



August 8, 2008

Mr. Bruce Lewis
ERM West
620 Bercut Dr.
Sacramento, CA 95814

Dear Mr. Lewis,

Enclosed are the amended results for Frontier Analytical Laboratory project **2143**. This corresponds to your project number **1099**. On August 7, 2008 I received an email from you requesting that Frontier Analytical Laboratory recalculate the TEQs for these two samples using the 2005 WHO TEFs. The two samples were originally analyzed in 2003 and the TEQs were calculated using the 1998 WHO TEFs. The following report is paginated with the suffix "B" signifying an amended report. The report consists of four pages; the case narrative, the two new data sheets, and a copy of your email request.

Thank you for choosing Frontier Analytical Laboratory for your analytical needs. If you have any questions regarding this project, please feel free to contact me at (916) 934-0900.

Sincerely,

A handwritten signature in black ink that reads "Bradley B. Silverbush". The signature is fluid and cursive.

Bradley B. Silverbush
Director of Operations

EPA Method 8290
PCDD/F



FAL ID: 2143-002-SA Date Extracted: 7/22/03 ICal: PCDDFAL1-6-13 Acquired: 24-JUL-03
 Client ID: C4-SNS02 Date Received: 7/16/03 GC Column: db5
 Matrix: Soil Amount: 10.11 g Units: pg/g 2005 WHO TEQ: 6.34
 Batch No.: 0056 % Solids: 99.2

Compound	Conc	DL	Qual	2005 WHO Tox	Compound	Conc	DL	Qual	#Hom
2,3,7,8-TCDD	-	0.350		-					
1,2,3,7,8-PeCDD	1.02	-	J	1.02					
1,2,3,4,7,8-HxCDD	1.22	-	J	0.122					
1,2,3,6,7,8-HxCDD	2.72	-		0.272	Total Tetra-Dioxins	4.44	-		4
1,2,3,7,8,9-HxCDD	1.99	-	J	0.199	Total Penta-Dioxins	13.4	-		8
1,2,3,4,6,7,8-HpCDD	46.6	-		0.466	Total Hexa-Dioxins	28.6	-		7
OCDD	175	-	B	0.0525	Total Hepta-Dioxins	83.9	-		2
2,3,7,8-TCDF	2.30	-	F	0.230					
1,2,3,7,8-PeCDF	3.59	-		0.108					
2,3,4,7,8-PeCDF	4.67	-		1.40					
1,2,3,4,7,8-HxCDF	5.12	-		0.512					
1,2,3,6,7,8-HxCDF	5.66	-		0.566					
2,3,4,6,7,8-HxCDF	6.47	-		0.647					
1,2,3,7,8,9-HxCDF	2.18	-	J	0.218	Total Tetra-Furans	55.7	-		17
1,2,3,4,6,7,8-HpCDF	42.1	-		0.421	Total Penta-Furans	59.3	-		11
1,2,3,4,7,8,9-HpCDF	7.56	-		0.0756	Total Hexa-Furans	58.1	-		13
OCDF	103	-		0.0309	Total Hepta-Furans	70.7	-		4

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	97.1	40.0 - 135	
13C-1,2,3,7,8-PeCDD	86.9	40.0 - 135	
13C-1,2,3,4,7,8-HxCDD	92.3	40.0 - 135	
13C-1,2,3,6,7,8-HxCDD	94.7	40.0 - 135	
13C-1,2,3,4,6,7,8-HpCDD	99.6	40.0 - 135	
13C-OCDD	106	40.0 - 135	
13C-2,3,7,8-TCDF	96.3	40.0 - 135	
13C-1,2,3,7,8-PeCDF	92.7	40.0 - 135	
13C-2,3,4,7,8-PeCDF	88.5	40.0 - 135	
13C-1,2,3,4,7,8-HxCDF	90.4	40.0 - 135	
13C-1,2,3,6,7,8-HxCDF	90.9	40.0 - 135	
13C-2,3,4,6,7,8-HxCDF	88.1	40.0 - 135	
13C-1,2,3,7,8,9-HxCDF	91.6	40.0 - 135	
13C-1,2,3,4,6,7,8-HpCDF	89.6	40.0 - 135	
13C-1,2,3,4,7,8,9-HpCDF	106	40.0 - 135	
13C-OCDF	97.1	40.0 - 135	

Cleanup Surrogate

F = DB225 Confirmation

37Cl-2,3,7,8-TCDD 94.5 40.0 - 135

Acquired: 25-JUL-03

Analyst: 8
Date: 8/8/08

Reviewed by: GN
Date: 8/8/08

000003B of 000004B

Brad Silverbush

From: Bruce Lewis [Bruce.Lewis@erm.com]
Sent: Thursday, August 07, 2008 6:23 PM
To: Brad Silverbush
Subject: RE: 2005 TEQ
Attachments: 2143 Final Report D&F.pdf; 2143A Final Report - D&F.pdf

Hi Brad. We had some TEQ data for Aerojet work that we did in 2003 and would like to update these using the 2005 values. Attached are pdf's containing the laboratory data sheets for the six samples. Let me know if it is possible to provide me with updated TEQs for the samples.

Thanks,

Bruce A. Lewis, P.G.
Program Director
ERM
T: (916) 924-9378
F: (916) 920-9378
M:(916) 337-3251

From: Brad Silverbush [mailto:brads@frontieranalytical.com]
Sent: Wednesday, January 23, 2008 11:23 AM
To: Fennessy, Christopher; Bruce Lewis; Bruce Lewis
Subject: 2005 TEQ

Hi Chris and Bruce,

I have attached an excel spreadsheet regarding the samples both of you inquired about. The original table had TEQs calculated using the 1998 WHO TEFs. This table has both the 1998 WHO values and the 2005 WHO values.

I mentioned to Bruce that until this year, we were using the 1998 TEF values with clients that had established projects and established history with us, unless another set of values was requested in writing. This was to avoid changing TEF values in the middle of a project. Starting in 2008, all reports are using the 2005 values unless specified in writing otherwise.

Thanks,
Brad

Bradley B. Silverbush
Director of Operations
Frontier Analytical Laboratory
5172 Hillside Circle,
El Dorado Hills, CA 95762
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8/8/2008