Los Alamos Environmental Restoration Records Processing Facility

ER Record I.D.# 63947

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ER Records Index Form

ER ID NO. 63947 *Date Received:* 5/19/98 *Processor:* DIC *Page Count:* 26

Privileged: (Y/N) N *Record Category:* P *Record Package No:* 255

FileFolder: OU 1111 RECORDS PACKAGE SUBMITTAL LETTER RECORDS PACKAGE #255 ADDITION SUBMITTAL #3/PRELIMINARY FIELD WORK SITE RECON, FIELD SCREENING AND SAMPLE PLANNING ARREGATE 7 - ACTIVE FIRING SITES

Correction: (Y/N) N *Corrected No.* 0 *Corrected By Number:* 0

Administrative Record: (Y/N) Y

Refilmed: (Y/N) N *Old ER ID Number:* 0 *New ER ID Number:* 0

Miscellaneous Comments:

N/A

34002

THIS FORM IS SUBJECT TO CHANGE. CONTACT THE RPF FOR LATEST VERSION. (JUNE 1997)

(26)

Los Alamos National Laboratory Environmental Restoration
DAILY ACTIVITY LOG

Date: 13 Feb 95 Sheet 1 of 1

Technical Area 40 Operable Unit 1111

Site Work Plan Aggregate 7: Active Firing Sites

Signature Richard Romero

Received by ER-RPF
MAY 19 1998
JIC

Comments:

09:00 Richard Romero, Elmer Velasquez, Jody Armijo arrived and signed in at TA-22: 90 Met Larry Creamer and Gerald Vasilik.

09:10 Left TA-22 and arrived at TA-40-9 firing site to locate 40-009 (Landfill). Both Larry & Gerald identified suspected location of landfill immediately south of TA-40-9. Drove 1"X.025"X12" dumpsum stake into perimeter of landfill. Landfill (suspected) is on steep hillside and has two prominent earthen berms with no obvious debris indicative of disposal events. Drill rig "will not" be able to access site. Will have to hand-auger and hope to positively identify landfill by retrieving burn or other disposal debris.

09:40 Visited active firing site at TA-40-15 and queried Larry & Gerald on site perimeter area of largest HE debris deposition, firing site berm identification etc

09:50 Visited Scrap detonation site east of TA-40-15 to determine if landfill 40-009 is not in fact at this site Larry identified old burn pit he suspects

☐ CHECK HERE IF CONTINUED ON BACK OF THIS SHEET.

"may be" actual landfill. Area now in final stages of closure.

10:00 Left site and signed out at TA-22!

Los Alamos National Laboratory Environmental Restoration
DAILY ACTIVITY LOG

Date: 11 April 1995 Sheet 1 of 1

Technical Area 40 Operable Unit 1111

Site Work Plan Aggregate 7 Active Firing Site (TA-40-9 TA-40-15)

Signature Richard Romero

Comments: Aggregate 7 Site Visit (Active Firing Site)
Arrived at TA-22 at 13:23. Signed in at Group DX-10 office. Elmer Velasquez, Eddie Trujillo, Judy Arango and Richard Romero secured key for access to TA-40-15 (Active Firing Site) (PRS 40-006A) and TA-40-9 (Landfill) (PRS-40-009)
Arrived at TA-40-15 Active Firing site at 13:35. Richard Romero informed Elmer, Eddie and Judy of sampling scheme for this area and locations of samples to be surveyed. Left site at 13:45. Arrived at TA-40-9 Landfill at 13:50. Richard Romero informed Elmer, Eddie, and Judy of sampling scheme and sample locations to be surveyed in. Left site at 14:00. Logged out of TA-22 at 14:10. Returned to TA-59 at 14:15

☐ CHECK HERE IF CONTINUED ON BACK OF THIS SHEET.

AGGREGATE 7

ACTIVE FIRING SITES

[redacted] SAMPLE LOCATION — FIMAD

1) 40-006 A
Active Firing Pad
2 transects 6' wide from firing berm across the canyon (survey for shrapnel, rad, metals (XRF).
Cores: Collect from area evenly spaced determined to contain contaminants
3 samples from each core (0-6", soil-tuff, intermediate depth judged most likely to contain contaminants)
→ Look for discoloration, fractures, or loss of materials) If none present, collect at 2 feet or at the middle depth of a core that is less than 3'!
NOTE →

Core 1			
~~Surface~~			
~~Intermediate~~			
0-6"	1	7001	~~07-7001~~
Soil-Tuff	2		~~07-7002~~
Intermediate	3		~~07-7003~~
Core 2			
0-6"	4	7002	~~07-7004~~
Soil-Tuff	5		~~07-7005~~
Inter.	6		~~07-7006~~
Core 3			
0-6"	7	7003	~~07-7007~~
Soil-Tuff	8		~~07-7008~~
Inter.	9		~~07-7009~~
Core 4			
0-6"	10	7004	~~07-7010~~
Soil-Tuff	11		~~07-7011~~
Inter.	12		~~07-7012~~
Duplicate 0-6" of #10			~~07-7013~~
Core 5			
0-6"	13	7005	~~07-7014~~
Soil-Tuff	14		~~07-7015~~
Inter.	15		~~07-7016~~
Core 6			
0-6"	16	7006	~~07-7017~~
Soil-Tuff	17		~~07-7018~~
Inter.	18		~~07-7019~~

AGGREGATE 7

Active Firing Sites

Sampling Location				FIMAO
1) 40-006A	Core 7			
Active Firing Pad	0-6"	19	7007	~~07-7020~~
	Soil-Tuff	20		~~07-7021~~
	Intermediate	21		~~07-7022~~
	Core 8			
	0-6"	22	7008	~~07-7023~~
	Soil-Tuff	23		~~07-7024~~
	Inter.	24		~~07-7025~~
	Duplicate 0-6" of #22			~~07-7026~~
40-006(A)				
2) Berm	Core 1			
Canyon Edge	0-6"	25	7009	~~07-7027~~
	Soil-Tuff	26		~~07-7028~~
Cores from the	Intermediate	27		~~07-7029~~
berm collected				
evenly spaced along	Core 2			
full length of berm.	0-6"	28	7010	~~07-7030~~
	Soil-Tuff	29		~~07-7031~~
	Inter.	30		~~07-7032~~
	Core 3			
	0-6"	31	7011	~~07-7033~~
	Soil-Tuff	32		~~07-7034~~
	Inter.	33		~~07-7035~~
	Core 4			
	0-6"	34	7012	~~07-7036~~
	Soil-Tuff	35		~~07-7037~~
	Inter.	36		~~07-7038~~
	Duplicate 0-6" of #34			~~07-7039~~

AGGREGATE 7

Active Firing Sites

Sampling Location				FIMAO
2) 40-006 (A) Berm	Core 5			
	0-6"	37	7013	~~07-7040~~
	Soil-Tuff	38		07-7041
	Intermediate	39		~~07-7042~~
	Core 6			
	0-6"	40	7014	07-7043
	Soil-Tuff	41		~~07-7044~~
	Inter.	42		~~07-7045~~
	Core 7			
	0-6"	43	7015	~~07-7046~~
	Soil-Tuff	44		~~07-7047~~
	Inter.	45		~~07-7048~~
	Core 8			
	0-6"	46	7016	~~07-7049~~
	Soil-Tuff	47		~~07-7050~~
	Inter.	48		~~07-7051~~
	Duplicate 0-6" of # 46			~~07-7052~~
3) 40-006(A) North Canyon Wall	Core 1			
	0-6"	49	7017	~~07-7053~~
Cores widely spaced between the transects but two may be located outside the transects within 50'	Soil-Tuff	50		~~07-7054~~
	Intermediate	51		~~07-7055~~
	Core 2			
	0-6"	52	7018	~~07-7056~~
	Soil-Tuff	53		~~07-7057~~
	Inter.	54		~~07-7058~~

AGGREGATE 7

Active Firing Sites

3) 40-006 (A) North Canyon Wall	Sampling Location			FIMAD
	Core 3			
	0-6"	55	7019	~~07-7059~~
	Soil-Tuff	56		~~07-7060~~
	Intermediate	57		~~07-7061~~
	Core 4			
	0-6"	58	7020	~~07-7062~~
	Soil-Tuff	59		~~07-7063~~
	Inter.	60		~~07-7064~~
	Duplicate 0-6" f #	58		~~07-7065~~
	Core 5			
	0-6"	61	7021	~~07-7066~~
	Soil-Tuff	62		~~07-7067~~
	Inter.	63		~~07-7068~~
	Core 6			
	0-6"	64	7022	~~07-7069~~
	Soil-Tuff	65		~~07-7070~~
	Inter.	66		~~07-7071~~
	Core 7			
	0-6"	67	7023	~~07-7072~~
	Soil-Tuff	68		~~07-7073~~
	Inter.	69		~~07-7074~~
	Core 8			
	0-6"	70	7024	~~07-7075~~
	Soil-Tuff	71		~~07-7076~~
	Inter.	72		~~07-7077~~
	Duplicate 0-6" f #	70		07-7078

AGGREGATE 7

Active Firing Sites

	Sampling Location		FIMAC
40-006(A)	Core 1	7025	
4) Canyon Bottom Floodplain Cores in the canyon alluvium will be widely spaced on both sides of the stream channel between the transects.	0-6"	73	~~07-7018~~ 80
	Soil-Tuff	74	~~07-7019~~
	Intermediate	75	~~07-7020~~ 81
	Core 2	7026	
	0-6"	76	~~07-7021~~
	Soil-Tuff	77	~~07-7022~~
	Inter.	78	~~07-7023~~ 84
	Core 3	7027	
	0-6"	79	~~07-7024~~ 85
	Soil-Tuff	80	~~07-7025~~
	Inter.	81	~~07-7026~~ 87
	Core 4	7028	
	0-6"	82	~~07-7027~~
	Soil-Tuff	83	~~07-7028~~
	Inter.	84	~~07-7029~~
	Duplicate 0-6" of #	82	~~07-7030~~ 4
	Core 5	7029	
	0-6"	85	~~07-7031~~
	Soil-Tuff	86	~~07-7032~~
	Inter.	87	~~07-7033~~
	Core 6	7030	
	0-6"	88	~~07-7034~~ 95
	Soil-Tuff	89	~~07-7035~~ 96
	Inter.	90	~~07-7036~~ 97

AGGREGATE 7

Active Firing Sites

	Sampling Location		FIMAD
4) 40-006(A) Canyon Bottom Floodplain	Core 7	7031	
	0-6"	91	~~07-7098~~
	Soil-Tuff	92	~~07-7099~~
	Intermediate	93	~~07-7100~~ 7100
	Core 8	7032	
	0-6"	94	~~07-7100~~ 7101
	Soil-Tuff	95	~~07-7102~~
	Inter.	96	~~07-7103~~
	Duplicate 0-6" of # 94		~~07-7104~~
5) 40-006(A) Stream Channel Sediment	Core 1	7033	
	Sediment-Tuff	97	~~07-7105~~
(8) Cores evenly spaced in stream channel to ~~soil-tuff~~ sediment-tuff interface. Cores located within the two transects but two cores may be located outside the transects within 50'. Each core will be collected as one sample including any fluid. Samples will be dried & homogenized before analysis.	Core 2	7034	
	Sed.-Tuff	98	~~07-7106~~
	Core 3	7035	
	Sed. Tuff	99	~~07-7107~~
	Core 4	7036	
	Sediment-Tuff	100	~~07-7108~~
	Duplicate of # 100		~~07-7109~~
	Core 5	7037	
	Sed.-Tuff	101	~~07-7110~~
	Core 6	7038	
	Sed-Tuff	102	~~07-7111~~

AGGREGATE 7
Active Firing Sites

40-006(A) **Sampling Locations** **FIMAD**

5) Stream Channel Sediment

Core 7			
Sediment-Tuff	103	7039	~~07-7112~~
Core 8			
Sed-Tuff	104	7040	~~07-7113~~
~~Duplicate of # 104~~			~~[illegible]~~

40-006(A)

6) South Canyon Wall

Surface samples (8)	0-6"	105	7041	~~07-7114~~
Evenly spaced	0-6"	106	7042	~~07-7115~~
between the two	0-6"	107	7043	~~07-7116~~
transects	0-6"	108	7044	~~07-7117~~
	0-6"	109	7045	~~07-7118~~
	0-6"	110	7046	~~07-7119~~
	0-6"	111	7047	~~07-7120~~
	0-6"	112	7048	~~07-7121~~
	[redacted]	[redacted]		
Duplicate 0-6" of # ?		113		~~07-7122~~

next to TA-40-5 used Daily (Gas Cur).

7) 40-009 [redacted]

Core 1			
0-6"	114	7049	07-7123
Soil-Tuff	115		07-7124
Intermediate	116		07-7125

6 cores. 4 from within landfill boundary and 2 from drainages below canyon wall in areas representing accumulation of eroded debris. Intermediate = most contaminated depth, e.g. look for discoloration, fractures, or debris; If none, collect at at 2 feet or at middle depth of core if < 3!

AGGREGATE 7

Active Firing Sites
Sampling Locations

				FIMAD
7) 40-009 LANDFILL	Core 2		7050	
	0-6"	117		~~07-7126~~
	Soil-Tuff	118		~~07-7127~~
	Intermediate	119		~~07-7128~~
(Landfill)	Core 3		7051	
	0-6"	120		~~07-7129~~
	Soil-Tuff	121		~~07-7130~~
	Inter.	122		~~07-7131~~
(Landfill)	Core 4		7052	
	0-6"	123		~~07-7132~~
	Soil-Tuff	124		~~07-7133~~
	Inter.	125		~~07-7134~~
	Duplicate 0-6" of #	123		~~07-7135~~
(Drainage)	Core 5		7053	
	0-6"	126		~~07-7136~~
	Soil-Tuff	127		~~07-7137~~
	~~07-7~~ Inter.	128		~~07-7138~~
	~~Soil-Tuff~~			
(Drainage)	Core 6		7054	
	0-6"	129		~~07-7139~~
	Soil-Tuff	130		~~07-7140~~
	Inter.	131		~~07-7141~~

10/14/94

AGGREGATE 7
ACTIVE FIRING SITES

	SAMPLE LOCATION	FIMAD NUMBER
40-006 A Active Firing Pad. Two transects six feet wide from firing bunker across the canyon (survey for shrapnel, rad, and metals). Collect cores from area evenly spaced determined to contain contaminants. Three samples from each core (0-6", soil/tuff, and intermediate depth judged most likely to contain contaminants: look for discoloration, fractures or debris). Note: if none present, collect at two feet or at the middle depth of a core that is less than three feet.	Core 1 0-6" soil/tuff Intermediate	7001
	Core 2 0-6" soil/tuff Intermediate	7002
	Core 3 0-6" soil/tuff Intermediate	7003
	Core 4 0-6" soil/tuff Intermediate	7005
	Core 5 0-6" soil/tuff Intermediate	7006
	Core 6 0-6" soil/tuff Intermediate	7007
	Core 7 0-6" soil/tuff Intermediate	7008
	Core 8 0-6" Duplicate 0-6" soil/tuff Intermediate	7009

	SAMPLE LOCATION	FIMAD NUMBER
40-006 A Berm Canyon Edge. Cores taken from the berm, evenly spaced along the full length of the berm.	Core 1 0-6" soil/tuff Intermediate	7009
	Core 2 0-6" soil/tuff Intermediate	7010
	Core 3 0-6" soil/tuff Intermediate	7011
	Core 4 0-6" Duplicate 0-6" soil/tuff Intermediate	7012
	Core 5 0-6" soil/tuff Intermediate	7013
	Core 6 0-6" soil/tuff Intermediate	7014
	Core 7 0-6" soil/tuff Intermediate	7015
	Core 8 0-6" Duplicate 0-6" soil/tuff Intermediate	7016

	SAMPLE LOCATION	FIMAD NUMBER
40-006 A North Canyon Wall. Cores widely spaced between the transects but two may be located outside the transects within fifty feet.	Core 1 0-6" soil/tuff Intermediate	7017
	Core 2 0-6" soil/tuff Intermediate	7018
	Core 3 0-6" soil/tuff Intermediate	7019
	Core 4 0-6" Duplicate 0-6" soil/tuff Intermediate	7020
	Core 5 0-6" soil/tuff Intermediate	7021
	Core 6 0-6" soil/tuff Intermediate	7022
	Core 7 0-6" soil/tuff Intermediate	7023
	Core 8 0-6" Duplicate 0-6" soil/tuff Intermediate	7024

	SAMPLE LOCATION	FIMAD NUMBER
40-006 A Canyon Bottom Floodplain. Cores in the canyon alluvium will be widely space on both sides of the stream channel between the transects.	Core 1 0-6" soil/tuff Intermediate	7025
	Core 2 0-6" soil/tuff Intermediate	7026
	Core 3 0-6" soil/tuff Intermediate	7027
	Core 4 0-6" Duplicate 0-6" soil/tuff Intermediate	7028
	Core 5 0-6" soil/tuff Intermediate	7029
	Core 6 0-6" soil/tuff Intermediate	7030
	Core 7 0-6" soil/tuff Intermediate	7031
	Core 8 0-6" Duplicate 0-6" soil/tuff Intermediate	7032

40-006 A	SAMPLE LOCATION	FIMAD NUMBER
Stream Channel Sediment. Cores evenly space in stream channel to sediment-tuff interface. Cores located within the two transects but two cores may be located outside the transects within fifty feet. Each core will be collected as one sample including any fluid. Samples will be dried and homogenized before analysis.	Core 1 sediment/tuff	7033 ↓
	Core 2 sediment/tuff	7034 ↓
	Core 3 sediment/tuff	7035 ↓
	Core 4 sediment/tuff	7036
	Duplicate	↓
	Core 5 sediment/tuff	7037 ↓
	Core 6 sediment/tuff	7038 ↓
	Core 7 sediment/tuff	7039 ↓
	Core 8 sediment/tuff	7040 ↓
South Canyon Wall. Eight surface samples evenly spaced between the two transects.	0-6"	7041
	0-6"	7042
	0-6"	7043
	0-6"	7044
	0-6"	7045
	0-6"	7046
	0-6"	7047
	0-6"	7048
	duplicate	↓

40-009	SAMPLE LOCATION	FIMAD NUMBER
Landfill. Next to TA-40-9 and used daily (Gas Gun). Six cores, four from within Landfill boundary and two from drainage below canyon wall in areas representing accumulation of eroded debris. Note: Intermediate - most contaminated depth, look for discoloration, fractures, or debris; if none, collect at two feet or at middle depth of core if less than three feet.	Landfill Core 1 0-6" soil/tuff Intermediate	7049 ↓
	Landfill Core 2 0-6" soil/tuff Intermediate	7050 ↓
	Landfill Core 3 0-6" soil/tuff Intermediate	7051 ↓
	Landfill Core 4 0-6" Duplicate 0-6" soil/tuff Intermediate	7052 ↓
	Drainage Core 5 0-6" soil/tuff Intermediate	7053 ↓
	Drainage Core 6 0-6" soil/tuff Intermediate	7052 ↓

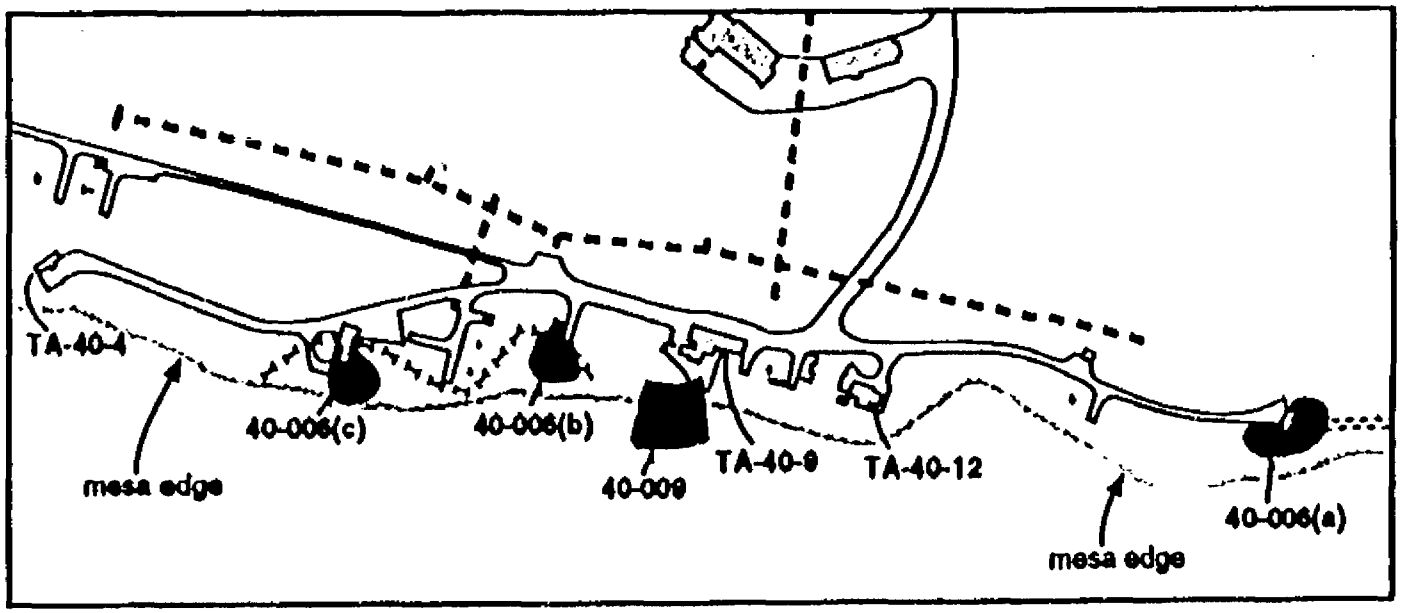
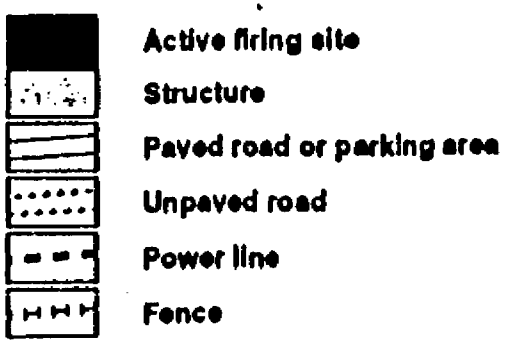


Figure 5-30. Locations of active firing sites and Landfill 40-009 at TA-40.



Active Firing Sites

SWMU Aggregate: Oil-1111 Aggregate 7

Subarea: 40-006A

Date:

Field Team Leader:

Sample Type *	Sampling Location	Interval	ER Sample Identification (01-XXXX)	Field Surveys and Screening: FIDLER	Beta / Gamma	Alpha	Organic vapor	EM 8 Laboratory Measurements: Gross alpha	Gross beta	Gross gamma	X-ray fluorescence	Laboratory Analysis: Gamma Spectroscopy (40SR, 137Cs)	Isotopic Uranium (RA-marked)	Isotopic Plutonium	Metals (SW6010)	Semivolatiles (SW 8270)	VOA	Tritium	HE (LANL method)	Tritium
(Soil)	1	0-6"	7001									X	X		X	X		X	X	
40-006A		Soil/tuff										X	X		X	X			X	
Active Firing Pad:	2	Intermediate										X	X		X	X			X	
Evenly spaced to																				
cover area most	3	0-6"	7002									X	X		X	X			X	
likely to contain		Soil/tuff										X	X		X	X			X	
crofics	4	Intermediate										X	X		X	X			X	
	5	0-6"	7003									X	X		X	X			X	
		Soil/tuff										X	X		X	X			X	
	6	Intermediate										X	X		X	X			X	
	7	0-6"	7004									X	X		X	X			X	
		Duplicate										X	X		X	X			X	
	8	Soil/tuff										X	X		X	X			X	
		Intermediate										X	X		X	X			X	
	9																			
		0-6"	7005									X	X		X	X			X	
	10	Soil/tuff										X	X		X	X			X	
		Intermediate										X	X		X	X			X	
	11																			
		0-6"	7006									X	X		X	X			X	
	12	Soil/tuff										X	X		X	X			X	
		Intermediate										X	X		X	X			X	
	13																			

* **Vertical Composite** -- made up of soil segments from same borehole

Surface Composite -- made up of top 6 inch segments from several boreholes

Bottom Composite -- made up of last (deepest) 12-inch segments from several boreholes

(Tritium - 500 ml poly - cool)

(metals - 125 ml poly 1) (HE - 125 ml glass - cool) (40SR - 137Cs - Isoll - 125 ml poly) (SVO 125 ml glass cool)

(2)

Active Firing Sites

SWMU Aggregate: OU-1111 Aggregate 7

Subarea: 40-006A

Date:

Field Team Leader:

Sample Type *	Sampling Location	Interval	ER Sample Identification (01-XXXX)	Field Surveys and Screening: FIDLER	Beta / Gamma	Alpha	Organic vapor	EM 8 Laboratory Measurements: Gross alpha	Gross beta	Gross gamma	X-ray fluorescence	Laboratory Analysis: ~~Gamma Spectrometer~~ 40 SF, 137 Cs	Isotopic Uranium	Isotopic Plutonium	Metals (SW6010)	Semivolatiles (SW 8270)	VOA	Tritium	HE (LANL method)
(Soil)	1	0-6"	7007									X	X		X	X			X
40-006A		Soil/tuff										X	X		X	X			X
Active Firing Pad	2	Intermediate										X	X		X	X			X
	3	0-6"	7008									X	X		X	X			X
		Duplicate										X	X		X	X			X
	4	Soil/tuff										X	X		X	X			X
		Intermediate										X	X		X	X			X
	5																		
40-006A		0-6"	7009									X	X		X	X			X
Burns Canyon	6	Soil/tuff										X	X		X	X			X
Edge:		Intermediate										X	X		X	X			X
Evenly spaced	7																		
along the full		0-6"	7010									X	X		X	X			X
length of the beam	8	Soil/tuff										X	X		X	X			X
		Intermediate										X	X		X	X			X
	9																		
		0-6"	7011									X	X		X	X			X
	10	Soil/tuff										X	X		X	X			X
		Intermediate										X	X		X	X			X
	11																		
		0-6"	7012									X	X		X	X			X
	12	Duplicate										X	X		X	X			X
		Soil/tuff										X	X		X	X			X
	13	Intermediate										X	X		X	X			X

Recent drill!!

* Vertical Composite -- made up of soil segments from same borehole

Surface Composite -- made up of top 6 inch segments from several boreholes

Bottom Composite -- made up of last (deepest) 12 inch segments from several boreholes

Active Firing Sites

SWMU Aggregate: OU-1111 Aggregate 7

Subarea: 40-006A

Date:

Field Team Leader:

Sample Type*	Sampling Location	Interval	ER Sample Identification (01-XXXX)	Field Surveys and Screening: FIDLER	Beta / Gamma	Alpha	Organic vapor	EM & Laboratory Measurements: Gross alpha	Gross beta	Gross gamma	X-ray fluorescence	Laboratory Analysis: Gamma Spectrometry	Isotopic Uranium	Isotopic Plutonium	Metals (SW6010)	Semivolatiles (SW 8270)	VOA	Tritium	HE (LANL method)
Soil	1	0-6"	7013									X	X		X	X			X
40-006A		Soil/Tuff										X	X		X	X			X
Berger Compound	2	Intermediate										X	X		X	X			X
Edge																			
	3	0-6"	7014									X	X		X	X			X
		Soil/Tuff										X	X		X	X			X
	4	Intermediate										X	X		X	X			X
	5	0-6"	7015									X	X		X	X			X
		Soil/Tuff										X	X		X	X			X
	6	Intermediate										X	X		X	X			X
	7	0-6"	7016									X	X		X	X			X
		Duplicate										X	X		X	X			X
	8	Soil/Tuff										X	X		X	X			X
		Intermediate										X	X		X	X			X
	9																		
40-006A		0-6"	7017									X	X		X	X			X
North Compound	10	Soil/Tuff										X	X		X	X			X
WALL:		Intermediate										X	X		X	X			X
Highly spaced	11																		
bottom the		0-6"	7018									X	X		X	X			X
transects; 2	12	Soil/Tuff										X	X		X	X			X
may be located		Intermediate										X	X		X	X			X
outside transect	13																		
but within 50'																			

* Vertical Composite -- made up of soil segments from same borehole

Surface Composite -- made up of top 6 inch segments from several boreholes

Bottom Composite -- made up of last (deepest) 12 inch segments from several boreholes

(4)

Active Firing Sites

SWMU Aggregate: OU-1111 Aggregate 7

Subarea: 40-006A

Date:

Field Team Leader:

Sample Type *	Sampling Location	Interval	ER Sample Identification (01-XXXX)	Field Surveys and Screening: FIDLER	Beta / Gamma	Alpha	Organic vapor	EM 8 Laboratory Measurements: Gross alpha	Gross beta	Gross gamma	X-ray fluorescence	Laboratory Analysis: ~~Gamma Spectroscopy~~ 40SR, 137Cs	Isotopic Uranium	Isotopic Plutonium	Metals (SW6010)	Semivolatiles (SW 8270)	VOA	Tritium	HE (LANL method)
(Soil)	1	0-6"	7019									X	X		X	X			X
40-006A		Soil/Tuff										X	X		X	X			X
North Canyon	2	Intermediate										X	X		X	X			X
Wall																			
	3	0-6"	7020									X	X		X	X			X
		Duplicate										X	X		X	X			X
	4	Soil/Tuff										X	X		X	X			X
		Intermediate										X	X		X	X			X
	5																		
		0-6"	7021									X	X		X	X			X
	6	Soil/Tuff										X	X		X	X			X
		Intermediate										X	X		X	X			X
	7																		
		0-6"	7022									X	X		X	X			X
	8	Soil/Tuff										X	X		X	X			X
		Intermediate										X	X		X	X			X
	9																		
		0-6"	7023									X	X		X	X			X
	10	Soil/Tuff										X	X		X	X			X
		Intermediate										X	X		X	X			X
	11																		
		0-6"										X	X		X	X			X
	12	Duplicate	7024									X	X		X	X			X
		Soil/Tuff										X	X		X	X			X
	13	Intermediate										X	X		X	X			X

* Vertical Composite -- made up of soil segments from same borehole

Surface Composite -- made up of top 6-inch segments from several boreholes

Bottom Composite -- made up of last (deepest) 12-inch segments from several boreholes

Active Firing Sites

SWMU Aggregate: OU-1111 Aggregate 7

Subarea: 40-006A

Date:

Field Team Leader:

Sample Type*	Sampling Location	Interval*	ER Sample Identification (01-XXXX)	FIDLER	Beta / Gamma	Alpha	Organic vapor	Gross alpha	Gross beta	Gross gamma	X-ray fluorescence	Gamma-spectrometry (40 SF, 137Cs)	Isotopic Uranium (Total U)	Isotopic Plutonium	Metals (SW6010)	Semivolatiles (SW 8270)	VOA	Tritium	HE (LANL method)
Soil)	1	0-6"	7025									X	X		X	X			X
40-006A		Soil/Tuff										X	X		X	X			X
Canyon Bottom	2	Intermediate										X	X		X	X			X
Flood plain																			
Visibly spread	3	0-6"	7026									X	X		X	X			X
on both sides of		Soil/Tuff										X	X		X	X			X
the stream	4	Intermediate										X	X		X	X			X
channel between																			
the transects	5	0-6"	7027									X	X		X	X			X
		Soil/Tuff										X	X		X	X			X
	6	Intermediate										X	X		X	X			X
	7	0-6"	7028									X	X		X	X			X
		Soil/Tuff										X	X		X	X			X
	8	Intermediate										X	X		X	X			X
		0-6" Duplicate										X	X		X	X			X
	9		~~7029~~																
		0-6"	7029									X	X		X	X			X
	10	Soil/Tuff										X	X		X	X			X
		Intermediate										X	X		X	X			X
	11																		
		0-6"	7030									X	X		X	X			X
	12	Soil/Tuff										X	X		X	X			X
		Intermediate										X	X		X	X			X
	13																		

Field Surveys and Screening

EM & Laboratory Measurements

Laboratory Analysis

(5)

(20)

(125 ml)

* **Vertical Composite** -- made up of soil segments from same borehole

Surface Composite -- made up of top 6 inch segments from several boreholes

Bottom Composite -- made up of last (deepest) 12-inch segments from several boreholes

(6)

Active Firing Sites

SWMU Aggregate: OU-1111 Aggregate 7

Subarea: 40-006A

Date:

Field Team Leader:

Sample Type *	Sampling Location	Interval	ER Sample Identification (O1-XXXX)	Field Surveys and Screening: FIDLER	Beta / Gamma	Alpha	Organic vapor	EM-8 Laboratory Measurements: Gross alpha	Gross beta	Gross gamma	X-ray fluorescence	Laboratory Analysis: ~~Gamma Spectroscopy~~ 40 SF, 137Cs	Isotopic Uranium Total	Isotopic Plutonium	Metals (SW6010)	Semivolatiles (SW 8270)	VOA	Tritium	HE (Lane method)	Cyanide	Total
(Soil)	1	0-6"	7031									X	X		X	X			X	X	X
40-006A		Soil/Tuff										X	X		X	X			X	X	X
Canyon Bottom	2	Intermediate										X	X		X	X			X	X	X
Floodplain																					
	3	0-6"	7032									X	X		X	X			X	X	X
		Soil/Tuff										X	X		X	X			X	X	X
	4	Intermediate										X	X		X	X			X	X	X
		0-6" Duplicate										X	X		X	X			X	X	X
	5																				
40-006A		Sediment/Tuff	7033									X	X		X	X			X	X	X
Interface: Stream Channel	6																				
Sediment;		Sediment/Tuff	7034									X	X		X	X			X	X	X
Evenly spaced along	7																				
stream channel		Sediment/Tuff	7035									X	X		X	X			X	X	X
between the 2	8																				
transects. 2		Sediment/Tuff	7036									X	X		X	X			X	X	X
Samples may be		Duplicate										X	X		X	X			X	X	X
located outside the																					
transects but		Sediment/Tuff	7037									X	X		X	X			X	X	X
within 50'.																					
		Sediment/Tuff	7038									X	X		X	X			X	X	X
		Sediment/Tuff	7039									X	X		X	X			X	X	X
		Sediment/Tuff	7040									X	X		X	X			X	X	X

* Vertical Composite -- made up of soil segments from same borehole

Surface Composite -- made up of top 6-inch segments from several boreholes

Bottom Composite -- made up of last (deepest) 12-inch segments from several boreholes

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(7)

Active Firing Sites

SWMU Aggregate: OU-1111 Aggregate 7

Subarea: 40-006A

Date:

Field Team Leader:

Sample Type *	Sampling Location	Interval	ER Sample Identification (01-XXXX)	Field Surveys and Screening: FIDLER	Field Surveys and Screening: Beta / Gamma	Field Surveys and Screening: Alpha	Field Surveys and Screening: Organic vapor	EM 8 Laboratory Measurements: Gross alpha	EM 8 Laboratory Measurements: Gross beta	EM 8 Laboratory Measurements: Gross gamma	EM 8 Laboratory Measurements: X-ray fluorescence	Laboratory Analysis: ~~Gamma Spectroscopy~~ 40 SF, 137 Cs	Laboratory Analysis: Isotopic Uranium	Laboratory Analysis: Isotopic Plutonium	Laboratory Analysis: Metals (SW6010)	Laboratory Analysis: Semivolatiles (SW 8270)	Laboratory Analysis: VOA	Laboratory Analysis: Tritium	HE (LANL method)
(Soil)	1	0-6"	7041									X	X		X	X			X
40-006A		Duplicate										X	X		X	X			X
South Canyon	2																		
Wall:		0-6"	7042									X	X		X	X			X
Evenly spaced	3																		
between the two		0-6"	7043									X	X		X	X			X
transects	4																		
		0-6"	7044									X	X		X	X			X
	5																		
		0-6"	7045									X	X		X	X			X
	6																		
		0-6"	7046									X	X		X	X			X
	7																		
		0-6"	7047									X	X		X	X			X
	8																		
		0-6"	7048									X	X		X	X			X
	9																		
	10																		
	11																		
	12																		
	13																		

* **Vertical Composite** -- made up of soil segments from same borehole

Surface Composite -- made up of top 6 inch segments from several boreholes

Bottom Composite -- made up of last (deepest) 12-inch segments from several boreholes

Active Firing Sites

SWMU Aggregate: OU-1111 Aggregate 7

Subarea: 40-009 Landfill

Date:

Field Team Leader:

Sample Type *	Sampling Location	Interval	ER Sample Identification (01-XXXX)	FIDLER	Beta / Gamma	Alpha	Organic vapor	Gross alpha	Gross beta	Gross gamma	X-ray fluorescence	~~Gamma spectrometry~~	Isotopic Uranium	Isotopic Plutonium	Metals (SW6010)	Semivolatiles (SW 8270)	VOA	Tritium	HE (LANL method)
				Field Surveys and Screening				EM & Laboratory Measurements				40SE-137Cs	Laboratory Analysis						
(soil)	1	0-6"	7049									X	X		X	X		X	X
40-009		soil/tuff										X	X		X	X			X
Landfill-	2	Intermediate										X	X		X	X			X
within IT																			
	3	0-6"	7050									X	X		X	X			X
		soil/tuff										X	X		X	X			X
	4	Intermediate										X	X		X	X			X
	5	0-6"	7051									X	X		X	X			X
		soil/tuff										X	X		X	X			X
	6	Intermediate										X	X		X	X			X
	7	0-6"	7052									X	X		X	X			X
		Duplicate										X	X		X	X			X
	8	Soil/tuff										X	X		X	X			X
		Intermediate										X	X		X	X			X
	9																		
40-009		0-6"	7053									X	X		X	X			X
Drainage	10	Soil/tuff										X	X		X	X			X
below		Intermediate										X	X		X	X			X
	11																		
		0-6"	7054									X	X		X	X			X
40-009	12	Soil/tuff										X	X		X	X			X
Drainage		Intermediate										X	X		X	X			X
Below	13																		

* **Vertical Composite** -- made up of soil segments from same borehole

Surface Composite -- made up of top 6 inch segments from several boreholes

Bottom Composite -- made up of last (deepest) 12 inch segments from several boreholes

collected where flaws or leaks indicate liquid may have escaped from the tank. At least eight sample locations will be used, including the areas selected for leaks and other samples dispersed about the excavation to obtain wide coverage. Samples will be collected at depths of 6 in. and 3 ft or at the soil-tuff interface, whichever is shallower.

If no contaminants of concern are present, the excavated area will be backfilled and no further action will be recommended. If contaminants of concern are present, the excavated area will be backfilled and a Phase II investigation will be recommended.

5.7 Aggregate 7, Active Firing Sites

The following PRSs are included in this aggregate.

- 40-006(a) (TA-40-15) Dave Mark CC7-7988 + CC7-3229
- 40-006(b) (TA-40-8) Howard Stacy CC5-1249 + CC7-6841
- 40-006(c) (TA-40-5) Bert Harry CC7-8023 + CC5-0694
- 40-009

The following firing sites are also included in this aggregate.

- TA-40-4 Bert Harry CC7-8023 / CC5-0694 Active Site
- TA-40-9 Robert Alcon CC7-6763 / CC5-0693 Active Site
- TA-40-12 Jerry Dick CC7-1864 / CC7-6315 Inactive

5.7.1 Background + Group Office - Yucca - CC7-CC04

5.7.1.1 Description and History

In 1950, TA-40 was constructed to replace the detonator firing sites at Two-Mile Mesa Site South (TA-6). Six firing sites are active at TA-40; these include the three firing sites [40-006(a, b, c)] listed in the SWMU Report (LANL 1990, 0145) and three other firing sites (Buildings TA-40-4, -9, and -12). All six firing sites are used only for testing and development of small explosive devices and not for waste disposal. They, therefore, are probably not Hazardous and Solid Waste Amendments SWMUs (RCRA proposed Subpart S) (EPA 1990, 0432) but will be investigated to determine whether they are sources of contaminants. SWMU 40-009, a landfill adjacent to TA-40-9, is also included in this aggregate.

The firing sites at TA-40 are located on the north edge of Pajarito Canyon (Figure 5-30). Each site consists of a reinforced concrete and steel building from which a shot is observed with various types of optical diagnostics, a partially protected area adjacent to the building where the shot is set up, and an open area covered with sand where larger shots are fired. After each shot, large pieces of debris are removed and disposed of, the open area is graded, and sand and debris are pushed to the edge of the canyon. This practice has led to the development of sand berms extending along the edge of the canyon.

These firing sites have been used for detonator development tests since they were constructed. Tests have included detonator booster tests, which use 2 lb. of explosives, and large open-air shots, which can use up to 50 lb. of explosives.

Blair,

Points of contact for TA-40 footing sites as noted. Take in your work plan.

Thanks

RR