430 **End Date/Time** 12-11-95/1440

Drilling Equip./Method 6" HOLLOW STEM AUGER **Sampling Equip./Method** CONTINUOUS CORE BARREL.

Depth (feet)	Recovery (feet per feet / %)	Field Anaytical Sample Number	Field Screening Results	Top/Bottom of Core in Box	Lithology-Petrology - Soil	Graphic Log	Lithologic Unit	Notes
30	5.0/5.0 RUN 7	0100-95 0931 at 33'	PID=0	NA	30-35 S.A.A.			1430
31								
32								
33								
34								
35								
36	5.0/5.0 RUN 8	0100-95 0932 at 36' 0100-95 0933 at 38.5'	PID=0	NA	35-40 SLIGHTLY TO MODERATELY WELDED IGNIMBRITE WITH VITRIC AND DEVITRIFIED PUMICES AND MODERATE TO PHENOCRYST CONTENT. WELL INDURATED. - 5-25% PUMICES, VITRIFIED AND DEVITRIFIED, LIGHT BROWN (7.5YR 6/4) RANGING FROM 1 TO 4 CM AND MOSTLY 2 CM IN SIZE. - 20% PHENOCRYSTS, QUARTZ (35%) SANIDINE TRANSLUCENT 1 TO 3 MM AND MOSTLY 2 MM IN SIZE. - LITHICS NOT OBSERVED - MATRIX IS REDDISH GRAY (5YR 5/2), DRY SLIGHTLY GRAVEL.			1440 35' TO 37' BROWN PUMICE FRAGMENTS
37								
38								
39								
40					BOTTOM OF BOREHOLE AT 40'			

Prepared by ALEX MORA **Date** 12-18-95 **Checked By** [signature] **Date** 12/20/95

LOS ALAMOS NATIONAL LABORATORY ENVIRONMENTAL RESTORATION PROGRAM

SAMPLE MANAGEMENT FACILITY | **CORE SAMPLE LOG**

Borehole ID 03 TA/OU 0, FU-1 Drill Depth From 0 To 10 Page 1 of 4

Driller STEWART BROS Box #(s) NA Start Date/Time 12-12-95/0900 End Date/Time 12-12-95/0930

Drilling Equip./Method 6" HOLLOW STEM AUGER Sampling Equip./Method CONTINUOUS CORE BARREL

Depth (feet)	Recovery (feet per feet / %)	Field Analytical Sample Number	Field Screening Results	Top/Bottom of Core in Box	Lithology-Petrology - Soil	Graphic Log	Lithologic Unit	Notes
0	5.0/5.0 RUN 1	0108-95 0934 at 3'	PID = 0	NA	0-3.0' REDDISH BROWN SILTY CLAY ROOTS CLAY INCREASING TO BOTTOM. 3.0-5.0 NR.			0900
5	5.0/5.0 RUN 2	0109-95 0935 at 8'	PID = 0	NA	5.0-10.0 MODERATELY WELDED IGNIMBRITE WITH DEVITRIFIED PUMICE AND MODERATE TO RICH IN PHENOCRYSTS. SLIGHTLY INDURATED. - 5% PUMICE LAPILLI, DEVITRIFIED REDDISH BROWN (5YR 4/3) RANGING FROM 2 TO 5 CM AND AVERAGING 3 CM IN SIZE. - 20% PHENOCRYSTS. QUARTZ (90%) ANGULAR TRANSPARENT, 3 MM IN SIZE. - LITHICS NOT OBSERVED. - MATRIX IS REDDISH BROWN (5YR 4/3) ASH, SLIGHTLY TO MODERATELY COHESIVE.			0915
10								

Prepared by ALEX MORA Date 12-18-95 Checked By [signature] Date 12/21/95

LOS ALAMOS NATIONAL LABORATORY ENVIRONMENTAL RESTORATION PROGRAM

SAMPLE MANAGEMENT FACILITY | **CORE SAMPLE LOG**

Borehole ID 03 TA/OU 0, FU-1 Drill Depth From 10 To 20 Page 2 of 4

Driller STEWART BROSS Box #(s) NA Start Date/Time 12-12-95/0930 End Date/Time 12-12-95/1010

Drilling Equip./Method 6" HOLLOW STEM AUGER Sampling Equip./Method CONTINUOUS CORE BARREL

Depth (feet)	Recovery (feet per feet / %)	Field Analytical Sample Number	Field Screening Results	Top/Bottom of Core In Box	Lithology-Petrology - Soil	Graphic Log	Lithologic Unit	Notes
10	5.0/5.0 RUN 3	0100-95 0936 @ 14'	PID = 0	NA	10-15 S.A.A. EXCEPT: MATRIX IS GRAY (5YR, 5/1)			0930 14' FRACTURE, METAL REDDISH STAINED. 12-14 BROWN REDDISH STAINS.
11								
12								
13								
14								
15	5.0/5.0 RUN 4	0100-95 0937 @ 19'	PID = 0	NA	15-20 SLIGHTLY WELDED IGNIMBRITE DEVITRIFIED, MODERATE TO RICH PHENOCRYST CONTENT. SLOWLY TO WELL INDURATED. - 5% PUMICE CLASTS, DEVITRIFIED, GRAY (5/N), 3cm MODERATE IN SIZE - 20% PHENOCRYSTS. QUARTZ (90%), ANGULAR 1 TO 4mm IN SIZE. - NO VISIBLE LITHICS - MATRIX IS GRAY (5/N), DRY, SLIGHTLY COHESIVE.			1000
16								
17								
18								
19								
20								

Prepared by ALEX MORA Date 12-19-95 Checked By [signature] Date 12/20/95

LOS ALAMOS NATIONAL LABORATORY ENVIRONMENTAL RESTORATION PROGRAM

SAMPLE MANAGEMENT FACILITY

CORE SAMPLE LOG

Borehole ID 53 TA/OU O, FU-1 Drill Depth From 20 To 30 Page 3 of 4

Driller STEWART BROS Box #(s) NA. Start Date/Time 12-12-95/1010 End Date/Time 12-12-95/1100

Drilling Equip./Method 6" HOLLOW STEM AUGER Sampling Equip./Method COUTINOUS CORE BARREL

Depth (feet)	Recovery (feet per feet / %)	Field Anaytical Sample Number	Field Screening Results	Top/Bottom of Core in Box	Lithology-Petrology - Soil	Graphic Log	Lithologic Unit	Notes
20	50/50 RUN 5	0100-95 0939 at 24'	PID = 0	NA	20-25 S.A.A - PUMICES UP TO 5CM IN SIZE.			1010 83' FRACTURE, HEMATITE OLIVE STAINS 22.5 FRACTURE, HEMATITE OLIVE STAINS.
21								
22								
23								
24								
25	50/50 RUN 6	0100-95 0939 at 29'	PID = 0	NA	25-30 S.A.A - SANIDINE PRESENT (5% OF TOTAL PHENOCRYST CONTENT).			1100
26								
27								
28								
29								
30								

Prepared by ALEX MORA Date 12-18-95 Checked By [signature] Date 12/20/95

LOS ALAMOS NATIONAL LABORATORY ENVIRONMENTAL RESTORATION PROGRAM

SAMPLE MANAGEMENT FACILITY | **CORE SAMPLE LOG**

Borehole ID 03 TA/OU O.SU-1 Drill Depth From 30 To 40 Page 4 of 4

Driller STEWART BROS Box #(s) NA Start Date/Time 12-12-95/1110 End Date/Time 12-12-95/1130

Drilling Equip./Method 6" HOLLOW STEM AUGER Sampling Equip./Method CONTINUOUS CORE BARREL

Depth (feet)	Recovery (feet per feet / %)	Field Anaytical Sample Number	Field Screening Results	Top/Bottom of Core in Box	Lithology-Petrology - Soil	Graphic Log	Lithologic Unit	Notes
30	5.0/5.0 RUN 7	0100-95 0940 at 34.5	PID=0	NA	30-35 S.A.A.			1110 34.5' FRACTURE, 45° REDDISH CLAY LINDES.
31								
32								
33								
34								
35								
36	5.0/5.0 RUN 8	0100-95 0941.	PID=0		35-40' S.A.A. - MATRIX STAINED TO BE REDDISH BROWN 37.3 POORLY SORTED, SANDSTONE			1130 36.5' FRACTURE, METAL CLAY LINNED PRESENT 39' FRACTURE, 45° BROWN STAINED REDDISH BROWN CLAY LINNER.
37								
38								
39								
40					BOTTOM OF BOREHOLE.			

Prepared by ALEX MORA Date 12-18-95 Checked By [signature] Date 12/20/95

LOS ALAMOS NATIONAL LABORATORY ENVIRONMENTAL RESTORATION PROGRAM

SAMPLE MANAGEMENT FACILITY | **CORE SAMPLE LOG**

Borehole ID 04 **TA/OU** 0 FU-1 **Drill Depth From** 0 **To** 10 **Page** 1 **of** 4

Driller [illegible] **Box #(s)** NA **Start Date/Time** 12-12-95/1345 **End Date/Time** 12-12-95/1400

Drilling Equip./Method 6" HOLLOW STEM AUGER **Sampling Equip./Method** CONTINUOUS CORE BARREL

Depth (feet)	Recovery (feet per feet / %)	Field Anaytical Sample Number	Field Screening Results	Top/Bottom of Core in Box	Lithology-Petrology-Soil	Graphic Log	Lithologic Unit	Notes
0	2.5/5.0 RUN 1	NA	PID: 0	NA	0 2.5 REDDISH BROWN SANDY SILT. ROOTS ORGANIC MATTER. 2.5-5.0 NR.			1345
1								
2								
3								
4								
5	5.0/5.0 RUN 2	0100-95 0942 at 9'	PID: 0	NA	5.0 TO 6.5 REDDISH BROWN SANDY SILT. 6.5 TO 10 MODERATELY WELDED IGNIMBRITE WITH DEVITRIFIED PUMICE AND MODERATE PHENOCRYST CONTENT. MODERATELY INDURATED. - 5% PUMICE WHICH IS DEVITRIFIED, DULLY RED (2.5YR, 4/2). RANGING FROM 1 TO 3 cm IN SIZE AND AVERAGING 1 cm. - 20% PHENOCRYSTS. QUARTZ (90%) FELDSPAR TRANSPARENT. 1 TO 4 mm IN SIZE AND AVERAGING 3 mm. - LITHICS NOT OBSERVED - MATRIX IS DARK GRAY (5YR, 4/1) SLIGHTLY COHESIVE.			1400
6								
7								
8								
9								
10								

Prepared by ALEX MORA **Date** 12-19-95 **Checked By** [signature] **Date** 12/21/95

LOS ALAMOS NATIONAL LABORATORY ENVIRONMENTAL RESTORATION PROGRAM

SAMPLE MANAGEMENT FACILITY | **CORE SAMPLE LOG**

Borehole ID 04 **TA/OU** 0. FU-1 **Drill Depth From** 10 **To** 20 **Page** 2 **of** 4

Driller STEWART CROSS **Box #(s)** NA **Start Date/Time** 12-12-95/1400 **End Date/Time** 12-12-95/1445

Drilling Equip./Method 6" HOLLOW STEM AUGER **Sampling Equip./Method** CONTINUOUS CORE BARREL

Depth (feet)	Recovery (feet per feet / %)	Field Anaytical Sample Number	Field Screening Results	Top/Bottom of Core in Box	Lithology-Petrology - Soil	Graphic Log	Lithologic Unit	Notes
10	5.0/5.0 RUN 3	0100-95-0943 at 12' 0100-95-0944 at 14'	PID=0	NA	10-15 S.A.A. EXCEPT PUMICE ARE 3 CM. TO 0.25 AND [illegible] AT 11 TO 12'			1400 11-12 FRACTURE, 45° FILLED WITH REDDISH BROWN CLAY CLAY PLASTIC AND MOIST. 12-13 FRACTURE, 45° S.A.A. FRACTURE.
15	5.0/5.0 RUN 4	0100-95-0945 at 19'	PID=0	NA	15-20 S.A.A			1445
20								

Prepared by ALEX MORA Date 12-19-95 Checked By [signature] Date 12/20/95

LOS ALAMOS NATIONAL LABORATORY ENVIRONMENTAL RESTORATION PROGRAM

SAMPLE MANAGEMENT FACILITY | **CORE SAMPLE LOG**

Borehole ID 04 **TA/OU** 0-FU-1 **Drill Depth From** 20 **To** 30 **Page** 3 **of** 4

Driller STEWART GROSS **Box #(s)** NA **Start Date/Time** 12-12-95/1500 **End Date/Time** 12-12-95/1520

Drilling Equip./Method 6" HOLLOW STEM AUGER **Sampling Equip./Method** CONTINUOUS CORE BARREL

Depth (feet)	Recovery (feet per feet / %)	Field Anaytical Sample Number	Field Screening Results	Top/Bottom of Core in Box	Lithology-Petrology - Soil	Graphic Log	Lithologic Unit	Notes
20	5.0/5.0 RUN 5	0100-95-0946 at 23.5'	PID=0	NA	20-30 S.A.A. MATRIX DARK REDDISH GRAY (5YR 4/2).			1500
21								
22								
23								
24								
25	5.0/5.0 RUN 6	0100-95-0947 at 27.0; 0100-95-0948 at 28.5'	PID=0	NA	25-27 MODERATELY WELDED IGNIMBRITE WITH DEVITRIFIED PUMICE AND MODERATE IN VARIANCE. POORLY TO MODERATELY INDURATED. - 8% PUMICE SPHERICAL, DEVITRIFIED, DARK REDDISH GRAY (10R 3/1), RANGING FROM 1 to 3 cm, AND AVERAGING 2 cm IN SIZE. - 10% PHENOCRYSTS, QUARTZ (90%) SEMI-ANGULAR, CLEAR, 1 to 3 mm IN SIZE AND AVERAGING 2 mm IN SIZE. - LITHICS NOT OBSERVED - MATRIX IS DUSKY RED (2.5YR 3/3) 27-30 S.A.A. EXCEPT PUMICES DARK RED (2.5YR 4/6) AND MATRIX DARK RED (2.5YR 4/6).			1520
26								
27								
28								
29								
30								

Prepared by ALEX MORA **Date** 12-19-95 **Checked By** [signature] **Date** 12/20/95

LOS ALAMOS NATIONAL LABORATORY ENVIRONMENTAL RESTORATION PROGRAM

SAMPLE MANAGEMENT FACILITY

CORE SAMPLE LOG

Borehole ID 04 TA/OU 0 FU-1 Drill Depth From 30 To 40 Page 4 of 4

Driller STEWART BROSS. Box #(s) NA Start Date/Time 12-12-95/1545 End Date/Time 12-12-95/1600

Drilling Equip./Method 6" HOLLOW STEM AUGER Sampling Equip./Method CONTINUOUS CORE BARREL.

Depth (feet)	Recovery (feet per feet / %)	Field Anaytical Sample Number	Field Screening Results	Top/Bottom of Core in Box	Lithology-Petrology - Soil	Graphic Log	Lithologic Unit	Notes
30	5.0/5.0 RUN 7	0100-95 0949	PID=0	NA	30-35 S.A.A. EXCEPT: MATRIX IS DARK REDDISH GRAY (5YR 4/2).			1545
31								
32								
33								
34								
35	5.0/5.0 RUN 8	0100-95 0950	PID=0	NA	35-40 S.A.A.			1600
36								
37								
38								
39								
40					BOTTOM OF BOREHOLE AT 40'.			

Prepared by ALEX MARA Date 12-19-95 Checked By [signature] Date 12/20/95

LOS ALAMOS NATIONAL LABORATORY ENVIRONMENTAL RESTORATION PROGRAM

SAMPLE MANAGEMENT FACILITY | **CORE SAMPLE LOG**

Borehole ID 05 **TA/OU** 0, FU-1 **Drill Depth From** 0 **To** 10 **Page** 1 **of** 4

Driller STEWART BROSS. **Box #(s)** NA **Start Date/Time** 12-13-95/1000 **End Date/Time** 12-13-95/1030

Drilling Equip./Method 6" HOLLOW STEEM AUGER **Sampling Equip./Method** CONTINUOUS CORE BARREL

Depth (feet)	Recovery (feet per feet / %)	Field Anaytical Sample Number	Field Screening Results	Top/Bottom of Core in Box	Lithology-Petrology - Soil	Graphic Log	Lithologic Unit	Notes
0	3.5/5.0 RUN 1	0100-95-0951 at 4'.	PID=0	NA	0-1.5' ASPHALT 1.5-3.0 NR 3.0-5.0 BROWN CLAY WITH YELLOWISH SAND. DRY LOW PLASTICITY.			1000
1								
2								
3								
4								
5	5.0/5.0 RUN 2	0100-95-0952. at 8.5'	PID=0	NA	5'-6' BROWN CLAY WITH YELLOWISH SAND 6'-10 SLIGHTLY TO MODERATELY WELDED IGNIMBRITE WITH VITRIC PUMICE AND POOR TO MODERATE IN PHENOCRYSTS. SLIGHTLY INDURATED. – 5% PUMICE LAPILLI, VITRIC, LIGHT BLUISH GRAY (7/1), RANGING FROM 1 TO 3 CM, AND AVERAGING 1.5 CM IN SIZE. – 5% PHENOCRYST, QUARTZ (90%) SEMI-ANGULAR TRANSLUCID, RANGING FROM 1 TO 3 mm IN SIZE. OTHERS (10%). – LITHICS NOT OBSERVED. – MATRIX IS BLUISH GRAY (6/1), ASH, SLIGHTLY COHESIVE, AND BECOMING GRAY (5YR 6/1) TOWARD BOTTOM.			1015. FRACTURE. AT 7', 30° CLAY LINNED, BROWN CLAY WITH WHITE CALICHE.
6								
7								
8								
9								
10								

Prepared by ALEX MORA **Date** 12-18-95 **Checked By** [signature] **Date** 12/20/95

LOS ALAMOS NATIONAL LABORATORY ENVIRONMENTAL RESTORATION PROGRAM

SAMPLE MANAGEMENT FACILITY | CORE SAMPLE LOG

Borehole ID 05 TA/OU O. FU-1 Drill Depth From 10 To 20 Page 2 of 4

Driller STEWART GROSS. Box #(s) NA Start Date/Time 12-13-95/1025 End Date/Time 12-13-95 /1100

Drilling Equip./Method 6" HOLLOW STEM AUGER Sampling Equip./Method CONTINUOUS CORE BARREL

Depth (feet)	Recovery (feet per feet / %)	Field Anaytical Sample Number	Field Screening Results	Top/Bottom of Core In Box	Lithology-Petrology - Soil	Graphic Log	Lithologic Unit	Notes
10	5.0/5.0 RUN 3	0100-95-0953. at 14.5'	PID=0	NA	10-15' S.A.A EXCEPT: - MATRIX IS GRAY (7.5YR 6/1) AND - PHENOCRYSTS AVERAGE 4MM IN SIZE.			1025
11								
12								
13								
14								
15								
16	5.0/5.0 RUN 4	0100-95 0954 at 19'	PID=0	NA	15-20' S.A.A. EXCEPT: - PUMICE LAPILLI BROWN (7.5YR 4/2).			1030
17								
18								
19								
20					NO ENTRIES. SEE NEXT PAGE			

Prepared by ALEX MORA Date 12-18-95 Checked By [signature] Date 12/20/95

LOS ALAMOS NATIONAL LABORATORY ENVIRONMENTAL RESTORATION PROGRAM

SAMPLE MANAGEMENT FACILITY | **CORE SAMPLE LOG**

Borehole ID 05 TA/OU 0 . FU-1 Drill Depth From 20 To 30 Page 3 of 4

Driller STEWART GROSS. Box #(s) NA Start Date/Time 12-13-95/1100 End Date/Time 12-13-95/1130

Drilling Equip./Method 6" HOLLOW STEM AUGER Sampling Equip./Method SOP 06.24 - CONTINUOUS CORE BARREL

Depth (feet)	Recovery (feet per feet / %)	Field Anaytical Sample Number	Field Screening Results	Top/Bottom of Core in Box	Lithology-Petrology - Soil	Graphic Log	Lithologic Unit	Notes
20	5.0/5.0 RUN 5	0100-95-0955 at 23'	PID = 0	NA	20'-25' S.A.A. EXCEPT: - MATRIX IS GRAY (5/N).			1100 FRACTURE. FROM 22' TO 23' 50°, SLIGHTLY STAINED BROWN.
21								
22								
23		0						
24								
25	5.0/5.0 RUN 6	0100-95 0956 at 27'	PID = 0	NA.	25'-30' - SLIGHTLY WELDED IGNIMBRITE, WITH VITRIC AND DEVITRIFIED PUMICE, AND MODERATE IN PHENOCRYSTS. SLIGHTLY INDURATED. - 5% PUMICE LAPILLI, VITRIC AND DEVITRIFIED GRAY (5YR 6/1) RANGING FROM 1 TO 3 cm, AND AVERAGING 2 CM IN SIZE. ALSO DARK GRAY (5YR 4/1) PUMICES. - 10% PHENOCRYSTS, QUARTZ (90%), ANGULAR TO SEMI-ANGULAR, TRANSPARENT, AVERAGING 2 MM IN SIZE. - LITHICS NOT OBSERVED. - MATRIX IS GRAY (5YR 6/1) ASH, SLIGHTLY COHESIVE.			1120
26								
27		0						
28								
29								
30								

Prepared by ALEX MORA Date 12-18-95 Checked By [signature] Date 12/20/95

LOS ALAMOS NATIONAL LABORATORY ENVIRONMENTAL RESTORATION PROGRAM

SAMPLE MANAGEMENT FACILITY

CORE SAMPLE LOG

Borehole ID 05 TA/OU O, FU-1 Drill Depth From 30 To 40 Page 4 of 4

Driller STEWART BROS Box #(s) NA Start Date/Time 12-13-95/1130 End Date/Time 12-13-95/1200

Drilling Equip./Method 6" HOLLOW STEM AUGER Sampling Equip./Method CONTINUOUS CORE BARREL

Depth (feet)	Recovery (feet per feet / %)	Field Anaytical Sample Number	Field Screening Results	Top/Bottom of Core In Box	Lithology-Petrology - Soil	Graphic Log	Lithologic Unit	Notes
30	5.0/5.0 RUN 7	0100-95 0959 at 34'	PID=0	NA	30-35 S.A.A. 31.5-32.5 POORLY INDURATED.			1130
31								
32								
33								
34								
35	5.0/5.0 RUN 8	0100-95 0960 at 37'	PID=0	NA	35-37' NR. 37-40 S.A.A. POORLY TO NON INDURATED GRAY (5Y) SAND-LIKE IGNIMBRITE			1140
36								
37'								
38								
39								
40					BOTTOM OF BOREHOLE AT 40'.			1200

Prepared by ALEX MORA Date 12-18-95 Checked By [signature] Date 12/20/95

LOS ALAMOS NATIONAL LABORATORY ENVIRONMENTAL RESTORATION PROGRAM

SAMPLE MANAGEMENT FACILITY | **CORE SAMPLE LOG**

Borehole ID [illegible] TA/OU [illegible] Drill Depth From [illegible] To 35 Page [illegible] of 2

Driller [illegible] Box #(s) NA Start Date/Time [illegible] End Date/Time [illegible]

Drilling Equip./Method [illegible] Sampling Equip./Method [illegible]

ALL SAMPLES FROM THIS BORHOLE WILL BE FILED I.D. # [illegible]

Depth (feet)	Recovery (feet per feet / %)	Field Analytical Sample Number	Field Screening Results	Top/Bottom of Core In Box	Lithology-Petrology - Soil	Graphic Log	Lithologic Unit	Notes
0					FILL MATERIAL FROM 2-033 TANK EXCAVATION. THIS MATERIAL WAS NOT SAMPLED			
10	2.0/2.0 100%	0100-95-0916	OVM-0.0 α=ND β/γ=ND	NA	RUN #1, 10.3-11.2, 11 45, SAMPLE TAKEN FROM 11.0 FT. LOOSE TO CONSOLIDATED, VERY LT. GRAY TO WHITE TUFF STRONG ODOR, WET TO DRY, POWDERY APPEARANCE			SAMPLE FOR TPH ONLY VIA CHEM VAN METHOD 418.1
12	2.0/2.0 100%	0100-95-0917	OVM-54 α=NDA β/γ=	NA	RUN #2, 14.7-16.7, 13 20, SAMPLE COLLECTED FROM THE 15 FT MARK. CORE IS LOOSE TO CONSOLIDATED, LOOSE GRADING TO CONSOLIDATED LIGHT GRAY TO DARK GRAY TUFF, NO PUMICE VISIBLE PRESENT. CORE IS WET GRADING TO DRY.			TPH VIA CHEM VAN
15								
	2.0/2.0 100%	0100-95-0918	OVM-24 α=NDA β/γ=NDA	NA	RUN #3, 18.0-20.4, 1520 SAMPLE COLLECTED FROM THE 20 FT MARK, SAME LITHOLOGY AS THE LAST TWO SAMPLES.			
					S[illegible] FINISHED 15[illegible] 12 [illegible] 95			
20	2.0/2.0 100%	0100-95-0919	OVM-49 α=NDA β/γ=NDA	NA	RUN #4, 23.0-25.0, 1040, SAMPLE WAS COLLECTED AT THE 25 FT. MARK. COHESIVE CONSOLIDATED DARK GREY TO LIGHT GRAY PUMICE POOR ASH FLOW TUFF, HYDROCARBON ODOR, DAMP.			WEATHER FOR [illegible] IS [illegible] 65°F, SLIGHT BREEZE SOME HIGH CLOUDS, NO PRECIPITATION.
25	2.0/2.0 100%	0100-95-0920	OVM-14 α=ND β/γ=ND	NA	RUN #5, 29-31 FT. 1150 SAMPLED FROM THE 30 FT. INTERVAL. CORE IS CONSOLIDATED COHESIVE PUMICE POOR ASHFLOW TUFF GRAY TO LIGHT BROWN WET. PHENOCRYSTS TO 2MM SLIGHT HYDROCARBON ODOR.			BREAK FOR LUNCH 12:[illegible]
30								
	2.0/2.0 100%	0100-95-0921	OVM-ND α=ND β/γ=ND	NA	RUN #6, 34-35 FT, 1420 SAMPLE FROM THE 35 FT. INTERVAL. COHESIVE CONSOLIDATED. BROWN CLAYEY TUFF, PLATY STRUCTURE, LITTLE VISIBLE PUMICE, NO FLOW ODOR, WET.			[illegible] DRILLING FOR THE DAY
35								

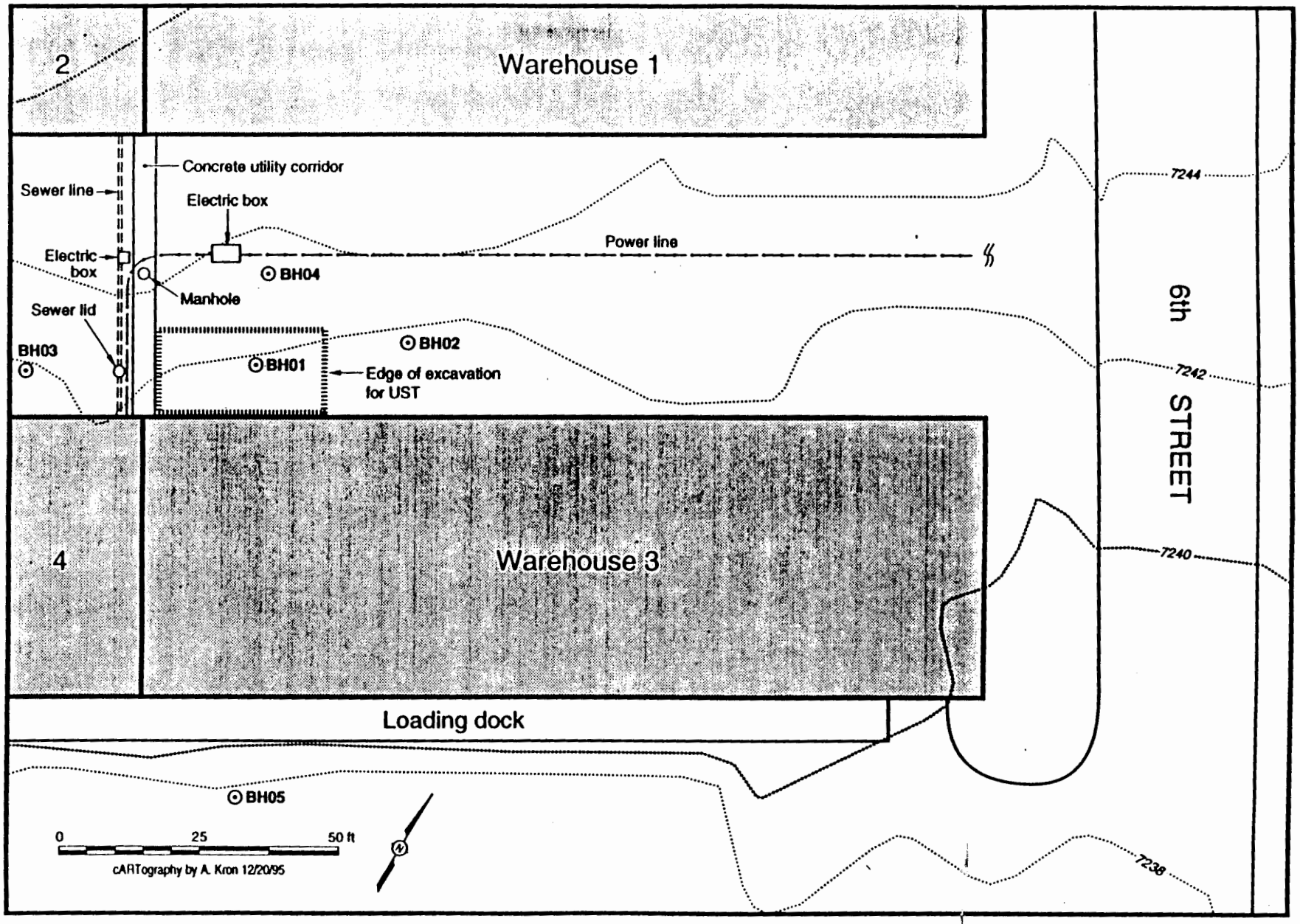
WEATHER [illegible] SOME HIGH CLOUDS, NO PRECIP. 65°F (NOON)

DURING ONE DRILLED THROUGH LAYER OF THE CONTAMINATED WHERE THE TANK USED TO BE

Prepared by [illegible] Date [illegible] Checked By MEX MORA Date [illegible]

ENCLOSURE FIVE

COREHOLE SAMPLE LOGS



Locations of boreholes at the underground storage tank, 6th Street warehouse.

ENCLOSURE FOUR

COREHOLE LOCATIONS

ATTACHMENT H

State of New Mexico
ENVIRONMENT DEPARTMENT
Underground Storage Tank Bureau
Harold Runnels Building
1190 St. Francis Drive, P.O. Box 26110
Santa Fe, New Mexico 87502
(505) 827-0188
(505) 827-0310 Fax

GARY E. JOHNSON
GOVERNOR

MARK E. WEIDLER
SECRETARY

EDGAR T. THORNTON, III
DEPUTY SECRETARY

January 23, 1996

Los Alamos National Laboratory
Joe Vozella, LAAO
Environment, Safety & Health Group
Mailstop A316
Los Alamos, NM 87545

RE: No Further Action Required at TA-0, 6th Street Site, Los Alamos National Laboratory, Los Alamos, New Mexico

Dear Mr. Vozella:

The New Mexico Environment Department has reviewed the 45 day Minimum Site Assessment Report received on January 18, 1996 for the above-referenced site. The Department has determined that this site does not pose an immediate public health or environmental threat for the following reasons:

1. The horizontal extent of soil contamination has been adequately defined. The vertical extent of soil contamination has been adequately defined and is greater than 900 feet above high static ground water.

2. Contaminated soils have been excavated and properly disposed.

3. Depth to ground water at the site is greater than 1000 feet below ground surface.

Based on this information, the Department requires no additional work at this time, although it reserves the right to do so should petroleum hydrocarbon contamination resulting in a threat to public health or the environment is discovered.

Thank you for your cooperation in this matter.

Sincerely,

Anthony Moreland
Geologist
Underground Storage Tank Bureau

cc: NMED District II Office
NMED Espanola Field Office
Jeff Carmichael, Los Alamos National Laboratory, ES&H Group, Mailstop K490, Los Alamos, New Mexico 87545

ATTACHMENT I

Los Alamos
NATIONAL LABORATORY

Hazardous & Solid Waste Group
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

Date: January 11, 1996
In Reply Refer To: ESH-19:96-0015
Mail Stop: K498
Telephone: (505) 665-2505

Anthony Moreland, Geologist
Remedial Action Section
Underground Storage Tank Bureau
New Mexico Environment Department
1190 St. Francis Drive
Harold Runnels Building
Santa Fe, New Mexico 87502

Dear Mr. Moreland:

SUBJECT: FORTY-FIVE DAY REPORT FOR FUEL OIL UST RELEASE AT TECHNICAL AREA 0, 6TH STREET

This letter transmits a forty-five day investigation report involving petroleum soil contamination associated with an underground storage tank (UST) located at Technical Area (TA) 0, 6th Street, near Warehouse Number Three. On November 13, 1995, the New Mexico Environment Department was notified that heating fuel oil contamination was discovered in the soil beneath the UST during a routine UST removal. The UST is owned by the Department of Energy.

The enclosed forty-five day investigation report and its associated enclosures will show that Los Alamos National Laboratory has determined the extent of the fuel oil contaminated soil at the TA-0, 6th Street UST site. If you have questions concerning this report, please contact me at (505) 665-2505.

The foregoing report was prepared under my supervision by qualified staff who are personally familiar with the information submitted in the report and the enclosed documents.

Sincerely,

Jeff Carmichael
Hazardous & Solid Waste

JAC:es

Enclosure: UST TA-0, 6th, Street Forty-Five Day Report

Cy: T. Grieggs, ESH-19, MS K498, w/o enc.
L. Hartman, EM/ER, MS E525, w/enc.
T. Taylor, LAAO, MS A316, w/enc.
RPF, EM/ER, MS M707, w/enc.
ESH-19 Circ File
C. Fesmire, LAAO, MS A316, w/enc.
J. Vozella, LAAO, MS A316, w/enc.
S. Calhoun, ERM/Golder, MS M327, w/enc.
CIC-10, MS A150

Los Alamos
NATIONAL LABORATORY

Hazardous & Solid Waste Group
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

UNDERGROUND STORAGE TANK

TA-0, 6TH STREET

FORTY-FIVE DAY REPORT

1.0 INTRODUCTION

The purpose of this report is to fulfill the forty-five day reporting requirements of Part XII, Section 1206 B., of the New Mexico Underground Storage Tank Regulations (USTR). Under this regulation, the forty-five day report was due on January 4, 1995. However, an extension of time was granted to January 11, 1996.

On November 13, 1995, Los Alamos National Laboratory (LANL) notified the New Mexico Environment Department (NMED) of a confirmed petroleum release. The release was discovered during a scheduled underground storage tank (UST) removal located at LANL's Technical Area (TA) 0. See *Enclosure One* for maps of LANL's property boundary, Technical Areas, and of the UST site. The UST is owned by the Department of Energy and was taken out of operation in the late 1960's. This UST was discovered by LANL's Environmental Management/Environmental Restoration Project. Listed below is a data summary regarding this UST and its removal:

UST DATA

• Name of UST	TA-0, 6th Street
• Physical Location of UST:	TA-0, North West Side of Warehouse # 3
• Age of UST:	Unknown
• UST Capacity:	5,000 Gallons
• Contents of UST:	Heating Fuel Oil
• Date Removed:	11-13-95
• NMED Inspector Present:	None

A visual inspection of the UST revealed one hole, approximately 2 inches in diameter, in the lower west end of the tank. The soil surrounding and beneath the UST was contaminated with fuel oil, but not highly contaminated. Soil samples collected beneath the UST have total petroleum hydrocarbons (TPH) concentrations ranging from approximately 3,000 to 10,800 mg/kg (ppm).

The excavation was backfilled with clean fill material to avoid structural damage to the adjacent warehouse foundation. Pursuant to Part XII, Section 1206 (B.), of the USTR, five boreholes were drilled and sampled. Analytical data from these boreholes was sufficient to define both the horizontal and vertical extent of the TPH affected area.

2.0 UST REMOVAL DETAILS

Excavation support during the UST removal was provided by Keers Environmental of Albuquerque, New Mexico. Oversight of the operations was provided by the Morrison Knudsen Corporation of Los Alamos, New Mexico, ERM/Golder Los Alamos Project Team, and LANL's Hazardous and Solid Waste Group (ESH-19).

An initial inspection found the UST to contain approximately 3,500 gallons of water and fuel oil, with approximately one foot of fuel oil floating on top of the water. These liquids were pumped out of the tank prior to commencing excavation activities and transported to Mesa Oil, Inc. for recycling *(See Manifest in Enclosure Two).*

A visual inspection of the UST revealed one hole, approximately 2 inches in diameter, in the lower west end of the tank. The piping associated with this tank, rose straight up from the tank approximately 18 inches, then made a 90 degree turn south, and penetrated the wall of the adjacent warehouse. The total length of pipe was approximately 15 feet. The UST's piping condition was only slightly corroded except for where the fill pipe attached to the UST. This area had significant corrosion. Furthermore, the fill pipe was found loose where it connected to the tank. It is speculated that surface water from rain events collected on the ground above the UST and over time penetrated into the UST through the loose fill pipe connection filling the tank.

A sufficient amount of tank pit backfill material was excavated to remove the tank and piping. The backfill material was obviously contaminated with fuel oil. Therefore, the remaining backfill material and concrete cradles on which the tank was resting were removed, and the tuff below the tank was excavated to a depth of approximately 11 feet. This tuff removal was voluntary because the tuff was not highly contaminated. The excavation was eventually stopped because of potential structural damage to the warehouse foundation to the south and the concrete utility corridor to the west. The final excavation was approximately 15 feet wide, 30 feet long, and 11 feet deep.

The UST and the concrete cradles were transported off-site by Keers. The UST was shipped to Eidson Steel Products, Inc. for recycling. The concrete cradles were disposed of by Keers. The excavated soil, totaling 55 cubic yards, was transported to Keers Solid Waste Management Facility located in Mountainair, New Mexico, for hydrocarbon soil farming. See *Enclosure Two* for copies of the disposal manifests.

During removal, an underground power line, was encountered above the UST and was temporarily rerouted during construction activities. An underground electric line also runs east-west about 15 feet north of the UST location at a depth of approximately 4 feet. Also, a north-south running sewer line is located about 6 feet west of the UST excavation at a depth of approximately five feet. A concrete encased utility corridor runs north-south immediately west of the UST excavation. No other utilities lines are located near the UST site. Utility corridor investigations revealed that they were not impacted by the TPH soil contamination.

3.0 EXCAVATION SAMPLING

Following removal of the UST, the contaminated fill material was removed and the tuff below the tank was removed to a depth of approximately 11 feet. Four samples of tuff from below the tank were then collected and submitted to LANL's mobile chemical analytical laboratory (MCAL) for TPH analysis using EPA SW-846, Method 418.1. Table 1 provides information regarding the sample IDs, depths, and analytical results.

TABLE 1
Excavation Bottom TPH Results

Sample ID	Sample Location/Depth	Analytical Data
0100-95-0736	West end / 11 feet	5,163 ppm
0100-95-0737	Southeast Corner / 11 feet	2,989 ppm
0100-95-0738	Northeast Corner / 11 feet	8,215 ppm
0100-95-0739	Southwest Corner / 11 feet	10,822 ppm

All samples were field screened for radioactivity and none was detected.

4.0 ON-SITE INVESTIGATION HORIZONTAL AND VERTICAL EXTENT OF CONTAMINATION

On December 4 through 13, 1995, five boreholes were advanced to a total depth of 40 feet to determine the extent of vertical and horizontal TPH contamination. Chain of custody forms and analytical data sheets are enclosed for all five soil borings as discussed in Tables 2-6 of this report *(See Enclosure Three)*. *Enclosure Four* contains a map showing the location of each borehole and *Enclosure Five* contains each corehole sample log.

Borehole 01

Borehole #01 was completed on December 4 and 5, 1995, near the center of the UST excavation. The fill material used to backfill the excavation was encountered from 0 to 10 feet. Gray and brown tuff was encountered from 10 to 40 feet. From 10 to 30 feet, the recovered core samples had a fuel oil odor and varied in moisture content. The core was particularly moist with water, although not exhibiting saturated conditions, within the zone from 30 to 35 feet. Samples were collected at approximately five-foot intervals and submitted for analysis of TPH using EPA SW-846, Method 418.1. This analytical method was used for evaluating all subsequent corehole samples. Analytical results showed elevated TPH concentrations from 11 feet to between 30 and 35 feet, with concentrations ranging from 148 to 5818 ppm (Table 2). Samples collected at 35 and 40 feet showed no detectable TPH concentrations.

TABLE 2
Borehole #01 TPH Results

Sample ID	Sample Depth (ft)	PID Value (ppm)	Analytical Data
0100-95-0916	11.0	0	4,237 ppm
0100-95-0917	16.0	89	4,541 ppm
0100-95-0918	20.0	24	1,119 ppm

0100-95-0919	25.0	49	5,818 ppm
0100-95-0920	30.0	0	148 ppm
0100-95-0921	35.0	0	ND
0100-95-0922	40.0	0	ND

Borehole 02

Borehole #02 was completed on December 11, 1995, approximately 15 feet east of the UST excavation. Reddish brown to gray, moderately welded tuff was encountered from near the surface to a depth of 40 feet. Occasional brown stains, believed to be iron oxide, were noticed on the recovered core. However, based on the analytical results these stains proved not to be related to TPH contamination. The recovered core did not have a fuel oil odor and moisture contents were low. Samples were collected at approximately five-foot intervals and where stains or other possible signs of TPH contamination were observed. Sample results showed no detectable TPH concentrations (Table 3).

TABLE 3
Borehole #02 TPH Results

Sample ID	Sample Depth (ft)	PID Value (ppm)	Analytical Data
0100-95-0923	3.0	0	ND
0100-95-0924	8.0	0	ND
0100-95-0925	12.0	0	ND
0100-95-0926	13.0	0	ND
0100-95-0927	17.0	0	ND
0100-95-0928	19.0	0	ND
0100-95-0929	23.5	0	ND
0100-95-0930	28.0	0	ND
0100-95-0931	33.0	0	ND
0100-95-0932	36.0	0	ND
0100-95-0933	38.5	0	ND

Borehole 03

Borehole #03 was completed on December 12, 1995, approximately 20 feet west of the UST excavation. Reddish brown to gray, moderately welded tuff with occasional brown clay lined fractures were encountered from near the surface to a depth of 40 feet. The recovered core had no fuel oil odor and moisture contents were low. Samples were collected at approximately every five-foot interval and where stains or other possible signs of contamination were observed. Sample results showed no detectable TPH concentrations (Table 4).

TABLE 4

Borehole #03 TPH Results

Sample ID	Sample Depth (ft)	PID Value (ppm)	Analytical Data
0100-95-0934	3.0	0	ND
0100-95-0935	8.0	0	ND
0100-95-0936	14.0	0	ND
0100-95-0937	19.0	0	ND
0100-95-0938	24.0	0	ND
0100-95-0939	29.0	0	ND
0100-95-0940	34.5	0	ND
0100-95-0941	39.0	0	ND

Borehole 04

Borehole #04 was completed on December 12, 1995, approximately 10 feet north of the UST excavation. Reddish brown to gray and dusky red, moderately welded tuff was encountered from near the surface to a depth of 40 feet. Reddish clay lined fractures were occasionally noted. Recovered core did not have a fuel oil odor and moisture contents were low. Samples were collected at approximately five-foot intervals and where stains or other possible signs of contamination were observed. Sample results showed no detectable TPH concentrations (Table 5).

TABLE 5

Borehole #04 TPH Results

Sample ID	Sample Depth (ft)	PID Value (ppm)	Analytical Data
0100-95-0942	8.0	0	ND
0100-95-0943	12.0	0	ND
0100-95-0944	14.0	0	ND
0100-95-0945	19.0	0	ND
0100-95-0946	23.5	0	ND
0100-95-0947	27.0	0	ND
0100-95-0948	28.5	0	ND
0100-95-0949	31.5	0	ND
0100-95-0950	38.0	0	ND

Borehole 05

Borehole #05 was completed on December 13, 1995, approximately 70 feet south of the UST excavation. Since 6th Street Warehouses #3 and #4 are adjacent to the south side of the UST excavation, it was necessary to locate borehole #05 on the south side of the building. Dark and light gray, moderately welded tuff was encountered from near the surface to a depth of 40 feet during drilling. Again samples were collected at approximately five-foot intervals. Recovered core had no fuel oil odor and moisture contents were low. Sample results showed no detectable TPH concentrations (Table 6).

TABLE 6

Borehole #05 TPH Results

Sample ID	Sample Depth (ft)	PID Value (ppm)	Analytical Data
0100-95-0951	4.0	0	ND
0100-95-0952	8.5	0	ND
0100-95-0953	14.5	0	ND
0100-95-0954	19.0	0	ND

0100-95-0955	23.0	0	ND
0100-95-0956	27.0	0	ND
0100-95-0959	34.0	0	ND
0100-95-0960	37.0	0	ND

4.1 Corehole Investigation Summary

Based on the analytical data, both the horizontal and vertical extent of TPH affected tuff have been defined, and at depth, the TPH concentrations do not exceed 5,818 ppm. Borehole #01 provides evidence that the TPH plume extends vertically to no deeper than 30 to 35 feet. The four surrounding boreholes indicate that there has been little if any horizontal movement of the TPH plume. There appears to be three primary reasons for this apparent lack of significant migration of the fuel oil: first, the moderately welded tuff lacks sufficient permeability for significant migration, second, the observed fractures in the tuff were mostly clay filled, thus inhibiting migration, and third, the moisture zone at a depth of 30 to 35 feet in borehole #01 has acted as a barrier to vertical migration.

5.0 UST REQUIRED INFORMATION

Depth to groundwater beneath TA-0 is approximately 1,000 feet. There are no private water supply wells within a 1000 foot radius or municipal water wells within an one mile radius of this UST removal site. Additionally, there are no surface water courses within 500 feet of this UST removal site. LANL has determined that the surrounding utility corridors were not impacted by the petroleum soil contamination. No potentially explosive fuel oil or harmful vapors have been detected in these corridors or in the vicinity of the release. This report also contains information that is required in Part XII, §1206 B., of the USTR *(See Enclosures 6 and 7).*

6.0 CONCLUSIONS

LANL has determined that there is no threat to human health and the environment from the fuel oil soil contamination. The extent of the contamination has now been defined. No highly contaminated soil was encountered during this investigation. Because the UST was abandoned in the late 1960's, LANL has no tank tightness or repair data on this UST. If you should require any additional information, please contact me at 665-2505.

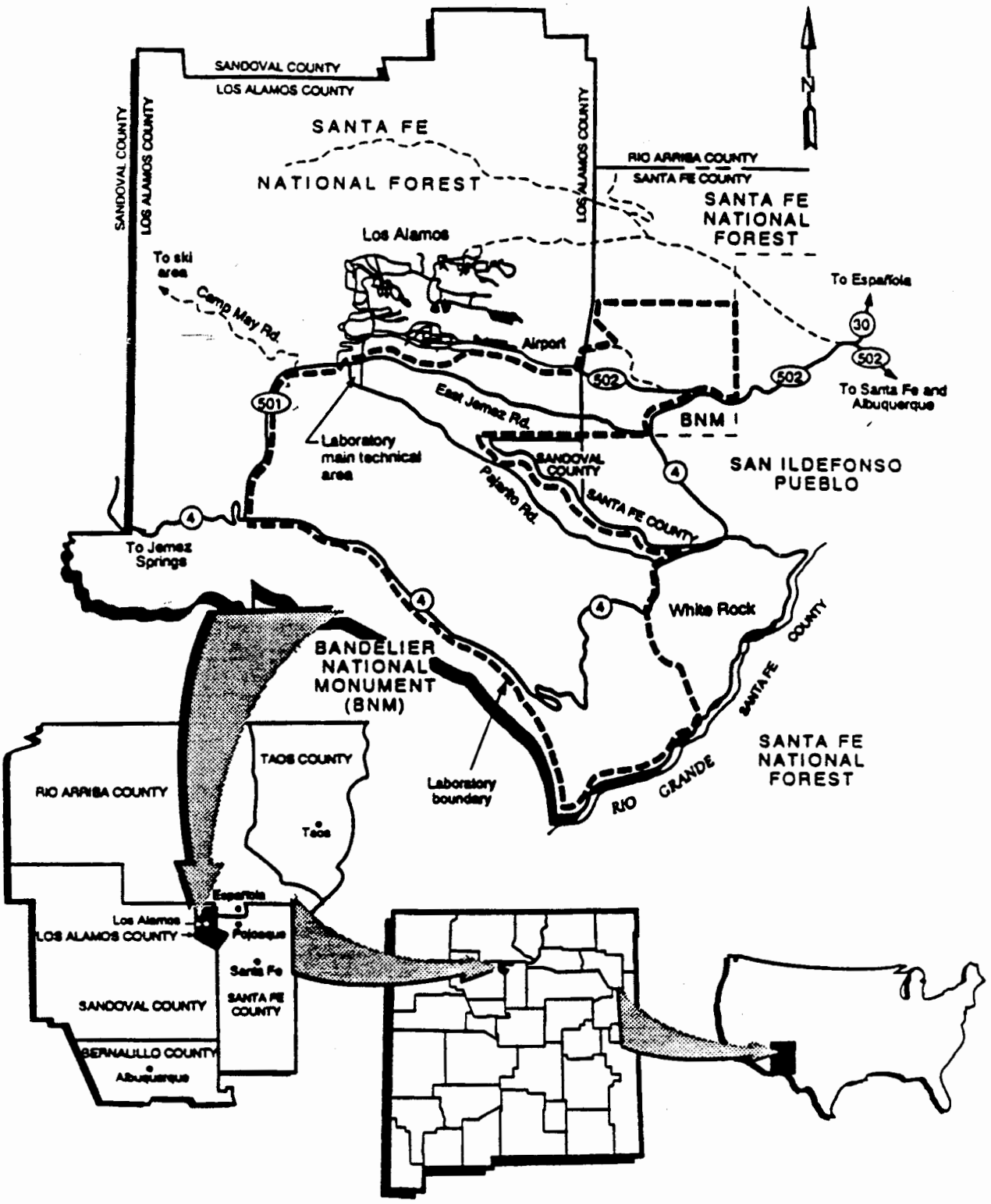
Enclosures:

1. Maps of LANL's Property Boundary, Technical Areas, and of the UST Site
2. Disposal Manifests
3. Chain of Custody and Corehole Sample Analytical Data Sheets
4. Corehole Locations
5. Corehole Sample Logs
6. LANL General Geology and Hydrology Information
7. Groundwater Wells and Other Penetrations and Drawings

ENCLOSURE ONE

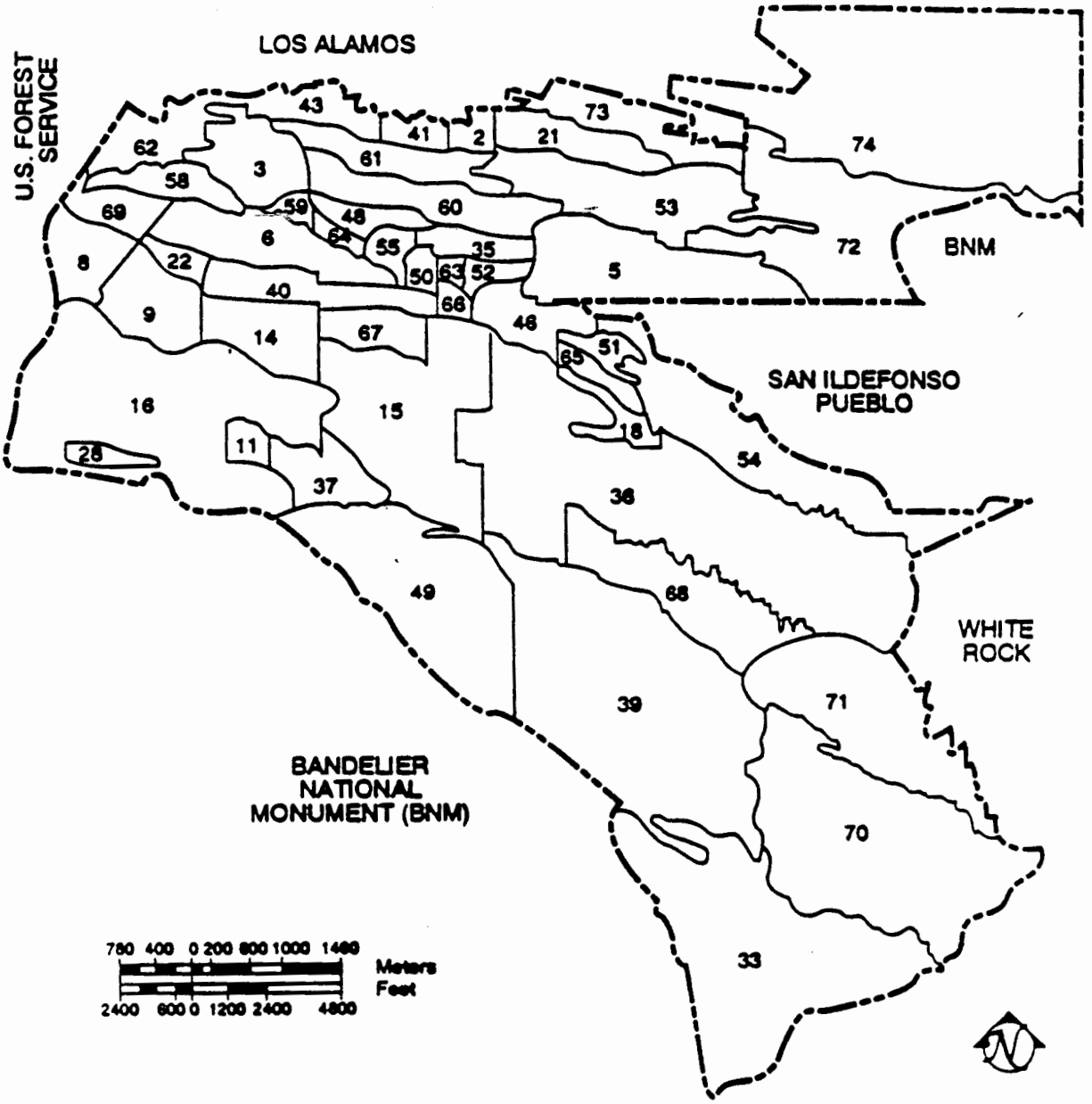
MAPS OF LANL'S PROPERTY BOUNDARY, TECHNICAL AREAS, AND UST SITE

Note: No surface impoundments or pit areas reside in the vicinity of this former UST.

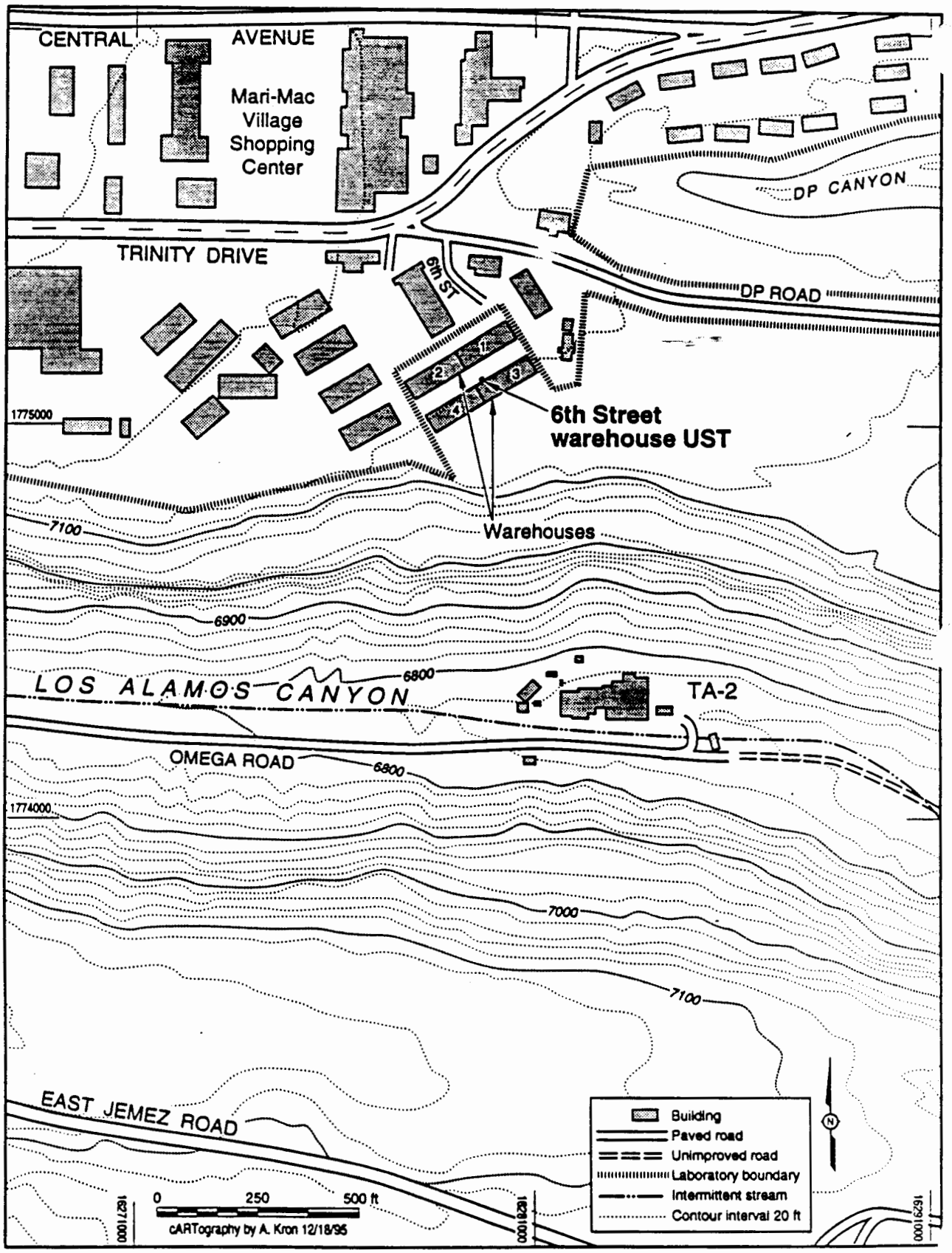


Regional location of Los Alamos National Laboratory.

TA-0 Is Located In The Town Site.



Technical areas (TAs) of Los Alamos National Laboratory in relation to surrounding landholdings.



Location of the 6th Street warehouse area (SWMU Group 0-1) in Los Alamos.

ENCLOSURE TWO

DISPOSAL MANIFESTS

KEERS ENVIRONMENTAL

NMED GROUND WATER DISCHARGE PERM

5904 FLORENCE AVE. NE
UQUERQUE, NM 87113
) 823-9006
1-800-327-2766
FAX (505) 823-2766

KEERS HYDROCARBON SOIL LAND FARM
14 MILES SOUTH ON HWY 55 FROM
MOUNTAINAIR, NEW MEXICO

GROUND WATER DISCHAR MIT
MANIFEST 0021

HYDROCARBON CONTAMINATED SOIL MANIFEST

PART I

GENERATOR NAME Los Alamos National Laboratory

GENERATOR ADDRESS P.O. Box 1663 MS J593

CITY/STATE/ZIP Los Alamos / NM / 87545

TELEPHONE 505-667-7579 FAX

TECHNICAL FIRM Keers

TECHNICAL CONTACT Dan Gray

TELEPHONE 823-9006 FAX 823-2766

KEERS HYDROCARBON CONTAMINATED SOIL PROFILE SHEET NUMBER 00168

QUANTITY 20 CUBIC YARDS X DRUMS _____ OTHER Bulk

GENERATORS CERTIFICATION: I HEREBY CERTIFY THAT THE ABOVE DESCRIBED MATERIAL IS NOT A HAZARDOUS WASTE AS DEFINED B US EPA AND/OR STATE AND LOCAL REGULATIONS, DOES NOT CONTAIN REGULATED RADIOACTIVE MATERIALS OR REGULATE CE TIONS OF PCB'S (POLYCHLORINATED BIPHENYLS), AND THIS MATERIAL DOES NOT CONTAIN FREE LIQUIDS. I ALSO CERTIFY THAT ...E MATERIAL BEING REPRESENTED IN THIS MANIFEST CORRESPONDS WITH AND IS THE SAME AS THE MATERIAL REFERENCED IN THE HYDROCARBON CONTAMINATED SOIL PROFILE SHEET SHOWN ABOVE.

NAME OF GENERATOR OR AUTHORIZED AGENT (PRINT) Henry Paul Nunes

SIGNATURE OF GENERATOR OR AUTHORIZED AGENT Henry Paul Nunes

RECEIPT DATE 11-22-95

PART II

TRANSPORTER CERTIFICATION: I HEREBY CERTIFY THAT NO OTHER MATERIAL HAS BEEN PLACED IN THIS TRUCK SINCE ACCEPTANCE (THE MATERIAL AS DESCRIBED IN PART I OF THIS DOCUMENT.

NAME OF TRANSPORTER (PRINT) _____

SIGNATURE OF TRANSPORTER _____

RECEIPT DATE _____

PART III

THIS IS TO CERTIFY THAT KEERS HYDROCARBON CONTAMINATED SOIL LAND FARM, OPERATING UNDER N.M.E.D GROUND WATER DISCHARGE PERMIT #DP-1012 HAS ACCEPTED THE ABOVE MATERIAL.

ME OF AUTHORIZED AGENT (PRINT) _____

NATURE OF AUTHORIZED AGENT _____

RECEIPT DATE _____

MATERIAL DEPOSITED IN CELL # _____ LOCATION _____

KEERS ENVIRONMENTAL
5904 FLORENCE AVE. NE
ALBUQUERQUE, NM 87113
(505) 823-9006
1-800-327-2766
FAX (505) 823-2766

NMED GROUND WATER DISCHARGE PERMIT

KEERS HYDROCARBON SOIL LAND FARM
14 MILES SOUTH ON HWY 55 FROM
MOUNTAINAIR, NEW MEXICO

GROUND WATER DISCHARGE PERMIT
MANIFEST 00222

HYDROCARBON CONTAMINATED SOIL MANIFEST

PART I

GENERATOR NAME Los Alamos National Laboratory
GENERATOR ADDRESS P.O. Box 1663 MS J593
CITY/STATE/ZIP Los Alamos / NM / 87545
TELEPHONE 505-667-7577 FAX
TECHNICAL FIRM Keers
TECHNICAL CONTACT Dan Gay
TELEPHONE 823-9006 FAX 823-2766
KEERS HYDROCARBON CONTAMINATED SOIL PROFILE SHEET NUMBER 00168

QUANTITY 35 CUBIC YARDS _____ DRUMS _____ OTHER Bulk

GENERATORS CERTIFICATION: I HEREBY CERTIFY THAT THE ABOVE DESCRIBED MATERIAL IS NOT A HAZARDOUS WASTE AS DEFINED BY U.S. EPA AND/OR STATE AND LOCAL REGULATIONS, DOES NOT CONTAIN REGULATED RADIOACTIVE MATERIALS OR REGULATED CONCENTRATIONS OF PCB'S (POLYCHLORINATED BIPHENYLS), AND THIS MATERIAL DOES NOT CONTAIN FREE LIQUIDS. I ALSO CERTIFY THAT THE MATERIAL BEING REPRESENTED IN THIS MANIFEST CORRESPONDS WITH AND IS THE SAME AS THE MATERIAL REFERENCED IN THE HYDROCARBON CONTAMINATED SOIL PROFILE SHEET SHOWN ABOVE.

NAME OF GENERATOR OR AUTHORIZED AGENT (PRINT) Henry Paul Nunes
SIGNATURE OF GENERATOR OR AUTHORIZED AGENT Henry Paul Nunes
RECEIPT DATE 11-14-95

PART II

TRANSPORTER CERTIFICATION: I HEREBY CERTIFY THAT NO OTHER MATERIAL HAS BEEN PLACED IN THIS TRUCK SINCE ACCEPTANCE OF THE MATERIAL AS DESCRIBED IN PART I OF THIS DOCUMENT.

NAME OF TRANSPORTER (PRINT) Cl Paul M Chavez Chavez & Sons Trucking
SIGNATURE OF TRANSPORTER Paul M Chavez KEERS
RECEIPT DATE 11/21/95

PART III

THIS IS TO CERTIFY THAT KEERS HYDROCARBON CONTAMINATED SOIL LAND FARM, OPERATING UNDER N.M.E.D GROUND WATER DISCHARGE PERMIT #DP-1012 HAS ACCEPTED THE ABOVE MATERIAL.

NAME OF AUTHORIZED AGENT (PRINT) Shannon Kayser
SIGNATURE OF AUTHORIZED AGENT
RECEIPT DATE 11-21-95
MATERIAL DEPOSITED IN CELL # 5 LOCATION Middle - South side

Eidson
STEEL PRODUCTS, INC.
8301 BROADWAY, S.E., ALBUQUERQUE, NM 87105
TELEPHONE (505) 873-0160 FAX (505) 873-0167

TANK DISPOSAL

DATE: 11/14/95

TO WHOM IT MAY CONCERN:

PLEASE BE ADVISED THAT THE FOLLOWING TANK(S) WILL BE PROPERLY DISPOSED OF AND/OR RECYCLED BY EIDSON STEEL PRODUCTS, INC. IN ACCORDANCE WITH APPLICABLE RULES AND REGULATIONS:

TANK SIZE: GALLONS 3500 DIMENSIONS 8 X 25 LABEL # UNKNOWN

PREVIOUS LOCATION OF TANK(S) 6TH STREET WAREHOUSE, LOS ALAMOS, NM

OWNER KEERS ENVIRONMENTAL

DISPOSAL REQUESTED BY KEERS ENVIRONMENTAL

RESPECTFULLY,

Mike Moro

EIDSON STEEL PRODUCTS, INC.

MESA ENVIRONMENTAL

A DIVISION OF MESA OIL, INC.

RECYCLING MANIFEST / RECEIPT

Service Order # 085265

82

Mailing Address
Keers Environmental Inc
5904 Florence Ave NE
Accts Payable - Emily Sanchez
Albq NM 87113

(505) 823-9006 Ext. 0000

Service Address
Keers Environmental Inc
600 6th St
Robbi
Los Alamos NM 87544

(505) 288-0079 Ext. 0000
Contact: Sterling Johnson

Account Number	P.O. Number	Order Date	Terms
KEERS01		11/08/95	Net 30 days

Description	Ordered	Unit	Price	Quantity	Total
Used Oil Removal	1	Gal-Tank	0.2000	2,500	2,500
Oily Water Removal	1	Gal-Tank	0.7200		
Meet Robbi Across The Street From The Hilltop In In Los Alamos At 7:30 Am.					

APPROVAL:

JOB #:

CAT:

CLASS:

SPECIAL INSTRUCTIONS

SALES TAX

TOTAL DUE MESA OIL $

This is not a work order

FORM OF PAYMENT

CASH: CREDIT APP.# MC / VISA

CHECK: APPROVED BY VENDOR P.O.#

GENERATORS CERTIFICATION: This material is described to the best of my ability. This material has not been mixed with PCB's or hazardous waste listed in 40 C.F.R. part 262. I acknowledge the accuracy of the total due on this receipt. If to be charged on account I understand that an invoice will follow with terms of NET 30 DAYS.

Robbi Gallo — 11/7/95

Printed / Typed Name — Signature — Date

TRANSPORTER, STORER AND RECYCLER

MESA OIL, INC. - PLANT
Belen, NM
EPA# NMD 0000096024
TEXAS TWC ID# 40849

MESA OIL, INC. - PLANT
Golden, CO
EPA# COD 983772955

Mailing Address:
Mesa Oil, Inc.
7239 Bradburn Blvd.
Westminster, CO 80030
(303) 426-4777

MESA01

IN CASE OF SPILL CONTACT: MESA OIL, INC. 1-800-USED-OIL

D.O.T. REQUIREMENT - MAXIMUM LOAD 7000 GALLONS OIL N.O.S. COMBUSTIBLE LIQUID

TRANSPORTER ACKNOWLEDGMENT OF RECEIPT OF MATERIALS:
I certify materials have been tested and are below 1,000 PPM halogens.

Bob Williams — Bob Williams — 11-9-95

Printed / Typed Name — Signature — Date

TREATMENT FACILITY OPERATOR:
Described materials were handled by me, the treatment facility named above, and were accepted.

Printed / Typed Name — Signature — Date

White - Return to Generator Green - Records Pink - Office Goldenrod - Generator Copy

TOTAL P.02

ENCLOSURE THREE

CHAIN OF CUSTODY AND COREHOLE SAMPLE ANALYTICAL DATA SHEETS

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Technical Area	00	Send Lab Report to	Janet Brewer	Field Unit Leader	Garry Allen
Operable Unit	1071		E525		(505)667-3394
Date	12/05/95	LANL Destination	Chem Van	Turnaround	45 days
OU Contact	Rebecca C. Eaton	LANL Contact	John Miglio	Lab Report Required	01/19/96
Contact Phone No	(505) 662-1358	LANL Mail Stop		Charge Code	MA1CB0400000

Relinquished by: ~~Dave Frank~~ ALEX MORA (Signature): [signature] Affiliation: ERM/Golder	Date: 12 04 95	Relinquished by: CST-1.2 (Signature): Laura Kelly Affiliation: [signature]	Date: 12/4/95	Relinquished by: (Signature): Affiliation:	Date:
Received by: CST-1.2 (Signature): Laura Kelly Affiliation: [signature]	Time: 1145 TO 1515	Received by: ALEX MORA (Signature): [signature] Affiliation: ERM	Time: 1530	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SCREENING METHOD: Rad Van/Chem Van

SAMPLE DISPOSAL: Return to Client

Comments: BH 01

Field Unique Sample #/ID	Cont ID	Date & Time Collected	Sample Container Volume/Material	Matrix	Preserv	ANALYSIS REQUESTED: (SMO Order Codes)	REMARKS (Conditions of receipt, etc.)
0100-95-0916	01	12/04/95 1145	125 ml Septum Amber G	Soil	Ice	CVTPH	
0100-95-0917	01	12/04/95 1320	125 ml Septum Amber G	Soil	Ice	CVTPH	
0100-95-0918	01	12/04/95 1520	125 ml Septum Amber G	Soil	Ice	CVTPH	
0100-95-0919	01	12/05/95 1040	125 ml Septum Amber G	Soil	Ice	CVTPH	
0100-95-0920	01	12/05/95 1150	125 ml Septum Amber G	Soil	Ice	CVTPH	
0100-95-0921	01	12/05/95 1420	125 ml Septum Amber G	Soil	Ice	CVTPH	
0100-95-0922	01	12/05/95 1515	125 ml Septum Amber G	Soil	Ice	CVTPH	

tal Petroleum Hydrocarbons in Soil.

CST-12 Mobile Analytical Laboratory

Analytical Results

Analyst: LAK

Date: 12/4/95

Sample #	Weight(g)	Dilution	ABS	Soil oncentration (mg/kg)
Daily Std.	10	1	0.268	58
0100-95-0916	10.2	100	0.201	4237
0100-95-0917	10.7	100	0.226	4541
0100-95-0918	9.8	100	0.051	1119

ily Std. Recovery: 105%

Total Petroleum Hydrocarbons in Soil.

CST-12 Mobile Analytical Laboratory

Analytical Results

Analyst: LAK

Date: 12/5/95

Sample #	Weight(g)	Dilution	ABS	Soil Concentration (mg/kg)
Daily Std.	10	1	0.045	10
0100-95-0919	10.2	100	0.276	5818
0100-95-0920	10.4	1	0.714	148
0100-95-0921	10.8	1	-0.008	<1
0100-95-0922	10.6	1	-0.001	<1

Daily Std. Recovery: 88%

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Technical Area 00	Send Lab Report to Janet Brewer	Field Unit Leader Garry Allen
Operable Unit 1071	E525	(505)667-3394
Date 12/11/95	LANL Destination Chem Van	Turnaround 45 days
OU Contact Rebecca C. Eaton	LANL Contact John Miglio	Lab Report Required 01/25/96
Contact Phone No (505) 662-1358	LANL Mail Stop	Charge Code MA1CB0400000

Relinquished by: ~~Dave Frank~~ ALEX MORA (Signature): Affiliation: ERM/Golder	Date: 12-11-95	Relinquished by: CST-12 (Signature): Laura Kelly Affiliation:	Date: 12/11/95	Relinquished by: (Signature): Affiliation:	Date:
Received by: CST-12 (Signature): Laura Kelly Affiliation:	Time: 1630 TO 1445	Received by: ALEX MORA (Signature): Affiliation: ERM	Time: 1500	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SCREENING METHOD: Rad Van/Chem Van

SAMPLE DISPOSAL: Return to Client

Comments: B11 02

Field Unique Sample #/ID	Cont ID	Date & Time Collected	Sample Container Volume/Material	Matrix	Preserv	ANALYSIS REQUESTED: (SMO Order Codes)	REMARKS (Conditions of receipt, etc.)
0100-95-0923	01	12/11/95 1030	125 ml Septum Amber G	Soil	Ice	CVTPH	
0100-95-0924	01	12/11/95 1100	125 ml Septum Amber G	Soil	Ice	CVTPH	
0100-95-0925	01	12/11/95 1120	125 ml Septum Amber G	Soil	Ice	CVTPH	
0100-95-0926	01	12/11/95 1305	125 ml Septum Amber G	Soil	Ice	CVTPH	
0100-95-0927	01	12/11/95 1315	125 ml Septum Amber G	Soil	Ice	CVTPH	
0100-95-0928	01	12/11/95 1340	125 ml Septum Amber G	Soil	Ice	CVTPH	
0100-95-0929	01	12/11/95 1350	125 ml Septum Amber G	Soil	Ice	CVTPH	
0100-95-0930	01	12/11/95 1415	125 ml Septum Amber G	Soil	Ice	CVTPH	
0100-95-0931	01	12/11/95 1430	125 ml Septum Amber G	Soil	Ice	CVTPH	
0100-95-0932	01	12/11/95 1440	125 ml Septum Amber G	Soil	Ice	CVTPH	
0100-95-0933	01	12/11/95 1445	125 ml Septum Amber G	Soil	Ice	CVTPH	

Original - LA[illegible]estination Yellow - [illegible] Pink - FTL Copy

Total Petroleum Hydrocarbons in Soil.

CST-12 Mobile Analytical Laboratory

Analytical Results

Analyst: LAK

Date: 12/11/95

Sample #	Weight(g)	Dilution	ABS	Soil Concentration (mg/kg)
Daily Std.	10	1	0.053	11
0100-95-0923	10.4	1	-0.01	<1
0100-95-0924	9.7	1	-0.004	<1
0100-95-0925	10	1	-0.007	<1
0100-95-0926	9.9	1	-0.006	<1
0100-95-0927	10.4	1	0.001	<1
0100-95-0928	10.3	1	-0.002	<1
0100-95-0929	10.3	1	-0.03	<1
0100-95-0930	10	1	-0.008	<1
0100-95-0931	10.6	1	-0.009	<1
0100-95-0932	10.7	1	-0.007	<1
0100-95-0933	10.5	1	-0.011	<1

Daily Std. Recovery: 104%

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Technical Area	00	Send Lab Report to	Janet Brewer	Field Unit Leader	Garry Allen
Operable Unit	1071		E525		(505)667-3394
Date	12/12/95	LANL Destination	Chem Van	Turnaround	45 days
OU Contact	Rebecca C. Eaton	LANL Contact	John Miglio	Lab Report Required	01/26/96
Contact Phone No	(505) 662-1358	LANL Mail Stop		Charge Code	MA1CB0400000

Relinquished by: ~~Dave Frank~~ ALEX MORA (Signature): [signature] Affiliation: ERM/Golder	Date: 12-12-95	Relinquished by: CST-12 (Signature): Laura Kelly Affiliation: Laura Kelly	Date: 12/12/95	Relinquished by: (Signature): Affiliation:	Date:
Received by: CST-12 (Signature): Laura Kelly Affiliation: Laura Kelly	Time: 0900 TO 1130.	Received by: ALEX MORA (Signature): [signature] Affiliation: ERM	Time: 1130	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SCREENING METHOD: Rad Van/Chem Van

SAMPLE DISPOSAL: Return to Client

Comments: BH 03

Field Unique Sample #/ID	Cont ID	Date & Time Collected	Sample Container Volume/Material	Matrix	Preserv	ANALYSIS REQUESTED: (SMO Order Codes)	REMARKS (Conditions of receipt, etc.)
0100-95-0934	01	12/12/95 0900	125 ml Septum Amber G	Soil	Ice	CVTPH	
0100-95-0935	01	12/12/95 0915	125 ml Septum Amber G	Soil	Ice	CVTPH	
0100-95-0936	01	12/12/95 0930	125 ml Septum Amber G	Soil	Ice	CVTPH	
0100-95-0937	01	12/12/95 1007	125 ml Septum Amber G	Soil	Ice	CVTPH	
0100-95-0938	01	12/12/95 1018	125 ml Septum Amber G	Soil	Ice	CVTPH	
0100-95-0939	01	12/12/95 1100	125 ml Septum Amber G	Soil	Ice	CVTPH	
0100-95-0940	01	12/12/95 1116	125 ml Septum Amber G	Soil	Ice	CVTPH	
0100-95-0941	01	12/12/95 1130	125 ml Septum Amber G	Soil	Ice	CVTPH	

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Technical Area	00	Send Lab Report to	Janet Brewer	Field Unit Leader	Garry Allen
Operable Unit	1071		E525		(505)667-3394
Date	12/12/95	LANL Destination	Chem Van	Turnaround	45 days
OU Contact	Rebecca C. Eaton	LANL Contact	John Miglio	Lab Report Required	01/26/96
Contact Phone No	(505) 662-1358	LANL Mail Stop		Charge Code	MA1CB0400000

Relinquished by: ~~Dave Frank~~ ALEX MORA (Signature): Affiliation: ERM/Golder	Date: 12-12-95	Relinquished by: CST-12 (Signature): Laura Kelly Affiliation:	Date: 12/12/95	Relinquished by: (Signature): Affiliation:	Date:
Received by: CST-12 (Signature): Laura Kelly Affiliation:	Time: 1400 TC	Received by: ALEX MORA (Signature): Affiliation: ERM	Time: 1500	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SCREENING METHOD: Rad Van/Chem Van

SAMPLE DISPOSAL: Return to Client

Comments: BH 04

Field Unique Sample #/ID	Cont ID	Date & Time Collected	Sample Container Volume/Material	Matrix	Preserv	ANALYSIS REQUESTED: (SMO Order Codes)	REMARKS (Conditions of receipt, etc.)
0100-95-0942	01	12/12/95 1400	125 ml Septum Amber G	Soil	Ice	CVTPH	
0100-95-0943	01	12/12/95 1420	125 ml Septum Amber G	Soil	Ice	CVTPH	
0100-95-0944	01	12/12/95 1420	125 ml Septum Amber G	Soil	Ice	CVTPH	
0100-95-0945	01	12/12/95 0000	125 ml Septum Amber G	Soil	Ice	CVTPH	
0100-95-0946	01	12/12/95 1500	125 ml Septum Amber G	Soil	Ice	CVTPH	
0100-95-0947	01	12/12/95 1520	125 ml Septum Amber G	Soil	Ice	CVTPH	
0100-95-0948	01	12/12/95 1520	125 ml Septum Amber G	Soil	Ice	CVTPH	
0100-95-0949	01	12/12/95 0000 1540	125 ml Septum Amber G	Soil	Ice	CVTPH	
0100-95-0950	01	12/12/95 0000 1550	125 ml Septum Amber G	Soil	Ice	CVTPH	

Los Alamos National Laboratory Environmental Restoration (Los Alamos, NM 87545)

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Technical Area	00	Send Lab Report to	Janet Brewer	Field Unit Leader	Garry Allen
Operable Unit	1071		E525		(505)667-3394
Date	12/13/95	LANL Destination	Chem Van	Turnaround	45 days
OU Contact	Rebecca C. Eaton	LANL Contact	John Miglio	Lab Report Required	01/27/96
Contact Phone No	(505) 662-1358	LANL Mail Stop		Charge Code	MA1CB0400000

Relinquished by: ~~Dave Frank~~ ALEX MORA (Signature): Affiliation: ERM/Golder	Date: 12-13-95	Relinquished by: CST-12 (Signature): Laura Kelly Affiliation:	Date: 12-13-95	Relinquished by: (Signature): Affiliation:	Date:
Received by: CST-12 (Signature): Laura Kelly Affiliation:	Time: 1000 to 1145	Received by: ALEX MORA (Signature): Affiliation: ERM	Time: 1145	Received by: (Signature): Affiliation:	Time:

POSSIBLE HAZARD IDENTIFICATION: (please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances): Radiological___ Highly Toxic___ Flammable___ Skin Irritant___ Non-Hazard X Other___

SCREENING METHOD: Rad Van/Chem Van

SAMPLE DISPOSAL: Return to Client

Comments: BH 05

Field Unique Sample #/ID	Cont ID	Date & Time Collected	Sample Container Volume/Material	Matrix	Preserv	ANALYSIS REQUESTED: (SMO Order Codes)	REMARKS (Conditions of receipt, etc.)
0100-95-0951	01	12/13/95 1000	125 ml Septum Amber G	Soil	Ice	CVTPH	
0100-95-0952	01	12/13/95 1015	125 ml Septum Amber G	Soil	Ice	CVTPH	
0100-95-0953	01	12/13/95 1033	125 ml Septum Amber G	Soil	Ice	CVTPH	
0100-95-0954	01	12/13/95 1100	125 ml Septum Amber G	Soil	Ice	CVTPH	
0100-95-0955	01	12/13/95 1100	125 ml Septum Amber G	Soil	Ice	CVTPH	
0100-95-0956	01	12/13/95 1120	125 ml Septum Amber G	Soil	Ice	CVTPH	
0100-95-0959	01	12/13/95 1140	125 ml Septum Amber G	Soil	Ice	CVTPH	
0100-95-0960	01	12/13/95 1145	125 ml Septum Amber G	Soil	Ice	CVTPH	

Total Petroleum Hydrocarbons in Soil.

CST-12 Mobile Analytical Laboratory

Analytical Results

Analyst: LAK

Date: 12/12/95

Sample #	Weight(g)	Dilution	ABS	Soil Concentration (mg/kg)
Daily Std.	10	1	0.052	11
0100-95-0934	10.2	1	-0.002	<1
0100-95-0935	10	1	-0.008	<1
0100-95-0936	9.7	1	-0.005	<1
0100-95-0937	10.2	1	-0.007	<1
0100-95-0938	9.8	1	-0.005	<1
0100-95-0939	10.4	1	0	<1
0100-95-0940	10.3	1	-0.003	<1
0100-95-0941	10.2	1	-0.002	<1
0100-95-0942	10.4	1	0.002	<1
0100-95-0943	10.2	1	-0.002	<1
0100-95-0944	10.5	1	0.003	<1
0100-95-0945	10.2	1	0	<1
0100-95-0946	9.5	1	0.003	<1
0100-95-0947	10.6	1	-0.001	<1
0100-95-0948	10.6	1	-0.002	<1
0100-95-0949	9.6	1	-0.003	<1
0100-95-0950	10.2	1	0	<1

Daily Std. Recovery: 102%

Total Petroleum Hydrocarbons in Soil.

CST-12 Mobile Analytical Laboratory

Analytical Results

Analyst: jbr

Date: 12/13/95

Sample #	Weight(g)	Dilution	ABS	Soil Concentration (mg/kg)
Daily Std.	10	1	0.052	11
0100-95-0951	10.3	1	0.013	3
0100-95-0952	10.6	1	-0.001	<1
0100-95-0953	10.2	1	-0.002	<1
0100-95-0954	10.1	1	-0.003	<1
0100-95-0955	10.2	1	-0.001	<1
0100-95-0956	10.4	1	-0.002	<1
0100-95-0959	10	1	-0.001	<1
0100-95-0960	10.1	1	-0.001	<1

Daily Std. Recovery: 102%

LOS ALAMOS NATIONAL LABORATORY ENVIRONMENTAL RESTORATION PROGRAM

SAMPLE MANAGEMENT FACILITY

CORE SAMPLE LOG

Borehole ID [illegible] TA/OU [illegible] Drill Depth From 35 To 40 Page 2 of 2

Driller M. HENKE Box #(s) 1.A Start Date/Time [illegible] End Date/Time [illegible]

Drilling Equip./Method [illegible] Sampling Equip./Method [illegible]

Depth (feet)	Recovery (feet per feet / %)	Field Anaytical Sample Number	Field Screening Results	Top/Bottom of Core in Box	Lithology-Petrology - Soil	Graphic Log	Lithologic Unit	Notes
35	2.0/2.0 100%	0100-0422	VOH ND α = ND β/γ-ND	NA	FILL-FT, 38-40, 1550, SAMPLED AT 40' CONSOLIDATED, COHESIVE, LT BROWN TO LT GRAY TUFF. SOMEWHAT PLATY STRUCTURE NO VISIBLE CLASTS OR PUMICE, MOIST.			
40					FINISH DRILLING FOR THE DAY			
45								
50								

Prepared by D. FRANK Date 12-4-95 Checked By [illegible] Date [illegible]

LOS ALAMOS NATIONAL LABORATORY ENVIRONMENTAL RESTORATION PROGRAM

SAMPLE MANAGEMENT FACILITY

CORE SAMPLE LOG

Borehole ID 02 TA/OU O, FU-I Drill Depth From 0 To 10 Page 1 of 4

Driller STEWART BROSS Box #(s) NA Start Date/Time 12-11-95/1000 End Date/Time 12-11-95/1100

Drilling Equip./Method 6" HOLLOW STEM AUGER Sampling Equip./Method CONTINUOUS CORE BARREL

Depth (feet)	Recovery (feet per feet / %)	Field Analytical Sample Number	Field Screening Results	Top/Bottom of Core In Box	Lithology-Petrology - Soil	Graphic Log	Lithologic Unit	Notes
0	3.5/5.0 RUN 1	0100-95 0923 at 3'	210-0	NA	0-6" TOPSOIL [illegible] 6"-1.5' [illegible] TUFF, REDDISH YELLOW (7.5YR 7/6) 1.5-2.0' STRONG BROWN (3/4 7.5YR) CLAY, DRY, LOW PLASTICITY. 2.0-2.4' LIGHT BROWN (6/4, 7.5YR), WEATHERED CLAYEY TUFF. DRY. 2.4-3.5 GRAY (5/1) TUFF CRUSHED [illegible] WET 3.5-5.0' NR. BARREL PLUGGED WITH CLAY.			1000
5	5.0/5.0 RUN 2	0100-95 0924 at 9'	210-0		5.0-10.0 MODERATELY WELDED ISOLUCITIC [illegible] VITRIC AND DEVITRIFIED PUMICE, AND MODERATE TO RICH IN PHENOCRYSTS SLIGHTLY TO WELL INDURATED. - 20% PUMICE LAPILLI VITRIFIED AND DEVITRIFIED, BROWN (3/2, 7.5YR), RANGING FROM 0.3 mm TO 2.5 cm, AVERAGING 2.0 cm. - 30% PHENOCRYST, QUARTZ (90%), FELDSPARS (5%), SANIDINE (2%), OTHERS (3%). QTZ IS ANGULAR, CLEAR, RANGING FROM 0.1 TO 0.3 mm, AND AVERAGING 0.2 mm IN SIZE. - LITHICS NOT VISIBLE. - MATRIX IS LIGHT REDDISH BROWN (5YR 6/3) ASH, MODERATELY CONSOLIDATED.			1010
10								

Prepared by ALEX MORA Date 12-18-95 Checked By [signature] Date 12/20/95

LOS ALAMOS NATIONAL LABORATORY ENVIRONMENTAL RESTORATION PROGRAM

SAMPLE MANAGEMENT FACILITY | **CORE SAMPLE LOG**

Borehole ID 02 TA/OU O. FU-1 Drill Depth From 10 To 20 Page 2 of 4

Driller STUART BROSS Box #(s) NA Start Date/Time 12-11-95/1:50 End Date/Time 12-11-95/1630

Drilling Equip./Method 6" HOLLOW STEM AUGER Sampling Equip./Method CONTINUOUS CORE BARREL

Depth (feet)	Recovery (feet per feet / %)	Field Analytical Sample Number	Field Screening Results	Top/Bottom of Core In Box	Lithology-Petrology - Soil	Graphic Log	Lithologic Unit	Notes
10	5.0/5.0	0150-95 0925 at 12'	PID: 0	NA	10-15 MODERATELY WELDED IGNIMBRITE [illegible] PINK [illegible] PUMICE, AND RICH IN PHENOCRYST. WELL INDURATED. - 5% [illegible] LIGHT GREY (7/N) RANGING FROM 2 TO 3 cm AND MEASURING 3cm [illegible]. - 35% PHENOCRYSTS QUARTZ (70%) SEMI-BROWN CLEAR, 1 TO 3 mm AND 2 mm AVERAGE IN SIZE, OTHER NOT IDENTIFIED PHENOCRYSTS (10%) - LITHICS NOT VISIBLE - MATRIX [illegible] (7/N) FIRM TO MODERATELY COHESIVE.	■ ■ ■ ■ ■ ■ ■ ■		1100
11	RUN 3	0150-95 0926 at 13'						
12		0						
13		0						
14								
15	5.0/5.0	0150-95 0927 at 17'	PID: 0	NA	15-20 SLIGHTLY WELDED IGNIMBRITE [illegible] PINK [illegible] RICH IN PHENOCRYST. [illegible]. - 10% PUMICE, [illegible] (7/N), RANGING FROM 4 cm 1 cm AND AVERAGING 3cm IN SIZE. - 15% PHENOCRYSTS, QUARTZ (80%), [illegible] 1 mm IN SIZE. SANIDINE [illegible] PINK, AVERAGING 2 mm IN SIZE. OTHER UNIDENTIFIED (15%) - LITHICS NOT OBSERVED - MATRIX WEAK RED (2.5-2.5/3), FIRM, MODERATELY COHESIVE.	■ ■ ■ ■ ■ ■ ■ ■		1300
16	RUN 4	0150-95 0928 at 19'						
17		0						
18								
19								
20								

Prepared by ALEX MORA Date 12-18-95 Checked By [signature] Date 12/21/95

LOS ALAMOS NATIONAL LABORATORY ENVIRONMENTAL RESTORATION PROGRAM

SAMPLE MANAGEMENT FACILITY

CORE SAMPLE LOG

Borehole ID 02 TA/OU 0.FU-1 Drill Depth From 20' To 30' Page 3 of 4

Driller STEWART BROS Box #(s) UA Start Date/Time 12-11-95/1400 End Date/Time 12-11-95/1430

Drilling Equip./Method 6" HOLLOW STEM AUGER Sampling Equip./Method CONTINUOUS CORE BARREL

Depth (feet)	Recovery (feet per feet / %)	Field Analytical Sample Number	Field Screening Results	Top/Bottom of Core in Box	Lithology-Petrology - Soil	Graphic Log	Lithologic Unit	Notes
20	5.0/5.0	0100-95 0929	PID:0		20-25 SILTY. [illegible]			1400
21	RUN 5	@ 23.5'						
22								
23								
24	0	0						
25								
26	5.0/5.0 RUN 6	0100-95 0930 @ 28'	PID:0		25-30 SLIGHTLY TO MODERATELY WELDED IGNIMBRITE WITH VITRIFIED PUMICE AND MODERATE PHENOCRYST CONTENT. WELL INDURATED. - 10% PUMICE [illegible] VITRIFIED, BROWN (7.5YR 5/2) RANGING FROM 1-4 CM AND AVERAGING 3 CM IN SIZE. - 20% PHENOCRYSTS. QUARTZ (80%) CLEAR, 1-4 mm and AVERAGING 2mm IN SIZE - LITHICS NOT OBSERVED. - MATRIX IS REDDISH GRAY (5YR 5/2), ASH, MODERATELY CONSOLID.			1420 28' [illegible] 45° [illegible]
27								
28								
29								
30								

Prepared by ALEX MORA Date 12-18-95 Checked By [signature] Date 12/[illegible]/95

LOS ALAMOS NATIONAL LABORATORY ENVIRONMENTAL RESTORATION PROGRAM

SAMPLE MANAGEMENT FACILITY

CORE SAMPLE LOG

Borehole ID 02 TA/OU 0, FO-1 Drill Depth From 30' To 40' Page 4 of 4

Driller STUART BYRES Box #(s) NA Start Date/Time 12-11-95/1430 End Date/Time 12-11-95/1440

Drilling Equip./Method 6" HOLLOW STEM AUGER Sampling Equip./Method CONTINUOUS CORE BARREL.

Depth (feet)	Recovery (feet per feet / %)	Field Analytical Sample Number	Field Screening Results	Top/Bottom of Core in Box	Lithology-Petrology - Soil	Graphic Log	Lithologic Unit	Notes
30	5.0/50 RUN 7	CIAC-95 0931 at 33'	BKG=0	NA	30-35 T.A.A.			1430
31								
32								
33								
34								
35								
36	5.0/50 RUN 8	CIAC-95 0932 at 36 CIAC-95 0933 at 38.5'	BKG=0	NA	35-40 SIGHTLY TO MODERATELY WELDED IGNIMBRITE WITH VITRIC SAND [illegible] PUMICES AND MODERATE IN PRESENCE - CONTENT. WELL INDURATED. - 5-10% [illegible] VITRIC AND [illegible] RANGING FROM 1 TO 4 CM AND MOSTLY 2 CM IN SIZE. - 20% RHYOLITE, QUARTZ (30%) [illegible] TRANSLUCENT [illegible] 2mm IN SIZE. - LITHICS NOT VESICULAR - MATRIX IS LIGHT GRAY (5YR [illegible]) [illegible]			1440 35' to 37' [illegible]
37								
38								
39								
40					BOTTOM OF BOREHOLE AT 40'			

Prepared by ALEX MORA Date 12-18-95 Checked By [signature] Date 12/20/95

LOS ALAMOS NATIONAL LABORATORY ENVIRONMENTAL RESTORATION PROGRAM

SAMPLE MANAGEMENT FACILITY | **CORE SAMPLE LOG**

Borehole ID 03 TA/OU 0, FU-1 Drill Depth From 0 To 10 Page 1 of 4

Driller STEWART BROS Box #(s) NA Start Date/Time 12-12-95/0AM End Date/Time 12-12-95/0930

Drilling Equip./Method 6" HOLLOW STEM AUGER Sampling Equip./Method CONTINUOUS CORE BARREL

Depth (feet)	Recovery (feet per feet / %)	Field Analytical Sample Number	Field Screening Results	Top/Bottom of Core In Box	Lithology-Petrology - Soil	Graphic Log	Lithologic Unit	Notes
0	3.0/3.0 RUN 1	0-08-95 0934 at 3'	PID = 0	NA	0-3.0' REDDISH BROWN SILTY CLAY POSSIBLY CLAY INDURATING TO BOTTOM. 3.0-5.0 NR.			0400
1								
2								
3								
4								
5	5.0/5.0 RUN 2	0-08-95 0935 at 8'	PID = 0	NA	5.0-10.0 MODERATELY WELDED RHYOLITE WITH DEVITRIFIED PUMICE AND MODERATE TO RICH IN PHENOCRYSTS. SLIGHTLY INDURATED. - 5% PUMICE LAPILLI, DEVITRIFIED REDDISH BROWN (5YR 4/3) RANGING FROM 2 TO 5 CM. AND AVERAGING 3 CM IN SIZE. - 20% PHENOCRYSTS: QUARTZ (90%) FELDSPAR TRANSLUCENT, 3 MM IN SIZE. - LITHICS NOT OBSERVED. - MATRIX IS REDDISH BROWN (5YR 4/3) ASH, SLIGHTLY INDURATED COHESIVE.			0915
6								
7								
8								
9								
10								

Prepared by ALEX MOZI Date 12-18-95 Checked By [signature] Date 12/21/95

LOS ALAMOS NATIONAL LABORATORY ENVIRONMENTAL RESTORATION PROGRAM

SAMPLE MANAGEMENT FACILITY

CORE SAMPLE LOG

Borehole ID 03 TA/OU 0, FU-1 Drill Depth From 10 To 20 Page 2 of 4

Driller [illegible] Box #(s) NA Start Date/Time 12-12-95/0930 End Date/Time 12-12-95/1010

Drilling Equip./Method 6" HOLLOW STEM AUGER Sampling Equip./Method CONTINUOUS CORE BARREL

Depth (feet)	Recovery (feet per feet / %)	Field Analytical Sample Number	Field Screening Results	Top/Bottom of Core in Box	Lithology-Petrology - Soil	Graphic Log	Lithologic Unit	Notes
10	50/50 RUN 3	12-12-95 0936 at 14'	PID = 0	NA	10-15 D.A. EXCEPT MATRIX IS GRAY (5YR.5/1)			0930 14' FRACTURE, METAL FLOOR 4 FOUND. 12-14 FROM FIELD STAINS.
11								
12								
13								
14								
15	50/50 RUN 4	12-12-95 0937 at 19'	PID = 0	NA	15-20 SLIGHTLY WELDED TUFFACEOUS DEVITRIFIED, MODERATE TO RICH PHENOCRYST CONTENT, [illegible] WELL [illegible]. 5% [illegible], DEVITRIFIED GRAY (5/N), 2cm NODULES IN [illegible] - 20% PHENOCRYSTS, SUBEQUEDRAL, FINER 1 to 4mm IN SIZE. - NO VISIBLE LITHICS - MATRIX IS GRAY (5/N), FIRM, SLIGHTLY COHESIVE.			1000
16								
17								
18								
19								
20								

Prepared by ALEX MOZA Date 12-13-95 Checked By [signature] Date 12/20/95

LOS ALAMOS NATIONAL LABORATORY ENVIRONMENTAL RESTORATION PROGRAM

SAMPLE MANAGEMENT FACILITY

CORE SAMPLE LOG

Borehole ID 53 TA/OU C.-53-I Drill Depth From 20 To 30 Page 3 of 4

Driller STEWART GROSS Box #(s) N.A. Start Date/Time 12-12-95/1010 End Date/Time 12-12-95/1100

Drilling Equip./Method 4" HOLLOW STEM AUGER Sampling Equip./Method CONTINUOUS CORE BARREL

Depth (feet)	Recovery (feet per feet / %)	Field Anaytical Sample Number	Field Screening Results	Top/Bottom of Core In Box	Lithology-Petrology - Soil	Graphic Log	Lithologic Unit	Notes
20	5.0/5.0 RUN 5	0100-95 0939 at 24'	PID = 0	NA	20-25 S.A.A - PUMICE UP TO 5cm IN SIZE.			1010 23 FRACTURE, HEAVY OLIVE STAINS 22.5 STRONG HEAVY OLIVE STAINS.
21								
22								
23								
24								
25								
26	5.0/5.0 RUN 6	0100-95 0939 at 29'	PID = 0	NA	25-30 S.A.A - SANIDINE PRESENT (5% OF TOTAL PHENOCRYST CONTENT).			1100
27								
28								
29								
30								

Prepared by ALEX MORA Date 12-18-95 Checked By [signature] Date 12/ /95

LOS ALAMOS NATIONAL LABORATORY ENVIRONMENTAL RESTORATION PROGRAM

SAMPLE MANAGEMENT FACILITY

CORE SAMPLE LOG

Borehole ID 33 TA/OU [illegible] Drill Depth From 30 To 40 Page 4 of 4

Driller [illegible] Box #(s) NA Start Date/Time [illegible] End Date/Time [illegible]/1130

Drilling Equip./Method 5" HOLLOW STEM AUGER Sampling Equip./Method CONTINUOUS CORE BARREL

Depth (feet)	Recovery (feet per feet / %)	Field Analytical Sample Number	Field Screening Results	Top/Bottom of Core in Box	Lithology-Petrology - Soil	Graphic Log	Lithologic Unit	Notes
30	[illegible]/5.0	[illegible] 0940 @ 34.5	PID=0	NA	30-35 S.A.A.			1110
31	RUN 7							34.5' FRACTURE, 45° RUSTY CLAY STAINS.
32								
33								
34								
35								
	5.0/5.0	0900-35 0941.	PID=0		35-40' S.A.A. [illegible] BROWN TO REDDISH BROWN			1130
36	RUN 8				37.5 POORLY WELDED, SANDY [illegible]			38.5' FRACTURE, METAL [illegible]
37								39' FRACTURE 45° BROWN STAINED REDDISH BROWN CLAY STAINS.
38								
39								
40					BOTTOM OF BOREHOLE.			

Prepared by ALEX MORA Date [illegible] Checked By [signature] Date 12

LOS ALAMOS NATIONAL LABORATORY ENVIRONMENTAL RESTORATION PROGRAM

SAMPLE MANAGEMENT FACILITY

CORE SAMPLE LOG

Borehole ID 04 TA/OU [illegible] Drill Depth From 0 To 10 Page [illegible] of 4

Driller [illegible] Box #(s) [illegible] Start Date/Time 12-12-95/1345 End Date/Time 12-12-95/1400

Drilling Equip./Method 6" HOLLOW STEM AUGER Sampling Equip./Method CONTINUOUS CORE BARREL

Depth (feet)	Recovery (feet per feet / %)	Field Anaytical Sample Number	Field Screening Results	Top/Bottom of Core in Box	Lithology-Petrology - Soil	Graphic Log	Lithologic Unit	Notes
0	2.5/5.0 RUN 1	NA	PID 0.0	NA	0 2.5 REDDISH BROWN SANDY SILT. ROOTS ORGANIC MATTER. 2.5-5.0 NR.			1345
1								
2								
3								
4								
5								
6	5.0/5.0 RUN 2	0100-1.5 04-d at 9'	PID 0.0	NA	5.0 TO 6.5 REDDISH BROWN SANDY SILT. 6.5 TO 10 MODERATELY WELDED IGNIMBRITE WITH DEVITRIFIED PUMICE AND MODERATE PHENOCRYST CONTENT. MODERATELY INDURATED. - 5% PUMICE IS HIGH ALUMINATED ONLY RED (2.5 YR, 4/2) RANGING FROM 1 TO 5 mm IN SIZE AND AVERAGING 1 mm. - 30% PHENOCRYSTS. QUARTZ (90%) ANGULAR TRANSPARENT. 1 TO 4 mm IN SIZE AND AVERAGING 1 mm. - LITHICS NOT OBSERVED - MATRIX IS DARK GRAY (5 YR, 4/1) SLIGHTLY COHESIVE.			1400
7								
8								
9								
10								

Prepared by ALEX MOYA Date [illegible] Checked By [illegible] Date 12/[illegible]/95

LOS ALAMOS NATIONAL LABORATORY ENVIRONMENTAL RESTORATION PROGRAM

SAMPLE MANAGEMENT FACILITY | **CORE SAMPLE LOG**

Borehole ID 04 TA/OU O FU-1 Drill Depth From 10 To 20 Page 2 of 4

Driller STEWART CROSS Box #(s) NA Start Date/Time [illegible] End Date/Time [illegible]

Drilling Equip./Method [illegible] Sampling Equip./Method CONTINUOUS CORE BARREL

Depth (feet)	Recovery (feet per feet / %)	Field Analytical Sample Number	Field Screening Results	Top/Bottom of Core In Box	Lithology-Petrology - Soil	Graphic Log	Lithologic Unit	Notes
10	50/5.0 RUN 3	[illegible] 0943 at 12' [illegible] 0944 at 14'	P10-20	NA	10-15 [illegible] A A EXCEPT [illegible] AT [illegible]			1400 11-12 FRACTURE, [illegible] BROWN CLAY CLAY PLASTIC AND MOIST. 12-13 FRACTURE [illegible] S.M.A. FRACTURE.
11								
12								
13								
14								
15								
16	50/5.0 RUN 4	[illegible] 0945 at 19'	P10-20	NA	15-20 [illegible] A A			1415
17								
18								
19								
20								

Prepared by ALEX MOZA Date 12-19-95 Checked By [illegible] Date 12/20/95

LOS ALAMOS NATIONAL LABORATORY ENVIRONMENTAL RESTORATION PROGRAM

SAMPLE MANAGEMENT FACILITY

CORE SAMPLE LOG

Borehole ID 04 TA/OU 0-001 Drill Depth From 20 To 30 Page 3 of 4

Driller STEWART GROSS Box #(s) NA Start Date/Time 12/05/1500 End Date/Time 12/05/1500

Drilling Equip./Method 6" HOLLOW STEM AUGER Sampling Equip./Method CONTINUOUS CORE BARREL

Depth (feet)	Recovery (feet per feet / %)	Field Analytical Sample Number	Field Screening Results	Top/Bottom of Core In Box	Lithology-Petrology - Soil	Graphic Log	Lithologic Unit	Notes
20	5.0/5.0 RUN 5	0000-25 0946 at 23.5'	PID=0	NA	20-25 SILTY MATRIX DARK YELLOWISH GRAY (5YR 4/2).			1500
21								
22								
23								
24								
25	5.0/5.0 RUN 6	0000-25 0947 at 27.0 0000-25 0948 at 28.5'	PID=0	NA	25-27 MODERATELY WELDED IGNIMBRITE WITH DEVITRIFIED PUMICE AND MODERATE IN VARIANCE POORLY TO MODERATELY INDURATED. - 8% PUMICE LAPILLI, DEVITRIFIED STALE REDDISH GRAY (10R 5/1) RANGING FROM 1 TO 3 CM, AND AVERAGING 2 CM IN SIZE. - 10% CONDUCTED [illegible] TRANSLUCENT, CLEAR 1 TO 2 MM IN SIZE AND AVERAGING 1 MM IN SIZE. - LITHICS NOT OBSERVED - MATRIX IS DUSKY RED (2.5YR 3/2) 27-30 SILTY MATRIX PUMICE STAINED (5YR 4/2) AND MATRIX [illegible]			1500
26								
27								
28								
29								
30								

Prepared by ALEX MORA Date 12/05/95 Checked By [illegible] Date 12/[illegible]/95

LOS ALAMOS NATIONAL LABORATORY ENVIRONMENTAL RESTORATION PROGRAM

SAMPLE MANAGEMENT FACILITY

CORE SAMPLE LOG

Borehole ID 04 TA/OU [illegible] Drill Depth From 30 To 40 Page 4 of 4

Driller [illegible] Box #(s) NA Start Date/Time [illegible] End Date/Time [illegible]

Drilling Equip./Method [illegible] Sampling Equip./Method [illegible]

Depth (feet)	Recovery (feet per feet / %)	Field Analytical Sample Number	Field Screening Results	Top/Bottom of Core in Box	Lithology-Petrology - Soil	Graphic Log	Lithologic Unit	Notes
30	5.0/5.0 RUN 7	0100-95 0949	PID=0	NA	30-35 SAA EXCEPT MATRIX IS DARK REDDISH GRAY (5YR 4/2).			1545
31								
32								
33								
34								
35	5.0/5.0 RUN 8	0100-95 0950	PID=0	NA	35-40 SAA			1600
36								
37								
38								
39								
40					BOTTOM OF BOREHOLE AT 40'			

Prepared by ALEX MORA Date 12-19-95 Checked By [illegible] Date 12/20/95

LOS ALAMOS NATIONAL LABORATORY ENVIRONMENTAL RESTORATION PROGRAM

SAMPLE MANAGEMENT FACILITY

CORE SAMPLE LOG

Borehole ID 05 TA/OU 0, FU-1 Drill Depth From 0 To 10 Page 1 of 4

Driller STEWART BROS. Box #(s) NA Start Date/Time 12-13-95/1000 End Date/Time 12-13-95/1030

Drilling Equip./Method 6" HOLLOW STEM MOBER. Sampling Equip./Method CONTINUOUS CORE BARREL

Depth (feet)	Recovery (feet per feet / %)	Field Analytical Sample Number	Field Screening Results	Top/Bottom of Core in Box	Lithology-Petrology - Soil	Graphic Log	Lithologic Unit	Notes
0	3.5/5.0 RUN 1	0100-95-0951 at 4'	PID=0	NA	0-1.5' ASPHALT 1.5-3.0 NR 3.0-5.0 BROWN CLAY WITH YELLOWISH SAND. DRY LOW PLASTICITY.			1000
1								
2								
3								
4								
5	5.0/5.0 RUN 2	0100-95-0952 at 8.5'	PID=0	NA	5'-6' BROWN CLAY WITH YELLOWISH SAND 6'-10 SLIGHTLY TO MODERATELY WELDED IGNIMBRITE WITH VITRIC PUMICE AND POOR TO MODERATE IN PHENOCRYSTS. SLIGHTLY INDURATED. – 5% PUMICE LAPILLI, VITRIC, LIGHT BLUISH GRAY (7/1), RANGING FROM 1 TO 3 CM. AND AVERAGING 1.5 CM IN SIZE. – 5% PHENOCRYST, QUARTZ (90%) SEMI-ANGULAR TRANSLUCID, RANGING FROM 1 TO 3 mm IN SIZE. OTHERS (10%). – LITHICS NOT OBSERVED. – MATRIX IS BLUISH GRAY (6/1), ASH. SLIGHTLY COHESIVE, AND BECOMING GRAY (5YR 6/1) TOWARD BOTTOM.			1015. FRACTURE. AT 7', 30° CLAY LINNED. BROWN CLAY WITH WHITE CALICHE.
6								
7								
8								
9								
10								

Prepared by ALEX MOZA Date 12-18-95 Checked By [illegible] Date 12/[illegible]/95

LOS ALAMOS NATIONAL LABORATORY ENVIRONMENTAL RESTORATION PROGRAM

SAMPLE MANAGEMENT FACILITY

CORE SAMPLE LOG

Borehole ID 05 TA/OU 0 FU-1 Drill Depth From 10 To 20 Page 2 of 4

Driller STEWART GROSS. Box #(s) NA Start Date/Time 12-13-95/1025 End Date/Time 12-13-95 /1100

Drilling Equip./Method 6" HOLLOW STEM AUGER Sampling Equip./Method CONTINUOUS CORE BARREL

Depth (feet)	Recovery (feet per feet / %)	Field Analytical Sample Number	Field Screening Results	Top/Bottom of Core In Box	Lithology-Petrology - Soil	Graphic Log	Lithologic Unit	Notes
10	5.0/5.0 RUN 3	0160-95-0953. at 14.5'	PID=0	NA	10-15' S.A.A EXCEPT: -MATRIX IS GRAY (7.5YR 6/1) AND - PHENOCRYSTS AVERAGE 4MM IN SIZE.			1025
11								
12								
13								
14								
15								
16	5.0/5.0 RUN 4	0160-95-0954 at 19'	PID=0	NA	15'-20' S.A.A. EXCEPT: - PUMICE LAPILLI BROWN (7.5YR 4/2).			1030
17								
18								
19								
20								

NO ENTRIES. SEE NEXT PAGE

Prepared by ALEX IKORA Date 12-13-95 Checked By [signature] Date 12/20/95

LOS ALAMOS NATIONAL LABORATORY ENVIRONMENTAL RESTORATION PROGRAM

SAMPLE MANAGEMENT FACILITY

CORE SAMPLE LOG

Borehole ID 05 TA/OU 0 FU-1 Drill Depth From 20 To 30 Page 3 of 4

Driller STEWART GROSS. Box #(s) NA Start Date/Time 12-13-95/1100 End Date/Time 12-13-95/1130

Drilling Equip./Method 6 HOLLOW STEM AUGER Sampling Equip./Method SOP 06.24 - CONTINUOUS CORE PROBE

Depth (feet)	Recovery (feet per feet / %)	Field Analytical Sample Number	Field Screening Results	Top/Bottom of Core in Box	Lithology-Petrology - Soil	Graphic Log	Lithologic Unit	Notes
20	5.0/5.0 RUN 5	0100-95-0955 at 23'	PID = 0	NA	20'-25' S.A.A. EXCEPT: - MATRIX IS GRAY (5/N).			1100 FRACTURE. FROM 22' TO 23' 50°, SLIGHTLY STAINED BROWN.
21								
22								
23		0						
24								
25								
26	5.0/5.0 RUN 6	0100-95 0956 at 27'	PID = 0	NA.	25'-30' - SLIGHTLY WELDED IGNIMBRITE, WITH VITRIC AND DEVITRIFIED PUMICE, AND MODERATE IN PHENOCRYSTS. SLIGHTLY INDURATED. - 5% PUMICE LAPILLI, VITRIC AND DEVITRIFIED GRAY (5YR 6/1) RANGING FROM 1 TO 3 cm, AND AVERAGING 2 CM IN SIZE. ALSO DARK GRAY (5YR 4/1) PUMICES. - 10% PHENOCRYSTS, QUARTZ (90%), ANGULAR TO SEMI-ANGULAR, TRANSPARENT, AVERAGING 2 MM IN SIZE. - LITHICS NOT OBSERVED. - MATRIX IS GRAY (5YR 6/1) ASH, SLIGHTLY COHESIVE.			1120
27		0						
28								
29								
30								

Prepared by ALEX MORA Date 12-18-95 Checked By [signature] Date 12/2/95

LOS ALAMOS NATIONAL LABORATORY ENVIRONMENTAL RESTORATION PROGRAM

SAMPLE MANAGEMENT FACILITY

CORE SAMPLE LOG

Borehole ID 35 TA/OU 0.50-1 Drill Depth From 30 To 40 Page 4 of 4

Driller STEWART BROS Box #(s) NA Start Date/Time 12-13-95/1130 End Date/Time 12-13-95/1200

Drilling Equip./Method CHANGE SIZE DUGER Sampling Equip./Method CONTINUOUS CORE BARREL

Depth (feet)	Recovery (feet per feet / %)	Field Analytical Sample Number	Field Screening Results	Top/Bottom of Core In Box	Lithology-Petrology - Soil	Graphic Log	Lithologic Unit	Notes
30	5.0/5.0 RUN 7	0100-95 0959 at 34'	PID = 0	NA	30-35 S.A.A 31.5-32.5 POORLY INDURATED			1130
31								
32								
33								
34								
35	3.0/5.0 RUN 8	0100-95 0960 at 37'	PID = 0	NA	35-37' NR. 37-40 SAA POORLY TO NON INDURATED GRAY (5Y) SAND-LIKE BENTONITE			1140
36								
37								
38								
39								
40					BOTTOM OF BOREHOLE AT 40'.			1200

Prepared by ALEX MOZA Date 12-13-95 Checked By [signature] Date 12/20/95

LANL ENCLOSURE SIX

LANL GENERAL GEOLOGY AND HYDROLOGY INFORMATION

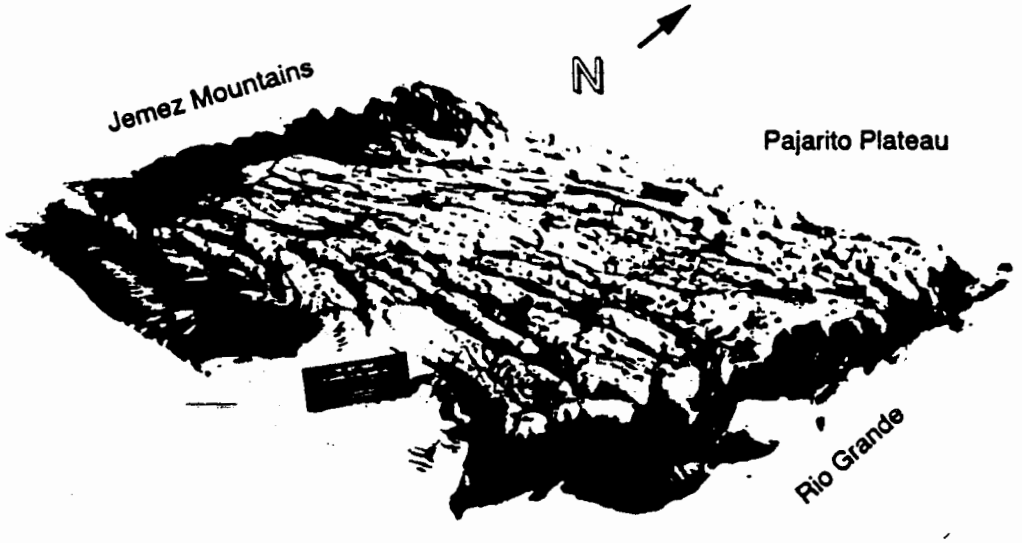


Figure II-3. Topography of the Los Alamos area.

The report provided environmental input for decisions regarding continuing activities at the Laboratory. It also provided more detailed information on the environment in and around Los Alamos. DOE is planning to prepare a new site-wide EIS for the Laboratory within the next several years.

C. Geology and Hydrology

Most of the finger-like mesas in the Los Alamos area are Bandelier Tuff, ash fall, ash fall pumice, and rhyolite tuff (Figure II-6). The tuff, ranging from nonwelded to welded, is over 300 m (1,000 ft) thick in the western part of the plateau and thins to about 80 m (260 ft) eastward above the Rio Grande. It was deposited as a result of a major eruption of a volcano in the Jemez Mountains about 1.1 to 1.4 million years ago.

The tuff overlaps onto the Tschicoma Formation, which consists of older volcanics that form the Jemez Mountains. The tuff is underlain by the conglomerate of the Puye Formation (Figure II-6) in the central and eastern edge along the Rio Grande. Chino Mesa basalts interfinger with the conglomerate along the river. These formations overlay the sediments of the Santa Fe Group, which extends across the Rio Grande Valley and is more than 1,000 m (3,300 ft) thick. The Laboratory is bordered on the east by the Rio Grande, within the Rio Grande Rift. Because the rift is slowly widening, the area experiences frequent but minor seismic disturbances.

Surface water in the Los Alamos area occurs primarily as ephemeral or intermittent reaches of streams. Perennial springs on the flanks of the Jemez Mountains supply base flow into upper reaches of some canyons, but the volume is insufficient to maintain surface flows across the Laboratory site before they are depleted by evaporation, transpiration, and infiltration. Run-off from heavy thunderstorms or heavy snowmelt reaches the Rio Grande several times a year in some drainages. Effluents from sanitary sewage, industrial waste treatment plants, and cooling-tower blowdown enter some canyons at rates sufficient to maintain surface flows for varying distances.

Groundwater in the Los Alamos area occurs in three modes: (1) water in shallow alluvium in canyons, (2) perched water (a body of groundwater above an impermeable layer that separates it from the underlying main body of groundwater), and (3) the main aquifer of the Los Alamos area.

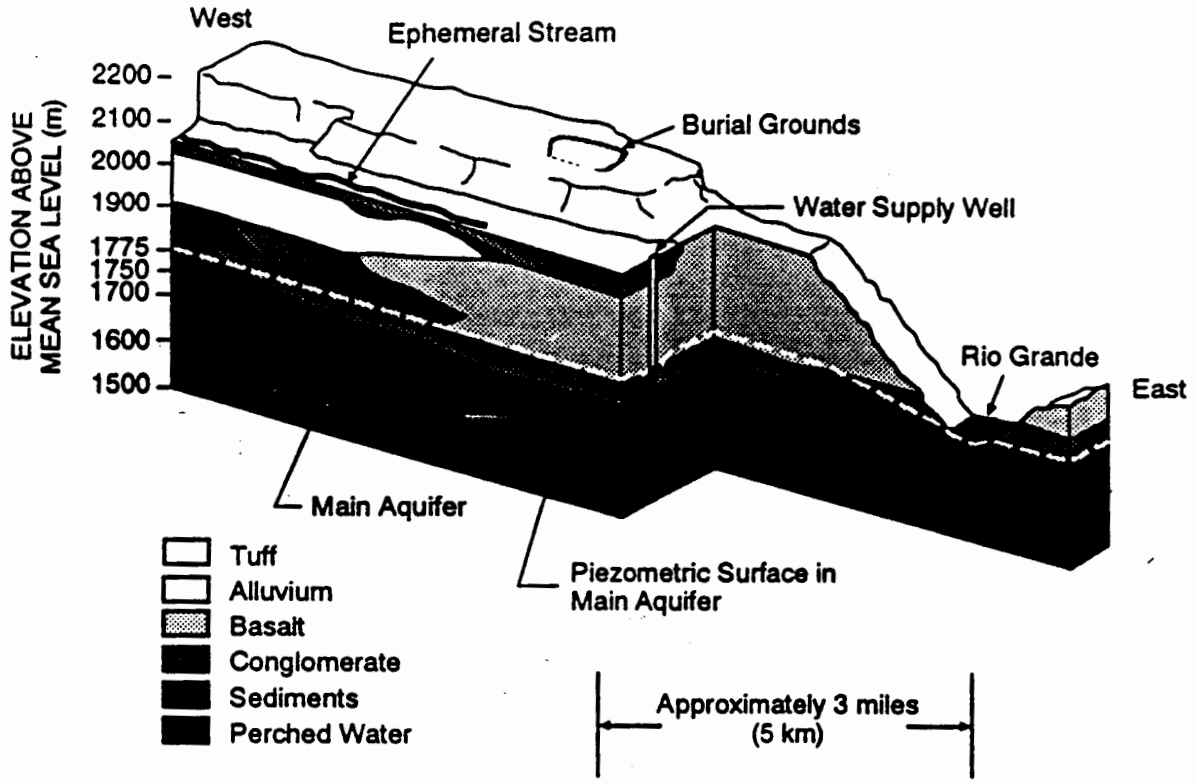


Figure II-6. Conceptual illustration of geologic and hydrologic relationship in Los Alamos area.

Ephemeral and interrupted streams have deposited alluvium that ranges from less than 1 m (3 ft) to as much as 30 m (100 ft) in thickness. Run-off in canyons infiltrates the alluvium until its downward movement is impeded by layers of weathered tuff and volcanic sediment that are less permeable than the alluvium. This creates shallow bodies of perched groundwater that move down gradient within the alluvium. As water in the alluvium moves down gradient, it is depleted by evapotranspiration and movement into underlying volcanics (Purtymun 1977). The perched alluvial groundwaters show the effects of discharges from the Laboratory.

Perched groundwater occurs at intermediate depths in conglomerates and basalts beneath the alluvium in portions of Pueblo, Los Alamos, and Sandia canyons. It has been found at depths of about 37 m (120 ft) in the midreach of Pueblo Canyon, about 45 to 60 m (150 to 200 ft) beneath the surface in lower Pueblo and Los Alamos canyons near their confluence in basalts in Los Alamos Canyon at 61 to 76 m (200 to 250 ft) (Figure II-6), and in Sandia Canyon near the eastern Laboratory boundary at a depth of about 137 m (450 ft). This intermediate depth perched water has one known discharge point at Basalt Spring in Los Alamos Canyon. The intermediate depth groundwaters communicate with the overlying perched alluvial groundwaters and show the effects of radioactive and inorganic contamination from Laboratory operations.

The main aquifer of the Los Alamos area is the only aquifer in the area capable of serving as a municipal water supply. The surface of the aquifer rises westward from the Rio Grande within the Tesuque Formation into the lower part of the Puye Formation beneath the central and western part of the plateau. Depth to the main aquifer is about 300 m (1,000 ft) beneath the mesa tops in the central part of the plateau. The main aquifer is separated from alluvial and perched waters by about 110 to 190 m (350 to 620 ft) of tuff and volcanic sediments with low (<10%) moisture content.

Water in the main aquifer is under artesian conditions in the eastern part and along the Rio Grande (Purtymun 1974b). Continuously recorded data on water levels collected in test wells since fall 1992 indicate that the main

aquifer exhibits confined aquifer response to barometric and earth tide effects throughout the Plateau. Major recharge to the main aquifer is probably from the west because the piezometric surface slopes downward to the east. The main aquifer discharges into the Rio Grande through springs in White Rock Canyon. The 18.5 km (11.5 mi) reach of the river in White Rock Canyon between Otowi Bridge and the mouth of Rito de Frijoles receives an estimated 5.3 to 6.8 × 10^6 m^3 (4,300 to 5,500 ac-ft) annually from the aquifer.

D. Climatology

Climatological averages for atmospheric state variables (temperature, pressure, and moisture) and precipitation are based on observations made at the official Los Alamos weather station from 1961 to 1991. Extremes are based on the 1911 to 1991 period. Although the location of the official weather station has changed over the years, all locations are within 30 m (100 ft) of each other in elevation and 5 km (3 mi) in distance. The meteorological conditions described here are representative of conditions on the Pajarito Plateau at an elevation of approximately 2,250 m (7,400 ft) above sea level.

Statistics on wind do not vary significantly from year to year; it may be helpful to refer to the wind roses for 1992 (Figures II-7 and II-8) along with the following text. In these diagrams, the length of each spoke is proportional to the amount of time that the wind blew from the indicated direction; circles of a probability of 6% and 12% are shown for reference. The spoke representing each wind direction sector is partitioned into segments, and the length of each segment is proportional to percentage of time the wind speed fell within the indicated range. Unless otherwise noted, the following discussion is based on winds observed at 11 m (36 ft) above the ground. The average time for wind gusts is approximately 1 s.

Los Alamos winds are generally light, averaging 2.8 m/s (6.3 mi/h). Strong winds are most frequent during the spring when sustained winds exceeding 11 m/s (25 mi/h) with peak gusts exceeding 22 m/s (50 mi/h) are common. The highest wind gust in the record is 34.4 m/s (77 mi/h).

Winds over the plateau show considerable spatial structure and temporal variability. The semiarid climate promotes strong surface heating by day and strong radiative cooling by night. Because the terrain is very complex, heating and cooling rates are uneven over the Los Alamos area, and this results in diurnal thermally generated local flows. However, it is often difficult to explain observed winds completely in terms of the simple conceptual models of slope and valley flows.

During sunny, light-wind days, an upslope flow often develops over the plateau in the morning hours. This flow is more pronounced along the western edge of the plateau, where it is 200 to 500 m (650 to 1650 ft) deep. By noon, southerly flow usually prevails over the entire plateau.

At measurement sites closer to the eastern edge of the plateau, wind roses show a weak secondary peak in the daytime wind direction in the northeast sector. These northeasterlies also show up in the wind roses for observations made at 92 m (300 ft) and 510 m (1,670 ft) above the ground. They are thought to result from cold air drainage down the Rio Grande Valley that persists into the early morning hours.

The prevailing nighttime flow along the western edge of the plateau is west-southwesterly to northwesterly. These nighttime westerlies result from cold air drainage off the Jemez Mountains and the Pajarito Plateau; the drainage layer is typically 50 m (165 ft) deep in the vicinity of TA-3. At sites farther from the mountains, the nighttime direction is more variable but usually has a relatively strong westerly component. Just above the drainage layer, the prevailing nighttime flow is southwesterly, with minor peaks in the distribution around northwest and northeast. At 510 m (1,673 ft) above the ground, the wind direction distribution exhibits a broad, flat peak covering the whole western half of the compass.

Atmospheric flow in the canyons is quite different than over the plateau. Data collected from Los Alamos Canyon suggest that at night a cold air drainage fills the lower portion of the canyon. The flow is steady and continues for about an hour after sunrise when it ceases abruptly and is followed by an unsteady up-canyon flow for a couple of hours. This up-canyon flow often gives way to the development of a rotor that fills the canyon when the wind over the plateau has a strong cross-canyon component. When the rotor occurs, southwesterly (or southeasterly) flow over the plateau results in northwesterly (or northeasterly) flow at the canyon bottom. Down-canyon flow begins again around sunset, but the onset time appears to be more variable than cessation time in the morning

ENCLOSURE SEVEN

GROUNDWATER WELLS AND OTHER PENETRATIONS AND DRAWINGS

Note: The nearest public supply well is PM-5 which is approximately 8,800 feet southeast of former UST TA-0, 6th Street.

LEGEND

1748

PERCHED ALLUVIAL MONITORING WELLS
(Old wells are pre-1990; new wells installed since 1990 according to EPA guidelines)

○ New Dry Well

⊖ Old Dry Well

● New Saturated Well

◓ Old Saturated Well

ATTACHMENT J

Los Alamos
NATIONAL LABORATORY

Hazardous & Solid Waste Group
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

Date: February 22, 1996
In Reply Refer To: ESH-19:96-0056
Mail Stop: K498
Telephone: (505) 665-2505

Ruben Baca
Prevention/Inspection Section
Underground Storage Tank Bureau
New Mexico Environment Department
1190 St. Francis Drive
P.O. Box 26110
Santa Fe, New Mexico 87502

Dear Mr. Baca:

SUBJECT: TRANSMITTAL OF UNDERGROUND STORAGE TANK CLOSURE FORM AND TANK CLOSURE WORK SHEET

The purpose of this letter is to transmit the official notification form (Environmental Protection Agency [EPA] Form 7530-1) indicating the closure date of an Underground Storage Tank (UST) located at Technical Area (TA) 0. I have enclosed for your records a copy of a completed Tank Closure Worksheet for this UST removal.

This UST was never registered with the New Mexico Environment Department (NMED) because it was taken out of operation in the late 1960's. Recently, the UST was discovered by Los Alamos National Laboratory's (LANL), Environmental Management/Restoration Project. LANL has named this UST TA-0-6th Street. UST TA-0-6th Street, before its removal was owned by the Department of Energy, had a 3500-gallon fuel capacity, and held heating fuel oil. When the UST was removed, it was found to be full of water with approximately one foot of fuel oil floating on top of the water.

Upon removal of the UST it was determined that the tank was leaking. LANL initiated corrective actions and eventually received a NMED no further action letter for this UST site. A copy of the letter is enclosed.

If you should require additional information or if you have questions, please contact me at 665-2505.

Sincerely,

Jeff Carmichael

Jeff Carmichael
Hazardous & Solid Waste

JAC:em

Enclosure: EPA Form 7530-1, and NMED's Tank Closure Work Sheet, NMED No Further Action Letter.

Cy: T. Grieggs, ESH-19, MS K498, w/o enc.
J. Vozella, LAAO, MS A316, w/enc.
C. Fesmire, LAAO, MS A316, w/enc.
RPF, EM/ER, MS M707, w/enc.
ESH-19 Circ File
L. Hartman, EM/ER, MS E525, w/enc.
T. Taylor, LAAO, MS A316, w/enc.
S. Calhoun, ERM/Golder, MS M327, w/enc.
CIC-10, MS A150

Notification for Underground Storage Tanks

FORM APPROVED
OMB NO. 2050-0049
APPROVAL EXPIRES 6-30-88

FOR TANKS IN NM

RETURN COMPLETED FORM TO

New Mexico Environment Department
UNDERGROUND STORAGE TANK BUREAU
1190 St. Francis Drive
Harold Runnels Bldg. N2164
Santa Fe, New Mexico 87503

I.D. Number

STATE USE ONLY

Date Received

GENERAL INFORMATION

Notification is required by Federal law for all underground tanks that have been used to store regulated substances since January 1, 1974, that are in the ground as of May 8, 1986, or that are brought into use after May 8, 1986. The information requested is required by Section 9002 of the Resource Conservation and Recovery Act, (RCRA), as amended.

The primary purpose of this notification program is to locate and evaluate underground tanks that store or have stored petroleum or hazardous substances. It is expected that the information you provide will be based on reasonably available records, or, in the absence of such records, your knowledge, belief, or recollection.

Who Must Notify? Section 9002 of RCRA, as amended, requires that, unless exempted, owners of underground tanks that store regulated substances must notify designated State or local agencies of the existence of their tanks. Owner means—

(a) in the case of an underground storage tank in use on November 8, 1984, or brought into use after that date, any person who owns an underground storage tank used for the storage, use, or dispensing of regulated substances, and

(b) in the case of any underground storage tank in use before November 8, 1984, but no longer in use on that date, any person who owned such tank immediately before the discontinuation of its use.

What Tanks Are Included? Underground storage tank is defined as any one or combination of tanks that (1) is used to contain an accumulation of "regulated substances," and (2) whose volume (including connected underground piping) is 10% or more beneath the ground. Some examples are underground tanks storing: 1. gasoline, used oil, or diesel fuel, and 2. industrial solvents, pesticides, herbicides or fumigants.

What Tanks Are Excluded? Tanks removed from the ground are not subject to notification. Other tanks excluded from notification are:

1. farm or residential tanks of 1,100 gallons or less capacity used for storing motor fuel for noncommercial purposes;
2. tanks used for storing heating oil for consumptive use on the premises where stored;
3. septic tanks;
4. pipeline facilities (including gathering lines) regulated under the Natura Pipeline Safety Act of 1968, or the Hazardous Liquid Pipeline Safety Act of 19 which is an intrastate pipeline facility regulated under State laws;
5. surface impoundments, pits, ponds, or lagoons;
6. storm water or waste water collection systems;
7. flow-through process tanks;
8. liquid traps or associated gathering lines directly related to oil or gas productic gathering operations;
9. storage tanks situated in an underground area (such as a basement, mineworking, drift, shaft, or tunnel) if the storage tank is situated upon or abo surface of the floor.

What Substances Are Covered? The notification requirements apply to u ground storage tanks that contain regulated substances. This includes any subs defined as hazardous in section 101 (14) of the Comprehensive Environm Response, Compensation and Liability Act of 1980 (CERCLA), with the excepti those substances regulated as hazardous waste under Subtitle C of RCRA. I includes petroleum, e.g., crude oil or any fraction thereof which is liquid at star conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pound square inch absolute).

Where To Notify? Completed notification forms should be sent to the ad given at the top of this page.

When To Notify? 1. Owners of underground storage tanks in use or that have taken out of operation after January 1, 1974, but still in the ground, must noti May 8, 1986. 2. Owners who bring underground storage tanks into use after M 1986, must notify within 30 days of bringing the tanks into use.

Penalties: Any owner who knowingly fails to notify or submits false inform shall be subject to a civil penalty not to exceed $10,000 for each tank for w notification is not given or for which false information is submitted.

INSTRUCTIONS

Please type or print in ink all items except "signature" in Section V. **This form must by completed for each location containing underground storage tanks.** If more than 5 tanks are owned at this location, photocopy the reverse side, and staple continuation sheets to this form.

Indicate number of continuation sheets attached

I OWNERSHIP OF TANK(S)

Owner Name (Corporation, Individual, Public Agency, or Other Entity): U. S. Department of Energy, LAAO

Street Address: 528 35th Street

County: Los Alamos

City: Los Alamos | State: NM | ZIP Code: 87544

Area Code: (505) | Phone Number: 667-5105

Type of Owner (*Mark all that apply* ☒)

- ☒ Current
- ☐ Former
- ☐ State or Local Gov't
- ☒ Federal Gov't (GSA facility I.D. no. _____)
- ☐ Private or Corporate
- ☐ Ownership uncertain

II LOCATION OF TANK(S)

(If same as Section 1, mark box here ☐)

Facility Name or Company Site Identifier, as applicable: Los Alamos National Laboratory

Street Address or State Road, as applicable: Box 1663

County: Los Alamos

City (nearest): Los Alamos | State: NM | ZIP Code: 87545

Indicate number of tanks at this location: 13

Mark box here if tank(s) are located on land within an Indian reservation or on other Indian trust lands ☐

III CONTACT PERSON AT TANK LOCATION

Name (If same as Section I, mark box here ☐): Jeff Carmichael

Job Title: Environmental Scientist

Area Code: (505) Phone Numl: 665-2505

IV TYPE OF NOTIFICATION

☐ Mark box here only if this is an amended or subsequent notification for this location.

V CERTIFICATION (Read and sign after completing Section VI)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attac documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe tha submitted information is true, accurate, and complete.

Name and official title of owner or owner's authorized representative	Signature	Date Signed
Jeff Carmichael Envir. Scientist	Jeff Carmichael	2-20-95

CONTINUE ON REVERSE SIDE

TANK CLOSURE WORKSHEET
(COMPLETE AFTER CLOSURE)

Tank Owner U.S. Dept. of Energy Phone (505) 667-5288
Mailing Address 528 35th Street, Los Alamos, NM 87544
Tank Address
Contractor Name Los Alamos National Laboratory Phone (505) 665-2505
Address P.O. Box 1663, Los Alamos, NM 87545
Contractor Name Phone
Address

Tank Closure Date November 13, 1995 # of Tanks Closed 1

****

I. Tank Closure Initial Procedures (check measures complied with):

- x Obtain recommended safety equipment for all personnel
- x Contact Fire Marshall or other fire officials
- x Bond or ground equipment
- x Drain product from piping and tank
- x Disconnect, then cap or remove piping
- x Remove all residual product from tank
- x Excavate to tank top
- x Remove all tank fixtures
- x Properly purge or inert tank of all flammable vapors using approved method
- x Continually monitor for explosive vapors while tank is being removed

II. Tank Removal

- x Create vent hole
- x Excavate tank using all safety precautions
- x Clean and inspect tank
- x Check excavation for evidence of leaks and notify EID and other proper authorities if leak is found
- x Check vapor levels in tank before transporting
- x Dispose of tank in approved manner

Tank disposal location Eidson Steel Products, Inc. Albuquerque, NM
City State

How did you assess site for leakage? Visual/Soil Samples
Closure report kept at Jeff Carmichael's Office, LANL, TA-59
NOTE: Immediately report any evidence of leakage to EID at 827-0188

I hereby state that the above information is correct

Jeff Carmichael Feb 20, 1996
Signature of owner or contractor performing work

****

FOR EID USE ONLY
Notification Received Approved By
Inspection Date Inspector