



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

623392

Required Client Information: Section A

Company: ATC Associates Inc

Address: 104 E 25th Street
10th floor

Phone: 912.353.8286 Fax: 912.353.8306

Required Client Information: Section B

Report To: James John

Copy To:

Invoice To:

P.O.:

Project Name: PS 89M

Project Number: 19125 - PS 89M

Page: 1 of 1

To Be Completed by Pace Analytical and Client **Section C**

Quote Reference:

Project Manager:

Project #:

Profile #:

Requested Analysis:

ITEM #	Section D Required Client Information:										Valid Matrix Codes ←		DATE COLLECTED mm / dd / yy	TIME COLLECTED Vol: mm a/p	# Containers	Preservatives							Dioxin	Remarks / Lab ID				
	SAMPLE ID One character per box. (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE										MATRIX CODE	CODE				Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol			Other			
1	A	T	C	1	2	1	5	-	8	9	1	-	X	AR	12/15/16	495									✓	Play ground		
2	A	T	C	1	2	1	5	-	8	9	1	-	X			432										✓	Hallway by Cafeteria	
3	A	T	C	1	2	1	5	-	8	9	1	-	X			436										✓	Room 202	
4	A	T	C	1	2	1	5	-	8	9	1	-	X			446										✓	Room by AIR Intake	
5	A	T	C	1	2	1	5	-	8	9	1	-	X			Blank										✓	Blank	
6																												
7																												
8																												
9																												
10																												
11																												
12																												

SHIPMENT METHOD	AIRBILL NO.	SHIPPING DATE	NO. OF COOLERS	ITEM NUMBER	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Fed ex										

SAMPLE CONDITION

Temp in °C

Received on Ice Y/N

Sealed Cooler Y/N

Samples Intact Y/N

SAMPLE NOTES

Additional Comments:

Batch # 62 - PUF check

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER:

DATE Signed: (MM / DD / YY)

SEE REVERSE SIDE FOR INSTRUCTIONS

Form COC01 Rev 0601

CITY_21MC100_002880293

JAN-08-02 11:12

FROM-PACE ANALYTICAL

612-607-6444

T-510 P.02/06 F-614

1700 Elm Street - Suite 200
Minneapolis, MN 55414Tel: 612-607-1700
Fax: 612-607-6444**Pace Analytical™***Amground***Method 23 Analysis Results**

Client - ATC

DRAFT

Client's Sample ID	ATC-1215-89M-DX1		
Lab Sample ID	103222188		
Filename	F20105A_12	Matrix	PUF
Injected By	BAL	Dilution	NA
Amount Extracted	426 m3	Collected	12/15/2001
ICAL Date	01/05/2002	Received	12/18/2001
CCal Filename(s)	F20105A_02	Extracted	12/19/2001
Method Blank ID	BLANK-1385	Analyzed	01/06/2002 07:15

Native Isomers	Conc pg/m3	EMPC pg/m3	LRL pg/m3	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.0047	2,3,7,8-TCDF-13C	2.00	62
Total TCDF	0.072	-----	0.0047	2,3,7,8-TCDD-13C	2.00	71
				1,2,3,7,8-PeCDF-13C	2.00	73
2,3,7,8-TCDD	ND	-----	0.0047	1,2,3,7,8-PeCDD-13C	2.00	61
Total TCDD	0.057	-----	0.0047	1,2,3,6,7,8-HxCDF-13C	2.00	67
				1,2,3,6,7,8-HxCDD-13C	2.00	69
1,2,3,7,8-PeCDF	ND	-----	0.0230	1,2,3,4,6,7,8-HpCDF-13C	2.00	83
2,3,4,7,8-PeCDF	ND	-----	0.0230	1,2,3,4,6,7,8-HpCDD-13C	2.00	70
Total PeCDF	ND	-----	0.0230	OCDD-13C	4.00	76
1,2,3,7,8-PeCDD	ND	-----	0.0230	Recovery		
Total PeCDD	0.025	-----	0.0230 J	Standards		
				1,2,3,4-TCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDF	ND	-----	0.0230	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,6,7,8-HxCDF	ND	-----	0.0230			
2,3,4,6,7,8-HxCDF	ND	-----	0.0230	Surrogates		
1,2,3,7,8,9-HxCDF	ND	-----	0.0230	2,3,7,8-TCDD-37Cl4	2.00	103
Total HxCDF	ND	-----	0.0230	2,3,4,7,8-PeCDF-13C	2.00	79
				1,2,3,4,7,8-HxCDF-13C	2.00	107
1,2,3,4,7,8-HxCDD	ND	-----	0.0230	1,2,3,4,7,8-HxCDD-13C	2.00	131 P
1,2,3,6,7,8-HxCDD	ND	-----	0.0230	1,2,3,4,7,8,9-HpCDF-13C	2.00	96
1,2,3,7,8,9-HxCDD	ND	-----	0.0230			
Total HxCDD	0.041	-----	0.0230 J			
1,2,3,4,6,7,8-HpCDF	ND	-----	0.0230	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.0230	Equivalence: 0.00043 pg/m3		
Total HpCDF	ND	-----	0.0230	(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	0.031	-----	0.0230 J			
Total HpCDD	0.062	-----	0.0230 J			
OCDF	ND	-----	0.0470			
OCDD	0.130	-----	0.0470 J			

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
 B = Less than 10 times higher than method blank level
 P = Recovery outside of target range
 Nn = Value obtained from additional analysis
 A = Detection Limit based on signal to noise

I = Interference
 E = PCDE Interference
 S = Saturated signal
 ND = Not Detected
 NA = Not Applicable
 NC = Not Calculated

Report No.....01-1052342

REPORT OF LABORATORY ANALYSIS

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JAN-08-02 11:12

FROM-PAGE ANALYTICAL

612-607-6444

T-510 P.03/06 F-614

1700 Elm Street - Suite 200
Minneapolis, MN 55414**Pace Analytical™***Hallway by the Cafeteria*Tel: 612-607-1700
Fax: 612-607-6444**Method 23 Analysis Results**

Client - ATC

DRAFT

Client's Sample ID	ATC-1215-89M-DX2		
Lab Sample ID	103222196		
Filename	F20105A_13	Matrix	PUF
Injected By	BAL	Dilution	NA
Amount Extracted	432 m3	Collected	12/15/2001
ICAL Date	01/05/2002	Received	12/18/2001
CCal Filename(s)	F20105A_02	Extracted	12/19/2001
Method Blank ID	BLANK-1385	Analyzed	01/06/2002 08:05

Native Isomers	Conc pg/m3	EMPC pg/m3	LRL pg/m3		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.013	----	0.0047	JA	2,3,7,8-TCDF-13C	2.00	64
Total TCDF	0.240	----	0.0046		2,3,7,8-TCDD-13C	2.00	74
					1,2,3,7,8-PeCDF-13C	2.00	85
2,3,7,8-TCDD	ND	----	0.0060	A	1,2,3,7,8-PeCDD-13C	2.00	75
Total TCDD	0.420	----	0.0046		1,2,3,6,7,8-HxCDF-13C	2.00	75
					1,2,3,6,7,8-HxCDD-13C	2.00	86
1,2,3,7,8-PeCDF	ND	----	0.0230		1,2,3,4,6,7,8-HpCDF-13C	2.00	89
2,3,4,7,8-PeCDF	ND	----	0.0230		1,2,3,4,6,7,8-HpCDD-13C	2.00	82
Total PeCDF	ND	----	0.0230		OCDD-13C	4.00	90
1,2,3,7,8-PeCDD	ND	----	0.0230		Recovery		
Total PeCDD	0.076	----	0.0230	J	Standards		
					1,2,3,4-TCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDF	ND	----	0.0230		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,6,7,8-HxCDF	ND	----	0.0230				
2,3,4,6,7,8-HxCDF	ND	----	0.0230		Surrogates		
1,2,3,7,8,9-HxCDF	ND	----	0.0230		2,3,7,8-TCDD-37Cl4	2.00	101
Total HxCDF	ND	----	0.0230		2,3,4,7,8-PeCDF-13C	2.00	82
					1,2,3,4,7,8-HxCDF-13C	2.00	101
1,2,3,4,7,8-HxCDD	ND	----	0.0230		1,2,3,4,7,8-HxCDD-13C	2.00	102
1,2,3,6,7,8-HxCDD	ND	----	0.0230		1,2,3,4,7,8,9-HpCDF-13C	2.00	97
1,2,3,7,8,9-HxCDD	ND	----	0.0230				
Total HxCDD	0.040	----	0.0230	J			
1,2,3,4,6,7,8-HpCDF	ND	----	0.0230		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	----	0.0230		Equivalence: 0.0023 pg/m3		
Total HpCDF	ND	----	0.0230		(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	0.057	----	0.0230	J			
Total HpCDD	0.100	----	0.0230	J			
OCDF	0.053	----	0.0460	J			
OCDD	0.370	----	0.0460				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
 EMPC = Estimated Maximum Possible Concentration
 LRL = Lower Reporting Limit
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 NA = Not Applicable
 NC = Not Calculated

Report No.....01-1052342

REPORT OF LABORATORY ANALYSIS

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JAN-08-02 11:13

FROM-PACE ANALYTICAL

612-607-6444

T-510 P.04/06 F-614

1700 Elm Street - Suite 200
Minneapolis, MN 55414**Pace Analytical™**

Room 202

Tel: 612-607-1700
Fax: 612-607-6444**Method 23 Analysis Results**

Client - ATC

DRAFT

Client's Sample ID	ATC-1215-89M-DX3	Matrix	PUF
Lab Sample ID	103222204	Dilution	NA
Filename	F20105A_14	Collected	12/15/2001
Injected By	BAL	Received	12/18/2001
Amount Extracted	436 m3	Extracted	12/19/2001
ICAL Date	01/05/2002	Analyzed	01/06/2002 08:54
CCal Filename(s)	F20105A_02		
Method Blank ID	BLANK-1385		

Native Isomers	Conc pg/m3	EMPC pg/m3	LRL pg/m3		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.012	----	0.0067	JA	2,3,7,8-TCDF-13C	2.00	63
Total TCDF	0.350	----	0.0046		2,3,7,8-TCDD-13C	2.00	73
					1,2,3,7,8-PeCDF-13C	2.00	82
2,3,7,8-TCDD	ND	----	0.0078	A	1,2,3,7,8-PeCDD-13C	2.00	72
Total TCDD	0.280	----	0.0046		1,2,3,6,7,8-HxCDF-13C	2.00	69
					1,2,3,6,7,8-HxCDD-13C	2.00	76
1,2,3,7,8-PeCDF	ND	----	0.0230		1,2,3,4,6,7,8-HpCDF-13C	2.00	83
2,3,4,7,8-PeCDF	ND	----	0.0230		1,2,3,4,6,7,8-HpCDD-13C	2.00	78
Total PeCDF	0.030	----	0.0230	J	OCDD-13C	4.00	88
1,2,3,7,8-PeCDD	ND	----	0.0230		Recovery		
Total PeCDD	0.067	----	0.0230	J	Standards		
					1,2,3,4-TCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDF	ND	----	0.0230		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,6,7,8-HxCDF	ND	----	0.0230				
2,3,4,6,7,8-HxCDF	ND	----	0.0230		Surrogates		
1,2,3,7,8,9-HxCDF	ND	----	0.0230		2,3,7,8-TCDD-37Cl4	2.00	108
Total HxCDF	ND	----	0.0230		2,3,4,7,8-PeCDF-13C	2.00	88
					1,2,3,4,7,8-HxCDF-13C	2.00	114
1,2,3,4,7,8-HxCDD	ND	----	0.0230		1,2,3,4,7,8-HxCDD-13C	2.00	115
1,2,3,6,7,8-HxCDD	ND	----	0.0230		1,2,3,4,7,8,9-HpCDF-13C	2.00	110
1,2,3,7,8,9-HxCDD	ND	----	0.0230				
Total HxCDD	0.036	----	0.0230	J			
1,2,3,4,6,7,8-HpCDF	ND	----	0.0230		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	----	0.0230		Equivalence: 0.0013 pg/m3		
Total HpCDF	ND	----	0.0230		(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	ND	----	0.0230				
Total HpCDD	ND	----	0.0230				
OCDF	ND	----	0.0460				
OCDD	0.091	----	0.0460	J			

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Report No.....01-1052342

REPORT OF LABORATORY ANALYSIS

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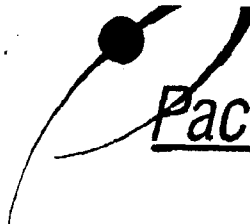
CITY_21MC100_002880296

JAN-08-02 11:13

FROM-PACE ANALYTICAL

612-607-6444

T-510 P.05/06 F-614

1700 Elm Street - Suite 200
Minneapolis, MN 55414Tel: 612-607-1700
Fax: 612-607-6444 **Pace Analytical™***Roof by the
air intake***Method 23 Analysis Results**

Client - ATC

Client's Sample ID	ATC-1215-89M-DX4		
Lab Sample ID	103222212		
Filename	F20105A_15	Matrix	PUF
Injected By	BAL	Dilution	NA
Amount Extracted	446 m3	Collected	12/15/2001
ICAL Date	01/05/2002	Received	12/18/2001
CCal Filename(s)	F20105A_02	Extracted	12/19/2001
Method Blank ID	BLANK-1385	Analyzed	01/05/2002 09:43

Native Isomers	Conc pg/m3	EMPC pg/m3	LRL pg/m3		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	----	0.0072	A	2,3,7,8-TCDF-13C	2.00	65
Total TCDF	0.024	----	0.0045		2,3,7,8-TCDD-13C	2.00	70
					1,2,3,7,8-PeCDF-13C	2.00	77
2,3,7,8-TCDD	ND	----	0.0065	A	1,2,3,7,8-PeCDD-13C	2.00	65
Total TCDD	0.016	----	0.0045	J	1,2,3,6,7,8-HxCDF-13C	2.00	64
					1,2,3,6,7,8-HxCDD-13C	2.00	65
1,2,3,7,8-PeCDF	ND	----	0.0220		1,2,3,4,6,7,8-HpCDF-13C	2.00	81
2,3,4,7,8-PeCDF	ND	----	0.0220		1,2,3,4,6,7,8-HpCDD-13C	2.00	73
Total PeCDF	ND	----	0.0220		OCDD-13C	4.00	75
1,2,3,7,8-PeCDD	ND	----	0.0220		Recovery		
Total PeCDD	ND	----	0.0220		Standards		
					1,2,3,4-TCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDF	ND	----	0.0220		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,6,7,8-HxCDF	ND	----	0.0220				
2,3,4,6,7,8-HxCDF	ND	----	0.0220		Surrogates		
1,2,3,7,8,9-HxCDF	ND	----	0.0220		2,3,7,8-TCDD-37Cl4	2.00	103
Total HxCDF	ND	----	0.0220		2,3,4,7,8-PeCDF-13C	2.00	79
					1,2,3,4,7,8-HxCDF-13C	2.00	127
1,2,3,4,7,8-HxCDD	ND	----	0.0220		1,2,3,4,7,8-HxCDD-13C	2.00	149 P
1,2,3,6,7,8-HxCDD	ND	----	0.0220		1,2,3,4,7,8,9-HpCDF-13C	2.00	95
1,2,3,7,8,9-HxCDD	ND	----	0.0220				
Total HxCDD	ND	----	0.0220				
1,2,3,4,6,7,8-HpCDF	ND	----	0.0220		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	----	0.0220		Equivalence: 0.00039 pg/m3		
Total HpCDF	ND	----	0.0220		(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	0.026	----	0.0220	J			
Total HpCDD	0.057	----	0.0220	J			
OCDF	ND	----	0.0450				
OCDD	0.130	----	0.0450	J			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
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Report No.....01-1052342

REPORT OF LABORATORY ANALYSIS

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CITY_21MC100_002880297

JAN-08-02 11:13

FROM-PACE ANALYTICAL

612-607-6444

T-510 P.06/06 F-614

1700 Elm Street - Suite 200
Minneapolis, MN 55414Tel: 612-607-1700
Fax: 612-607-6444**Pace Analytical™**

Blank

Method 23 Analysis Results

Client - ATC

Client's Sample ID	ATC-1215-89M-DX5		
Lab Sample ID	103222220		
Filename	F20105A_16	Matrix	PUF
Injected By	BAL	Dilution	NA
Amount Extracted	426 m3	Collected	12/15/2001
ICAL Date	01/05/2002	Received	12/18/2001
CCal Filename(s)	F20105A_02	Extracted	12/19/2001
Method Blank ID	BLANK-1385	Analyzed	01/06/2002 10:33

Native Isomers	Conc pg/m3	EMPC pg/m3	LRL pg/m3		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	----	0.0089	A	2,3,7,8-TCDF-13C	2.00	57
Total TCDF	ND	----	0.0047		2,3,7,8-TCDD-13C	2.00	61
					1,2,3,7,8-PeCDF-13C	2.00	73
2,3,7,8-TCDD	ND	----	0.0062	A	1,2,3,7,8-PeCDD-13C	2.00	62
Total TCDD	ND	----	0.0047		1,2,3,6,7,8-HxCDF-13C	2.00	68
					1,2,3,6,7,8-HxCDD-13C	2.00	72
1,2,3,7,8-PeCDF	ND	----	0.0230		1,2,3,4,6,7,8-HpCDF-13C	2.00	80
2,3,4,7,8-PeCDF	ND	----	0.0230		1,2,3,4,6,7,8-HpCDD-13C	2.00	74
Total PeCDF	ND	----	0.0230		OCDD-13C	4.00	72
1,2,3,7,8-PeCDD	ND	----	0.0230		Recovery		
Total PeCDD	ND	----	0.0230		Standards		
					1,2,3,4-TCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDF	ND	----	0.0230		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,6,7,8-HxCDF	ND	----	0.0230				
2,3,4,6,7,8-HxCDF	ND	----	0.0230		Surrogates		
1,2,3,7,8,9-HxCDF	ND	----	0.0230		2,3,7,8-TCDD-37Cl4	2.00	110
Total HxCDF	ND	----	0.0230		2,3,4,7,8-PeCDF-13C	2.00	84
					1,2,3,4,7,8-HxCDF-13C	2.00	112
1,2,3,4,7,8-HxCDD	ND	----	0.0230		1,2,3,4,7,8-HxCDD-13C	2.00	127
1,2,3,6,7,8-HxCDD	ND	----	0.0230		1,2,3,4,7,8,9-HpCDF-13C	2.00	95
1,2,3,7,8,9-HxCDD	ND	----	0.0230				
Total HxCDD	ND	----	0.0230				
1,2,3,4,6,7,8-HpCDF	ND	----	0.0230		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	----	0.0230		Equivalence: 0.00 pg/m3		
Total HpCDF	ND	----	0.0230		(Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	ND	----	0.0230				
Total HpCDD	ND	----	0.0230				
OCDF	ND	----	0.0470				
OCDD	ND	----	0.0470				

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
 B = Less than 10 times higher than method blank level
 P = Recovery outside of target range
 Nn = Value obtained from additional analysis
 A = Detection Limit based on signal to noise

I = Interference
 E = PCDE Interference
 S = Saturated signal
 ND = Not Detected
 NA = Not Applicable
 NC = Not Calculated

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REPORT OF LABORATORY ANALYSIS

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