

January 12, 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 **5270**. This corresponds to your project number **103P0333** and work order number **0812697C**. The two PUF/filter samples received on 12/30/2008 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 **5270**.

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 **5270**, 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: **5270**

Received on: **12/30/2008**

Project Due: **01/22/2009** Storage: **R2**

FAL Sample ID	Dup	Client Project ID	Client Sample ID	Requested Method	Matrix	Sampling Date	Sampling Time	Hold Time Due Date
5270-001-SA	0	103PO333	OFF01-122708	EPA TO-9 D/F	PUF / Filter	12/27/2008	08:00 am	01/03/2009
5270-002-SA	0	103PO333	OFF02-122708	EPA TO-9 D/F	PUF / Filter	12/27/2008	08:15 am	01/03/2009

EPA Method TO-9 PCDD/F



FAL ID: 5270-001-MB
Client ID: Method Blank
Matrix: PUF / Filter
Batch No: X1606

Date Extracted: 12-30-2008
Date Received: NA
Amount: 1.00 sample

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

Acquired: 01-09-2009
WHO TEQ: 0.00

Compound	Conc	DL	Qual	WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	1.05		-	0.779				
1,2,3,7,8-PeCDD	ND	1.82		-	0.866				
1,2,3,4,7,8-HxCDD	ND	3.79		-	2.25				
1,2,3,6,7,8-HxCDD	ND	4.01		-	2.20	Total TCDD	ND	1.05	
1,2,3,7,8,9-HxCDD	ND	3.78		-	2.18	Total PeCDD	ND	1.82	
1,2,3,4,6,7,8-HpCDD	ND	3.77		-	2.71	Total HxCDD	ND	4.01	
OCDD	ND	9.13		-	5.66	Total HpCDD	ND	3.77	
2,3,7,8-TCDF	ND	1.61		-	0.744				
1,2,3,7,8-PeCDF	ND	3.34		-	0.941				
2,3,4,7,8-PeCDF	ND	3.53		-	0.982				
1,2,3,4,7,8-HxCDF	ND	1.84		-	1.47				
1,2,3,6,7,8-HxCDF	ND	1.78		-	1.31				
2,3,4,6,7,8-HxCDF	ND	2.00		-	1.51				
1,2,3,7,8,9-HxCDF	ND	2.37		-	1.85	Total TCDF	ND	1.61	
1,2,3,4,6,7,8-HpCDF	ND	1.82		-	1.12	Total PeCDF	ND	3.53	
1,2,3,4,7,8,9-HpCDF	ND	2.37		-	1.53	Total HxCDF	ND	2.37	
OCDF	ND	6.79		-	4.19	Total HpCDF	ND	2.37	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	86.0	40.0 - 130	
13C-1,2,3,7,8-PeCDD	80.4	40.0 - 130	
13C-1,2,3,6,7,8-HxCDD	88.1	40.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	79.7	25.0 - 130	
13C-OCDD	69.6	25.0 - 130	
13C-2,3,7,8-TCDF	89.2	40.0 - 130	
13C-1,2,3,7,8-PeCDF	77.7	40.0 - 130	
13C-1,2,3,6,7,8-HxCDF	90.4	40.0 - 130	
13C-1,2,3,4,6,7,8-HpCDF	73.6	25.0 - 130	
13C-OCDF	80.0	25.0 - 130	
Cleanup Surrogate			
13C-1,2,3,7,8,9-HxCDF	100	40.0 - 130	
Pre-Spike Surrogate			
37Cl-2,3,7,8-TCDD	107	70.0 - 130	
13C-1,2,3,4,7,8-HxCDD	108	70.0 - 130	
13C-2,3,4,7,8-PeCDF	78.5	70.0 - 130	
13C-1,2,3,4,7,8-HxCDF	109	70.0 - 130	
13C-1,2,3,4,7,8,9-HpCDF	129	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: 1/10/09

Reviewed By: AN

Date: 1/12/09

EPA Method TO-9 PCDD/F



FAL ID: 5270-001-LCS1/LCS2
Client ID: LCS1/LCS2
Matrix: PUF / Filter

Date Extracted: 12-30-2008
Date Received: NA
LCS1 Amount: 1.00 sample
LCS2 Amount: 1.00 sample

ICal: AIRFAL3-8-29-08
Batch No: X1606
Units: ng/ml

LCS1 Acquired: 01-09-2009
LCS2 Acquired: 01-09-2009
GC Column: DB5

Compound	Amount Spiked (pg)	LCS1 Amount	LCS2 Amount	% RSD	Qual
2,3,7,8-TCDD	200	4.87	4.91	0.818	
1,2,3,7,8-PeCDD	1000	21.9	22.1	0.909	
1,2,3,4,7,8-HxCDD	1000	24.3	24.4	0.411	
1,2,3,6,7,8-HxCDD	1000	26.0	26.7	2.66	
1,2,3,7,8,9-HxCDD	1000	24.1	24.5	1.65	
1,2,3,4,6,7,8-HpCDD	1000	28.0	27.9	0.358	
OCDD	2000	51.3	54.2	5.50	
2,3,7,8-TCDF	200	5.35	5.61	4.74	
1,2,3,7,8-PeCDF	1000	26.1	26.2	0.382	
2,3,4,7,8-PeCDF	1000	25.8	25.8	0.00	
1,2,3,4,7,8-HxCDF	1000	21.8	23.0	5.36	
1,2,3,6,7,8-HxCDF	1000	23.7	23.8	0.421	
2,3,4,6,7,8-HxCDF	1000	21.4	22.5	5.01	
1,2,3,7,8,9-HxCDF	1000	23.2	24.8	6.67	
1,2,3,4,6,7,8-HpCDF	1000	24.0	25.4	5.67	
1,2,3,4,7,8,9-HpCDF	1000	26.6	32.9	21.2	
OCDF	2000	51.5	52.5	1.92	

Internal Standards		% Rec	% Rec	QC Limits
13C-2,3,7,8-TCDD	4000	93.4	89.9	40.0 - 130
13C-1,2,3,7,8-PeCDD	4000	88.2	86.9	40.0 - 130
13C-1,2,3,6,7,8-HxCDD	4000	94.7	91.0	40.0 - 130
13C-1,2,3,4,6,7,8-HpCDD	4000	86.1	81.1	25.0 - 130
13C-OCDD	8000	71.8	76.6	25.0 - 130
13C-2,3,7,8-TCDF	4000	93.8	88.3	40.0 - 130
13C-1,2,3,7,8-PeCDF	4000	85.2	80.5	40.0 - 130
13C-1,2,3,6,7,8-HxCDF	4000	98.4	92.0	40.0 - 130
13C-1,2,3,4,6,7,8-HpCDF	4000	87.4	76.9	25.0 - 130
13C-OCDF	8000	61.7	85.6	25.0 - 130

Cleanup Surrogate				
13C-1,2,3,7,8,9-HxCDF	4000	101	102	40.0 - 130

Pre Spike Surrogate		% Rec	% Rec	QC Limits
37Cl-2,3,7,8-TCDD	4000	109	111	70.0 - 130
13C-1,2,3,4,7,8-HxCDD	4000	107	108	70.0 - 130
13C-2,3,4,7,8-PeCDF	4000	78.8	78.7	70.0 - 130
13C-1,2,3,4,7,8-HxCDF	4000	106	111	70.0 - 130
13C-1,2,3,4,7,8,9-HpCDF	4000	112	127	70.0 - 130

Analyst: 

Date: 1/10/09

Reviewed By: DN

Date: 1/12/09

EPA Method TO-9 PCDD/F



FAL ID: 5270-001-SA
Client ID: OFF01-122708
Matrix: PUF / Filter
Batch No: X1606

Date Extracted: 12-30-2008
Date Received: 12-30-2008
Amount: 1.00 sample

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

Acquired: 01-09-2009
WHO TEQ: 14.8

Compound	Conc	DL	Qual	WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	1.56		-	0.779				
1,2,3,7,8-PeCDD	ND	3.18		-	0.866				
1,2,3,4,7,8-HxCDD	ND	4.78		-	2.25				
1,2,3,6,7,8-HxCDD	ND	5.05		-	2.20	Total TCDD	11.3	-	
1,2,3,7,8,9-HxCDD	ND	4.77		-	2.18	Total PeCDD	12.1	-	J
1,2,3,4,6,7,8-HpCDD	33.2	-	J	0.332	2.71	Total HxCDD	27.3	-	J
OCDD	79.2	-	J	0.00792	5.66	Total HpCDD	62.1	-	
2,3,7,8-TCDF	11.7	-		1.17	0.744				
1,2,3,7,8-PeCDF	14.8	-	J	0.742	0.941				
2,3,4,7,8-PeCDF	7.09	-	J	3.54	0.982				
1,2,3,4,7,8-HxCDF	32.5	-	J	3.25	1.47				
1,2,3,6,7,8-HxCDF	21.8	-	J	2.18	1.31				
2,3,4,6,7,8-HxCDF	12.8	-	J	1.28	1.51				
1,2,3,7,8,9-HxCDF	10.6	-	J	1.06	1.85	Total TCDF	208	-	
1,2,3,4,6,7,8-HpCDF	82.9	-		0.829	1.12	Total PeCDF	158	-	
1,2,3,4,7,8,9-HpCDF	38.9	-	J	0.389	1.53	Total HxCDF	178	-	
OCDF	264	-		0.0264	4.19	Total HpCDF	181	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	88.7	40.0 - 130	
13C-1,2,3,7,8-PeCDD	85.0	40.0 - 130	
13C-1,2,3,6,7,8-HxCDD	91.1	40.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	82.9	25.0 - 130	
13C-OCDD	73.9	25.0 - 130	
13C-2,3,7,8-TCDF	91.2	40.0 - 130	
13C-1,2,3,7,8-PeCDF	80.2	40.0 - 130	
13C-1,2,3,6,7,8-HxCDF	90.9	40.0 - 130	
13C-1,2,3,4,6,7,8-HpCDF	79.8	25.0 - 130	
13C-OCDF	80.0	25.0 - 130	
Cleanup Surrogate			
13C-1,2,3,7,8,9-HxCDF	102	40.0 - 130	
Pre-Spike Surrogate			
37Cl-2,3,7,8-TCDD	107	70.0 - 130	
13C-1,2,3,4,7,8-HxCDD	104	70.0 - 130	
13C-2,3,4,7,8-PeCDF	83.0	70.0 - 130	
13C-1,2,3,4,7,8-HxCDF	111	70.0 - 130	
13C-1,2,3,4,7,8,9-HpCDF	126	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: 1/10/09

Reviewed By: 
Date: 1/12/09

EPA Method TO-9
PCDD/F



FAL ID: 5270-002-SA
Client ID: OFF02-122708
Matrix: PUF / Filter
Batch No: X1606

Date Extracted: 12-30-2008
Date Received: 12-30-2008
Amount: 1.00 sample

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

Acquired: 01-09-2009
WHO TEQ: 3.57

Compound	Conc	DL	Qual	WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	1.53		-	0.779				
1,2,3,7,8-PeCDD	ND	2.21		-	0.866				
1,2,3,4,7,8-HxCDD	ND	4.70		-	2.25				
1,2,3,6,7,8-HxCDD	ND	4.97		-	2.20	Total TCDD	3.53	-	J
1,2,3,7,8,9-HxCDD	ND	4.69		-	2.18	Total PeCDD	ND	2.21	
1,2,3,4,6,7,8-HpCDD	23.6	-	J	0.236	2.71	Total HxCDD	9.49	-	J
OCDD	59.1	-	J	0.00592	5.66	Total HpCDD	46.7	-	J
2,3,7,8-TCDF	6.34	-	J	0.634	0.744				
1,2,3,7,8-PeCDF	ND	5.07		-	0.941				
2,3,4,7,8-PeCDF	ND	5.36		-	0.982				
1,2,3,4,7,8-HxCDF	11.0	-	J	1.10	1.47				
1,2,3,6,7,8-HxCDF	6.41	-	J	0.641	1.31				
2,3,4,6,7,8-HxCDF	4.24	-	J	0.424	1.51				
1,2,3,7,8,9-HxCDF	ND	1.99		-	1.85	Total TCDF	77.3	-	
1,2,3,4,6,7,8-HpCDF	35.5	-	J	0.355	1.12	Total PeCDF	21.4	-	J
1,2,3,4,7,8,9-HpCDF	16.0	-	J	0.160	1.53	Total HxCDF	40.3	-	J
OCDF	176	-		0.0176	4.19	Total HpCDF	77.6	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	87.1	40.0 - 130	
13C-1,2,3,7,8-PeCDD	80.7	40.0 - 130	
13C-1,2,3,6,7,8-HxCDD	90.7	40.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	85.7	25.0 - 130	
13C-OCDD	79.5	25.0 - 130	
13C-2,3,7,8-TCDF	94.5	40.0 - 130	
13C-1,2,3,7,8-PeCDF	80.6	40.0 - 130	
13C-1,2,3,6,7,8-HxCDF	93.0	40.0 - 130	
13C-1,2,3,4,6,7,8-HpCDF	83.0	25.0 - 130	
13C-OCDF	78.4	25.0 - 130	
Cleanup Surrogate			
13C-1,2,3,7,8,9-HxCDF	101	40.0 - 130	
Pre-Spike Surrogate			
37Cl-2,3,7,8-TCDD	105	70.0 - 130	
13C-1,2,3,4,7,8-HxCDD	106	70.0 - 130	
13C-2,3,4,7,8-PeCDF	73.9	70.0 - 130	
13C-1,2,3,4,7,8-HxCDF	106	70.0 - 130	
13C-1,2,3,4,7,8,9-HpCDF	124	70.0 - 130	

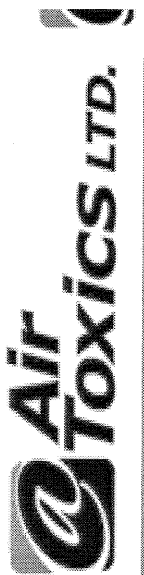
- A Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
- B Analyte is present in Method Blank
- C Chemical Interference
- D Presence of Diphenyl Ethers
- E Analyte concentration is above calibration range
- F Analyte confirmation on secondary column
- J Analyte concentration 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: 1/10/09

Reviewed By: BN

Date: 1/12/09



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

Project Manager: Kelly Buettner Company: Air Toxics Ltd. Address: 180B Blue Ravine State: CA Zip: 95630 Phone: 916-605-3356 City: Folsom FAX: 916-985-1020				Project Information: P.O. # 103P0333.005 Project # 103P0333 Project Name BMI ATL WO# 0812697C				Turn Around Time: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush Specify		Reporting Units: <input type="checkbox"/> ppmv <input type="checkbox"/> ppbv <input type="checkbox"/> ug/m3 <input type="checkbox"/> mg/m3	
Collected By (print and sign):				Relinquished By: (Signature) Date/Time				Relinquished By: (Signature) Date/Time			
Lab I.D. OFF01-122708 OFF02-122708				Field Sample I.D. OFF01-122708 OFF02-122708				Relinquished By: (Signature) Date/Time OFF01-122708 OFF02-122708			
Tube/Cartridge				Date of Collection				Start Time			
12/27/2008				12/27/2008				08:00			
12/27/2008				12/27/2008				08:15			
End Time				Duration				Final Volume			
Analysis Requested				TO-9				TO-9			
Notes:				Pump Calibration Information				Pre-test Flow Rate:			
Post-test Flow Rate:				Average Flow Rate:				Notes:			

Frontier Analytical Laboratory

Sample Login Form

FAL Project ID: **5270**

Client:	Air Toxics
Client Project ID:	103PO333
Date Received:	12/30/2008
Time Received:	12:55 pm
Received By:	GN
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	Yes
Test for residual Chlorine	No
Thiosulfate Added	No
Earliest Sample Hold Time Expiration	01/03/2009
Adequate Sample Volume	Yes
Anomalies or additional comments:	

Chain-of-Custody Record

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.

916-985-1000 main line
916-985-1020 fax line

Page 1 of 1

Project Manager: Kelly Buettner Company: Air Toxics Ltd. Address: 180B Blue Ravine State: CA Zip: 95630 Phone: 916-605-3356				City: Folsom FAX: 916-985-1020		Project Information: P.O. # 103P0333.005 Project # 103P0333 Project Name BMI ATL WO# 0812697C		Turn Around Time: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush Specify	Reporting Units: <input type="checkbox"/> ppmv <input type="checkbox"/> ppbv <input type="checkbox"/> ug/m3 <input type="checkbox"/> mg/m3
Collected By (print and sign):									
Lab I.D.	Field Sample I.D.	Tube/ Cartridge	Date of Collection	Start Time	End Time	Duration	Final Volume	Analysis Requested	
	OFF01-122708		12/27/2008	08:00				TO-9	
	OFF02-122708		12/27/2008	08:15				TO-9	

