

 ANALYTICAL PERSPECTIVES

17 February 2010

Craig McKenzie
GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407

Ph.: 843-556-8171
Fax: 843-766-1178

Subject: Certificate of Results

Dear Craig:

Attached to this narrative are the analytical results you requested on the samples submitted for the determination of polychlorinated dibenzo-*p*-dioxins and dibenzofurans, polychlorinated biphenyls and polynuclear aromatic hydrocarbons. The insert below summarizes the relevant information pertaining to your project. In particular, QC annotations bring to your attention specific analytical observations and assessments made during the sample handling and data interpretation phases. A brief description of the report's components is provided on the next page. Results reported relate only to the items tested.

Project Information Summary	When applicable, see QC Annotations for details
Client Project No. AP Project No. Analytical Protocol	CRBG 00107 P1977 Methods 23, 1668A, HRPAH
No. Samples Submitted No. Samples Analyzed No. Laboratory Method Blanks No. OPRs / Batch CS3 No. Outstanding Samples	4 12 (4 samples by 3 methods) 1 1 none
Date Received Condition Received Temperature upon Receipt (C) Extraction within Holding Time Analysis within Holding Time	21-Jan-2010 good 19 yes yes
Data meet QA/QC Requirements Exceptions Analytical Difficulties	yes none none

2714 EXCHANGE DRIVE
WILMINGTON, NC 28405
PH.: 910-794-1613

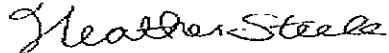
ANALYTICAL PERSPECTIVES

QC Annotations:

1. The "EMPC" data qualifier is used for analytes reported as an Estimated Maximum Possible Concentration. This flag indicates that a peak is detected with an ion-abundance ratio outside the allowed theoretical range.
2. The "C" qualifier is assigned when two or more isomers elute at similar retention times and cannot be resolved. The reported concentration is the total of the co-eluting isomers.
3. A "J" data qualifier is used for analytes with a concentration below the reporting limit.
4. An 'RJ' appended to sample IDs indicates results reported from a second analysis/re-injection of the sample extract.
5. An asterisk (*) qualifier denotes a concentration determined to be above the method's calibration range but within the instrument's analytical range; such a value should therefore be considered as an estimate.
6. Analytes are flagged "PR" to indicate that the specific analyte is poorly resolved.

Analytical Perspectives remains committed to serving you in the most effective manner. Should you have any questions or need additional information and technical support, do not hesitate to contact us. Thank you for choosing Analytical Perspectives as part of your analytical support team.

Sincerely,



Heather Steele, Ph.D.
Project Manager

2714 EXCHANGE DRIVE
WILMINGTON, NC 28405
PH.: 910-794-1613

The electronic version of this report contains 954 pages.
(add one page in count for the NELAC compliance statement) +1

Part 1

Narrative

41 pgs

✓Letter

✓QC Annotations

Project Information

✓

Part 3

Results

D/Fs: 85 pgs

PCBs: 135 pgs

PAHs: 55 pgs

✓Summary Topsheets

✓Raw Data

✓SICPs

✓Areas

✓Retention Times

✓S/N

✓Ion Abundance Ratios

D/Fs: 26 pgs

PCBs: 137 pgs

PAHs: 46 pgs

✓Overview

✓Protocol

✓Extraction

✓Analysis

✓Spike Profile

✓SOPs

✓QC

✓Reporting

✓Special Requirements

✓Fractionation

Tracking Sheets

✓Injection

Tracking Sheets

Part 2

Path

26 pgs

✓Overview

✓Protocol

✓Extraction

✓Analysis

✓Spike Profile

✓SOPs

✓QC

✓Reporting

✓Special Requirements

✓Fractionation

Tracking Sheets

✓Injection

Tracking Sheets

Part 4

Performance

D/Fs: 114 pgs

PCBs: 137 pgs

PAHs: 46 pgs

✓Mass Spectrometry

✓Gas Chromatography

✓Initial Calibration

✓Continuing Calibration

✓BCS₃, OPR

Part 4D

ICAL

D/Fs: 94 pgs

PCBs: 154 pgs

PAHs: 53 pgs

Part 4E

Audit

N/A

Picture File 13pgs

STATE CERTIFICATION ID #	
ARKANSAS	88-00328
CALIFORNIA	2640
FLORIDA	E87608
LOUISIANA	04024
MICHIGAN	9951
NEW JERSEY	NC005
NORTH CAROLINA	37783
PENNSYLVANIA	68-01849
SOUTH CAROLINA	99094
WASHINGTON	C2027

THIS REPORT SHALL NOT BE REPRODUCED EXCEPT FOR IN FULL
WITHOUT THE ORIGINAL APPROVAL OF THE LABORATORY

P1977 - TEQ
 Project ID: CRBG 00107

Sample Summary
Part 1

Analyte	<u>ANALYTICAL PERSPECTIVES</u>					Method 23
	0_7528_MB001	SSI #1-Blank	SSI #1-R-1	SSI #1-R-2	SSI #1-R-3	
	pg	pg	pg	pg	pg	
2,3,7,8-TCDD	(2.16)	(2.38)	(2.19)	(2.45)	(2.03)	
1,2,3,7,8-PeCDD	(2.36)	(2.86)	(3.58)	(2.61)	(2.28)	
1,2,3,4,7,8-HxCDD	(3.24)	(2.59)	(3.37)	(2.78)	(2.85)	
1,2,3,6,7,8-HxCDD	(3.34)	(2.86)	(3.82)	(2.98)	(3.01)	
1,2,3,7,8,9-HxCDD	(3.72)	(3.06)	(4.12)	(3.51)	(3.27)	
1,2,3,4,6,7,8-HxCDD	(3.34)	8.16	(6.08)	6.62	(3.72)	
OCDD	(5.58)	[11.4]	17.3	25.1	[18.7]	
2,3,7,8-TCDF	(1.35)	44.3	28.6	[13.2]	17.9	
1,2,3,7,8-PeCDF	(2.12)	[3.79]	(1.86)	(2)	(1.72)	
2,3,4,7,8-PeCDF	(2.15)	3.26	(1.74)	(2.02)	[2.8]	
1,2,3,4,7,8-HxCDF	(1.78)	[1.18]	(3)	(1.95)	(1.71)	
1,2,3,6,7,8-HxCDF	(1.69)	[1.52]	(3.09)	(1.77)	(1.67)	
2,3,4,6,7,8-HxCDF	(1.73)	(1.8)	(3.11)	(1.86)	(1.88)	
1,2,3,7,8,9-HxCDF	(2.26)	(2.29)	(4.48)	(2.29)	(2.33)	
1,2,3,4,6,7,8-HpCDF	(1.5)	[4.23]	(4.09)	[3.65]	[3.03]	
1,2,3,4,7,8,9-HpCDF	(2.19)	(2.88)	(5.46)	(2.72)	(2.95)	
OCDF	(4.29)	(4.75)	(9.7)	[8.01]	(3.76)	
ITEF TEQ (ND=0; EMPC=0)	0.00	6.14	2.87	0.0912	1.79	
ITEF TEQ (ND=0; EMPC=EMPC)	0.00	6.65	2.87	1.46	3.24	
ITEF TEQ (ND=DL2; EMPC=0)	3.26	8.93	6.68	3.51	4.76	
ITEF TEQ (ND=DL2; EMPC=EMPC)	3.26	9.21	6.68	4.76	5.74	
ITEF TEQ (ND=DL; EMPC=EMPC)	6.52	11.8	10.5	8.06	8.24	
Checkcode Lab ID	687-527 MB1 7528 DF SDS	646-161 P1977 7528 001	326-468 P1977 7528 002RJ	908-955 P1977 7528 003	959-761 P1977 7528 004	

() = DL
 [] = EMPC

Reviewer ... HS
 Date ... 17. Feb 10...

P1977 - WHO-2005-TEQ
 Project ID: CRBG 00107

Sample Summary
Part 1

Analyte	ANALYTICAL PERSPECTIVES			Method 23		
	0_7528_MB001	SSI #1-Blank	SSI #1-R-1	SSI #1-R-2	SSI #1-R-3	
	pg	pg	pg	pg	pg	pg
2,3,7,8-TCDD	(2.16)	(2.38)	(2.19)	(2.45)	(2.03)	
1,2,3,7,8-PeCDD	(2.36)	(2.86)	(3.58)	(2.61)	(2.28)	
1,2,3,4,7,8-HxCDD	(3.24)	(2.59)	(3.37)	(2.78)	(2.85)	
1,2,3,6,7,8-HxCDD	(3.34)	(2.86)	(3.82)	(2.98)	(3.01)	
1,2,3,7,8,9-HxCDD	(3.72)	(3.06)	(4.12)	(3.51)	(3.27)	
1,2,3,4,6,7,8-HxCDD	(3.34)	8.16	(6.08)	6.62	(3.72)	
OCDD	(5.58)	[11.4]	17.3	25.1	[18.7]	
2,3,7,8-TCDF	(1.35)	44.3	28.6	[13.2]	17.9	
1,2,3,7,8-PeCDF	(2.12)	[3.79]	(1.86)	(2)	(1.72)	
2,3,4,7,8-PeCDF	(2.15)	3.26	(1.74)	(2.02)	[2.8]	
1,2,3,4,7,8-HxCDF	(1.78)	[1.18]	(3)	(1.95)	(1.71)	
1,2,3,6,7,8-HxCDF	(1.69)	[1.52]	(3.09)	(1.77)	(1.67)	
2,3,4,6,7,8-HxCDF	(1.73)	(1.8)	(3.11)	(1.86)	(1.88)	
1,2,3,7,8,9-HxCDF	(2.26)	(2.29)	(4.48)	(2.29)	(2.33)	
1,2,3,4,6,7,8-HxCDF	(1.5)	[4.23]	(4.09)	[3.65]	[3.03]	
1,2,3,4,7,8,9-HxCDF	(2.19)	(2.88)	(5.46)	(2.72)	(2.95)	
OCDF	(4.29)	(4.75)	(9.7)	[8.01]	(3.76)	
WHO-2005 TEQ (ND=0; EMPC=C)	0.00	5.49	2.86	0.0737	1.79	
WHO-2005 TEQ (ND=0; EMPC=EMPC)	0.00	5.92	2.86	1.43	2.67	
WHO-2005 TEQ (ND=DL; EMPC=C)	3.61	8.97	7.36	3.92	5.12	
WHO-2005 TEQ (ND=DL; EMPC=EMPC)	3.61	9.19	7.36	5.17	5.72	
WHO-2005 TEQ (ND=DL; EMPC=EMPC)	7.22	12.5	11.9	8.90	8.77	
Checkcode	687-527	646-161	326-468	908-955	959-761	
Lab ID	MB1_7528_DF_SDS	P1977_7528_001	P1977_7528_002RJ	P1977_7528_003	P1977_7528_004	

() = DL
 [] = EMPC

HS
 Reviewer
 Date
 17 Feb 10

P1977 - Totals

Project ID: CRBG 00107

Sample Summary

Part 2

ANALYTICAL PERSPECTIVES

Method 23

Analyte	0_7528_MB001	SSI #1-Blank	SSI #1-R-1	SSI #1-R-2	SSI #1-R-3
Totals	pg	pg	pg	pg	pg
TCDDs	0	6.37	6.6	6.01	0
PeCDDs	0	0	0	0	0
HxCDDs	0	14.3	0	8.63	3.46
HpCDDs	0	20.5	0	12.3	0
OCDD	0	11.4	17.3	25.1	18.7
TCDFs	0	105	80	35.4	47.4
PeCDFs	0	3.26	0	0	0
HxCDFs	0	6.21	0	0	0
HpCDFs	0	0	0	0	0
OCDF	0	0	0	8.01	0
Total PCDD/Fs (ND=0; EMPC=0)	0.00	156	104	87.4	50.8
Total PCDD/Fs (ND=0; EMPC=EMPC)	0.00	211	128	116	87.2
Total PCDD/Fs (2378-X ND=0; EMPC=EMPC)	44.8	236	188	145	120
Total 2378s (ND=0; EMPC=0)	0.00	55.7	45.9	31.7	17.9
Total 2378s (ND=0.5; EMPC=0)	22.4	74.9	75.7	50.1	39.0
Total 2378s (ND=1; EMPC=0)	44.8	94.1	106	68.5	60.2
Total 2378s (ND=0; EMPC=1)	0.00	133	91.8	88.2	60.3
Total 2378s (ND=0.5; EMPC=1)	22.4	90.5	75.7	71.0	59.0
Total 2378s (ND=1; EMPC=1)	44.8	103	106	85.5	75.6
Checkcode	687-527	646-161	326-468	908-955	959-761
Lab ID	MB1_7528_DF_SDS	P1977_7528_001	P1977_7528_002RJ	P1977_7528_003	P1977_7528_004

() = DL
[] = EMPC

Reviewer HS
Date 17. Feb. 10.

P1977 - Others
Project ID: CRBG 00107

Sample Summary
Part 3

Analyte	<u>ANALYTICAL PERSPECTIVES</u>					Method 23
	0_7528_MB001	SSI #1-Blank	SSI #1-R-1	SSI #1-R-2	SSI #1-R-3	
	pg	pg	pg	pg	pg	
Other PCDD/DFs (ND=0, EMPC=0)						
Other TCDD	0	6.37	6.6	6.01	0	
Other PeCDD	0	0	0	0	0	
Other HxCDD	0	14.3	0	8.63	3.46	
Other HpCDD	0	12.3	0	5.66	0	
Other TCDF	0	61	51.5	35.4	29.5	
Other PeCDF	0	0	0	0	0	
Other HxCDF	0	6.21	0	0	0	
Other HpCDF	0	0	0	0	0	
Other PCDD/DFs (ND=0, EMPC=EMPC)						
Other TCDD	0	6.37	6.6	6.01	6.39	
Other PeCDD	0	0	0	0	0	
Other HxCDD	0	14.3	0	8.63	8.94	
Other HpCDD	0	12.3	0	5.66	0	
Other TCDF	0	88.3	75.4	39.6	29.5	
Other PeCDF	0	3.47	0	0	0	
Other HxCDF	0	8.23	0	0	0	
Other HpCDF	0	0	0	0	0	
Checkcode Lab ID	687-527 MB1_7528_DF_SDS	646-161 P1977_7528_001	326-468 P1977_7528_002RJ	908-955 P1977_7528_003	959-761 P1977_7528_004	

() = DL
[] = EMPC

Reviewer HS
Date 17 Feb 10

P1977 - DLs
Project ID: CRBG 00107

Sample Summary
Part 4

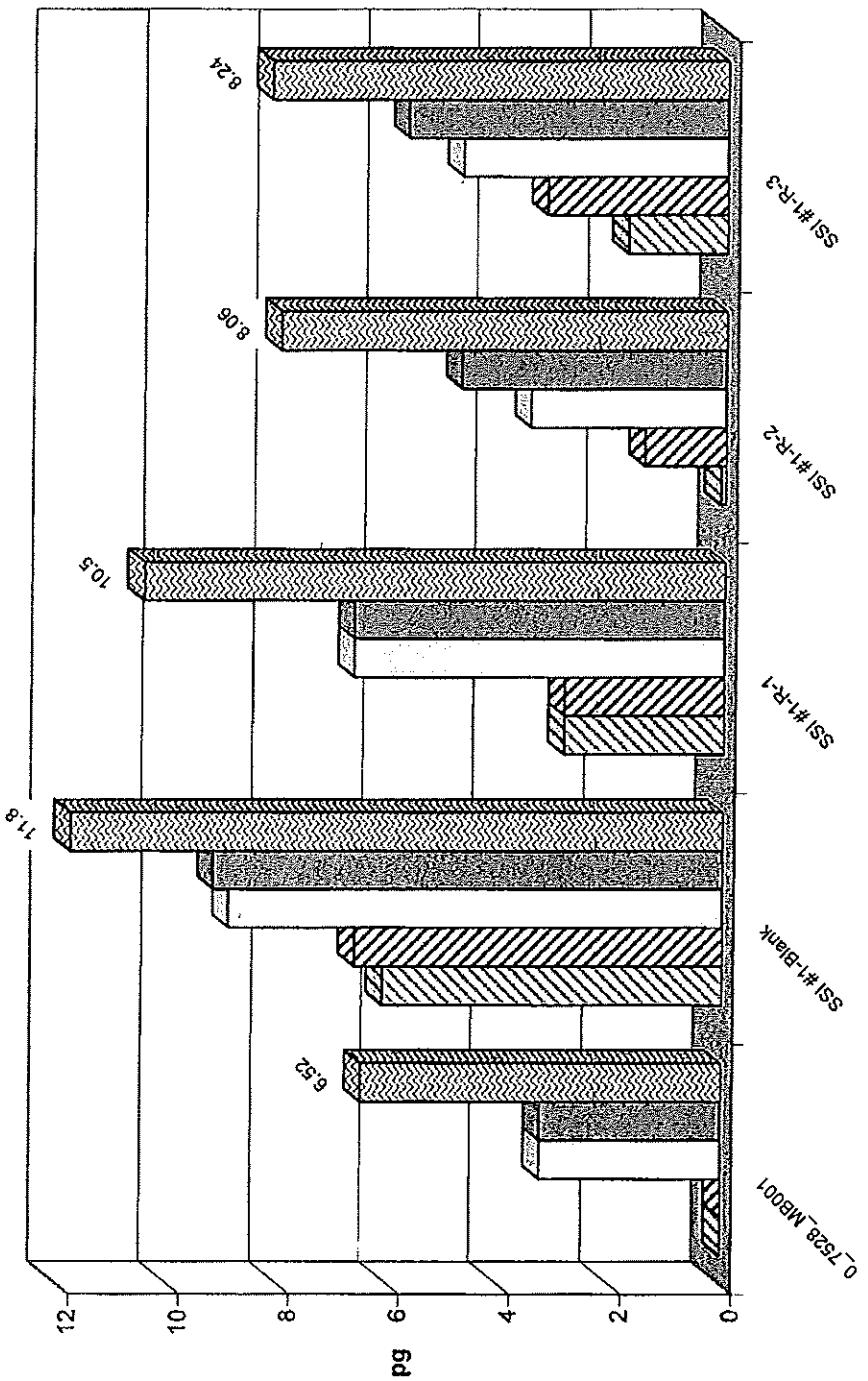
ANALYTICAL PERSPECTIVES

Analyte	0_7528_MB001	SSI #1-Bank	SSI #1-R-1	SSI #1-R-2	SSI #1-R-3
	pg	pg	pg	pg	pg
2,3,7,8-TCDD	2.16	2.38	2.19	2.45	2.03
1,2,3,7,8-PeCDD	2.36	2.86	3.58	2.61	2.28
1,2,3,4,7,8-HxCDD	3.24	2.59	3.37	2.78	2.85
1,2,3,6,7,8-HxCDD	3.34	2.86	3.82	2.98	3.01
1,2,3,7,8,9-HxCDD	3.72	3.06	4.12	3.51	3.27
1,2,3,4,6,7,8-HpCDD	3.34	3.96	6.08	3.01	3.72
OCDD	5.58	5.65	9.44	5.2	5.21
2,3,7,8-TCDF	1.35	1.75	1.54	2	1.05
1,2,3,7,8-PeCDF	2.12	1.95	1.86	2	1.72
2,3,4,7,8-PeCDF	2.15	1.9	1.74	2.02	1.83
1,2,3,4,7,8-HxCDF	1.78	1.75	3	1.95	1.71
1,2,3,6,7,8-HxCDF	1.69	1.69	3.09	1.77	1.67
2,3,4,6,7,8-HxCDF	1.73	1.8	3.11	1.86	1.88
1,2,3,7,8,9-HxCDF	2.26	2.29	4.48	2.29	2.33
1,2,3,4,6,7,8-HpCDF	1.5	1.94	4.09	1.98	2.08
1,2,3,4,7,8,9-HpCDF	2.19	2.88	5.46	2.72	2.95
OCDF	4.29	4.75	9.7	3.86	3.76
Total TCDD	2.16	2.38	2.19	2.45	2.03
Total PeCDD	2.36	2.86	3.58	2.61	2.28
Total HxCDD	3.42	2.82	3.75	3.07	3.03
Total HpCDD	3.34	3.96	6.08	3.01	3.72
Total TCDF	1.35	1.75	1.54	2	1.05
Total PeCDF	2.14	1.92	1.8	2.01	1.77
Total HxCDF	1.84	1.86	3.35	1.95	1.88
Total HpCDF	1.81	2.36	4.71	2.31	2.47
Checkcode	687-527	646-161	326-468	908-955	959-761
Lab ID	MB1_7528_DF SDS	P1977_7528_001	P1977_7528_002RJ	P1977_7528_003	P1977_7528_004

Reviewer HS
Date 17 Feb 10

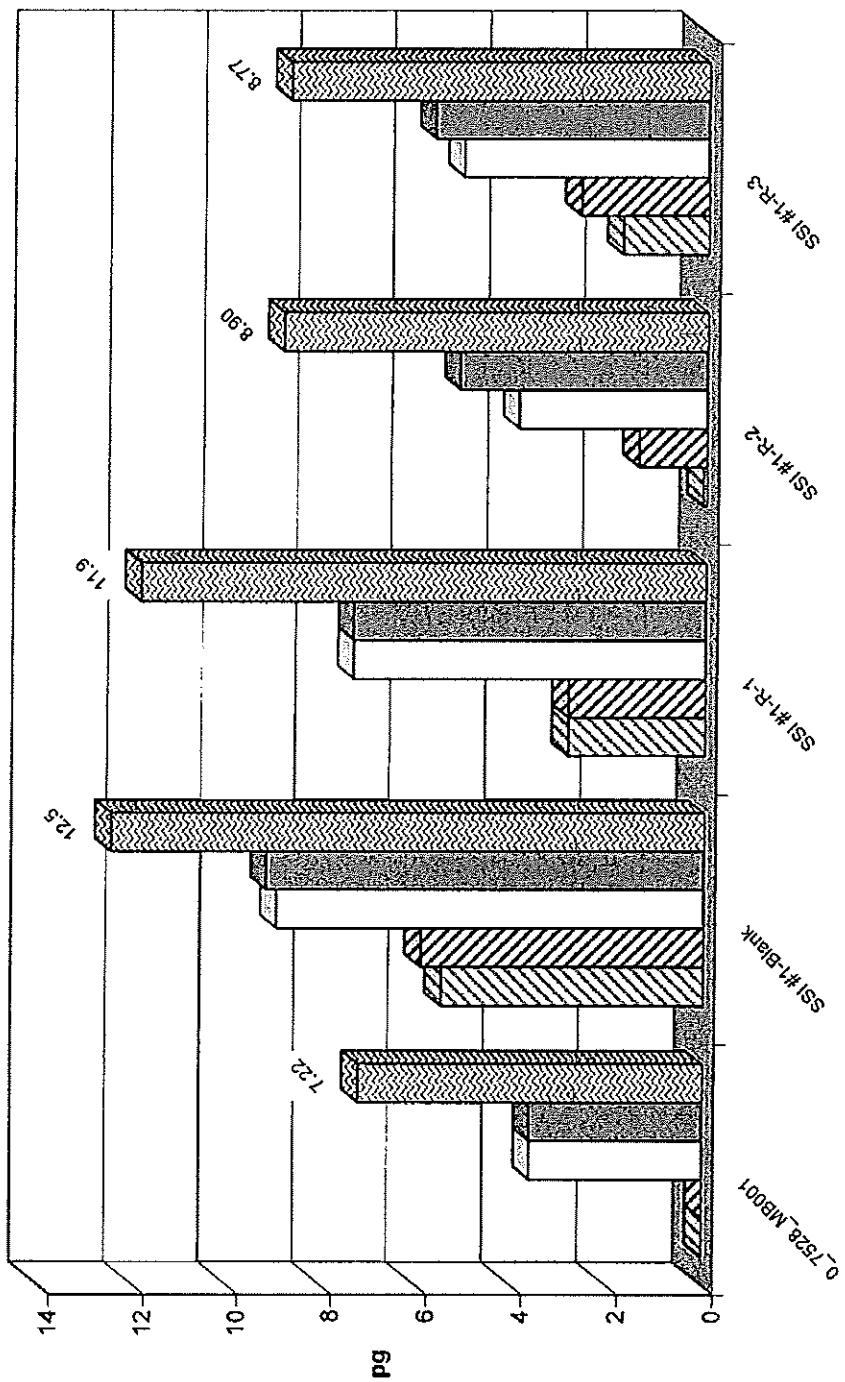
IIEF-TIEQ
Project ID: CRBG 00107
P1977

- ND=0; EMPC=0
- ND=0; EMPC=EMPC
- ND=D/2; EMPC=0
- ND=D/2; EMPC=EMPC
- ND=D; EMPC=EMPC



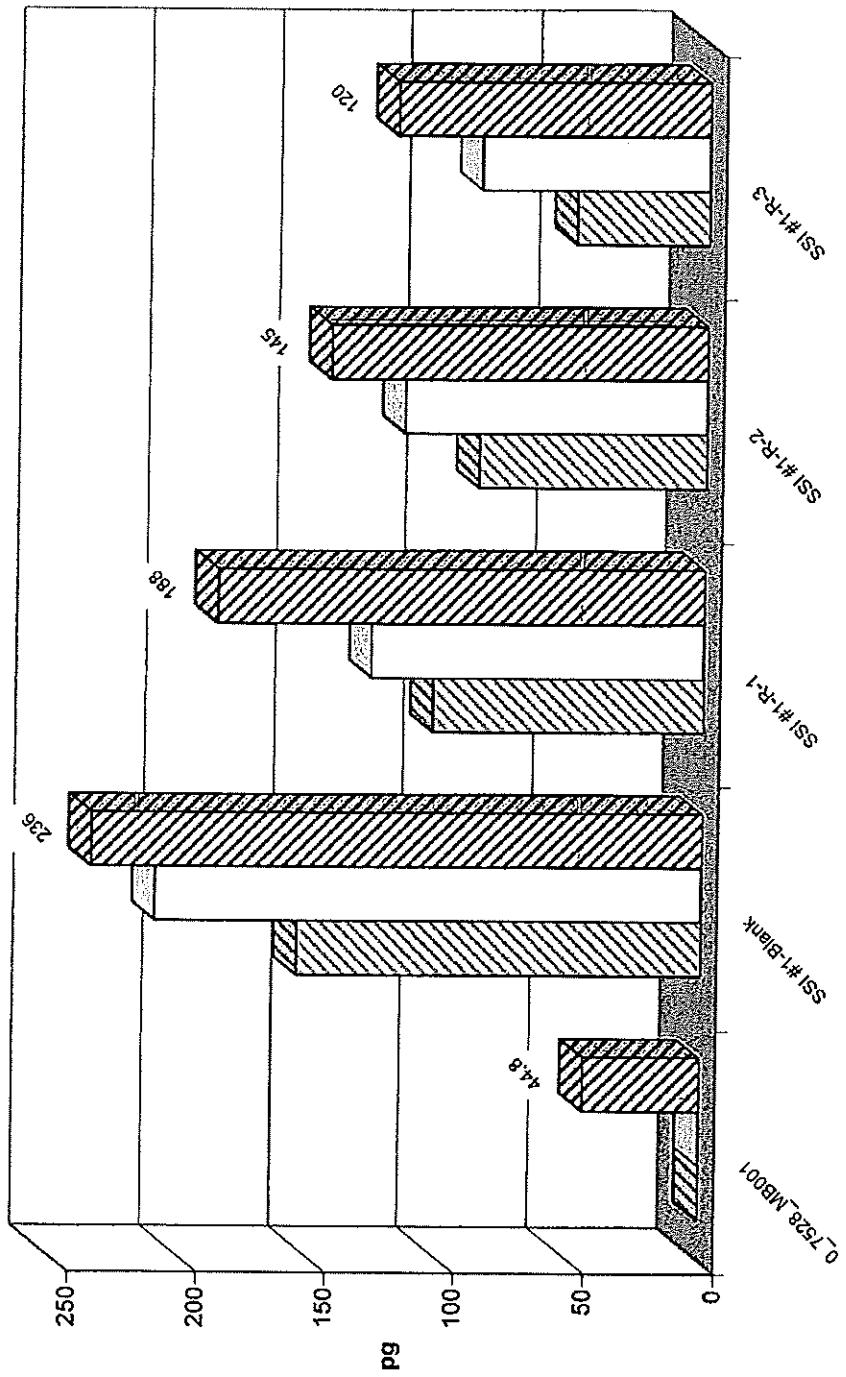
WHO-2005-TEQ
Project ID: CRBG 00107
P1977

- ND=0; EMPC=0
- ND=0; EMPC=EMPC
- ND=DL/2; EMPC=0
- ND=DL/2; EMPC=EMPC
- ND=DL; EMPC=EMPC



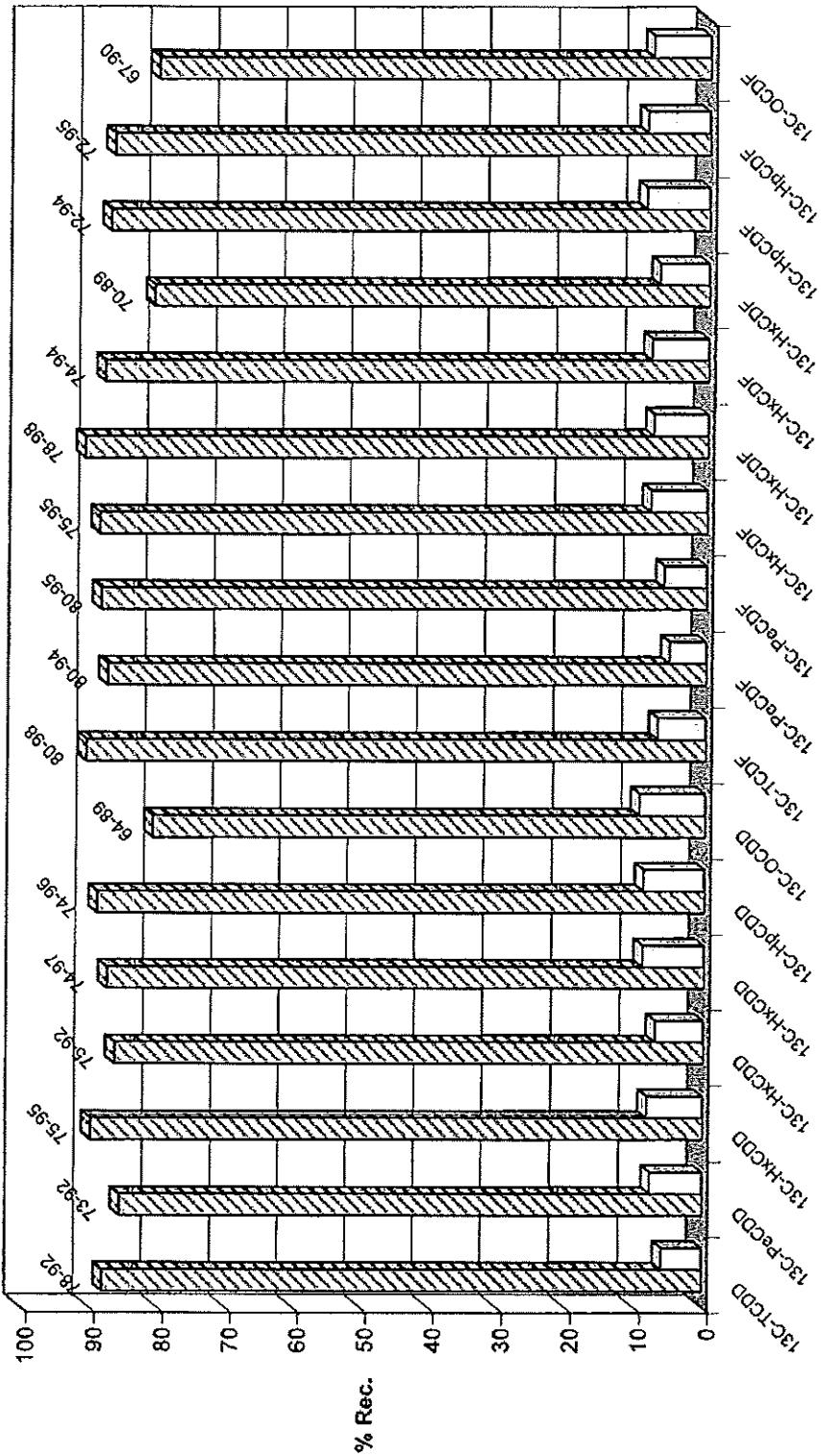
Totals
Project ID: CRBG 00107
P1977

- Total PCDD/Fs (ND=0; EMPC=0)
- Total PCDD/Fs (ND=0; EMPC=EMPC)
- Total PCDD/Fs (2378-X ND=D; EMPC=EMPC)



Mean Recoveries of Extraction Standards (N=5)
Project ID: CRBG 00107
P1977

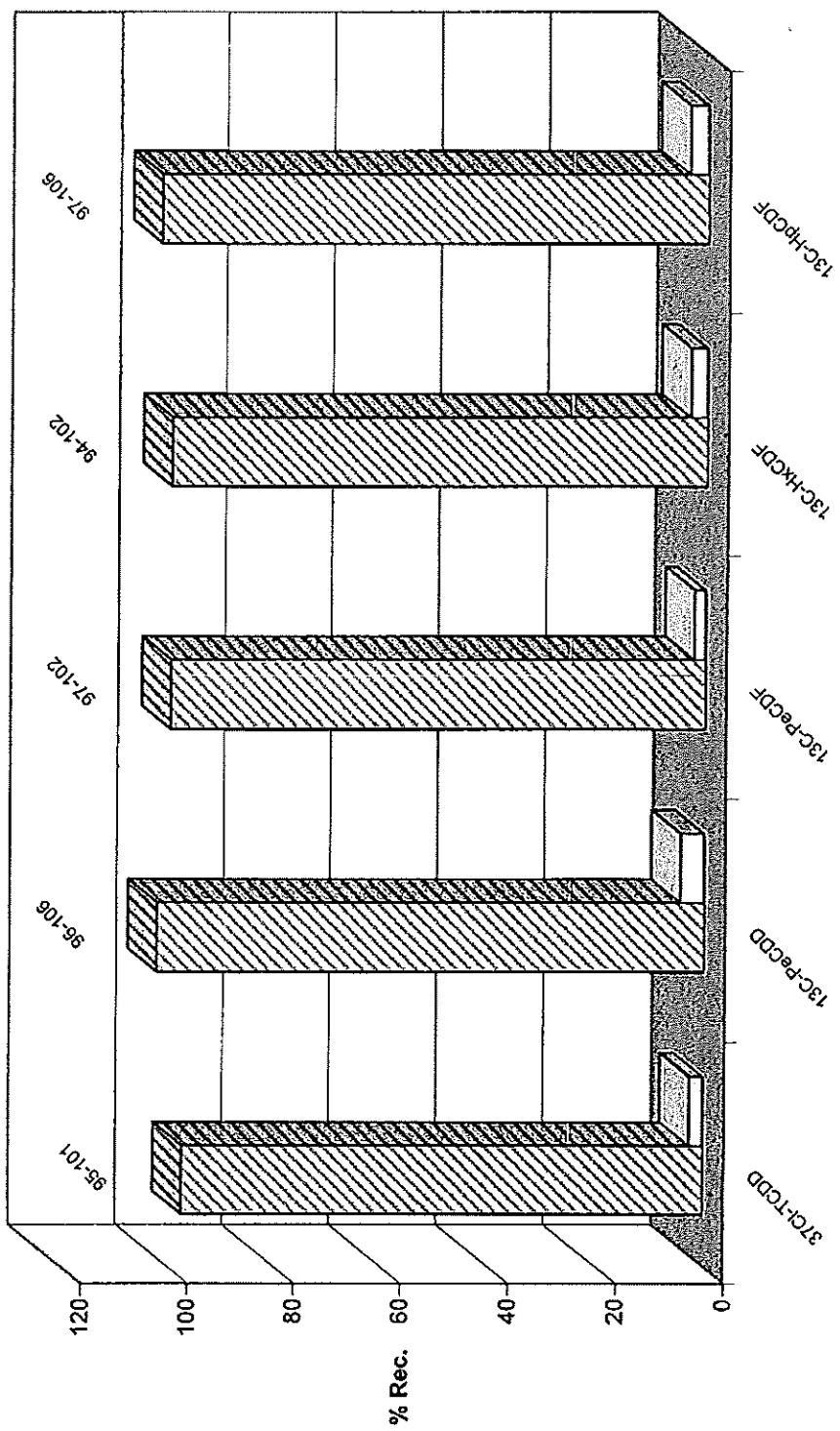
Mean Std. Dev.



Method Specification Limits: Tetra-Hexa ES: 40-130%, Hepta-Octa ES: 25-130% (F = fail)

Mean Recoveries of Sampling Standards (N=5)
Project ID: CRBG 00107
P1977

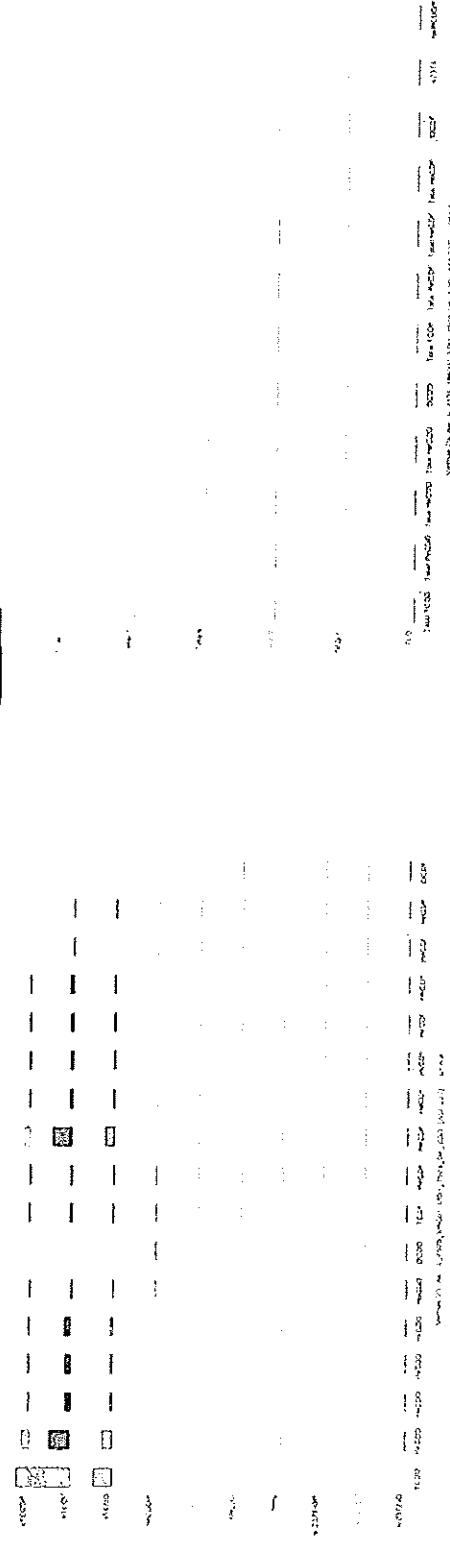
Mean Std. Dev.



Method Specification Limits: Tetra-Octa SS: 70-130% (F = fail)

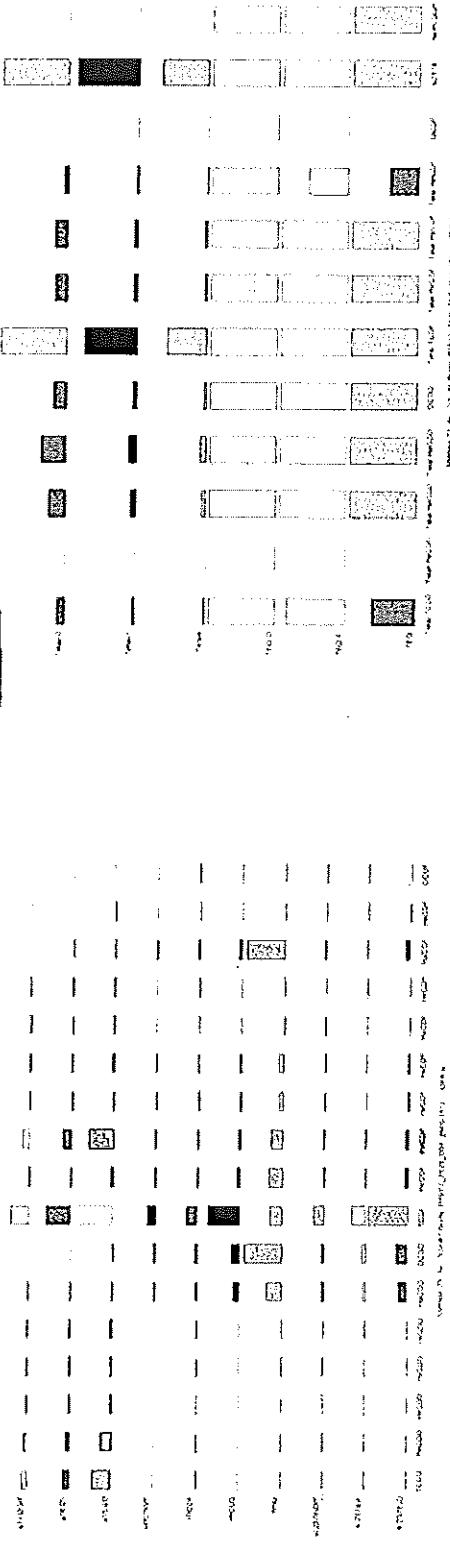
ଅନୁଷ୍ଠାନିକ ପ୍ରକାଶନକାରୀ

ANALYTICAL PERSPECTIVE

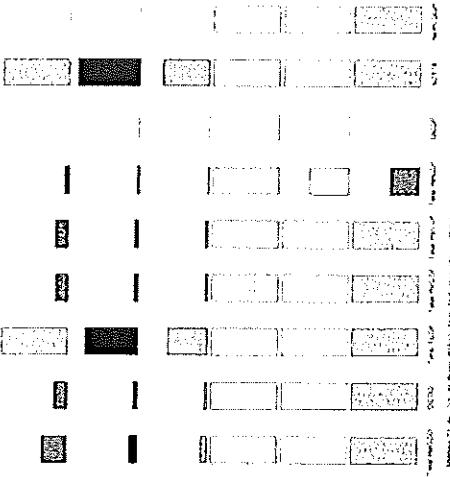


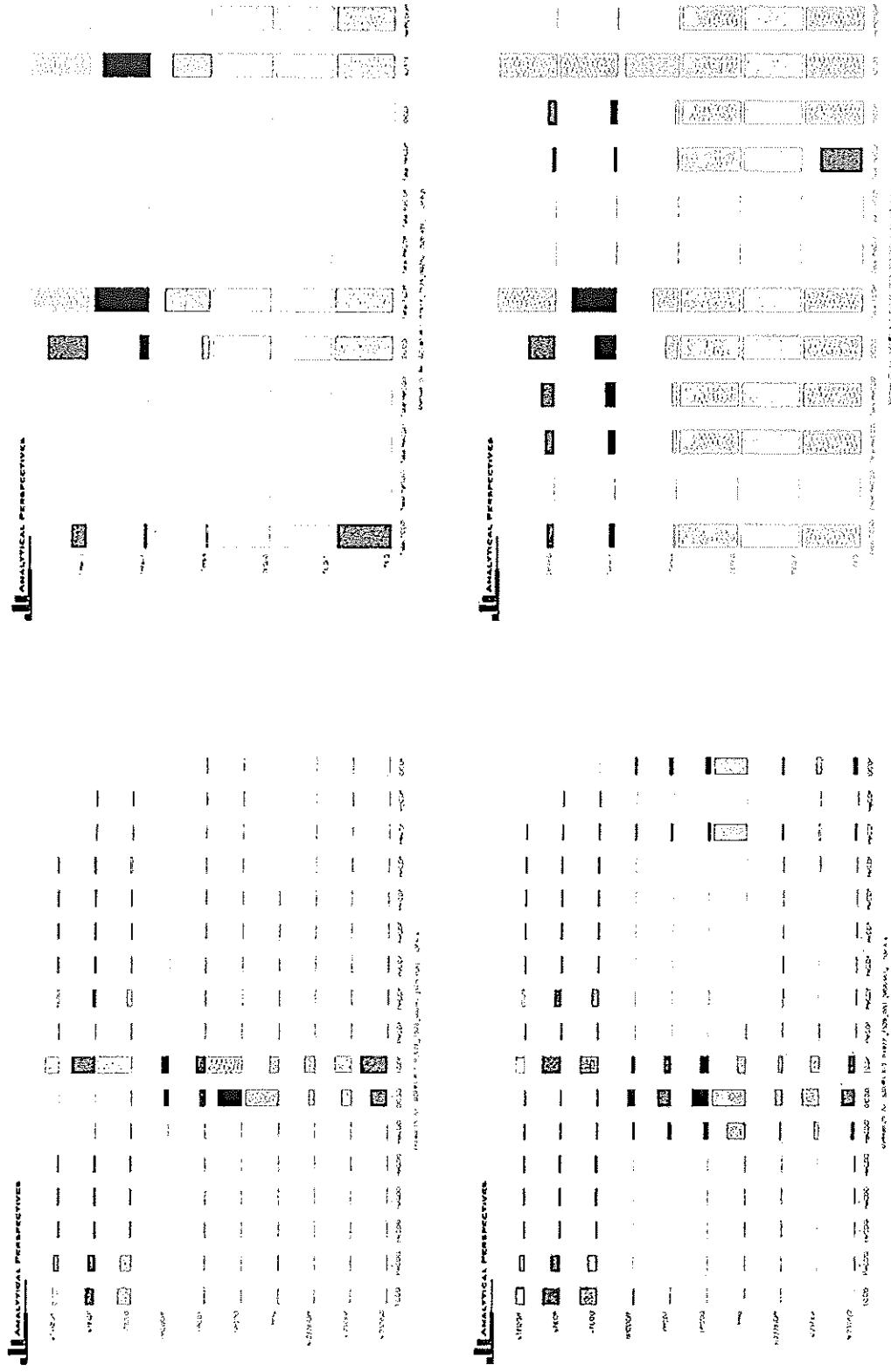
三國志

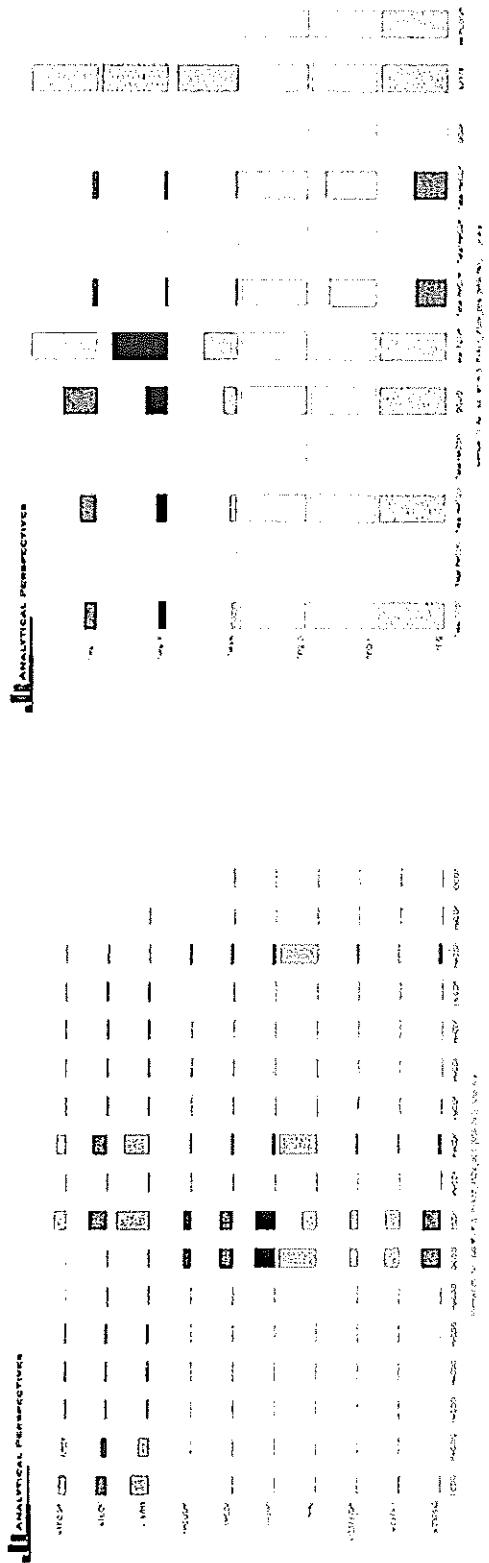
ארכיאולוגיה של ארץ ישראל



אברהם ורבקה







Sample ID: 0_7528_MB001

Method 23

Client Data		Sample Data		Laboratory Data			
Name:	General Engineering Laboratories	Matrix:	Air	Lab Project ID:	P1977	Date Received:	n/a
Project ID:	CRBG 00107	Weight/Volume:	1	Lab Sample ID:	MB1_7528_DF SDS	Date Extracted:	25 Jan 2010
Date Collected:	n/a	QC Batch No:	7528	QC Batch No:	7528	Date Analyzed:	02 Feb 2010
		Dilution:	-		-	Time Analyzed:	12:30:32
Analyte	Contc. (pg)	DL (pg)	EMPC (pg)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	2.16			ES 2378-TCDD	92.2	
123478-PeCDD	ND	2.36			ES 12378-PeCDD	92	
123478-HxCDD	ND	3.24			ES 123478-HxCDD	95.1	
123678-HxCDD	ND	3.34			ES 123678-HxCDD	89.2	
123789-HxCDD	ND	3.72			ES 123789-HxCDD	97.1	
1234678-HpCDD	ND	3.34			ES 1234678-HpCDD	94.4	
OCDD	ND	5.58			ES OCDD	82.8	
2378-TCDF	ND	1.35			ES 2378-TCDF	94.7	
123784-PeCDF	ND	2.12			ES 123784-PeCDF	92.5	
234784-PeCDF	ND	2.15			ES 234784-PeCDF	93.8	
123478-HxCDF	ND	1.78			ES 123478-HxCDF	91.5	
123678-HxCDF	ND	1.69			ES 123678-HxCDF	94.3	
234678-HxCDF	ND	1.73			ES 234678-HxCDF	93.9	
123789-HxCDF	ND	2.26			ES 123789-HxCDF	84.1	
1234678-HpCDF	ND	1.5			ES 1234678-HpCDF	94.3	
1234789-HpCDF	ND	2.19			ES 1234789-HpCDF	93.4	
OCDF	ND	4.29			ES OCDF	84.1	
Totals					Standard	SS/SAS Recoveries	
Total TCDD	ND	2.16		ND	SS 2378-TCDD	97.1	
Total PeCDD	ND	2.36		ND	SS 123478-PeCDD	95.5	
Total HxCDD	ND	3.42		ND	SS 1234678-HxCDD	96.7	
Total HpCDD	ND	3.34		ND	SS 123678-HpCDD	102	
Total TCDF	ND	1.35		ND	AS 1368-TCDD	97.1	
Total PeCDF	ND	2.14		ND	AS 1368-TCDF	95.3	
Total HxCDF	ND	1.84		ND			
Total HpCDF	ND	1.81		ND			
Total PCDD/Fs	ND			ND			
TEF TEQs							
TEQ: ND=0	0				0		
TEQ: ND=DL/2	3.26				3.26		
TEQ: ND=DL	6.52				6.52		

2714 Exchange Drive
Wilmington, NC 28405 , USA
info@ultratrace.com
Tel: +1 910 794-1613 (Fax: -3919); Toll-Free 866 846-8296www.ultratrace.com

Report Created: 03-Feb-2010 08:55 Analyst: MC

AP D/F 2010 Rev. L

Checkcode: 687-527

Sample ID: SSI #1-Blank

Method 23

Sample ID: SSI #1-Blank							
Client Data		Sample Data		Laboratory Data			
Name:	CRBG 00107	Matrix:	Air	Lab Project ID:	P1977	Date Received:	21 Jan 2009
Project ID:	20 Jan 2009	Weight/Volume:	1	Lab Sample ID:	P1977_7528_001	Date Extracted:	25 Jan 2010
Date Collected:		QC Batch No:	7528	QC Dilution:	-	Date Analyzed:	02 Feb 2010
Time Analyzed:	13:20:57						
Analyte	Conc. (pg)	DL (pg)	EMPC (pg)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	2.38			ES 2378-TCDD	77.8	
12378-PeCDD	ND	2.86			ES 12378-PeCDD	72.9	
123478-HxCDD	ND	2.59			ES 123478-HxCDD	75.2	
123678-HxCDD	ND	2.86			ES 123678-HxCDD	74.8	
123789-HxCDD	ND	3.06			ES 123789-HxCDD	73.8	
1234678-HpCDD	8.16				ES 1234678-HpCDD	74	
OCDD	EMPC	11.4		J J	ES OCDD	64.3	
2378-TCDF	44.3				ES 2378-TCDF	79.7	
12378-PeCDF	EMPC	3.79		J J	ES 12378-PeCDF	80.4	
123478-PeCDF	3.26				ES 23478-PeCDF	80.2	
123478-HxCDF	EMPC	1.18		J J	ES 123478-HxCDF	74.7	
123678-HxCDF	EMPC	1.52		J J	ES 123678-HxCDF	77.9	
123678-HxCDF	ND	1.8			ES 234678-HxCDF	73.9	
123789-HxCDF	ND	2.29			ES 123789-HxCDF	70.2	
1234678-HpCDF	EMPC	4.23		J	ES 1234678-HpCDF	72.4	
1234789-HpCDF	ND	2.88			ES 1234789-HpCDF	72.3	
OCDF	ND	4.75			ES OCDF	67.4	
Totals					Standard	SS/AS Recoveries	
Total TCDD	6.37		6.37		SS 37Cl-2378-TCDD	97.8	
Total PeCDD	ND	2.86	ND		SS 12347-PeCDD	106	
Total HxCDD	14.3		14.3		SS 12346-PeCDF	101	
Total HpCDD	20.5		20.5		SS 123469-HxCDF	101	
Total TCDF	105		133		SS 1234689-HpCDF	103	
Total PeCDF	3.26		10.5		AS 1388-TCDD	77.4	
Total HxCDF	6.21		10.9		AS 1388-TCDF	80.7	
Total HpCDF	ND		4.23				
Total PCDD/Fls	156		211				
TEF TEQs							
TEQ: ND=0	6.14		6.65				
TEQ: ND=DL/2	8.93		9.21				
TEQ: ND=DL	11.7		11.8				
ANALYTICAL PERSPECTIVES Wilmington, NC 28405, USA						2714 Exchange Drive info@ultratrace.com	
						Tel: +1 910 794-1613 (Fax: -3919); Toll-Free 866 846-8236; www.ultratrace.com	

Checkcode: 646-161

AP N/E 2010 Page 1

Report Created: 03-Feb-2010 08:55 Analyst: MC

Sample ID: SSI #1-R-1

Method 23							
Client Data		Sample Data			Laboratory Data		
Name:	General Engineering Laboratories	Matrix:	Air	Lab Sample ID:	P1977_7528_002RJ	Date Received:	21 Jan 2009
Project ID:	CRBG 00107	Weight/Volume:	1	QC Batch No:	7528	Date Extracted:	25 Jan 2010
Date Collected:	20 Jan 2009	Split:	-	Dilution:	-	Date Analyzed:	02 Feb 2010
Time Analyzed:	23:46:30				<th></th> <td></td>		
Analyte	Conc. (pg)	DL (pg)	EMPC (pg)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	2.19			ES 2378-TCDD	92.3	
12378-PeCDD	ND	3.58			ES 12378-PeCDD	85.4	
123478-HxCDD	ND	3.37			ES 123478-HxCDD	92.6	
123678-HxCDD	ND	3.82			ES 123678-HxCDD	84.5	
123789-HxCDD	ND	4.12			ES 123789-HxCDD	83.8	
1234678-HpCDD	ND	6.08			ES 1234678-HpCDD	88.4	
OCDD	17.3			J	ES OCDD	85.9	
2378-TCDF	28.6				ES 2378-TCDF	92.8	
12378-PeCDF	ND	1.86			ES 12378-PeCDF	87.1	
123478-PeCDF	ND	1.74			ES 123478-PeCDF	90.9	
123478-HxCDF	ND	3			ES 123478-HxCDF	94.7	
123678-HxCDF	ND	3.09			ES 123678-HxCDF	90.9	
234678-HxCDF	ND	3.11			ES 234678-HxCDF	91	
123789-HxCDF	ND	4.48			ES 123789-HxCDF	78.7	
1234678-HpCDF	ND	4.09			ES 1234678-HpCDF	86.1	
1234789-HpCDF	ND	5.46			ES 1234789-HpCDF	86	
OCDF	ND	9.7			ES OCDF	81.8	
Totals					Standard	SSI/S Recoveries	
Total TCDD	6.6		6.6		SS 37Cl-2378-TCDD	94.8	
Total PeCDD	ND	3.58	ND		SS 123478-PeCDD	106	
Total HxCDD	ND	3.75	ND		SS 12346-PeCDF	99.2	
Total HpCDD	ND	6.08	ND		SS 123469-HxCDF	100	
Total TCDF	80		104		SS 1234689-HpCDF	103	
Total PeCDF	ND	1.8	ND		AS 1388-TCDD	94.5	
Total HxCDF	ND	3.35	ND		AS 1388-TCDF	95	
Total HpCDF	ND	4.71	ND				
Total PCDD/DFs	104		128				
TEF TEQs							
TEQ: ND=0	2.87		2.87				
TEQ: ND=DL/2	6.68		6.68				
TEQ: ND=DL	10.5		10.5				

Checkcode: 326-468

AP D/F 2010 Rev. L

Report Created: 03-Feb-2010 08:58 Analyst: MC

info@ultratrace.com

www.ultratrace.com

Tel: +1 910 794-1613 (Fax: -3919) Toll-Free 866 846-8290

ANALYTICAL PERSPECTIVES Wilmington, NC 28405 , USA

2714 Exchange Drive