Los Alamos National Laboratory
Environmental Programs Technical Area 21

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TA-21 21-024(c)

FAX TRANSMITTAL

TA 21-9000 Project Office
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TO: Katie Chamberlain FAX# 428-2567

Organization: NMED Phone: _____

FROM: Roy Bohn Return FAX# _____

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#Pages Incl. Cover 5

Message:

Dioxin/Furan info!

Sample ID: RE21-06-68643 **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Los Alamos National Laboratory	Matrix:	Soil	Lab Sample:	27939-001	Date Received:	3-Aug-06
Project:	56678	Sample Size:	10.2 g	QC Batch No.:	8253	Date Extracted:	4-Aug-06
Date Collected:	25-Jul-06	%Solids:	97.2	Date Analyzed DB-5:	7-Aug-06	Date Analyzed DB-225:	NA
Time Collected:	1018						

Analyte	Conc. (pg/g)	TE	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	0.413	.41			J
1,2,3,7,8-PeCDD	ND			1.30	
1,2,3,4,7,8-HxCDD	4.01	.40			
1,2,3,6,7,8-HxCDD	7.18	.718			
1,2,3,7,8,9-HxCDD	5.19	.519			
1,2,3,4,6,7,8-HpCDD	187	1.87			
OCDD	1420	1.42			
2,3,7,8-TCDF	30.0	3.00			
1,2,3,7,8-PeCDF	9.83	.49			
2,3,4,7,8-PeCDF	13.1	6.55			
1,2,3,4,7,8-HxCDF	22.7	2.27			
1,2,3,6,7,8-HxCDF	6.77	.677			
2,3,4,6,7,8-HxCDF	4.95	.495			
1,2,3,7,8,9-HxCDF	4.51	.451			
1,2,3,4,6,7,8-HpCDF	81.6	.816			
1,2,3,4,7,8,9-HpCDF	11.3	.113			
OCDF	353	.353			B

	Labeled Standard	%R	LCL-UCL [d]	Qualifiers
IS	13C-2,3,7,8-TCDD	91.3	40 - 135	
	13C-1,2,3,7,8-PeCDD	82.9	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	90.1	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	91.8	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	106	40 - 135	
	13C-OCDD	89.8	40 - 135	
	13C-2,3,7,8-TCDF	92.6	40 - 135	
	13C-1,2,3,7,8-PeCDF	87.1	40 - 135	
	13C-2,3,4,7,8-PeCDF	84.7	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	90.6	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	82.4	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	87.3	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	96.5	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	96.5	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	103	40 - 135	
	13C-OCDF	89.8	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	88.1	40 - 135	

Totals	
Total TCDD	5.13
Total PeCDD	17.5
Total HxCDD	88.4
Total HpCDD	339
Total TCDF	143
Total PeCDF	96.3
Total HxCDF	102
Total HpCDF	210

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 20.5

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).

Analyst: JMH

Approved By: Martha M. Maier 08-Aug-2006 10:28

Table 10.

2,3,7,8-TCDD Toxicity Equivalency Factors (TEFs) for the Polychlorinated Dibenzodioxins and Dibenzofurans

Number	Compound(s)	TEF[a]
1	2,3,7,8-TCDD	1.00
2	1,2,3,7,8-PeCDD	0.50
3	1,2,3,6,7,8-HxCDD	0.10
4	1,2,3,7,8,9-HxCDD	0.10
5	1,2,3,4,7,8-HxCDD	0.10
6	1,2,3,4,6,7,8-HpCDD	0.01
7	1,2,3,4,6,7,8,9-OCDD	0.001
8	2,3,7,8-TCDF	0.1
9	1,2,3,7,8-PeCDF	0.05
10	2,3,4,7,8-PeCDF	0.5
11	1,2,3,6,7,8-HxCDF	0.1
12	1,2,3,7,8,9-HxCDF	0.1
13	1,2,3,4,7,8-HxCDF	0.1
14	2,3,4,6,7,8-HxCDF	0.1
15	1,2,3,4,6,7,8-HpCDF	0.01
16	1,2,3,4,7,8,9-HpCDF	0.01
17	1,2,3,4,6,7,8,9-OCDF	0.001

[a] Taken from "Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Update", (EPA/625/3-89/016, March 1989).

T-010 P.003/005 F-011 +5056060864

Dataset: C:\MassLynx\Default.pro\Results\060807f1\060807f1-7.qld

Last Altered: Monday, August 07, 2006 3:14:57 PM Pacific Standard Time
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Method: C:\MassLynx\DEFAULT.PRO\MethDB\1613.mdb 03 Aug 2006 15:04:56
Calibration: C:\MassLynx\DEFAULT.PRO\CurveDB\db-5_1613vg9-6-6-06.cdb 07 Jun 2006 08:41:22

Name: 060807F1-7, Date: 07-Aug-2006, Time: 13:52:33, ID: 27939_8253_001 RE21-06-68643 10.21, Description: RE21-06-68643

	# Name	Resp	%RA	ID	%RT	Wind	RT	Conc	%Rec	RL	EMPC
1	1 2,3,7,8-TCDD	1.41e3	0.71	NO	0.983	10.210	26.21	0.41292		0.180	~~0.41292~~
2	2 1,2,3,7,8-PeCDD	3.78e3	0.50	YES	0.871	10.210	31.07	~~1.3065~~ ND		0.222	1.3038
3	3 1,2,3,4,7,8-HxCDD	9.41e3	1.29	NO	0.971	10.210	34.39	4.0090		0.585	~~4.0090~~
4	4 1,2,3,6,7,8-HxCDD	1.84e4	1.17	NO	0.890	10.210	34.50	7.1798		0.579	~~7.1798~~
5	5 1,2,3,7,8,9-HxCDD	1.27e4	1.25	NO	0.921	10.210	34.78	5.1915		0.586	~~5.1915~~
6	6 1,2,3,4,6,7,8-HpCDD	4.18e5	1.01	NO	0.916	10.210	38.38	186.97		0.876	~~186.97~~
7	7 OCDD	2.57e6	0.85	NO	0.921	10.210	41.71	1423.2		0.948	~~1423.2~~
8	8 2,3,7,8-TCDF	1.11e5	0.76	NO	0.923	10.210	25.34	29.968		0.299	~~29.968~~
9	9 1,2,3,7,8-PeCDF	3.39e4	1.54	NO	0.985	10.210	29.81	9.8318		0.253	~~9.8318~~
10	10 2,3,4,7,8-PeCDF	4.44e4	1.59	NO	0.986	10.210	30.79	13.075		0.238	~~13.075~~
11	11 1,2,3,4,7,8-HxCDF	7.59e4	1.26	NO	1.18	10.210	33.52	22.698		0.279	~~22.698~~
12	12 1,2,3,6,7,8-HxCDF	2.51e4	1.25	NO	1.16	10.210	33.64	6.7735		0.269	~~6.7735~~
13	13 2,3,4,6,7,8-HxCDF	1.72e4	1.28	NO	1.19	10.210	34.23	4.9544		0.287	~~4.9544~~
14	14 1,2,3,7,8,9-HxCDF	1.39e4	1.25	NO	1.11	10.210	35.17	4.5079		0.367	~~4.5079~~
15	15 1,2,3,4,6,7,8-HpCDF	2.76e5	1.09	NO	1.49	10.210	36.93	81.601		0.547	~~81.601~~
16	16 1,2,3,4,7,8,9-HpCDF	3.38e4	1.04	NO	1.52	10.210	38.95	11.269		0.572	~~11.269~~
17	17 OCDF	7.30e5	0.87	NO	0.915	10.210	41.92	352.71		0.557	~~352.71~~
18	18 13C-2,3,7,8-TCDD	6.81e5	0.76	NO	1.07	10.210	26.18	178.78	91.3	0.456	
19	19 13C-1,2,3,7,8-PeCDD	5.65e5	0.62	NO	0.977	10.210	31.05	162.44	82.9	0.346	
20	20 13C-1,2,3,4,7,8-HxCDD	4.74e5	1.23	NO	0.891	10.210	34.38	176.41	90.1	0.698	
21	21 13C-1,2,3,6,7,8-HxCDD	5.65e5	1.23	NO	1.04	10.210	34.48	179.78	91.8	0.596	
22	22 13C-1,2,3,4,6,7,8-HpCDD	4.78e5	1.04	NO	0.765	10.210	38.37	207.21	106	0.771	
23	23 13C-OCDD	7.66e5	0.89	NO	0.723	10.210	41.70	351.71	89.8	0.628	
24	24 13C-2,3,7,8-TCDF	7.86e5	0.81	NO	0.953	10.210	25.33	181.30	92.6	0.500	
25	25 13C-1,2,3,7,8-PeCDF	7.00e5	1.54	NO	0.902	10.210	29.79	170.57	87.1	1.03	
26	26 13C-2,3,4,7,8-PeCDF	6.75e5	1.54	NO	0.895	10.210	30.76	165.86	84.7	1.04	
27	27 13C-1,2,3,4,7,8-HxCDF	5.57e5	0.52	NO	1.04	10.210	33.49	177.54	90.6	0.896	
28	28 13C-1,2,3,6,7,8-HxCDF	6.25e5	0.51	NO	1.28	10.210	33.63	161.44	82.4	0.726	
29	29 13C-2,3,4,6,7,8-HxCDF	5.73e5	0.50	NO	1.11	10.210	34.22	170.95	87.3	0.838	
30	30 13C-1,2,3,7,8,9-HxCDF	5.41e5	0.51	NO	0.950	10.210	35.14	189.04	96.5	0.981	
31	31 13C-1,2,3,4,6,7,8-HpCDF	4.44e5	0.45	NO	0.780	10.210	36.92	188.97	96.5	1.08	
32	32 13C-1,2,3,4,7,8,9-HpCDF	3.87e5	0.44	NO	0.636	10.210	38.95	202.14	103	1.33	

8/8/06

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Quantify Sample Summary Report **MassLynx 4.0 SCN530** Page 2 of 2

Dataset: C:\MassLynx\Default.pro\Results\060807f1\060807f1-7.qld

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	Name	Response	RA	Qual	RRM	RT	Rel. Int.	Conc.	%Rec	D	2,3,7,8-TCDF
33	33 13C-OCDF	8.66e5	0.85	NO	0.836	10.210	41.91	351.88	89.8	0.607	
34	34 37Cl-2,3,7,8-TCDD	2.03e5			0.826	10.210	26.21	69.002	88.1	0.650	
35	35 13C-1,2,3,4-TCDD	6.97e5	0.78	NO	1.00	10.210	25.53	195.89	100	0.488	
36	36 13C-1,2,3,4-TCDF	6.91e5	0.74	NO	1.00	10.210	23.86	195.89	100	0.477	
37	37 13C-1,2,3,7,8,9-HxCDD	5.90e5	1.21	NO	1.00	10.210	34.77	195.89	100	0.622	
38	38 Total Tetra-Dioxins					10.210		~~6.6669~~ 5.13			6.6143
39	39 Total Penta-Dioxins					10.210		~~19.908~~ 17.5			19.591
40	40 Total Hexa-Dioxins					10.210		88.390			~~88.390~~
41	41 Total Hepta-Dioxins					10.210		338.97			~~338.97~~
42	42 Total Tetra-Furans					10.210		143.39			~~143.39~~
43	43 1st Func. Penta-Furans					10.210		~~96.366~~			~~96.366~~
44	44 Total Penta-Furans					10.210		96.300			~~96.300~~
45	45 Total Hexa-Furans					10.210		102.37			~~102.37~~
46	46 Total Hepta-Furans					10.210		210.15			~~210.15~~