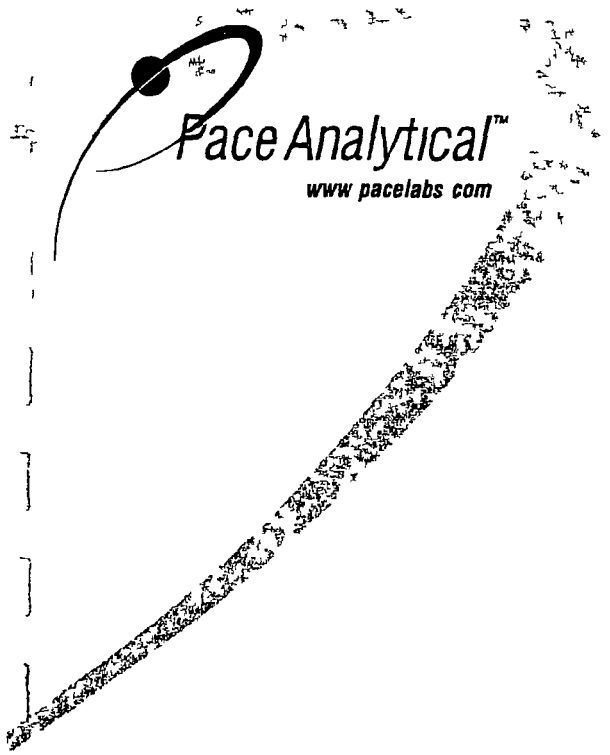

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Appendix B

REPORT OF LABORATORY ANALYSIS

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nelac

CITY_21MC100_003085238

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Method 8290 Blank Analysis Results

Client ATC

Lab Sample ID	BLANK 1566	Matrix	WIPE
Filename	F20416B_08	Dilution	NA
Total Amount Extracted	1 m2	Extracted	04/12/2002
ICAL Date	04/12/2002	Analyzed	04/17/2002 09 20
CCal Filename(s)	F20416B_01 & F20416B_13	Injected By	BAL

Native Isomers	Conc ng/m2	EMPC ng/m2	LRL ng/m2	Internal Standards	ng s Added	Percent Recovery
2 3 7 8 TCDF	ND		0 00200	2 3 7 8 TCDF 13C	2 00	72
Total TCDF	ND		0 00200	2 3 7 8 TCDD 13C	2 00	71
				1 2 3 7 8 PeCDF 13C	2 00	79
2 3 7 8 TCDD	ND		0 00200	2 3 4 7 8 PeCDF 13C	2 00	77
Total TCDD	ND		0 00200	1 2 3 7 8 PeCDD 13C	2 00	81
				1 2 3 4 7 8 HxCDF 13C	2 00	99
1 2 3 7 8 PeCDF	ND		0 01000	1 2 3 6 7 8 HxCDF 13C	2 00	69
2 3 4 7 8 PeCDF	ND		0 01000	2 3 4 6 7 8 HxCDF 13C	2 00	84
Total PeCDF	ND		0 01000	1 2 3 7 8 9 HxCDF 13C	2 00	87
				1 2 3 4 7 8 HxCDD 13C	2 00	93
1 2 3 7 8 PeCDD	ND		0 01000	1 2 3 6 7 8 HxCDD 13C	2 00	79
Total PeCDD	ND		0 01000	1 2 3 4 6 7 8 HpCDF 13C	2 00	77
				1 2 3 4 7 8 9 HpCDF 13C	2 00	73
1 2 3 4 7 8 HxCDF	ND		0 01000	1 2 3 4 6 7 8 HpCDD 13C	2 00	74
1 2 3 6 7 8 HxCDF	ND		0 01000	OCDD 13C	4 00	69
2 3 4 6 7 8 HxCDF	ND		0 01000			
1 2 3 7 8 9 HxCDF	ND		0 01000	1 2 3 4 TCDD 13C	2 00	NA
Total HxCDF	ND		0 01000	1 2 3 7 8 9 HxCDD 13C	2 00	NA
1 2 3 4 7 8 HxCDD	ND		0 01000	2 3 7 8 TCDD 37Cl4	0 20	76
1 2 3 6 7 8 HxCDD	ND		0 01000			
1 2 3 7 8 9 HxCDD	ND		0 01000			
Total HxCDD	ND		0 01000			
1 2 3 4 6 7 8 HpCDF	ND		0 01000	Total 2 3 7 8 TCDD		
1 2 3 4 7 8 9 HpCDF	ND		0 01000	Equivalence 0 00 ng/m2		
Total HpCDF	ND		0 01000	(Using ITE Factors)		
1 2 3 4 6 7 8 HpCDD	ND		0 01000			
Total HpCDD	ND		0 01000			
OCDF	ND		0 02000			
OCDD	ND		0 02000			

Conc = Concentration (Totals include 2 3 7 8 substituted isomers)
EMPC = Estimated Maximum Possible Concentration
LRL = Lower Reporting Limit
J = Concentration detected is below the calibration range
P = Recovery outside of target range
A = Detection Limit based on signal to noise measurement

I = Interference
E = PCDE Interference
ND = Not Detected
NA = Not Applicable
NC = Not Calculated
= See Discussion

Report No 02 1055555

REPORT OF LABORATORY ANALYSIS

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Method 8290 Analysis Results

Client ATC

Client s Sample ID	ATC 0322 M894 DX1		
Lab Sample ID	103418877		
Filename	F20417B_10		
Injected By	BAL		
Total Amount Extracted	1 m2	Matrix	WIPE
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	03/22/2002
ICAL Date	04/12/2002	Received	03/26/2002
CCal Filename(s)	F20417B_01 & F20417B_16	Extracted	04/12/2002
Method Blank ID	BLANK 1566	Analyzed	04/18/2002 09 39

Native Isomers	Conc ng/m2	EMPC ng/m2	LRL ng/m2		Internal Standards	ng s Added	Percent Recovery
2 3 7 8 TCDF	ND		0 00200		2 3 7 8 TCDF 13C	2 00	76
Total TCDF	0 021		0 00200		2 3 7 8 TCDD 13C	2 00	74
					1 2 3 7 8 PeCDF 13C	2 00	83
2 3 7 8 TCDD	ND		0 00200		2 3 4 7 8 PeCDF 13C	2 00	77
Total TCDD	0 030		0 00200		1 2 3 7 8 PeCDD 13C	2 00	83
					1 2 3 4 7 8 HxCDF 13C	2 00	99
1 2 3 7 8 PeCDF	ND		0 01000		1 2 3 6 7 8 HxCDF 13C	2 00	63
2 3 4 7 8 PeCDF	ND		0 01000		2 3 4 6 7 8 HxCDF 13C	2 00	85
Total PeCDF	ND		0 01000		1 2 3 7 8 9 HxCDF 13C	2 00	83
					1 2 3 4 7 8 HxCDD 13C	2 00	100
1 2 3 7 8 PeCDD	ND		0 01000		1 2 3 6 7 8 HxCDD 13C	2 00	82
Total PeCDD	0 011		0 01000	J	1 2 3 4 6 7 8 HpCDF 13C	2 00	79
					1 2 3 4 7 8 9 HpCDF 13C	2 00	75
1 2 3 4 7 8 HxCDF	ND		0 01000		1 2 3 4 6 7 8 HpCDD 13C	2 00	83
1 2 3 6 7 8 HxCDF	ND		0 01000		OCDD 13C	4 00	62
2 3 4 6 7 8 HxCDF	ND		0 01000				
1 2 3 7 8 9 HxCDF	ND		0 01000		1 2 3 4 TCDD 13C	2 00	NA
Total HxCDF	ND		0 01000		1 2 3 7 8 9 HxCDD 13C	2 00	NA
1 2 3 4 7 8 HxCDD	ND		0 01000		2 3 7 8 TCDD 37Cl4	0 20	83
1 2 3 6 7 8 HxCDD	ND		0 01000				
1 2 3 7 8 9 HxCDD	ND		0 01000				
Total HxCDD	ND		0 01000				
1 2 3 4 6 7 8 HpCDF	ND		0 01000		Total 2 3 7 8 TCDD		
1 2 3 4 7 8 9 HpCDF	ND		0 01000		Equivalence 0 00021 ng/m2		
Total HpCDF	ND		0 01000		(Using ITE Factors)		
1 2 3 4 6 7 8 HpCDD	0 012		0 01000	J			
Total HpCDD	0 022		0 01000	J			
OCDF	ND		0 02000				
OCDD	0 087		0 02000	J			

Conc = Concentration (Totals include 2 3 7 8 substituted isomers)
EMPC = Estimated Maximum Possible Concentration
A = Detection Limit based on signal to noise measurement
J = Concentration detected is below the calibration range
B = Less than 10 times higher than method blank level
P = Recovery outside of target range
Nn = Value obtained from additional analysis

LRL = Lower Reporting Limit
I = Interference
E = PCDE Interference
S = Saturated signal
ND = Not Detected
NA = Not Applicable
NC = Not Calculated
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Method 8290 Analysis Results

Client ATC

Client s Sample ID	ATC 0322 M894 DX2		
Lab Sample ID	103418885		
Filename	F20417B_11		
Injected By	BAL		
Total Amount Extracted	1 m2	Matrix	WIPE
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	03/22/2002
ICAL Date	04/12/2002	Received	03/26/2002
CCal Filename(s)	F20417B_01 & F20417B_16	Extracted	04/12/2002
Method Blank ID	BLANK 1566	Analyzed	04/18/2002 10 28

Native Isomers	Conc ng/m2	EMPC ng/m2	LRL ng/m2		Internal Standards	ng s Added	Percent Recovery
2 3 7 8 TCDF	0 0024		0 00200	J	2 3 7 8 TCDF 13C	2 00	77
Total TCDF	0 0540		0 00200		2 3 7 8 TCDD 13C	2 00	75
					1 2 3 7 8 PeCDF 13C	2 00	79
2 3 7 8 TCDD	ND		0 00200		2 3 4 7 8 PeCDF 13C	2 00	74
Total TCDD	0 0640		0 00200		1 2 3 7 8 PeCDD 13C	2 00	79
					1 2 3 4 7 8 HxCDF 13C	2 00	101
1 2 3 7 8 PeCDF	ND		0 01000		1 2 3 6 7 8 HxCDF 13C	2 00	60
2 3 4 7 8 PeCDF	ND		0 01000		2 3 4 6 7 8 HxCDF 13C	2 00	84
Total PeCDF	ND		0 01000		1 2 3 7 8 9 HxCDF 13C	2 00	81
					1 2 3 4 7 8 HxCDD 13C	2 00	98
1 2 3 7 8 PeCDD	ND		0 01000		1 2 3 6 7 8 HxCDD 13C	2 00	86
Total PeCDD	0 0210		0 01000	J	1 2 3 4 6 7 8 HpCDF 13C	2 00	76
					1 2 3 4 7 8 9 HpCDF 13C	2 00	74
1 2 3 4 7 8 HxCDF	ND		0 01000		1 2 3 4 6 7 8 HpCDD 13C	2 00	83
1 2 3 6 7 8 HxCDF	ND		0 01000		OCDD 13C	4 00	62
2 3 4 6 7 8 HxCDF	ND		0 01000				
1 2 3 7 8 9 HxCDF	ND		0 01000		1 2 3 4 TCDD 13C	2 00	NA
Total HxCDF	ND		0 01000		1 2 3 7 8 9 HxCDD 13C	2 00	NA
1 2 3 4 7 8 HxCDD	ND		0 01000		2 3 7 8 TCDD 37Cl4	0 20	84
1 2 3 6 7 8 HxCDD	ND		0 01000				
1 2 3 7 8 9 HxCDD	ND		0 01000				
Total HxCDD	0 0210		0 01000	J			
1 2 3 4 6 7 8 HpCDF	ND		0 01000		Total 2 3 7 8 TCDD		
1 2 3 4 7 8 9 HpCDF	ND		0 01000		Equivalence 0 00058 ng/m2		
Total HpCDF	ND		0 01000		(Using ITE Factors)		
1 2 3 4 6 7 8 HpCDD	0 0200		0 01000	J			
Total HpCDD	0 0360		0 01000	J			
OCDF	ND		0 02000				
OCDD	0 1500		0 02000				

Conc = Concentration (Totals include 2 3 7 8 substituted isomers)
EMPC = Estimated Maximum Possible Concentration
A = Detection Limit based on signal to noise measurement
J = Concentration detected is below the calibration range
B = Less than 10 times higher than method blank level
P = Recovery outside of target range
Nn = Value obtained from additional analysis

LRL = Lower Reporting Limit
I = Interference
E = PCDE Interference
S = Saturated signal
ND = Not Detected
NA = Not Applicable
NC = Not Calculated
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Method 8290 Analysis Results

Client ATC

Client s Sample ID	ATC 0322 M894 DX3		
Lab Sample ID	103418893		
Filename	F20417B_12		
Injected By	BAL		
Total Amount Extracted	1 m2	Matrix	WIPE
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	03/22/2002
ICAL Date	04/12/2002	Received	03/26/2002
CCal Filename(s)	F20417B_01 & F20417B_16	Extracted	04/12/2002
Method Blank ID	BLANK 1566	Analyzed	04/18/2002 11 18

Native Isomers	Conc ng/m2	EMPC ng/m2	LRL ng/m2		Internal Standards	ng s Added	Percent Recovery
2 3 7 8 TCDF	ND		0 00200		2 3 7 8 TCDF 13C	2 00	76
Total TCDF	0 026		0 00200		2 3 7 8 TCDD 13C	2 00	74
					1 2 3 7 8 PeCDF 13C	2 00	80
2 3 7 8 TCDD	ND		0 00200		2 3 4 7 8 PeCDF 13C	2 00	76
Total TCDD	0 039		0 00200		1 2 3 7 8 PeCDD 13C	2 00	70
					1 2 3 4 7 8 HxCDF 13C	2 00	101
1 2 3 7 8 PeCDF	ND		0 01000		1 2 3 6 7 8 HxCDF 13C	2 00	65
2 3 4 7 8 PeCDF	ND		0 01000		2 3 4 6 7 8 HxCDF 13C	2 00	86
Total PeCDF	ND		0 01000		1 2 3 7 8 9 HxCDF 13C	2 00	83
					1 2 3 4 7 8 HxCDD 13C	2 00	96
1 2 3 7 8 PeCDD	ND		0 01000		1 2 3 6 7 8 HxCDD 13C	2 00	84
Total PeCDD	0 015		0 01000	J	1 2 3 4 6 7 8 HpCDF 13C	2 00	77
					1 2 3 4 7 8 9 HpCDF 13C	2 00	75
1 2 3 4 7 8 HxCDF	ND		0 01000		1 2 3 4 6 7 8 HpCDD 13C	2 00	84
1 2 3 6 7 8 HxCDF	ND		0 01000		OCDD 13C	4 00	65
2 3 4 6 7 8 HxCDF	ND		0 01000				
1 2 3 7 8 9 HxCDF	ND		0 01000		1 2 3 4 TCDD 13C	2 00	NA
Total HxCDF	ND		0 01000		1 2 3 7 8 9 HxCDD 13C	2 00	NA
1 2 3 4 7 8 HxCDD	ND		0 01000		2 3 7 8 TCDD 37Cl4	0 20	84
1 2 3 6 7 8 HxCDD	ND		0 01000				
1 2 3 7 8 9 HxCDD	ND		0 01000				
Total HxCDD	0 013		0 01000	J			
1 2 3 4 6 7 8 HpCDF	ND		0 01000		Total 2 3 7 8 TCDD		
1 2 3 4 7 8 9 HpCDF	ND		0 01000		Equivalence 0 00026 ng/m2		
Total HpCDF	ND		0 01000		(Using ITE Factors)		
1 2 3 4 6 7 8 HpCDD	0 015		0 01000	J			
Total HpCDD	0 026		0 01000	J			
OCDF	ND		0 02000				
OCDD	0 110		0 02000				

Conc = Concentration (Totals include 2 3 7 8 substituted isomers)
EMPC = Estimated Maximum Possible Concentration
A = Detection Limit based on signal to noise measurement
J = Concentration detected is below the calibration range
B = Less than 10 times higher than method blank level
P = Recovery outside of target range
Nn = Value obtained from additional analysis

LRL = Lower Reporting Limit
I = Interference
E = PCDE Interference
S = Saturated signal
ND = Not Detected
NA = Not Applicable
NC = Not Calculated
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Method 8290 Laboratory Control Spike Results

Client ATC

Lab Sample ID	SPIKE 1578		
Filename	F20416B_02	Matrix	WIPE
Total Amount Extracted	1 m2	Dilution	NA
ICAL Date	04/12/2002	Extracted	04/12/2002
CCal Filename(s)	F20416B_01 & F20416B_13	Analyzed	04/17/2002 04 26
Method Blank ID	BLANK 1566	Injected By	BAL

Native Isomers	Qs (ng)	Qm (ng)	% Rec.	Internal Standards	ng s Added	Percent Recovery
2 3 7 8 TCDF	0 20	0 21	103	2 3 7 8 TCDF 13C	2 00	72
				2 3 7 8 TCDD 13C	2 00	71
				1 2 3 7 8 PeCDF 13C	2 00	72
2 3 7 8 TCDD	0 20	0 21	103	2 3 4 7 8 PeCDF 13C	2 00	72
				1 2 3 7 8 PeCDD 13C	2 00	77
				1 2 3 4 7 8 HxCDF 13C	2 00	97
1 2 3 7 8 PeCDF	1 00	1 00	100	1 2 3 6 7 8 HxCDF 13C	2 00	60
2 3 4 7 8 PeCDF	1 00	1 03	103	2 3 4 6 7 8 HxCDF 13C	2 00	79
				1 2 3 7 8 9 HxCDF 13C	2 00	82
				1 2 3 4 7 8 HxCDD 13C	2 00	89
1 2 3 7 8 PeCDD	1 00	1 03	103	1 2 3 6 7 8 HxCDD 13C	2 00	77
				1 2 3 4 6 7 8 HpCDF 13C	2 00	64
				1 2 3 4 7 8 9 HpCDF 13C	2 00	67
1 2 3 4 7 8 HxCDF	1 00	1 02	102	1 2 3 4 6 7 8 HpCDD 13C	2 00	66
1 2 3 6 7 8 HxCDF	1 00	1 05	105	OCDD 13C	4 00	55
2 3 4 6 7 8 HxCDF	1 00	1 05	105			
1 2 3 7 8 9 HxCDF	1 00	1 04	104	1 2 3 4 TCDD 13C	2 00	NA
				1 2 3 7 8 9 HxCDD 13C	2 00	NA
1 2 3 4 7 8 HxCDD	1 00	1 10	110	2 3 7 8 TCDD 37Cl4	0 20	78
1 2 3 6 7 8 HxCDD	1 00	1 12	112			
1 2 3 7 8 9 HxCDD	1 00	1 09	109			
1 2 3 4 6 7 8 HpCDF	1 00	1 11	111			
1 2 3 4 7 8 9 HpCDF	1 00	1 08	108			
1 2 3 4 6 7 8 HpCDD	1 00	1 11	111			
OCDF	2 00	1 96	98			
OCDD	2 00	2 15	108			

Qs = Quantity Spiked
Qm = Quantity Measured
Rec = Recovery (Expressed as Percent)
P = Recovery outside of target range
X = Background subtracted value
Nn = Value obtained from additional analysis
NA = Not Applicable
= See Discussion

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REPORT OF LABORATORY ANALYSIS

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Method 8290 Laboratory Control Spike Results

Client ATC

Lab Sample ID	SPIKE DUP 1377		
Filename	F20416B_03	Matrix	WIPE
Total Amount Extracted	1 m2	Dilution	NA
ICAL Date	04/12/2002	Extracted	04/12/2002
CCal Filename(s)	F20416B_01 & F20416B_13	Analyzed	04/17/2002 05 15
Method Blank ID	BLANK 1566	Injected By	BAL

Native Isomers	Qs (ng)	Qm (ng)	% Rec.	Internal Standards	ng s Added	Percent Recovery
2 3 7 8 TCDF	0 20	0 20	99	2 3 7 8 TCDF 13C	2 00	76
				2 3 7 8 TCDD 13C	2 00	74
				1 2 3 7 8 PeCDF 13C	2 00	81
2 3 7 8 TCDD	0 20	0 20	98	2 3 4 7 8 PeCDF 13C	2 00	76
				1 2 3 7 8 PeCDD 13C	2 00	82
				1 2 3 4 7 8 HxCDF 13C	2 00	101
1 2 3 7 8 PeCDF	1 00	0 96	96	1 2 3 6 7 8 HxCDF 13C	2 00	65
2 3 4 7 8 PeCDF	1 00	0 97	97	2 3 4 6 7 8 HxCDF 13C	2 00	88
				1 2 3 7 8 9 HxCDF 13C	2 00	85
				1 2 3 4 7 8 HxCDD 13C	2 00	94
1 2 3 7 8 PeCDD	1 00	0 99	99	1 2 3 6 7 8 HxCDD 13C	2 00	83
				1 2 3 4 6 7 8 HpCDF 13C	2 00	77
				1 2 3 4 7 8 9 HpCDF 13C	2 00	73
1 2 3 4 7 8 HxCDF	1 00	0 99	99	1 2 3 4 6 7 8 HpCDD 13C	2 00	76
1 2 3 6 7 8 HxCDF	1 00	1 00	100	OCDD 13C	4 00	70
2 3 4 6 7 8 HxCDF	1 00	0 99	99			
1 2 3 7 8 9 HxCDF	1 00	0 99	99	1 2 3 4 TCDD 13C	2 00	NA
				1 2 3 7 8 9 HxCDD 13C	2 00	NA
1 2 3 4 7 8 HxCDD	1 00	1 05	105	2 3 7 8 TCDD 37Cl4	0 20	80
1 2 3 6 7 8 HxCDD	1 00	1 05	105			
1 2 3 7 8 9 HxCDD	1 00	1 06	106			
1 2 3 4 6 7 8 HpCDF	1 00	1 03	103			
1 2 3 4 7 8 9 HpCDF	1 00	1 05	105			
1 2 3 4 6 7 8 HpCDD	1 00	1 07	107			
OCDF	2 00	1 86	93			
OCDD	2 00	2 02	101			

Qs = Quantity Spiked
Qm = Quantity Measured
Rec = Recovery (Expressed as Percent)
P = Recovery outside of target range
X = Background subtracted value
Nn = Value obtained from additional analysis
NA = Not Applicable
= See Discussion

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SPIKE RECOVERY RELATIVE PERCENT DIFFERENCE (RPD) RESULTS

Client ATC

SPIKE 1 ID	SPIKE 1578
SPIKE 1 Filename	F20416B_02
SPIKE 2 ID	SPIKE DUP 1377
SPIKE 2 Filename	F20416B_03

COMPOUND	SPIKE 1 REC %	SPIKE 2 REC %	RPD %
2378 TCDF	103	99	4 0
2378 TCDD	103	98	5 0
12378 PeCDF	100	96	4 1
23478 PeCDF	103	97	6 0
12378 PeCDD	103	99	4 0
123478 HxCDF	102	99	3 0
123678 HxCDF	105	100	4 9
234678 HxCDF	105	99	5 9
123789 HxCDF	104	99	4 9
123478 HxCDD	110	105	4 7
123678 HxCDD	112	105	6 5
123789 HxCDD	109	106	2 8
1234678 HpCDF	111	103	7 5
1234789 HpCDF	108	105	2 8
1234678 HpCDD	111	107	3 7
OCDF	98	93	5 2
OCDD	108	101	6 7

REC = Percent Recovered
RPD = The difference between the two values divided by the average
NA = Not Applicable

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