LANL '07 TA-21

TA 21 CLOSURE PROJECT
LOS ALAMOS NATIONAL LABORATORY
MAIL STOP C 349
231-0727
FAX 606-1526

DATE 12-3-07

TO Katie Roberts **FAX#**

ORGANIZATION NMED **PHONE** 699-1963

FROM Mark Thacker **RETURN FAX**

PHONE

#PAGES INCL. COVER 2

MESSAGE:

Here is the extended suite for [redacted]. There will be another sample from the impacted portion of SWMU coming in a few week.

30293

Sample ID: RE21-07-3925 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	29208-001	Date Received:	19-Jul-07
Project:	07-286C	Sample Size:	10.2 g	QC Batch No.:	9210	Date Extracted:	25-Jul-07
Date Collected:	17-Jul-07	%Solids:	99.1	Date Analyzed DB-5:	27-Jul-07	Dates Analyzed DB-225:	27-Jul-07
Time Collected:	0915						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	25.9			
1,2,3,7,8-PeCDD	247			
1,2,3,4,7,8-HxCDD	499			
1,2,3,6,7,8-HxCDD	3040			
1,2,3,7,8,9-HxCDD	1290			
1,2,3,4,6,7,8-HpCDD	83700			D
OCDD	350000			D
2,3,7,8-TCDF	9.24			
1,2,3,7,8-PeCDF	30.3			
2,3,4,7,8-PeCDF	84.9			
1,2,3,4,7,8-HxCDF	279			
1,2,3,6,7,8-HxCDF	296			
2,3,4,6,7,8-HxCDF	619			
1,2,3,7,8,9-HxCDF	78.5			
1,2,3,4,6,7,8-HpCDF	10900			D
1,2,3,4,7,8,9-HpCDF	799			D
OCDF	35100			D

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	98.9	40 - 135	
	13C-1,2,3,7,8-PeCDD	87.5	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	103	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	97.0	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	112	40 - 135	D
	13C-OCDD	179	40 - 135	D,I
	13C-2,3,7,8-TCDF	100	40 - 135	
	13C-1,2,3,7,8-PeCDF	100	40 - 135	
	13C-2,3,4,7,8-PeCDF	95.5	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	135	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	108	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	110	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	121	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	110	40 - 135	D
	13C-1,2,3,4,7,8,9-HpCDF	110	40 - 135	D
	13C-OCDF	108	40 - 135	D
CRS	37Cl-2,3,7,8-TCDD	91.5	40 - 135	

Totals				
Total TCDD	210			
Total PeCDD	2000			
Total HxCDD	21200			
Total HpCDD	201000			D
Total TCDF	427		431	
Total PeCDF	2250			
Total HxCDF	13500			
Total HpCDF	51800			D

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 2140

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: RAS

Approved By: William J. Luksemburg 01-Aug-2007 08:45

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High Explosives Analysis Data Sheet

Lab Name: General Engineering Laboratories

Client Sample ID: RE21-07-3925

Lab Code: GEL

GEL Job No (SDG) 07-285

Matrix: SOIL

GEL Sample ID: 189823001

Sample Amount 2

Moisture: .9

Amount Units g

Date Received: 19-JUL-07

Extraction Type Sonication

Extraction Batch ID: 653048

Concentrated Extract Volume (mL) 10

Date Extracted: 25-JUL-07

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXP0730019a

Date Analyzed: 30-JUL-07 21:30

Units: ug/kg

Cas No.	Compound	Concentration*	Q
118-96-7	2,4,6-Trinitrotoluene	500	U
121-14-2	2,4-Dinitrotoluene	500	U
121-82-4	RDX	500	U
19406-51-0	4-Amino-2,6-dinitrotoluene	500	U
2691-41-0	HMX	500	U
35572-78-2	2-Amino-4,6-dinitrotoluene	500	U
479-45-8	Tetryl	500	U
606-20-2	2,6-Dinitrotoluene	500	U
78-11-5	PETN	1000	U
88-72-2	o-Nitrotoluene	500	U
98-95-3	Nitrobenzene	500	U
99-08-1	m-Nitrotoluene	500	U
99-35-4	1,3,5-Trinitrobenzene	500	U
99-65-0	m-Dinitrobenzene	500	U
99-99-0	p-Nitrotoluene	500	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

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1

High Explosives Analysis Data Sheet

Lab Name: General Engineering Laboratories

Client Sample ID: RE21-07-3925

Lab Code: GEL

GEL Job No (SDG) 07-285

Matrix: SOIL

GEL Sample ID: 189823001

Sample Amount 2

Moisture: .9

Amount Units g

Date Received: 19-JUL-07

Extraction Type Sonication

Extraction Batch ID: 653048

Concentrated Extract Volume (mL) 10

Date Extracted: 25-JUL-07

Dilution Factor: 2

Injection Volume (uL): 50

GEL data file: EXS0802020.wiff

Date Analyzed: 02-AUG-07 21:50

Units: ug/kg

Cas No.	Compound	Concentration*	Q
3058-38-6	TATB	1000	U
59229-75-3	2,6-Diamino-4-nitrotoluene	2000	U
618-87-1	3,5-Dinitroaniline	1000	U
6629-29-4	2,4-Diamino-6-nitrotoluene	2000	U
78-30-8	tris(o-cresyl) phosphate	1000	U

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Sample Amoun}} \times \text{Dilution Factor}$$

GEL Laboratories LLC

Report Date: August 1, 2007

PCB
Certificate of Analysis
Sample Summary

SDG Number:	07-285	Date Collected:	07/17/2007 12:00	Matrix:	SOIL
Lab Sample ID:	189823001	Date Received:	07/19/2007 12:00	%Moisture:	.9
Client Sample:	1,2	Client:	LANL006	Project:	LANL00600
Client ID:	RE21-07-3925	Method:	SW846 8082	SOP Ref:	GL-OA-E-040
Batch ID:	653073	Inst:	ECD2A.I	Dilution:	1
Run Date:	07/27/2007 13:32	Analyst:	JXM	Inj. Vol:	1 uL
Prep Date:	07/23/2007 08:00	Aliquot:	30 g	Final Volume:	1 mL
Data File:	017f1701.d	Column:	1 CLP1	Level:	LOW
	017b1701.d		2 CLP2		

CAS No.	Parmname	Qualifier	Result	Units	MDL/LOD	PQL/LOQ	Column
12674-11-2	Aroclor-1016	U	3.36	ug/kg	1.12	3.36	1
11104-28-2	Aroclor-1221	U	3.36	ug/kg	1.12	3.36	1
11141-16-5	Aroclor-1232	U	3.36	ug/kg	1.12	3.36	1
53469-21-9	Aroclor-1242	U	3.36	ug/kg	1.12	3.36	1
12672-29-6	Aroclor-1248	U	3.36	ug/kg	1.12	3.36	1
11097-69-1	Aroclor-1254		51.8	ug/kg	1.12	3.36	2
11096-82-5	Aroclor-1260		28.4	ug/kg	1.12	3.36	1

Los Alamos National Laboratory

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 135 **EVENT NAME:** SWMU 21-027(a) as part of the DP Site Aggregate

SAMPLE ID: RE21-07-3925

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		07/17/2007	MEDIA:	ALLH	OK
TIME COLLECTED (HH:MM)		09:15	SUB-MEDIA:	UA	
PRS ID:	21-027(a)	OK	SAMPLE TECH CODE:	SS	
LOCATION ID:	~~UNK~~ aet 07/13/07	21-600872	FIELD QC TYPE:	NA	
LOCATION TYPE:	~~GENERIC~~ mcr 7/17/07	BH	FIELD PREP:	NA	
TOP DEPTH:	0	ok	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	aet 07/13/07	0.5ft	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	S	ok	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: — COMPOSITE TIME INTERVAL: — WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: — BOREHOLE DIRECTION: —

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
2		8082	125 ML GLASS	Ice	Y	
2		8290	125 ML GLASS	Ice	Y	
1		NMED Explosives list	~~250~~ ML AMBER GLASS 500 aet 07/13/07	Ice	Y	

SAMPLE DESC:

Brown sandy soil

LOCATION DESC:

Borehole 2 - South of location 21-01373, center of drainage

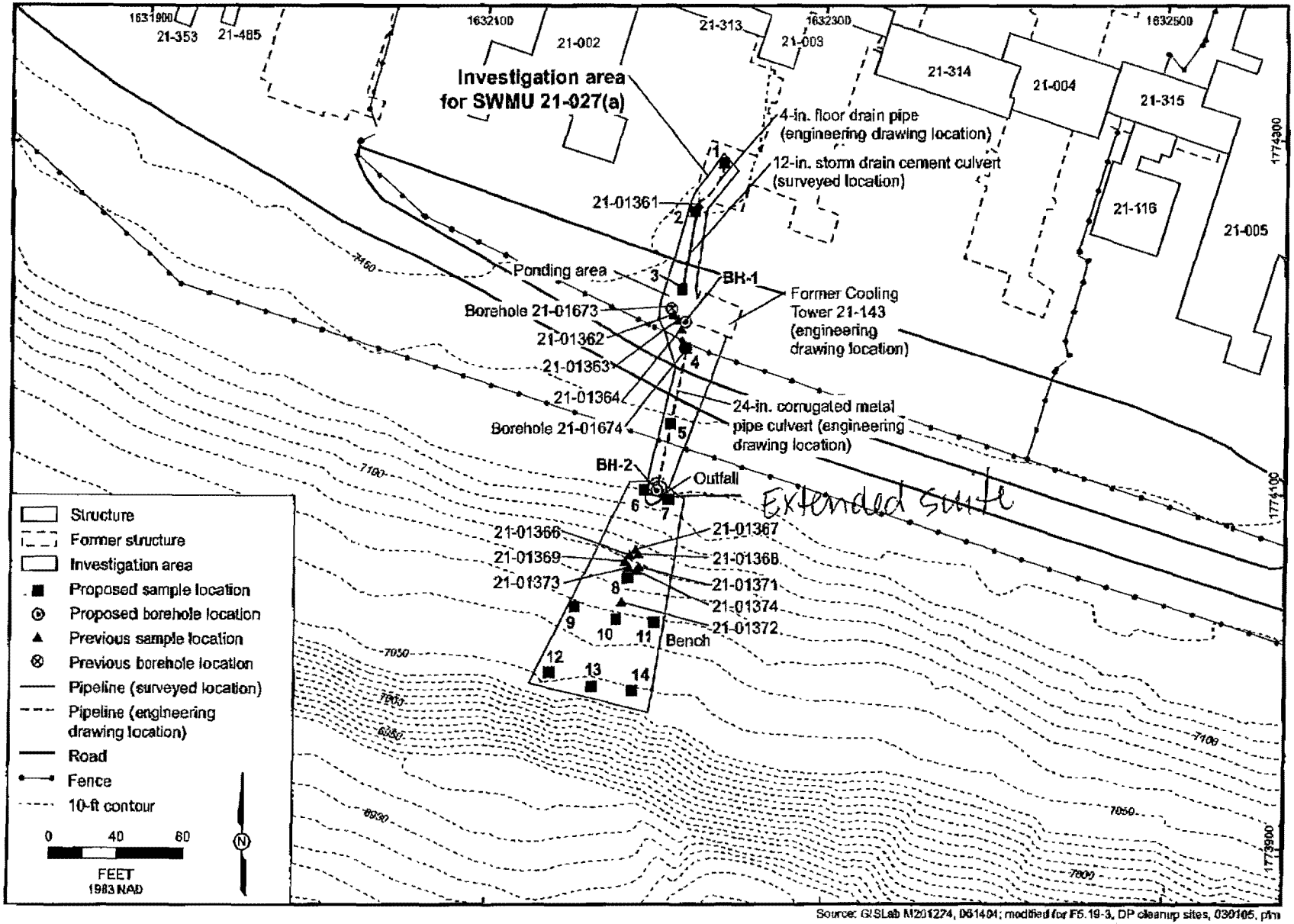
FIELD SCREENING/MEASUREMENT RESULTS:

α - 36dpm β - 1032dpm PID: 0.5ppm

COLLECTED BY (PRINT) MWhitaker REVIEWED BY (PRINT) Antoinette E. Tuyo

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name)	7/17/07	(Printed Name)	7/17/07
(Signature) [signature]	1600	(Signature) [signature]	4100
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name)		(Printed Name)	
(Signature)		(Signature)	

DRAFT



Source: GISLab M201274, D61404; modified for F5.19-3, DP cleanup sites, 030105, pfm

Figure 5.19-3. SWMU 21-027(a) proposed sample locations