

January 23, 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 **5284**. This corresponds to your project number **103P0333** and purchase order number **0901088CC**. The two PUF/filter samples received on 1/8/2009 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 **5284**.

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 a sample photo. The Laboratory Raw Data section contains our project request sheet, 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 **5284**, 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: **5284**

Received on: **01/08/2009**

Project Due: **01/30/2009**

Storage: **R2**

FAL Sample ID	Dup	Client Project ID	Client Sample ID	Requested Method	Matrix	Sampling Date	Sampling Time	Hold Time Due Date
5284-001-SA	0	103PO333	BMI11-010609	EPA TO-9 D/F	PUF / Filter	01/06/2009	02:25 pm	01/13/2009
5284-002-SA	0	103PO333	BMI06-010609	EPA TO-9 D/F	PUF / Filter	01/06/2009	03:00 pm	01/13/2009

EPA Method TO-9 PCDD/F



FAL ID: 5284-001-MB
Client ID: Method Blank
Matrix: PUF / Filter
Batch No: X1614

Date Extracted: 01-12-2009
Date Received: NA
Amount: 1.00 sample

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

Acquired: 01-15-2009
WHO TEQ: 0.00

Compound	Conc	DL	Qual	WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	1.55		-	0.779				
1,2,3,7,8-PeCDD	ND	1.78		-	0.866				
1,2,3,4,7,8-HxCDD	ND	5.00		-	2.25				
1,2,3,6,7,8-HxCDD	ND	5.28		-	2.20	Total TCDD	ND	1.55	
1,2,3,7,8,9-HxCDD	ND	4.99		-	2.18	Total PeCDD	ND	1.78	
1,2,3,4,6,7,8-HpCDD	ND	5.12		-	2.71	Total HxCDD	ND	5.28	
OCDD	ND	11.8		-	5.66	Total HpCDD	ND	5.12	
2,3,7,8-TCDF	ND	1.90		-	0.744				
1,2,3,7,8-PeCDF	ND	2.91		-	0.941				
2,3,4,7,8-PeCDF	ND	3.07		-	0.982				
1,2,3,4,7,8-HxCDF	ND	2.12		-	1.47				
1,2,3,6,7,8-HxCDF	ND	2.05		-	1.31				
2,3,4,6,7,8-HxCDF	ND	2.30		-	1.51				
1,2,3,7,8,9-HxCDF	ND	2.73		-	1.85	Total TCDF	ND	1.90	
1,2,3,4,6,7,8-HpCDF	ND	2.39		-	1.12	Total PeCDF	ND	3.07	
1,2,3,4,7,8,9-HpCDF	ND	3.12		-	1.53	Total HxCDF	ND	2.73	
OCDF	ND	10.6		-	4.19	Total HpCDF	ND	3.12	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	88.9	40.0 - 130	
13C-1,2,3,7,8-PeCDD	82.6	40.0 - 130	
13C-1,2,3,6,7,8-HxCDD	97.3	40.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	86.9	25.0 - 130	
13C-OCDD	90.1	25.0 - 130	
13C-2,3,7,8-TCDF	88.6	40.0 - 130	
13C-1,2,3,7,8-PeCDF	78.0	40.0 - 130	
13C-1,2,3,6,7,8-HxCDF	96.9	40.0 - 130	
13C-1,2,3,4,6,7,8-HpCDF	83.8	25.0 - 130	
13C-OCDF	90.8	25.0 - 130	
Cleanup Surrogate			
13C-1,2,3,7,8,9-HxCDF	96.4	40.0 - 130	
Pre-Spike Surrogate			
37Cl-2,3,7,8-TCDD	99.2	70.0 - 130	
13C-1,2,3,4,7,8-HxCDD	88.2	70.0 - 130	
13C-2,3,4,7,8-PeCDF	73.1	70.0 - 130	
13C-1,2,3,4,7,8-HxCDF	87.8	70.0 - 130	
13C-1,2,3,4,7,8,9-HpCDF	113	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: 1/16/09

Reviewed By: 

Date: 1/16/09

EPA Method TO-9 PCDD/F



FAL ID: 5284-001-LCS1/LCS2
Client ID: LCS1/LCS2
Matrix: PUF / Filter

Date Extracted: 01-12-2009
Date Received: NA
LCS1 Amount: 1.00 sample
LCS2 Amount: 1.00 sample

ICal: AIRFAL3-8-29-08
Batch No: X1614
Units: ng/ml

LCS1 Acquired: 01-15-2009
LCS2 Acquired: 01-15-2009
GC Column: DB5

Compound	Amount Spiked (pg)	LCS1 Amount	LCS2 Amount	% RSD	Qual
2,3,7,8-TCDD	200	4.70	4.78	1.69	
1,2,3,7,8-PeCDD	1000	22.5	22.9	1.76	
1,2,3,4,7,8-HxCDD	1000	22.4	21.9	2.26	
1,2,3,6,7,8-HxCDD	1000	25.0	25.8	3.15	
1,2,3,7,8,9-HxCDD	1000	23.6	23.1	2.14	
1,2,3,4,6,7,8-HpCDD	1000	27.1	27.9	2.91	
OCDD	2000	49.1	51.6	4.97	
2,3,7,8-TCDF	200	5.43	5.47	0.734	
1,2,3,7,8-PeCDF	1000	24.9	25.6	2.77	
2,3,4,7,8-PeCDF	1000	23.7	26.2	10.0	
1,2,3,4,7,8-HxCDF	1000	22.0	22.2	0.905	
1,2,3,6,7,8-HxCDF	1000	24.4	24.8	1.63	
2,3,4,6,7,8-HxCDF	1000	23.4	22.5	3.92	
1,2,3,7,8,9-HxCDF	1000	24.2	23.0	5.08	
1,2,3,4,6,7,8-HpCDF	1000	27.2	27.0	0.738	
1,2,3,4,7,8,9-HpCDF	1000	32.9	30.5	7.57	
OCDF	2000	52.8	53.7	1.69	

Internal Standards		% Rec	% Rec	QC Limits
13C-2,3,7,8-TCDD	4000	92.7	86.7	40.0 - 130
13C-1,2,3,7,8-PeCDD	4000	81.3	79.3	40.0 - 130
13C-1,2,3,6,7,8-HxCDD	4000	97.8	90.6	40.0 - 130
13C-1,2,3,4,6,7,8-HpCDD	4000	85.7	76.6	25.0 - 130
13C-OCDD	8000	88.1	78.0	25.0 - 130
13C-2,3,7,8-TCDF	4000	95.0	86.6	40.0 - 130
13C-1,2,3,7,8-PeCDF	4000	81.3	74.2	40.0 - 130
13C-1,2,3,6,7,8-HxCDF	4000	94.8	92.0	40.0 - 130
13C-1,2,3,4,6,7,8-HpCDF	4000	81.5	76.1	25.0 - 130
13C-OCDF	8000	90.1	78.5	25.0 - 130

Cleanup Surrogate


13C-1,2,3,7,8,9-HxCDF	4000	96.1	89.7	40.0 - 130
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Pre Spike Surrogate

		% Rec	% Rec	QC Limits
37Cl-2,3,7,8-TCDD	4000	98.1	99.1	70.0 - 130
13C-1,2,3,4,7,8-HxCDD	4000	90.6	89.8	70.0 - 130
13C-2,3,4,7,8-PeCDF	4000	76.9	77.8	70.0 - 130
13C-1,2,3,4,7,8-HxCDF	4000	93.8	91.7	70.0 - 130
13C-1,2,3,4,7,8,9-HpCDF	4000	121	114	70.0 - 130

Analyst: 

Date: 1/16/09

Reviewed By: 

Date: 1/16/09

EPA Method TO-9 PCDD/F



FAL ID: 5284-001-SA
Client ID: BMI11-010609
Matrix: PUF / Filter
Batch No: X1614

Date Extracted: 01-12-2009
Date Received: 01-08-2009
Amount: 1.00 sample

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

Acquired: 01-15-2009
WHO TEQ: 19.6

Compound	Conc	DL	Qual	WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	1.85		-	0.779				
1,2,3,7,8-PeCDD	3.81	-	J	3.81	0.866				
1,2,3,4,7,8-HxCDD	6.19	-	J	0.619	2.25				
1,2,3,6,7,8-HxCDD	11.3	-	J	1.13	2.20	Total TCDD	8.76	-	J
1,2,3,7,8,9-HxCDD	10.3	-	J	1.03	2.18	Total PeCDD	32.8	-	J
1,2,3,4,6,7,8-HpCDD	138	-		1.38	2.71	Total HxCDD	122	-	
OCDD	323	-		0.0323	5.66	Total HpCDD	276	-	
2,3,7,8-TCDF	8.49	-	J	0.849	0.744				
1,2,3,7,8-PeCDF	10.9	-	J	0.547	0.941				
2,3,4,7,8-PeCDF	6.19	-	J	3.09	0.982				
1,2,3,4,7,8-HxCDF	28.6	-	J	2.86	1.47				
1,2,3,6,7,8-HxCDF	15.2	-	J	1.52	1.31				
2,3,4,6,7,8-HxCDF	9.70	-	J	0.970	1.51				
1,2,3,7,8,9-HxCDF	8.97	-	J	0.897	1.85	Total TCDF	138	-	
1,2,3,4,6,7,8-HpCDF	56.3	-		0.563	1.12	Total PeCDF	109	-	
1,2,3,4,7,8,9-HpCDF	24.0	-	J	0.240	1.53	Total HxCDF	127	-	
OCDF	169	-		0.0169	4.19	Total HpCDF	119	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	91.5	40.0 - 130	
13C-1,2,3,7,8-PeCDD	85.2	40.0 - 130	
13C-1,2,3,6,7,8-HxCDD	93.2	40.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	84.7	25.0 - 130	
13C-OCDD	89.6	25.0 - 130	
13C-2,3,7,8-TCDF	93.1	40.0 - 130	
13C-1,2,3,7,8-PeCDF	85.1	40.0 - 130	
13C-1,2,3,6,7,8-HxCDF	90.0	40.0 - 130	
13C-1,2,3,4,6,7,8-HpCDF	84.1	25.0 - 130	
13C-OCDF	88.7	25.0 - 130	
Cleanup Surrogate			
13C-1,2,3,7,8,9-HxCDF	91.4	40.0 - 130	
Pre-Spike Surrogate			
37Cl-2,3,7,8-TCDD	93.6	70.0 - 130	
13C-1,2,3,4,7,8-HxCDD	84.2	70.0 - 130	
13C-2,3,4,7,8-PeCDF	72.9	70.0 - 130	
13C-1,2,3,4,7,8-HxCDF	90.0	70.0 - 130	
13C-1,2,3,4,7,8,9-HpCDF	105	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: 1/16/09

Reviewed By: 

Date: 1/16/09

EPA Method TO-9 PCDD/F



FAL ID: 5284-002-SA
Client ID: BMI06-010609
Matrix: PUF / Filter
Batch No: X1614

Date Extracted: 01-12-2009
Date Received: 01-08-2009
Amount: 1.00 sample

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

Acquired: 01-15-2009
WHO TEQ: 17.8


Compound	Conc	DL	Qual	WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	1.54		-	0.779				
1,2,3,7,8-PeCDD	3.58	-	J	3.58	0.866				
1,2,3,4,7,8-HxCDD	5.92	-	J	0.592	2.25				
1,2,3,6,7,8-HxCDD	9.32	-	J	0.932	2.20	Total TCDD	8.41	-	J
1,2,3,7,8,9-HxCDD	8.61	-	J	0.861	2.18	Total PeCDD	30.9	-	J
1,2,3,4,6,7,8-HpCDD	117	-		1.17	2.71	Total HxCDD	102	-	
OCDD	303	-		0.0303	5.66	Total HpCDD	246	-	
2,3,7,8-TCDF	7.82	-	J	0.782	0.744				
1,2,3,7,8-PeCDF	10.5	-	J	0.524	0.941				
2,3,4,7,8-PeCDF	6.81	-	J	3.41	0.982				
1,2,3,4,7,8-HxCDF	19.8	-	J	1.98	1.47				
1,2,3,6,7,8-HxCDF	14.6	-	J	1.46	1.31				
2,3,4,6,7,8-HxCDF	9.09	-	J	0.909	1.51				
1,2,3,7,8,9-HxCDF	6.89	-	J	0.689	1.85	Total TCDF	149	-	
1,2,3,4,6,7,8-HpCDF	58.9	-		0.589	1.12	Total PeCDF	103	-	
1,2,3,4,7,8,9-HpCDF	23.2	-	J	0.232	1.53	Total HxCDF	112	-	
OCDF	171	-		0.0171	4.19	Total HpCDF	123	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	90.3	40.0 - 130	
13C-1,2,3,7,8-PeCDD	84.3	40.0 - 130	
13C-1,2,3,6,7,8-HxCDD	91.7	40.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	80.4	25.0 - 130	
13C-OCDD	74.1	25.0 - 130	
13C-2,3,7,8-TCDF	92.1	40.0 - 130	
13C-1,2,3,7,8-PeCDF	83.9	40.0 - 130	
13C-1,2,3,6,7,8-HxCDF	92.9	40.0 - 130	
13C-1,2,3,4,6,7,8-HpCDF	81.0	25.0 - 130	
13C-OCDF	75.5	25.0 - 130	
Cleanup Surrogate			
13C-1,2,3,7,8,9-HxCDF	87.8	40.0 - 130	
Pre-Spike Surrogate			
37Cl-2,3,7,8-TCDD	104	70.0 - 130	
13C-1,2,3,4,7,8-HxCDD	97.9	70.0 - 130	
13C-2,3,4,7,8-PeCDF	75.9	70.0 - 130	
13C-1,2,3,4,7,8-HxCDF	95.9	70.0 - 130	
13C-1,2,3,4,7,8,9-HpCDF	118	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

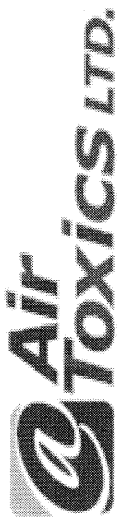
Analyst: 

Date: 1/16/09

Reviewed By: 

Date: 1/16/09

FAL Project: 52840 / Blue Ice



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 City Folsom State CA FAX 916-985-1020		Project Information: P.O. # 0901088CC 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 (psi)	
Lab I.D.	Field Sample I.D.	Canister I.D.	Date & Time	Initial	Final	Receipt	Final
	BMI11-010609		1/6/09 1425		"Hg		
	BMI06-010609		1/6/09 1500		"Hg		
					"Hg		
					"Hg		
					"Hg		
					"Hg		
					"Hg		
					"Hg		
					"Hg		
					"Hg		
					"Hg		
Relinquished By: (Signature) Date/Time <i>[Signature]</i> 1/8/09 1300		Received By: (Signature) Date/Time <i>[Signature]</i> 1/8/09 1300		Notes: K.buettner@airtoxics.com			
Relinquished By: (Signature) Date/Time <i>[Signature]</i> 1/8/09 1300		Received By: (Signature) Date/Time <i>[Signature]</i> 1/8/09 1300					
Relinquished By: (Signature) Date/Time <i>[Signature]</i> 1/8/09 1300		Received By: (Signature) Date/Time <i>[Signature]</i> 1/8/09 1300					
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: **5284**

Client:	Air Toxics
Client Project ID:	103PO333
Date Received:	01/08/2009
Time Received:	01:00 pm
Received By:	DV
Logged In By:	DV
# 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?	No
Custody seals(s) intact?	No
Sample Arrival Temperature (C)	0
Cooling Method	Blue Ice
Chain Of Custody Present?	Yes
Return Shipping Container To Client	No
Test for residual Chlorine	No
Thiosulfate Added	No
Earliest Sample Hold Time Expiration	01/13/2009
Adequate Sample Volume	Yes
Anomalies or additional comments:	

Address 180-B Blue Ravine City Folsom
Zip 95630
Phone 916-605-3356 FAX 916-985-1020

Collected By: (Signature)

Lab I.D.	Field Sample I.D.	Canister I.D.	Date & Time	Analysis Re
	BMI11-010609		1/6/09 1:25	TO-9
	BMI06-010609		1/6/09 1:25	TO-9

0901088-05A C/
Not Found

BMI11-010609
1425

BMI06-010609
-009
1500

0901088-J5A C/
Not Found

Frontier Analytical Laboratory
5284-002-SA
Client ID: BMI06-010609
Storage: R2 (01 of 01)

Frontier Analytical Laboratory
5284-001-SA
Client ID: BMI11-010609
Storage: R2 (01 of 01)

BMI11-010609
709 01/06/09
1425

BMI06-010609
709
01/06/09 11500