

Theodorellys, Penny

From: Nace.Charles@epamail.epa.gov
Sent: Thursday, April 03, 2003 8:18 AM
To: Fulop, Julius
Cc: Theodorellys, Penny
Subject: Re: PCDD/DF's from Swabs - JLC



009192email2Apr1st.xl

s

Julius,

Thank you for the file containing the dioxin results. I looked at the contents and the information provided, as well as the format, is acceptable.

Thanks,

Chuck Nace
Environmental Toxicologist

USEPA - Region 2
290 Broadway - 18th Floor
New York, NY 10007-1866

212.637.3459
212.637.4164
212.637.4360 - fax
nace.charles@epa.gov

"Fulop, Julius"

<JFulop@contactps
Nace/R2/USEPA/US@EPA
c.com>

To: Charles

cc:

Subject: PCDD/DF's from Swabs - JLC

04/01/2003 02:13
PM

Good afternoon,

Further to your discussions with Henri Huneault of our dioxin lab, we are forwarding to you presently the earlier report together with the TEQ, EMPC and EMPL (@ ½ DL).

<<009192email2Apr1st.xls>>

Please indicate back to us if this additional reporting information is acceptable to you, or if we need to make modifications. Thank-you.

Julius Fulop, M.Sc., C.Chem.
Senior Project Manager/Air Toxics Specialist
PSC Analytical Services
5555 North Service Road
Burlington, Ontario, Canada L7L 5H7
T: 905-332-8788 ext. 236; F: 905-332-0697
Toll Free: 1-800-668-0639
E: jfulop@contactpsc.com
W: www.pscanalytical.com

*** Philip Analytical Services provides data in an electronic spreadsheet format for the convenience of our clients. Our Project Managers validate and sign hard copy reports only. Electronic spreadsheet data is not provided until data validation has occurred. We maintain state of the art software to guard against viruses. While every reasonable precaution is taken to ensure the accuracy and uncontaminated nature of electronic spreadsheet reports, we cannot be responsible for errors that may result.

We recommend that all data be checked against the certified copy and that all clients maintain virus protection software.

(See attached file: 009192email2Apr1st.xls)

Certificate of Analysis

CLIENT INFORMATION

Attention: Vaughan O'Neill
Client Name: Philip Analytical Services Inc
Project: JLC Environmental
Project Desc:

Address: 4418 Pottsville Pike
 Reading, Pennsylvania
 19605
Fax Number: 610 921-9667
Phone Number: 610 921-8833

LABORATORY INFORMATION

Contact: Julius Fulop, M.Sc., C.Chem.
Project: AN030286
Date Received: 06-Mar-2003
Date Reported: 19-Mar-2003

Submission No.: 3C0148
Sample No.: 009192-009222

NOTES:

*"-" = not analysed "<" = less than Method Detection Limit (MDL) 'NA' = no data available
 LOQ can be determined for all analytes by multiplying the appropriate MDL X 3.33
 Blank correction is only performed on oil and grease, BTEX, total purgeable hydrocarbons
 and VOC analyses when Canadian methods are utilized.
 Solids data is based on dry weight except for biota analyses.
 Organic analyses are not corrected for extraction recovery standards except for isotope
 dilution methods, (i.e. CARB 429 PAH, all PCDD/F and DBD/DBF analyses)
 The enclosed copy of the Chain of Custody Record may contain information necessary for the
 interpretation of the data.*

Methods used by PSC Analytical Services are based upon those found in 'Standard Methods for the Examination of Water and Wastewater', Twentieth Edition. Other methods are based on the principles of MISA or EPA methodologies. New York State: ELAP Identification Number 10756.

All work recorded herein has been done in accordance with normal professional standards using accepted testing methodologies, quality assurance and quality control procedures except where otherwise agreed to by the client and testing company in writing. Any and all use of these test results shall be limited to the actual cost of the pertinent analysis done. There is no other warranty expressed or implied. Your samples will be retained at PSC Analytical Services for a period of three weeks from receipt of data or as per contract.

COMMENTS:

Certified by: _____

4/3/03

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Component	<i>Client ID:</i>		Method	Blank	%	3rd	3rd
	<i>Lab No.:</i>		Blank	Spike		Floor-07	Floor-08
	<i>Date Sampled:</i>		009192 03	009192 03		009193 03	009194 03
			05-Mar-2003	05-Mar-2003		05-Mar-2003	05-Mar-2003
	MDL	Units			Recovery		
Total Tetrachlorodibenzofurans		pg	<1.2	1100	-	<2.4	<1.4
Total Pentachlorodibenzofurans		"	<1.5	5400	-	<1.3	<1.7
Total Hexachlorodibenzofurans		"	<1.5	11000	-	<2.6	<1.5
Total Heptachlorodibenzofurans		"	<2.8	5200	-	<6.8	4.2
Octachlorodibenzofuran		"	<5.3	5400	-	14	6.2
Total Tetrachlorodibenzo-p-dioxins		"	<1.5	940	-	2.2	<1.6
Total Pentachlorodibenzo-p-dioxins		"	<1.4	2700	-	<6.0	<1.4
Total Hexachlorodibenzo-p-dioxins		"	<1.6	7700	-	4.6	<2.1
Total Heptachlorodibenzo-p-dioxins		"	12	2600	-	31	5.9
Octachlorodibenzo-p-dioxin		"	38	5300	-	130	41
Internal Recoveries		%					
2,3,7,8-T4CDF-13C12			80	77	-	80	81
2,3,7,8-T4CDD-13C12			88	82	-	86	93
1,2,3,7,8-P5CDF-13C12			86	92	-	76	81
1,2,3,7,8-P5CDD-13C12			85	83	-	72	75
1,2,3,4,7,8-H6CDF-13C12			100	91	-	91	97
1,2,3,6,7,8-H6CDD-13C12			97	88	-	84	91
1,2,3,4,6,7,8-H7CDF-13C12			114	101	-	89	100
1,2,3,4,6,7,8-H7CDD-13C12			111	97	-	82	96
OCDD-13C12			96	87	-	73	84
2,3,7,8-Cl4-Dibenzofuran (DB5)		pg	<1.2	1100	107	<3.5	<1.4
2,3,7,8-Cl4-Dibenzo-p-dioxin		"	<1.5	940	111	<2.4	<1.6
1,2,3,7,8-Cl5-Dibenzofuran		"	<1.5	2800	107	<1.3	<1.7
2,3,4,7,8-Cl5-Dibenzofuran		"	<1.5	2700	103	2.0	<1.7
1,2,3,7,8-Cl5-Dibenzo-p-dioxin		"	<1.4	2700	102	<1.6	<1.4
1,2,3,4,7,8-Cl6-Dibenzofuran		"	<1.4	2600	105	<2.4	<1.4
1,2,3,6,7,8-Cl6-Dibenzofuran		"	<1.4	2500	111	<1.2	<1.3
2,3,4,6,7,8-Cl6-Dibenzofuran		"	<1.6	2600	104	<1.4	<1.5
1,2,3,7,8,9-Cl6-Dibenzofuran		"	<1.9	2800	104	<1.6	<1.8
1,2,3,4,7,8-Cl6-Dibenzo-p-dioxin		"	<1.5	2600	107	<1.3	<2.0
1,2,3,6,7,8-Cl6-Dibenzo-p-dioxin		"	<1.7	2500	94	<1.5	<2.2
1,2,3,7,8,9-Cl6-Dibenzo-p-dioxin		"	<1.6	2600	107	<1.4	<2.0
1,2,3,4,6,7,8-Cl7-Dibenzofuran		"	<2.5	2600	102	<6.0	4.5
1,2,3,4,7,8,9-Cl7-Dibenzofuran		"	<3.3	2600	101	<7.2	<2.8
1,2,3,4,6,7,8-Cl7-Dibenzo-p-dioxin		"	6.0	2600	103	14	5.9
1,2,3,4,6,7,8,9-Cl8-Dibenzofuran		"	<5.3	5400	102	14	6.2
1,2,3,4,6,7,8,9-Cl8-Dibenzo-p-dioxin		"	38	5300	106	130	41
2,3,7,8-TCDF (DB225)		pg	<5.4	-	-	<6.9	<2.8
Internal Recoveries		%					
2,3,7,8-TCDF-13C12			69	-	-	71	73

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Component	MDL	Units	3rd	4th	4th	4th
			Floor-09	Floor-07	Floor-08	Floor-09
			009195 03	009196 03	009197 03	009198 03
			05-Mar-2003	05-Mar-2003	05-Mar-2003	05-Mar-2003
Total Tetrachlorodibenzofurans		pg	<2.2	85	<1.7	31
Total Pentachlorodibenzofurans		"	<1.9	66	<1.6	28
Total Hexachlorodibenzofurans		"	<1.9	30	<1.8	14
Total Heptachlorodibenzofurans		"	<3.1	2.9	2.3	4.2
Octachlorodibenzofuran		"	6.3	19	7.1	<11
Total Tetrachlorodibenzo-p-dioxins		"	<2.9	120	<2.1	35
Total Pentachlorodibenzo-p-dioxins		"	<1.9	30	<1.8	4.5
Total Hexachlorodibenzo-p-dioxins		"	<6.8	57	<7.0	36
Total Heptachlorodibenzo-p-dioxins		"	15	53	20	36
Octachlorodibenzo-p-dioxin		"	43	160	56	100
Internal Recoveries		%				
2,3,7,8-T4CDF-13C12			83	93	86	84
2,3,7,8-T4CDD-13C12			94	101	94	97
1,2,3,7,8-P5CDF-13C12			88	88	93	89
1,2,3,7,8-P5CDD-13C12			85	79	86	80
1,2,3,4,7,8-H6CDF-13C12			102	107	105	106
1,2,3,6,7,8-H6CDD-13C12			97	91	99	98
1,2,3,4,6,7,8-H7CDF-13C12			109	106	111	113
1,2,3,4,6,7,8-H7CDD-13C12			105	97	105	109
OCDD-13C12			85	90	97	104
2,3,7,8-Cl4-Dibenzofuran (DB5)		pg	<2.2	<21	<2.3	<8.1
2,3,7,8-Cl4-Dibenzo-p-dioxin		"	<2.5	<2.1	<2.1	<2.1
1,2,3,7,8-Cl5-Dibenzofuran		"	<1.8	4.6	<1.6	<2.1
2,3,4,7,8-Cl5-Dibenzofuran		"	<1.9	6.0	<1.7	4.2
1,2,3,7,8-Cl5-Dibenzo-p-dioxin		"	<1.9	<2.1	<1.8	<2.0
1,2,3,4,7,8-Cl6-Dibenzofuran		"	<1.7	8.9	<1.6	<2.8
1,2,3,6,7,8-Cl6-Dibenzofuran		"	<1.7	<4.8	<1.6	3.4
2,3,4,6,7,8-Cl6-Dibenzofuran		"	<1.9	3.8	<1.9	2.5
1,2,3,7,8,9-Cl6-Dibenzofuran		"	<2.3	<2.7	<2.2	<2.5
1,2,3,4,7,8-Cl6-Dibenzo-p-dioxin		"	<1.8	<2.1	<1.9	<2.2
1,2,3,6,7,8-Cl6-Dibenzo-p-dioxin		"	<2.0	<2.3	<2.1	<2.5
1,2,3,7,8,9-Cl6-Dibenzo-p-dioxin		"	<1.8	<2.1	<2.0	<2.2
1,2,3,4,6,7,8-Cl7-Dibenzofuran		"	<2.8	<15	<3.5	<8.7
1,2,3,4,7,8,9-Cl7-Dibenzofuran		"	<1.9	<2.9	<2.4	<2.5
1,2,3,4,6,7,8-Cl7-Dibenzo-p-dioxin		"	6.8	23	8.0	16
1,2,3,4,6,7,8,9-Cl8-Dibenzofuran		"	6.3	19	7.1	<11
1,2,3,4,6,7,8,9-Cl8-Dibenzo-p-dioxin		"	43	160	56	100
2,3,7,8-TCDF (DB225)		pg	<2.9	14	<4.9	<5.7
Internal Recoveries		%				
2,3,7,8-TCDF-13C12			73	82	75	78

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Component	<i>Client ID:</i>		5th	5th	5th	6th
	<i>Lab No.:</i>		Floor-07	Floor-08	Floor-09	Floor-07
	<i>Date Sampled:</i>		009199 03	009200 03	009201 03	009202 03
			05-Mar-2003	05-Mar-2003	05-Mar-2003	05-Mar-2003
	MDL	Units				
Total Tetrachlorodibenzofurans		pg	100	<1.6	13	76
Total Pentachlorodibenzofurans		"	36	<2.2	27	25
Total Hexachlorodibenzofurans		"	17	<1.5	27	18
Total Heptachlorodibenzofurans		"	<14	<3.8	5.6	<13
Octachlorodibenzofuran		"	19	8.2	20	29
Total Tetrachlorodibenzo-p-dioxins		"	91	<2.0	24	62
Total Pentachlorodibenzo-p-dioxins		"	24	<1.7	20	17
Total Hexachlorodibenzo-p-dioxins		"	37	<2.7	49	33
Total Heptachlorodibenzo-p-dioxins		"	45	20	46	41
Octachlorodibenzo-p-dioxin		"	170	61	97	120
Internal Recoveries		%				
2,3,7,8-T4CDF-13C12			95	64	97	96
2,3,7,8-T4CDD-13C12			97	65	101	103
1,2,3,7,8-P5CDF-13C12			94	91	98	94
1,2,3,7,8-P5CDD-13C12			89	71	85	80
1,2,3,4,7,8-H6CDF-13C12			99	78	107	109
1,2,3,6,7,8-H6CDD-13C12			92	74	95	99
1,2,3,4,6,7,8-H7CDF-13C12			105	85	112	110
1,2,3,4,6,7,8-H7CDD-13C12			97	80	103	100
OCDD-13C12			90	66	99	87
2,3,7,8-Cl4-Dibenzofuran (DB5)		pg	<17	<1.6	<6.6	<14
2,3,7,8-Cl4-Dibenzo-p-dioxin		"	<3.2	<2.0	<2.3	<2.9
1,2,3,7,8-Cl5-Dibenzofuran		"	<2.9	<2.2	<3.3	<3.8
2,3,4,7,8-Cl5-Dibenzofuran		"	5.4	<2.3	<3.8	<4.0
1,2,3,7,8-Cl5-Dibenzo-p-dioxin		"	<2.2	<1.7	<4.1	<4.8
1,2,3,4,7,8-Cl6-Dibenzofuran		"	<4.0	<1.4	7.0	6.1
1,2,3,6,7,8-Cl6-Dibenzofuran		"	<3.2	<1.3	4.0	3.9
2,3,4,6,7,8-Cl6-Dibenzofuran		"	<2.2	<1.5	3.0	<2.8
1,2,3,7,8,9-Cl6-Dibenzofuran		"	<1.8	<1.8	<3.0	<3.3
1,2,3,4,7,8-Cl6-Dibenzo-p-dioxin		"	<1.6	<1.4	<2.3	<2.5
1,2,3,6,7,8-Cl6-Dibenzo-p-dioxin		"	2.4	<1.6	<2.6	<2.8
1,2,3,7,8,9-Cl6-Dibenzo-p-dioxin		"	2.8	<1.4	<2.3	<2.6
1,2,3,4,6,7,8-Cl7-Dibenzofuran		"	<13	<3.3	<15	<11
1,2,3,4,7,8,9-Cl7-Dibenzofuran		"	<2.9	<2.3	<3.3	<3.6
1,2,3,4,6,7,8-Cl7-Dibenzo-p-dioxin		"	22	8.8	20	17
1,2,3,4,6,7,8,9-Cl8-Dibenzofuran		"	19	8.2	20	29
1,2,3,4,6,7,8,9-Cl8-Dibenzo-p-dioxin		"	170	61	97	120
2,3,7,8-TCDF (DB225)		pg	11	<4.4	<2.9	<7.2
Internal Recoveries		%				
2,3,7,8-TCDF-13C12			85	53	80	79

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Component	<i>Client ID:</i>		6th	6th	7th	7th
	<i>Lab No.:</i>		Floor-08	Floor-09	Floor-07	Floor-08
	<i>Date Sampled:</i>		009203 03	009204 03	009205 03	009206 03
			05-Mar-2003	05-Mar-2003	05-Mar-2003	05-Mar-2003
	MDL	Units				
Total Tetrachlorodibenzofurans		pg	7.4	7.5	24	<2.1
Total Pentachlorodibenzofurans		"	<3.1	10	11	<3.2
Total Hexachlorodibenzofurans		"	2.9	8.3	7.8	<1.7
Total Heptachlorodibenzofurans		"	<7.0	<7.4	3.7	2.2
Octachlorodibenzofuran		"	10.0	11	12	7.3
Total Tetrachlorodibenzo-p-dioxins		"	14	27	36	3.3
Total Pentachlorodibenzo-p-dioxins		"	3.5	<14	26	<2.7
Total Hexachlorodibenzo-p-dioxins		"	3.2	14	14	2.8
Total Heptachlorodibenzo-p-dioxins		"	32	24	27	17
Octachlorodibenzo-p-dioxin		"	84	73	86	55
Internal Recoveries		%				
2,3,7,8-T4CDF-13C12			94	83	102	84
2,3,7,8-T4CDD-13C12			107	99	112	105
1,2,3,7,8-P5CDF-13C12			101	84	100	86
1,2,3,7,8-P5CDD-13C12			88	70	85	79
1,2,3,4,7,8-H6CDF-13C12			118	107	111	112
1,2,3,6,7,8-H6CDD-13C12			106	95	100	102
1,2,3,4,6,7,8-H7CDF-13C12			123	108	108	112
1,2,3,4,6,7,8-H7CDD-13C12			112	99	96	105
OCDD-13C12			100	88	75	95
2,3,7,8-Cl4-Dibenzofuran (DB5)		pg	<4.5	<7.5	<8.2	<2.1
2,3,7,8-Cl4-Dibenzo-p-dioxin		"	<2.5	<2.7	<2.5	<2.4
1,2,3,7,8-Cl5-Dibenzofuran		"	<3.0	<3.2	<2.6	<3.2
2,3,4,7,8-Cl5-Dibenzofuran		"	<3.1	<3.3	2.9	<3.3
1,2,3,7,8-Cl5-Dibenzo-p-dioxin		"	<2.9	<5.1	<3.1	<2.7
1,2,3,4,7,8-Cl6-Dibenzofuran		"	<1.7	3.2	3.7	<1.5
1,2,3,6,7,8-Cl6-Dibenzofuran		"	<1.7	<2.3	<1.7	<1.5
2,3,4,6,7,8-Cl6-Dibenzofuran		"	<2.0	1.9	<1.8	<1.7
1,2,3,7,8,9-Cl6-Dibenzofuran		"	<2.3	<2.0	<2.1	<2.1
1,2,3,4,7,8-Cl6-Dibenzo-p-dioxin		"	<2.0	<2.4	<2.1	<1.9
1,2,3,6,7,8-Cl6-Dibenzo-p-dioxin		"	<2.3	<2.7	<2.3	<2.1
1,2,3,7,8,9-Cl6-Dibenzo-p-dioxin		"	<2.1	<2.5	<2.1	<1.9
1,2,3,4,6,7,8-Cl7-Dibenzofuran		"	<6.2	<6.5	<6.5	<2.4
1,2,3,4,7,8,9-Cl7-Dibenzofuran		"	<2.6	<3.1	<2.9	<2.2
1,2,3,4,6,7,8-Cl7-Dibenzo-p-dioxin		"	16	10	11	7.5
1,2,3,4,6,7,8,9-Cl8-Dibenzofuran		"	10.0	11	12	7.3
1,2,3,4,6,7,8,9-Cl8-Dibenzo-p-dioxin		"	84	73	86	55
2,3,7,8-TCDF (DB225)		pg	<6.1	<3.9	<5.3	<2.5
Internal Recoveries		%				
2,3,7,8-TCDF-13C12			83	78	86	85

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		7th	8th	8th	8th	
<i>Client ID:</i>		Floor-09	Floor-07	Floor-08	Floor-09	
<i>Lab No.:</i>		009207 03	009208 03	009209 03	009210 03	
<i>Date Sampled:</i>		05-Mar-2003	05-Mar-2003	05-Mar-2003	05-Mar-2003	
Component	MDL	Units				
Total Tetrachlorodibenzofurans		pg	<3.1	30	<3.6	5.4
Total Pentachlorodibenzofurans		"	<3.6	12	<3.3	<5.1
Total Hexachlorodibenzofurans		"	<2.3	6.9	<3.5	<4.0
Total Heptachlorodibenzofurans		"	<3.0	<9.1	<4.3	<8.6
Octachlorodibenzofuran		"	<4.7	<4.3	<4.9	<7.1
Total Tetrachlorodibenzo-p-dioxins		"	<4.6	50	<5.6	7.6
Total Pentachlorodibenzo-p-dioxins		"	<4.8	28	<7.3	<6.6
Total Hexachlorodibenzo-p-dioxins		"	<5.3	6.2	<31	<58
Total Heptachlorodibenzo-p-dioxins		"	<5.6	12	<4.7	9.1
Octachlorodibenzo-p-dioxin		"	13	44	9.9	33
Internal Recoveries		%				
2,3,7,8-T4CDF-13C12			69	77	69	74
2,3,7,8-T4CDD-13C12			92	102	91	95
1,2,3,7,8-P5CDF-13C12			74	86	77	81
1,2,3,7,8-P5CDD-13C12			78	92	81	87
1,2,3,4,7,8-H6CDF-13C12			105	101	91	98
1,2,3,6,7,8-H6CDD-13C12			99	100	93	99
1,2,3,4,6,7,8-H7CDF-13C12			99	93	93	96
1,2,3,4,6,7,8-H7CDD-13C12			101	98	96	96
OCDD-13C12			102	91	84	81
2,3,7,8-Cl4-Dibenzofuran (DB5)		pg	<3.1	12	<3.6	5.4
2,3,7,8-Cl4-Dibenzo-p-dioxin		"	<4.6	<4.8	<3.6	<5.0
1,2,3,7,8-Cl5-Dibenzofuran		"	<3.5	<6.4	<3.3	<5.1
2,3,4,7,8-Cl5-Dibenzofuran		"	<3.6	<6.6	<3.3	<5.2
1,2,3,7,8-Cl5-Dibenzo-p-dioxin		"	<4.8	<7.5	<7.3	<6.6
1,2,3,4,7,8-Cl6-Dibenzofuran		"	<2.0	6.0	<3.0	<3.4
1,2,3,6,7,8-Cl6-Dibenzofuran		"	<2.0	<3.1	<3.1	<3.6
2,3,4,6,7,8-Cl6-Dibenzofuran		"	<2.4	<3.6	<3.6	<4.1
1,2,3,7,8,9-Cl6-Dibenzofuran		"	<2.8	<4.3	<4.4	<5.0
1,2,3,4,7,8-Cl6-Dibenzo-p-dioxin		"	<5.3	<5.3	<6.6	<5.3
1,2,3,6,7,8-Cl6-Dibenzo-p-dioxin		"	<5.6	<5.6	<7.0	<5.6
1,2,3,7,8,9-Cl6-Dibenzo-p-dioxin		"	<5.2	<5.2	<6.5	<5.2
1,2,3,4,6,7,8-Cl7-Dibenzofuran		"	<2.6	<7.9	<3.7	<7.4
1,2,3,4,7,8,9-Cl7-Dibenzofuran		"	<3.5	<4.8	<5.1	<5.3
1,2,3,4,6,7,8-Cl7-Dibenzo-p-dioxin		"	<5.6	12	<4.7	9.1
1,2,3,4,6,7,8,9-Cl8-Dibenzofuran		"	<4.7	<4.3	<4.9	<7.1
1,2,3,4,6,7,8,9-Cl8-Dibenzo-p-dioxin		"	13	44	9.9	33
2,3,7,8-TCDF (DB225)		pg	<4.0	7.1	<2.8	4.6
Internal Recoveries		%				
2,3,7,8-TCDF-13C12			73	77	75	80

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Component	<i>Client ID:</i>		9th	9th	9th	10th
	<i>Lab No.:</i>		Floor-07	Floor-08	Floor-09	Floor-07
	<i>Date Sampled:</i>		009211 03	009212 03	009213 03	009214 03
			05-Mar-2003	05-Mar-2003	05-Mar-2003	04-Mar-2003
	MDL	Units				
Total Tetrachlorodibenzofurans		pg	140	<2.7	100	160
Total Pentachlorodibenzofurans		"	64	<2.7	54	15
Total Hexachlorodibenzofurans		"	36	<2.6	25	12
Total Heptachlorodibenzofurans		"	<24	<2.4	<17	<14
Octachlorodibenzofuran		"	5.9	<3.5	8.5	16
Total Tetrachlorodibenzo-p-dioxins		"	110	<4.0	130	180
Total Pentachlorodibenzo-p-dioxins		"	16	<7.0	28	30
Total Hexachlorodibenzo-p-dioxins		"	14	<35	10	<84
Total Heptachlorodibenzo-p-dioxins		"	22	<4.9	33	17
Octachlorodibenzo-p-dioxin		"	120	9.8	52	85
Internal Recoveries		%				
2,3,7,8-T4CDF-13C12			73	65	78	59
2,3,7,8-T4CDD-13C12			90	86	102	71
1,2,3,7,8-P5CDF-13C12			79	72	83	65
1,2,3,7,8-P5CDD-13C12			83	82	94	71
1,2,3,4,7,8-H6CDF-13C12			78	92	91	73
1,2,3,6,7,8-H6CDD-13C12			77	94	90	72
1,2,3,4,6,7,8-H7CDF-13C12			76	89	87	68
1,2,3,4,6,7,8-H7CDD-13C12			76	94	92	70
OCDD-13C12			63	87	80	53
2,3,7,8-Cl4-Dibenzofuran (DB5)		pg	32	<2.7	31	<37
2,3,7,8-Cl4-Dibenzo-p-dioxin		"	<4.9	<3.3	<4.3	<5.8
1,2,3,7,8-Cl5-Dibenzofuran		"	6.6	<2.7	<5.8	<10.0
2,3,4,7,8-Cl5-Dibenzofuran		"	6.8	<2.7	9.3	<10
1,2,3,7,8-Cl5-Dibenzo-p-dioxin		"	<7.6	<7.0	<7.3	<7.6
1,2,3,4,7,8-Cl6-Dibenzofuran		"	13	<2.3	10	11
1,2,3,6,7,8-Cl6-Dibenzofuran		"	6.7	<2.4	<3.1	<5.2
2,3,4,6,7,8-Cl6-Dibenzofuran		"	<6.9	<2.7	<3.5	<5.9
1,2,3,7,8,9-Cl6-Dibenzofuran		"	<8.4	<3.3	<4.3	<7.2
1,2,3,4,7,8-Cl6-Dibenzo-p-dioxin		"	<4.2	<3.4	<5.1	<8.2
1,2,3,6,7,8-Cl6-Dibenzo-p-dioxin		"	<4.5	<3.6	<5.4	<8.7
1,2,3,7,8,9-Cl6-Dibenzo-p-dioxin		"	<4.2	<3.3	<5.0	<8.1
1,2,3,4,6,7,8-Cl7-Dibenzofuran		"	<20	<2.1	<15	<12
1,2,3,4,7,8,9-Cl7-Dibenzofuran		"	<7.1	<2.9	<4.0	<7.0
1,2,3,4,6,7,8-Cl7-Dibenzo-p-dioxin		"	<18	<4.9	16	<14
1,2,3,4,6,7,8,9-Cl8-Dibenzofuran		"	20	<3.5	8.5	16
1,2,3,4,6,7,8,9-Cl8-Dibenzo-p-dioxin		"	120	9.8	52	85
2,3,7,8-TCDF (DB225)		pg	15	<2.4	16	17
Internal Recoveries		%				
2,3,7,8-TCDF-13C12			78	70	76	64

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Component			10th	10th	11th Floor	11th Floor
	<i>Client ID:</i>		Floor-08	Floor-09	Down-07	Down-08
	<i>Lab No.:</i>		009215 03	009216 03	009217 03	009218 03
	<i>Date Sampled:</i>		04-Mar-2003	04-Mar-2003	04-Mar-2003	04-Mar-2003
	MDL	Units				
Total Tetrachlorodibenzofurans		pg	<3.8	36	<2.9	90
Total Pentachlorodibenzofurans		"	<5.2	<14	<4.2	21
Total Hexachlorodibenzofurans		"	<3.3	25	<2.2	22
Total Heptachlorodibenzofurans		"	<2.6	<15	<3.6	<14
Octachlorodibenzofuran		"	<3.4	11	<4.5	12
Total Tetrachlorodibenzo-p-dioxins		"	<7.9	62	<8.5	110
Total Pentachlorodibenzo-p-dioxins		"	<6.2	30	<8.9	19
Total Hexachlorodibenzo-p-dioxins		"	<29	8.4	<34	<59
Total Heptachlorodibenzo-p-dioxins		"	5.1	27	3.7	14
Octachlorodibenzo-p-dioxin		"	15	49	15	68
Internal Recoveries		%				
2,3,7,8-T4CDF-13C12			74	73	64	77
2,3,7,8-T4CDD-13C12			104	96	88	105
1,2,3,7,8-P5CDF-13C12			84	82	67	87
1,2,3,7,8-P5CDD-13C12			88	86	72	92
1,2,3,4,7,8-H6CDF-13C12			107	91	86	99
1,2,3,6,7,8-H6CDD-13C12			108	94	85	97
1,2,3,4,6,7,8-H7CDF-13C12			115	98	88	101
1,2,3,4,6,7,8-H7CDD-13C12			117	104	93	109
OCDD-13C12			116	94	84	105
2,3,7,8-Cl4-Dibenzofuran (DB5)		pg	<3.8	<23	<2.9	<22
2,3,7,8-Cl4-Dibenzo-p-dioxin		"	<4.7	<4.6	<4.0	<4.0
1,2,3,7,8-Cl5-Dibenzofuran		"	<5.2	<10	<4.1	<8.2
2,3,4,7,8-Cl5-Dibenzofuran		"	<5.3	<10	<4.2	<8.3
1,2,3,7,8-Cl5-Dibenzo-p-dioxin		"	<6.2	<6.8	<8.9	<6.9
1,2,3,4,7,8-Cl6-Dibenzofuran		"	<2.9	12	<1.9	7.8
1,2,3,6,7,8-Cl6-Dibenzofuran		"	<3.0	<4.9	<2.0	<3.4
2,3,4,6,7,8-Cl6-Dibenzofuran		"	<3.5	<5.6	<2.3	<3.7
1,2,3,7,8,9-Cl6-Dibenzofuran		"	<4.2	<6.8	<2.8	<4.5
1,2,3,4,7,8-Cl6-Dibenzo-p-dioxin		"	<5.0	<4.7	<4.6	<5.1
1,2,3,6,7,8-Cl6-Dibenzo-p-dioxin		"	<5.3	<5.1	<4.9	<5.4
1,2,3,7,8,9-Cl6-Dibenzo-p-dioxin		"	<4.9	<4.7	<4.5	<5.0
1,2,3,4,6,7,8-Cl7-Dibenzofuran		"	<2.3	<13	<3.1	<12
1,2,3,4,7,8,9-Cl7-Dibenzofuran		"	<3.1	<5.3	<4.2	<2.9
1,2,3,4,6,7,8-Cl7-Dibenzo-p-dioxin		"	5.1	13	3.7	14
1,2,3,4,6,7,8,9-Cl8-Dibenzofuran		"	<3.4	11	<4.5	12
1,2,3,4,6,7,8,9-Cl8-Dibenzo-p-dioxin		"	15	49	15	68
2,3,7,8-TCDF (DB225)		pg	<3.5	13	<4.2	<11
Internal Recoveries		%				
2,3,7,8-TCDF-13C12			83	77	68	88

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		11th Floor	11th Floor	11th Floor	11th Floor
<i>Client ID:</i>		Down-09	Up-07	Up-08	Up-09
<i>Lab No.:</i>		009219 03	009220 03	009221 03	009222 03
<i>Date Sampled:</i>		04-Mar-2003	04-Mar-2003	04-Mar-2003	04-Mar-2003
Component	MDL	Units			
Total Tetrachlorodibenzofurans	pg	43	29	<2.3	6.5
Total Pentachlorodibenzofurans	"	68	6.9	<3.5	<5.2
Total Hexachlorodibenzofurans	"	31	<3.4	<1.5	<3.3
Total Heptachlorodibenzofurans	"	<35	<8.6	<3.1	<6.7
Octachlorodibenzofuran	"	19	7.6	<2.4	<5.3
Total Tetrachlorodibenzo-p-dioxins	"	99	51	<4.3	9.1
Total Pentachlorodibenzo-p-dioxins	"	21	<9.0	<7.6	<12
Total Hexachlorodibenzo-p-dioxins	"	22	<50	<36	<53
Total Heptachlorodibenzo-p-dioxins	"	61	16	<3.0	9.7
Octachlorodibenzo-p-dioxin	"	97	39	<11	34
Internal Recoveries	%				
2,3,7,8-T4CDF-13C12		56	75	71	71
2,3,7,8-T4CDD-13C12		72	99	98	95
1,2,3,7,8-P5CDF-13C12		66	82	80	79
1,2,3,7,8-P5CDD-13C12		74	88	86	87
1,2,3,4,7,8-H6CDF-13C12		74	88	94	93
1,2,3,6,7,8-H6CDD-13C12		75	92	96	93
1,2,3,4,6,7,8-H7CDF-13C12		73	91	97	95
1,2,3,4,6,7,8-H7CDD-13C12		76	101	109	103
OCDD-13C12		60	95	109	93
2,3,7,8-Cl4-Dibenzofuran (DB5)	pg	<30	13	<2.3	<6.5
2,3,7,8-Cl4-Dibenzo-p-dioxin	"	<6.0	<5.2	<2.4	<4.7
1,2,3,7,8-Cl5-Dibenzofuran	"	<9.4	<5.2	<3.4	<5.2
2,3,4,7,8-Cl5-Dibenzofuran	"	15	<5.3	<3.5	<5.3
1,2,3,7,8-Cl5-Dibenzo-p-dioxin	"	<8.8	<9.0	<7.6	<6.6
1,2,3,4,7,8-Cl6-Dibenzofuran	"	19	<2.9	<1.3	<2.9
1,2,3,6,7,8-Cl6-Dibenzofuran	"	<12	<3.0	<1.4	<3.0
2,3,4,6,7,8-Cl6-Dibenzofuran	"	10	<3.5	<1.6	<3.5
1,2,3,7,8,9-Cl6-Dibenzofuran	"	<6.7	<4.2	<1.9	<4.2
1,2,3,4,7,8-Cl6-Dibenzo-p-dioxin	"	<5.4	<3.4	<4.5	<4.0
1,2,3,6,7,8-Cl6-Dibenzo-p-dioxin	"	<5.7	<3.7	<4.8	<4.3
1,2,3,7,8,9-Cl6-Dibenzo-p-dioxin	"	<5.3	<3.4	<4.4	<4.0
1,2,3,4,6,7,8-Cl7-Dibenzofuran	"	<30	<7.5	<2.7	<5.8
1,2,3,4,7,8,9-Cl7-Dibenzofuran	"	<6.7	<4.6	<3.7	<4.6
1,2,3,4,6,7,8-Cl7-Dibenzo-p-dioxin	"	31	9.6	<3.0	<9.5
1,2,3,4,6,7,8,9-Cl8-Dibenzofuran	"	19	7.6	<2.4	<5.3
1,2,3,4,6,7,8,9-Cl8-Dibenzo-p-dioxin	"	97	39	<11	34
2,3,7,8-TCDF (DB225)	pg	19	6.6	<4.1	<4.5
Internal Recoveries	%				
2,3,7,8-TCDF-13C12		65	81	79	78

Sample ID	Client ID	TEQ (pg)	EMPC (pg)	EMPC ND= 1/2 (pg)
009192 03	Method Blank	0.097	4.456	2.277
009193 03	3rd Floor-07	1.290	6.075	3.682
009194 03	3rd Floor-08	0.151	4.841	2.496
009195 03	3rd Floor-09	0.118	6.147	3.132
009196 03	4th Floor-07	4.934	11.769	8.351
009197 03	4th Floor-08	0.142	5.639	2.891
009198 03	4th Floor-09	2.928	8.274	5.601
009199 03	5th Floor-07	3.653	11.202	7.428
009200 03	5th Floor-08	0.157	5.453	2.805
009201 03	5th Floor-09	1.716	9.935	5.826
009202 03	6th Floor-07	1.327	11.722	6.524
009203 03	6th Floor-08	0.258	7.800	4.029
009204 03	6th Floor-09	0.693	9.846	5.269
009205 03	7th Floor-07	2.025	8.353	5.189
009206 03	7th Floor-08	0.137	7.183	3.660
009207 03	7th Floor-09	0.013	11.991	6.002
009208 03	8th Floor-07	2.012	17.001	9.506
009209 03	8th Floor-08	0.010	13.018	6.514
009210 03	8th Floor-09	0.668	15.137	7.902
009211 03	9th Floor-07	9.096	21.094	15.080
009212 03	9th Floor-08	0.010	10.734	5.372
009213 03	9th Floor-09	8.975	20.045	14.510
009214 03	10th Floor-07	1.187	24.744	12.966
009215 03	10th Floor-08	0.066	13.994	7.030
009216 03	10th Floor-09	1.434	20.804	11.119
009217 03	11th Floor Down-07	0.052	13.494	6.773
009218 03	11th Floor Down-08	1.003	18.149	9.576
009219 03	11th Floor Down-09	10.901	28.664	19.782
009220 03	11th Floor Up-07	1.464	16.582	9.023
009221 03	11th Floor Up-08	0.000	10.512	5.256
009222 03	11th Floor Up-09	0.034	14.451	7.218

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Batch Code:	0307FB01	0309FB01	0307FB01	0307FB01
Total Tetrachlorodibenzofurans	009192 03	009199 03	009207 03	009215 03
	009193 03	009200 03	009208 03	009216 03
	009194 03	009201 03	009209 03	009217 03
	009195 03	009202 03	009210 03	009218 03
	009196 03	009203 03	009211 03	009219 03
	009197 03	009204 03	009212 03	009220 03
	009198 03	009205 03	009213 03	009221 03
		009206 03	009214 03	009222 03
Date Analysed:	03/03/14	03/03/14	03/03/14	03/03/15
Date Prepared:	03/03/07	03/03/09	03/03/07	03/03/07

Batch Code:	0307FB01	0309FB01	0307FB01	0307FB01
2,3,7,8-Cl4-Dibenzofuran (DB5)	009192 03	009199 03	009207 03	009215 03
	009193 03	009200 03	009208 03	009216 03
	009194 03	009201 03	009209 03	009217 03
	009195 03	009202 03	009210 03	009218 03
	009196 03	009203 03	009211 03	009219 03
	009197 03	009204 03	009212 03	009220 03
	009198 03	009205 03	009213 03	009221 03
		009206 03	009214 03	009222 03
Date Analysed:	03/03/14	03/03/14	03/03/14	03/03/15
Date Prepared:	03/03/07	03/03/09	03/03/07	03/03/07

Batch Code:	0307FB01	0307FB01
2,3,7,8-TCDF (DB225)	009192 03	009206 03
	009193 03	009207 03
	009194 03	009208 03
	009195 03	009209 03
	009196 03	009210 03
	009197 03	009211 03
	009198 03	009212 03
	009199 03	009213 03
	009200 03	009214 03
	009201 03	009215 03
	009202 03	009216 03
	009203 03	009217 03
	009204 03	009218 03
	009205 03	009219 03
		009220 03
		009221 03
		009222 03
Date Analysed:	03/03/12	03/03/13
Date Prepared:	03/03/07	03/03/07