

Los Alamos National Laboratory  
Environmental Programs Technical Area 21

Operated by the Los Alamos National Security, LLC, for DOE/NSA

TA-21 21-009

# FAX TRANSMITTAL

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FROM: Poy Bohn Return FAX# \_\_\_\_\_

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#Pages Incl. Cover 67

Message: 21-009 Dioxin/Furan



**Dioxin/ Furan for Sample RE21-06-68261**

Date Collected: August 3, 2006

Type: Soil/Tuff

Site: SWMU 21-009

Location #5

Depth: 1.5-2 feet bgs

PID reading = 0 ppm

Rad screening

Alpha NDA

Beta 420 dpm

**Based on this analytical data LANL does not plan on collecting additional dioxin furan samples at this site.**

Sample ID: RE21-06-68261					EPA Method 8290			
Client Data			Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory		Matrix:	Soil	Lab Sample:	27971-001	Date Received:	12-Aug-06
Project:	5737S		Sample Size:	11.1 g	QC Batch No.:	8282	Date Extracted:	13-Aug-06
Date Collected:	3-Aug-06		%Solids:	90.1	Date Analyzed DB-5:	15-Aug-06	Date Analyzed DB-225:	NA
Time Collected:	1330							
Analyte	Conc. (pg/g)	DL <sup>a</sup>	EMPC <sup>b</sup>	Qualifiers	Labeled Standard	%R	LCL-UCL <sup>d</sup>	Qualifiers
2,3,7,8-TCDD	ND	0.0981			<u>IS</u> 13C-2,3,7,8-TCDD	78.2	40 - 135	
1,2,3,7,8-PeCDD	0.177			J	13C-1,2,3,7,8-PeCDD	79.2	40 - 135	
1,2,3,4,7,8-HxCDD	0.347			J	13C-1,2,3,4,7,8-HxCDD	77.1	40 - 135	
1,2,3,6,7,8-HxCDD	0.674			J	13C-1,2,3,6,7,8-HxCDD	74.8	40 - 135	
1,2,3,7,8,9-HxCDD	0.552			J	13C-1,2,3,4,6,7,8-HpCDD	84.5	40 - 135	
1,2,3,4,6,7,8-HpCDD	11.0				13C-OCDD	78.3	40 - 135	
OCDD	87.0				13C-2,3,7,8-TCDF	78.2	40 - 135	
2,3,7,8-TCDF	0.147			J	13C-1,2,3,7,8-PeCDF	82.2	40 - 135	
1,2,3,7,8-PeCDF	ND	0.273			13C-2,3,4,7,8-PeCDF	82.9	40 - 135	
2,3,4,7,8-PeCDF	ND	0.255			13C-1,2,3,4,7,8-HxCDF	77.8	40 - 135	
1,2,3,4,7,8-HxCDF	ND		0.133		13C-1,2,3,6,7,8-HxCDF	73.1	40 - 135	
1,2,3,6,7,8-HxCDF	0.107			J	13C-2,3,4,6,7,8-HxCDF	74.3	40 - 135	
2,3,4,6,7,8-HxCDF	0.145			J	13C-1,2,3,7,8,9-HxCDF	75.5	40 - 135	
1,2,3,7,8,9-HxCDF	ND	0.108			13C-1,2,3,4,6,7,8-HpCDF	79.0	40 - 135	
1,2,3,4,6,7,8-HpCDF	1.55			J	13C-1,2,3,4,7,8,9-HpCDF	82.4	40 - 135	
1,2,3,4,7,8,9-HpCDF	ND	0.162			13C-OCDF	79.8	40 - 135	
OCDF	3.66			J	<u>CRS</u> 37Cl-2,3,7,8-TCDD	91.9	40 - 135	
Totals					Toxic Equivalent Quotient (TEQ) Data <sup>e</sup>			
Total TCDD	ND	0.0981			TEQ (Min):	0.502		
Total PeCDD	0.321				a. Sample specific estimated detection limit.			
Total HxCDD	3.76				b. Estimated maximum possible concentration.			
Total HpCDD	22.9				c. Method detection limit.			
Total TCDF	0.314		0.395		d. Lower control limit - upper control limit.			
Total PeCDF	0.768		0.835		e. TEQ based on (1989) International Toxic Equivalent Factors (ITEF).			
Total HxCDF	1.82		1.96	B				
Total HpCDF	4.01							

Analyst: DMS

Approved By: Martha M. Maier 17-Aug-2006 08:05

**SAMPLE COLLECTION LOG**

**SAMPLE ID: RE21-06-68261**

**EVENT ID: 8992**

**EVENT NAME: DP Site Aggregate Area, 21-009, Spring/Summer 2006**

*SOP Continued on Next Page*

AS PLANNED	AS COLLECTED	AS PLANNED	AS COLLECTED
DATE COLLECTED (MM/DD/YYYY):	8/3/06	EVAL CLASS: ALLH	OK
TIME COLLECTED (HH:MM):	1330	SAMPLE TECH CODE: <del>SS</del>	HA
PRS ID: PRS: 21-009	OK	FIELD QC TYPE: NA	OK
LOCATION ID: 21-25640	Location 5B	COMPOSITE TYPE: NA	
LOCATION TYPE: GENERIC	OK	FIELD PREP: NA	
TOP DEPTH ('): 0.00	1.5 (PT/cm/NA)	SAMPLE USAGE: INV	
BOTTOM DEPTH ('): 0.00	2.0 (PT/cm/NA)	WATER FLOWING: YES NO NA <input checked="" type="checkbox"/>	
FIELD MATRIX: S	OK	SCREEN/POR DESC (wells only): N/A	
		ER SOP Followed: 6.10	

#	CONTAINER	PRESERVATIVE	ORDER	ANALYTICAL SPECIAL INSTRUCTIONS
1	8 IN RESEALABLE POLY BAG	NONE	RADVANA+B+G	
	5 G ENCORE	ICE	8280BENCORE	
	5 G ENCORE	ICE	8280BENCORE	
4	250 ML AMBER GLASS	ICE	8270C+8082	
5	125 ML GLASS	ICE	8290	
6	125 ML GLASS	ICE	8290	
7	1 L POLY	NONE	AM241+GS+ISOPU+ISOU+SR90	
8	500 ML POLY	ICE	H3	
9	250 ML AMBER GLASS	ICE	NMED Explosives list	
10	125 ML POLY	NONE	PH	
11	1 L POLY	ICE	TALMET+U+CN+NO3+CLO4	

**ADDITIONAL INFORMATION (optional):** Special Instructions: Please assign top and bottom depths.

**SAMPLE DESC:** Brown / Loamy Type Soil / w mix of T<sub>2</sub>FF (G<sub>1</sub>)

**SAMPLE LOCATION DESC:** 21-25640

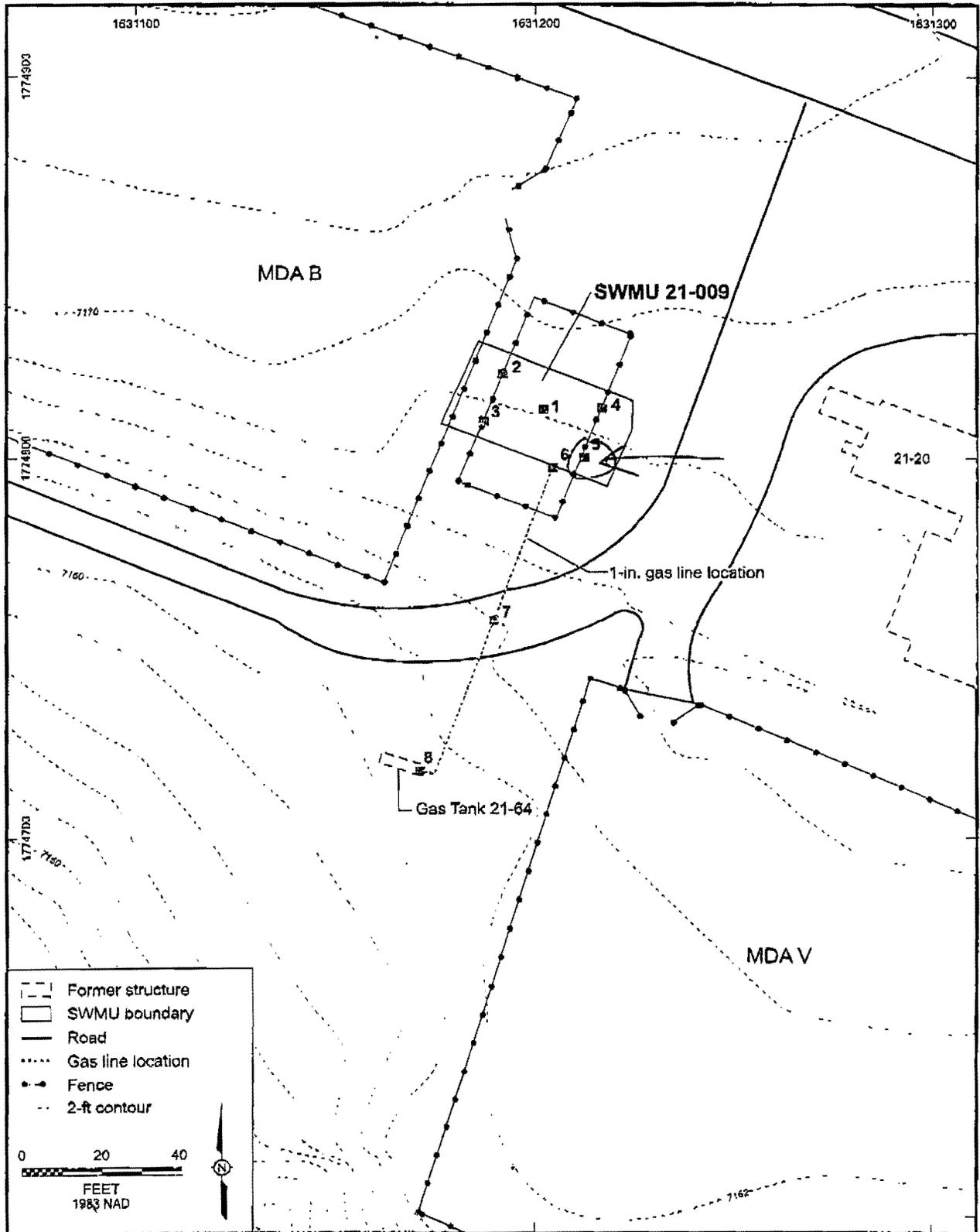
Location Description: South East corner of swmu

**FIELD SCREENING/MEASUREMENT RESULTS:**

α = NDA    B = 420    PFD = ∅

COLLECTED BY: (PRINTED NAME) Randy E. Vist (SIGNATURE) [Signature] (DATE) 8/3/06  
 REVIEWED BY: (PRINTED NAME) C. Schultz (SIGNATURE) [Signature] (DATE) 8/3/06

DP Site Aggregate Area Investigation Work Plan



Sources: GISLab, m201261 072904; modified for F4.4-1, DP IWP, 083004, p1m

Figure 4.4-1. SWMU 21-009 proposed sample locations

*extended site sample*

<b>CONTRACT # :</b> DE-AC52-06NA25396	<b>PROJECT TITLE &amp; LOCATION:</b> DP Aggregate Area at TA-21 SWMU 21-009	<b>REPORT DATE:</b> 8/03/06 <b>Start Time:</b> 0700 <b>End Time:</b> 1700
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<b>CONTRACTOR:</b> Accelerated Remediation Corporation (ARC)	<b>CONTRACTOR'S REPRESENTATIVES:</b> Keith Tucker
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<b>AM WEATHER:</b> Clear, warm	<b>PM WEATHER:</b> p. cloudy, hot	<b>PRECIPITATION:</b> None	<b>MAX TEMP:</b> NA	<b>MIN. TEMP:</b> NA
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**ON-SITE PERSONNEL AND TASKS PERFORMED/AREA OF RESPONSIBILITY**

TRADE/TITLE	EMPLOYER / ON-SITE	PERSONNEL	WORK DESCRIPTION
Field Team Leader	Portage	X Randy Vigil	Responsible for implementation of field operations/ heavy equipment operator.
Task Manager/SSO	Portage	X Curtis Schultz	Responsible for daily operations oversight and communications with LANS staff. As SSO, responsible for implementing site health and safety.
WMC	Portage	Brett Cummins	Responsible for all waste management activities.
WMC	Shaw	Doug Hopinkah	Responsible for all waste management activities.
Operator, field supervisor	Portage	Jared Pompeo	Heavy Equipment Operator, field activities implementation
Radiological Control Technician (RCT)	LANL	X Jami Morgan, John Barton	Radiological sample screening and site monitoring.
Supervisor	Laguna	Andy Long	Laguna field operations manager
Sample Tech	Laguna	X Larry Poncho	Field support/sampling/heavy equipment operator.
Sample Tech	Laguna	Franklin Silva	Field support/sampling/heavy equipment operator.
Sample Tech	Portage	X Serafin (JR) Vigil	Field support/sampling/heavy equipment operator.
Sample Tech	Portage	X Gabe Gallegos	Field support/sampling/heavy equipment operator.
Sample Tech	Portage	Antoinette Toya	Field support/sample preparation for SMO.

**EQUIPMENT USED**

EQUIPMENT DESCRIPTION	# OF UNITS	ARRIVAL DATE	LAST SAFETY CHECK (OTHER THAN DAILY)	Comments
Skidsteer	1	6/29/06		Power auger used at all sample locations to penetrate base course layer down to original surface for sampling activities.
Water Truck	1	6/29/06		
PU Truck w/ fuel tank	1	6/29/06		
Back Hoe	1	6/29/06		

**DESCRIPTION OF DAILY ACTIVITIES:** RCT performed pre-sampling gamma survey of all 8 locations to be sampled. Crew sampled locations #1 thru #8, 2 depths each. Samples bottled, labeled, and delivered to the SMO. Sampling at SWMU 21-009 completed.

Location 5b [RE21-06-68261] was selected for extended suite analysis based on historical data; there were no elevated field screening values for rads or from the PID.

JOB SAFETY	YES	NO
<b>SAFETY MEETING HELD TODAY?</b>	X	
<b>ANY LOST TIME ACCIDENTS?</b> if YES, attach copy of completed report(s), OSHA 200 log, et al		X
<b>TRENCHING/SCAFFOLDING/HIGH VOLTAGE ELECTRICAL/ELEVATED WORK PERFORMED?</b> if YES, include copy of report(s) of inspection(s) performed by competent or qualified person(s)		X
<b>ANY SPILLS OR HAZARDOUS WASTE RELEASED TO THE ENVIRONMENT?</b> if YES, include copy of completed reports indicating response action(s) and notification(s)		X
<b>ANY VIOLATIONS OF JOB SAFETY RULES OBSERVED?</b> if YES, include copy of completed reports indicating response action(s)		X

Visitors	
IAME	ORGANIZATION
Roy Bohn	TA-21
Beryl Cruz	HSR-5
Ron Rager	TA-21
TESTING AND QUALITY ACTIVITIES PERFORMED None	
FIELD SCREENING RANGES PID = 0.0 ppm to 0.0 ppm. RAD = Alpha: NDA; Beta: 420 dpm to 613 dpm. Background = Alpha - 500 dpm; beta - 200 dpm.	
CHANGES None	
SAMPLES COLLECTED SWMU 21-009: locations #1 thru #8; at depth intervals 0-0.5', 1.5'-2.0'. RE21-06-68252 thru 68267 for analytical; RE21-06-68274 field dup; RE21-06-68277 rinsate; RE21-06-68279 trip blank.	
INCIDENTS, ACCIDENTS, OR VIOLATIONS OBSERVED None	
NON-CONFORMANCES IDENTIFIED None	
OTHER REMARKS: Ron Rager stopped by site to investigate safety initiatives. Sampling at SWMU 21-009 complete. Sample ID RE21-06- 68261 (location #5b collected on 8/03/06) selected for extended sulfate analysis and 10-day turn around.	
SIGNATURE OF PORTAGE TEAM REPRESENTATIVE	DATE
CJS	8/03/06