

February 4, 2009

Ms. Kelly Buettner
Air Toxics LTD.
180 Blue Ravine Road, Suite.B
Folsom, CA 95630-1020

Dear Ms. Buettner,

Enclosed are the results for Frontier Analytical Laboratory project **5304**. This corresponds to your project number **103P0333** and purchase order number **0901358C**. The two PUF/filter samples received on 1/21/2009 were extracted and analyzed by EPA Method TO-9 for tetra through octa chlorinated dibenzo dioxins and furans. Air Toxics LTD. requested a Level IV data package and a turnaround time of fifteen business days for project **5304**.

The following level IV report consists of an Analytical Data section, a Sample Receipt section, a Laboratory Raw Data section, and an Instrument Raw Data section. The Analytical Data section contains our project-sample tracking log and the analytical results. The Sample Receipt section contains your original chain of custody, our sample login form and the sample photos. The Laboratory Raw Data section contains our project request sheet, the cartridge request form, an extraction bench sheet and the cleanup bench sheet. The instrument raw data section contains three sub-sections; the sample results section, the initial calibration section and the continuing/ending calibration section. The sample results sub-section consists of the quantitation summary forms with chromatograms for all samples and QC. The initial calibration sub-section consists of the individual quantitation summary forms and chromatograms for each point of the initial calibration curve as well as an overall quantitation summary form of the initial calibration curve. The continuing/ending calibration sub-section consists of the quantitation summary forms and chromatograms for all beginning and ending calibration injections associated with the samples and QC. You also requested Electronic Data Deliverables (EDD) for this project. The EDD and Level I summary have been sent to you via email. A copy of the entire Level IV data package on compact disk has been sent to you via OnTrac. The enclosed results are specifically for the samples referenced in this report only. These results meet all NELAC requirements and shall not be reproduced except in full.

If you have any questions regarding project **5304**, please feel free to contact me at (916) 934-0900. Thank you for choosing Frontier Analytical Laboratory for your analytical testing needs.

Sincerely,

Daniel P. Vickers

Daniel P. Vickers
Director of Air Toxics

Frontier Analytical Laboratory

Sample Tracking Log

FAL Project ID: **5304**

Received on: **01/21/2009**

Project Due: **02/12/2009** Storage: **R2**

FAL Sample ID	Dup	Client Project ID	Client Sample ID	Requested Method	Matrix	Sampling Date	Sampling Time	Hold Time Due Date
5304-001-SA	0	103PO333	BMI11-011609	EPA TO-9 D/F	PUF / Filter	01/16/2009	02:20 pm	01/23/2009
5304-002-SA	0	103PO333	BMI06-011609	EPA TO-9 D/F	PUF / Filter	01/16/2009	03:05 pm	01/23/2009

FAL Sample ID	Notes
5304-001-SA	'Using sample time from Ziploc bag.'
5304-002-SA	'Using sample ID and sample time from Ziploc bag.'

EPA Method TO-9 PCDD/F



FAL ID: 5304-001-MB
Client ID: Method Blank
Matrix: PUF / Filter
Batch No: X1626

Date Extracted: 01-22-2009
Date Received: NA
Amount: 1.00 sample

ICal: AIRFAL3-8-29-08
GC Column: DB5
Units: pg/sample

Acquired: 01-26-2009
WHO TEQ: 0.00

Compound	Conc	DL	Qual	WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	3.39		-	0.779				
1,2,3,7,8-PeCDD	ND	4.17		-	0.866				
1,2,3,4,7,8-HxCDD	ND	7.39		-	2.25				
1,2,3,6,7,8-HxCDD	ND	7.81		-	2.20	Total TCDD	ND	3.39	
1,2,3,7,8,9-HxCDD	ND	7.38		-	2.18	Total PeCDD	ND	4.17	
1,2,3,4,6,7,8-HpCDD	ND	7.50		-	2.71	Total HxCDD	ND	7.81	
OCDD	ND	11.8		-	5.66	Total HpCDD	ND	7.50	
2,3,7,8-TCDF	ND	3.68		-	0.744				
1,2,3,7,8-PeCDF	ND	4.53		-	0.941				
2,3,4,7,8-PeCDF	ND	4.79		-	0.982				
1,2,3,4,7,8-HxCDF	ND	2.75		-	1.47				
1,2,3,6,7,8-HxCDF	ND	2.66		-	1.31				
2,3,4,6,7,8-HxCDF	ND	2.99		-	1.51				
1,2,3,7,8,9-HxCDF	ND	3.54		-	1.85	Total TCDF	ND	3.68	
1,2,3,4,6,7,8-HpCDF	ND	5.75		-	1.12	Total PeCDF	ND	4.79	
1,2,3,4,7,8,9-HpCDF	ND	7.51		-	1.53	Total HxCDF	ND	3.54	
OCDF	ND	15.3		-	4.19	Total HpCDF	ND	7.51	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	88.7	40.0 - 130	
13C-1,2,3,7,8-PeCDD	75.2	40.0 - 130	
13C-1,2,3,6,7,8-HxCDD	99.8	40.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	86.5	25.0 - 130	
13C-OCDD	87.7	25.0 - 130	
13C-2,3,7,8-TCDF	83.7	40.0 - 130	
13C-1,2,3,7,8-PeCDF	75.6	40.0 - 130	
13C-1,2,3,6,7,8-HxCDF	97.3	40.0 - 130	
13C-1,2,3,4,6,7,8-HpCDF	84.9	25.0 - 130	
13C-OCDF	91.4	25.0 - 130	
Cleanup Surrogate			
13C-1,2,3,7,8,9-HxCDF	98.1	40.0 - 130	
Pre-Spike Surrogate			
37Cl-2,3,7,8-TCDD	99.9	70.0 - 130	
13C-1,2,3,4,7,8-HxCDD	82.0	70.0 - 130	
13C-2,3,4,7,8-PeCDF	71.4	70.0 - 130	
13C-1,2,3,4,7,8-HxCDF	85.5	70.0 - 130	
13C-1,2,3,4,7,8,9-HpCDF	119	70.0 - 130	

- A Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
 - B Analyte is present in Method Blank
 - C Chemical Interference
 - D Presence of Diphenyl Ethers
 - E Analyte concentration is above calibration range
 - F Analyte confirmation on secondary column
 - J Analyte concentration is below calibration range
 - M Maximum possible concentration
 - ND Analyte Not Detected
 - NP Not Provided
 - S Sample acceptance criteria not met
 - X Matrix interferences
 - * Result taken from dilution or reinjection

Analyst: 

Date: 1/28/09

Reviewed By: DN

Date: 1/28/09

EPA Method TO-9 PCDD/F



FAL ID: 5304-001-LCS1/LCS2
Client ID: LCS1/LCS2
Matrix: PUF / Filter

Date Extracted: 01-22-2009
Date Received: NA
LCS1 Amount: 1.00 sample
LCS2 Amount: 1.00 sample

ICal: AIRFAL3-8-29-08
Batch No: X1626
Units: ng/ml

LCS1 Acquired: 01-26-2009
LCS2 Acquired: 01-26-2009
GC Column: DB5

Compound	Amount Spiked (pg)	LCS1 Amount	LCS2 Amount	% RSD	Qual
2,3,7,8-TCDD	200	5.03	5.25	4.28	
1,2,3,7,8-PeCDD	1000	24.0	25.7	6.84	
1,2,3,4,7,8-HxCDD	1000	22.6	23.6	4.33	
1,2,3,6,7,8-HxCDD	1000	26.5	27.2	2.61	
1,2,3,7,8,9-HxCDD	1000	24.3	24.2	0.412	
1,2,3,4,6,7,8-HpCDD	1000	27.0	27.9	3.28	
OCDD	2000	51.6	54.1	4.73	
2,3,7,8-TCDF	200	5.02	5.29	5.24	
1,2,3,7,8-PeCDF	1000	27.6	28.5	3.21	
2,3,4,7,8-PeCDF	1000	27.9	29.1	4.21	
1,2,3,4,7,8-HxCDF	1000	21.6	23.5	8.43	
1,2,3,6,7,8-HxCDF	1000	25.6	26.4	3.08	
2,3,4,6,7,8-HxCDF	1000	23.9	24.2	1.25	
1,2,3,7,8,9-HxCDF	1000	24.9	26.0	4.32	
1,2,3,4,6,7,8-HpCDF	1000	28.3	29.8	5.16	
1,2,3,4,7,8,9-HpCDF	1000	34.0	33.2	2.38	
OCDF	2000	57.2	59.1	3.27	
Internal Standards		% Rec	% Rec	QC Limits	
13C-2,3,7,8-TCDD	4000	86.0	73.9	40.0 - 130	
13C-1,2,3,7,8-PeCDD	4000	74.4	65.2	40.0 - 130	
13C-1,2,3,6,7,8-HxCDD	4000	93.2	79.6	40.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	4000	79.5	65.6	25.0 - 130	
13C-OCDD	8000	76.4	64.1	25.0 - 130	
13C-2,3,7,8-TCDF	4000	85.9	72.5	40.0 - 130	
13C-1,2,3,7,8-PeCDF	4000	72.2	63.5	40.0 - 130	
13C-1,2,3,6,7,8-HxCDF	4000	97.3	81.2	40.0 - 130	
13C-1,2,3,4,6,7,8-HpCDF	4000	79.6	68.5	25.0 - 130	
13C-OCDF	8000	83.1	68.7	25.0 - 130	
Cleanup Surrogate					
13C-1,2,3,7,8,9-HxCDF	4000	100	82.5	40.0 - 130	
Pre Spike Surrogate		% Rec	% Rec	QC Limits	
37Cl-2,3,7,8-TCDD	4000	103	104	70.0 - 130	
13C-1,2,3,4,7,8-HxCDD	4000	91.5	92.0	70.0 - 130	
13C-2,3,4,7,8-PeCDF	4000	75.9	77.5	70.0 - 130	
13C-1,2,3,4,7,8-HxCDF	4000	88.2	90.7	70.0 - 130	
13C-1,2,3,4,7,8,9-HpCDF	4000	125	119	70.0 - 130	

Analyst:
Date: 1/28/09

Reviewed By:
Date: 1/28/09

EPA Method TO-9 PCDD/F



FAL ID: 5304-001-SA
Client ID: BMI11-011609
Matrix: PUF / Filter
Batch No: X1626

Date Extracted: 01-22-2009
Date Received: 01-21-2009
Amount: 1.00 sample


ICal: AIRFAL3-8-29-08
GC Column: DB5
Units: pg/sample

Acquired: 01-26-2009
WHO TEQ: 19.6

Compound	Conc	DL	Qual	WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	2.59		-	0.779				
1,2,3,7,8-PeCDD	ND	4.78		-	0.866				
1,2,3,4,7,8-HxCDD	ND	10.6		-	2.25				
1,2,3,6,7,8-HxCDD	ND	11.3		-	2.20	Total TCDD	10.2	-	
1,2,3,7,8,9-HxCDD	ND	10.6		-	2.18	Total PeCDD	ND	4.78	
1,2,3,4,6,7,8-HpCDD	14.4	-	J	0.144	2.71	Total HxCDD	ND	11.3	
OCDD	52.6	-	J	0.00526	5.66	Total HpCDD	30.8	-	J
2,3,7,8-TCDF	12.1	-		1.21	0.744				
1,2,3,7,8-PeCDF	16.7	-	J	0.833	0.941				
2,3,4,7,8-PeCDF	15.8	-	J	7.91	0.982				
1,2,3,4,7,8-HxCDF	40.0	-	J	4.00	1.47				
1,2,3,6,7,8-HxCDF	20.1	-	J	2.01	1.31				
2,3,4,6,7,8-HxCDF	14.2	-	J	1.42	1.51				
1,2,3,7,8,9-HxCDF	10.4	-	J	1.04	1.85	Total TCDF	228	-	
1,2,3,4,6,7,8-HpCDF	69.5	-		0.695	1.12	Total PeCDF	193	-	
1,2,3,4,7,8,9-HpCDF	33.9	-	J	0.339	1.53	Total HxCDF	167	-	
OCDF	309	-		0.0309	4.19	Total HpCDF	156	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	91.4	40.0 - 130	
13C-1,2,3,7,8-PeCDD	79.2	40.0 - 130	
13C-1,2,3,6,7,8-HxCDD	96.5	40.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	85.2	25.0 - 130	
13C-OCDD	81.9	25.0 - 130	
13C-2,3,7,8-TCDF	89.4	40.0 - 130	
13C-1,2,3,7,8-PeCDF	78.1	40.0 - 130	
13C-1,2,3,6,7,8-HxCDF	99.5	40.0 - 130	
13C-1,2,3,4,6,7,8-HpCDF	84.0	25.0 - 130	
13C-OCDF	87.5	25.0 - 130	
Cleanup Surrogate			
13C-1,2,3,7,8,9-HxCDF	98.2	40.0 - 130	
Pre-Spike Surrogate			
37Cl-2,3,7,8-TCDD	97.7	70.0 - 130	
13C-1,2,3,4,7,8-HxCDD	87.3	70.0 - 130	
13C-2,3,4,7,8-PeCDF	73.9	70.0 - 130	
13C-1,2,3,4,7,8-HxCDF	87.9	70.0 - 130	
13C-1,2,3,4,7,8,9-HpCDF	112	70.0 - 130	

- A Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
- B Analyte is present in Method Blank
- C Chemical Interference
- D Presence of Diphenyl Ethers
- E Analyte concentration is above calibration range
- F Analyte confirmation on secondary column
- J Analyte concentration is below calibration range
- M Maximum possible concentration
- ND Analyte Not Detected
- NP Not Provided
- S Sample acceptance criteria not met
- X Matrix interferences
- * Result taken from dilution or reinjection

Analyst: 
Date: 1/22/09

Reviewed By: DN
Date: 1/28/09

EPA Method TO-9 PCDD/F



FAL ID: 5304-002-SA
Client ID: BMI06-011609
Matrix: PUF / Filter
Batch No: X1626

Date Extracted: 01-22-2009
Date Received: 01-21-2009
Amount: 1.00 sample

ICal: AIRFAL3-8-29-08
GC Column: DB5
Units: pg/sample

Acquired: 01-26-2009
WHO TEQ: 36.9

Compound	Conc	DL	Qual	WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	3.40		-	0.779				
1,2,3,7,8-PeCDD	ND	4.83		-	0.866				
1,2,3,4,7,8-HxCDD	ND	7.90		-	2.25				
1,2,3,6,7,8-HxCDD	ND	8.35		-	2.20	Total TCDD	25.1	-	
1,2,3,7,8,9-HxCDD	ND	7.88		-	2.18	Total PeCDD	23.7	-	J
1,2,3,4,6,7,8-HpCDD	32.2	-	J	0.322	2.71	Total HxCDD	28.9	-	J
OCDD	68.2	-	J	0.00682	5.66	Total HpCDD	58.9	-	
2,3,7,8-TCDF	18.6	-		1.86	0.744				
1,2,3,7,8-PeCDF	33.4	-	J	1.67	0.941				
2,3,4,7,8-PeCDF	26.7	-	J	13.4	0.982				
1,2,3,4,7,8-HxCDF	68.7	-		6.87	1.47				
1,2,3,6,7,8-HxCDF	47.2	-	J	4.72	1.31				
2,3,4,6,7,8-HxCDF	29.2	-	J	2.92	1.51				
1,2,3,7,8,9-HxCDF	23.2	-	J	2.32	1.85	Total TCDF	410	-	
1,2,3,4,6,7,8-HpCDF	193	-		1.93	1.12	Total PeCDF	405	-	
1,2,3,4,7,8,9-HpCDF	83.6	-		0.836	1.53	Total HxCDF	403	-	
OCDF	514	-		0.0514	4.19	Total HpCDF	409	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	90.7	40.0 - 130	
13C-1,2,3,7,8-PeCDD	82.1	40.0 - 130	
13C-1,2,3,6,7,8-HxCDD	94.0	40.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	83.2	25.0 - 130	
13C-OCDD	78.4	25.0 - 130	
13C-2,3,7,8-TCDF	89.2	40.0 - 130	
13C-1,2,3,7,8-PeCDF	78.9	40.0 - 130	
13C-1,2,3,6,7,8-HxCDF	93.7	40.0 - 130	
13C-1,2,3,4,6,7,8-HpCDF	82.0	25.0 - 130	
13C-OCDF	83.5	25.0 - 130	
Cleanup Surrogate			
13C-1,2,3,7,8,9-HxCDF	94.7	40.0 - 130	
Pre-Spike Surrogate			
37Cl-2,3,7,8-TCDD	103	70.0 - 130	
13C-1,2,3,4,7,8-HxCDD	91.6	70.0 - 130	
13C-2,3,4,7,8-PeCDF	76.3	70.0 - 130	
13C-1,2,3,4,7,8-HxCDF	93.4	70.0 - 130	
13C-1,2,3,4,7,8,9-HpCDF	119	70.0 - 130	

- A Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
- B Analyte is present in Method Blank
- C Chemical Interference
- D Presence of Diphenyl Ethers
- E Analyte concentration is above calibration range
- F Analyte confirmation on secondary column
- J Analyte concentration is below calibration range
- M Maximum possible concentration
- ND Analyte Not Detected
- NP Not Provided
- S Sample acceptance criteria not met
- X Matrix interferences
- * Result taken from dilution or reinjection

Analyst: [Signature]

Date: 1/28/09

Reviewed By: [Signature]

Date: 1/28/09



Sample Transportation Notice

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection handling or shipping of these samples. Relinquished signature also indicated agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922.

AIR TOXICS LTD.
180 BLUE RAVINE RD, SUITE B
FOLSOM, CA 95630-1020
916-985-1000 main line
916-985-1020 fax line

Chain-of-Custody Record

Page 1 of 1

Contact Person Kelly Buettner Company Air Toxics Ltd. Address 180-B Blue Ravine Zip 95630 Phone 916-605-3356 FAX 916-985-1020		City Folsom State CA		Project Information: P.O. # 0901358C Project # 103PO333 Project Name BMI		Turn Around Time: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush Specify		Pressurized by: _____ Date: _____ Press. Gas: N2 He					
Collected By: (Signature)				Analysis Requested		Canister Pressure/Vacuum		Final					
Lab I.D.	Field Sample I.D.	Canister I.D.	Date & Time	Initial		Final		(psi)					
	BMI11-011609		1/16/09 1419	"Hg		"Hg							
	BMI11-011609		1/16/09 1419	"Hg		"Hg							
				"Hg		"Hg							
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				"Hg		"Hg							
				"Hg		"Hg							
Relinquished By: (Signature) Date/Time C. Kelly Buettner 1/21/09 1410				Received By: (Signature) Date/Time K. Buettner 1/21/09 1415				Notes: K.buettner@airtoxics.com					
Relinquished By: (Signature) Date/Time				Received By: (Signature) Date/Time									
Relinquished By: (Signature) Date/Time				Received By: (Signature) Date/Time									
Shipper Name		Air Bill #		Opened By		Temp ©		Condition		Custody Seals		Work Order #	
Lab Use Only										Yes No None			

Frontier Analytical Laboratory

Sample Login Form

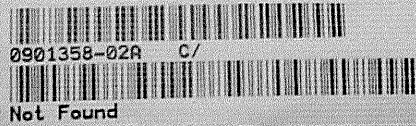
FAL Project ID: **5304**

Client:	Air Toxics
Client Project ID:	103PO333
Date Received:	01/21/2009
Time Received:	02:50 pm
Received By:	BM
Logged In By:	BM
# of Samples Received:	2
Duplicates:	0
Storage Location:	R2

Method of Delivery:	Courier
Tracking Number:	NA
Shipping Container Received Intact	Yes
Custody seals(s) present?	Yes
Custody seals(s) intact?	Yes
Sample Arrival Temperature (C)	3
Cooling Method	Blue Ice
Chain Of Custody Present?	Yes
Return Shipping Container To Client	Yes
Test for residual Chlorine	No
Thiosulfate Added	No
Earliest Sample Hold Time Expiration	01/23/2009
Adequate Sample Volume	Yes
Anomalies or additional comments:	

Chain of Custody Record

Contact Person Kelly Buettner
Company Air Toxics Inc.
Address 10000 1st St.
Zip 90029
Phone (818) 441-1111



Collected By: (S)

Lat
ID
Frontier Analytical Laboratory
5304-001-SA
Client ID BMI11-011609
Storage: P2 (01 of 01)

BMI11-011609
T09
01-16-09 1420

Turn Around Time: ☒ Normal ☐ Rush
Specify
Date
Press Gas
N2 He

Canister Pressure/Vacuum		
Initial	Final	Recess
Hg		
Hg		
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Hg		

Refrigeration Notice

that sample is being shipped in
cool boxes

AIR TOXICS LTD.
180 BLUE RAVINE RD, SUITE B
FOLSOM, CA 95630-1020

0901358-05A C/
Not Found

Frontier Analytical Laboratory

5304-002-SA

Client ID: BMI06-011609

Storage: R2 (01 of 01)

BMI06-011609
TB9
01-16-09
1505

R
V
Rel

Relinqu

Lab
Use
Onl