



AN ENVIRONMENTAL ANALYTICAL LABORATORY

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12/12/2008

Mr. Doug Herlocker

Tetra Tech

3380 Americana Terrace, Suite 201

Boise ID 83706

Project Name: BMI

Project #: 103P0333

Dear Mr. Doug Herlocker

The following report includes the data for the above referenced project for sample(s) received on 12/1/2008 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-4A are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kelly Buettner at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

A handwritten signature in black ink that reads 'Kelly Buettner'.

Kelly Buettner

Project Manager

**180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630**  
**(916) 985-1000 .FAX (916) 985-1020**  
**Hours 8:00 A.M to 6:00 P.M. Pacific**



AN ENVIRONMENTAL ANALYTICAL LABORATORY

## WORK ORDER #: 0812007A

### Work Order Summary

<b>CLIENT:</b>	Mr. Doug Herlocker Tetra Tech 3380 Americana Terrace, Suite 201 Boise, ID 83706	<b>BILL TO:</b>	Mr. Doug Herlocker Tetra Tech 3380 Americana Terrace, Suite 201 Boise, ID 83706
<b>PHONE:</b>	208-389-1030	<b>P.O. #</b>	103P0333.005
<b>FAX:</b>		<b>PROJECT #</b>	103P0333 BMI
<b>DATE RECEIVED:</b>	12/01/2008	<b>CONTACT:</b>	Kelly Buettner
<b>DATE COMPLETED:</b>	12/12/2008		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>
01A	OFF01-112508	Modified TO-4A
04A	OFF02-112508	Modified TO-4A
05A	Lab Blank	Modified TO-4A
06A	LCS	Modified TO-4A

CERTIFIED BY:

Laboratory Director

DATE: 12/12/08

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,

Accreditation number: E87680, Effective date: 07/01/08, Expiration date: 06/30/09

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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**LABORATORY NARRATIVE**  
**Modified TO-4A**  
**Tetra Tech**  
**Workorder# 0812007A**

Two PUF Cartridge samples were received on December 01, 2008. The laboratory performed analysis via Modified EPA Method TO-4A using GC/ECD. The PUF samples were extracted using Pressurized Fluid Extraction (PFE) by EPA Method 3545A. Following the extraction, the solvent is switched to hexane and the extract concentrated. Analysis is carried out on a HP 5890 GC/ECD and second column confirmation is used to positively identify pesticide results. Duplicate extraction cannot be performed on PUF media, therefore duplicate results are derived from analyzing the extract twice.

Method modifications taken to run these samples include:

<i><b>Requirement</b></i>	<i><b>Method TO-4A</b></i>	<i><b>ATL Modifications</b></i>
Extraction Solvent	10 % Diethyl Ether in Hexane	DCM, exchanging to Hexane during the concentration step.
Reagent Blank	Set up extraction system without filter/PUF; reflux with solvent	No Reagent Blank is extracted. Reagent lots are certified as acceptable prior to use.
Initial Calibration Verification (ICV)	Second source standard analyzed after ICAL; recovery 85 - 115 %	Recovery limits are 85-115% for pesticides; 80-120% for PCBs.
PCB Quantitation	Requires a minimum of 5 peaks	Use 4 peaks for quantitation.
Frequency of Continuing Calibration Verification	Every 10 samples.	Every 20 samples.

**Receiving Notes**

A Temperature Blank was included with the shipment. Temperature was measured and was not within 4±2 °C. Coolant in the form of blue ice was present. Analysis proceeded.

**Analytical Notes**

Sampling volume was supplied by the client. A sample volume of 120 m3 was assumed for all QC samples.

**Definition of Data Qualifying Flags**

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit.

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the detection limit.

M - Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



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## Summary of Detected Compounds MODIFIED EPA METHOD TO-4A GC/ECD

**Client Sample ID: OFF01-112508**

**Lab ID#: 0812007A-01A**

No Detections Were Found.

**Client Sample ID: OFF02-112508**

**Lab ID#: 0812007A-04A**

Compound	Rpt. Limit (ug)	Rpt. Limit (uG/m3)	Amount (ug)	Amount (uG/m3)
alpha-BHC	0.10	0.00088	0.10	0.00090



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Client Sample ID: OFF01-112508

Lab ID#: 0812007A-01A

MODIFIED EPA METHOD TO-4A GC/ECD

File Name:	8120818	Date of Collection: 11/25/08
Dil. Factor:	1.00	Date of Analysis: 12/8/08 09:14 PM
		Date of Extraction: 12/2/08

Compound	Rpt. Limit (ug)	Rpt. Limit (uG/m3)	Amount (ug)	Amount (uG/m3)
Aldrin	0.10	0.00098	Not Detected	Not Detected
alpha-BHC	0.10	0.00098	Not Detected	Not Detected
beta-BHC	0.10	0.00098	Not Detected	Not Detected
delta-BHC	0.10	0.00098	Not Detected	Not Detected
gamma-BHC (Lindane)	0.10	0.00098	Not Detected	Not Detected
alpha-Chlordane	0.10	0.00098	Not Detected	Not Detected
gamma-Chlordane	0.10	0.00098	Not Detected	Not Detected
4,4'-DDD	0.10	0.00098	Not Detected	Not Detected
4,4'-DDE	0.10	0.00098	Not Detected	Not Detected
4,4'-DDT	0.10	0.00098	Not Detected	Not Detected
Dieldrin	0.10	0.00098	Not Detected	Not Detected
Endosulfan I	0.10	0.00098	Not Detected	Not Detected
Endosulfan II	0.10	0.00098	Not Detected	Not Detected
Endosulfan Sulfate	0.10	0.00098	Not Detected	Not Detected
Endrin	0.10	0.00098	Not Detected	Not Detected
Endrin Aldehyde	0.10	0.00098	Not Detected	Not Detected
Endrin Ketone	0.10	0.00098	Not Detected	Not Detected
Heptachlor	0.10	0.00098	Not Detected	Not Detected
Heptachlor Epoxide	0.10	0.00098	Not Detected	Not Detected
4,4'-Methoxychlor	1.0	0.0098	Not Detected	Not Detected
Toxaphene	1.0	0.0098	Not Detected	Not Detected
Aroclor 1016/1242	1.0	0.0098	Not Detected	Not Detected
Aroclor-1221	1.0	0.0098	Not Detected	Not Detected
Aroclor-1232	1.0	0.0098	Not Detected	Not Detected
Aroclor-1248	1.0	0.0098	Not Detected	Not Detected
Aroclor-1254	1.0	0.0098	Not Detected	Not Detected
Aroclor-1260	1.0	0.0098	Not Detected	Not Detected

Air Sample Volume(L): 102000

PCBs were reported from file #8120818a, analyzed on 12/08/08 with a dilution factor of 1.00.

Container Type: PUF Cartridge

Surrogates	%Recovery	Method Limits
2,4,5,6-Tetrachloro-m-xylene	87	60-120
Decachlorobiphenyl	80	60-120



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Client Sample ID: OFF02-112508

Lab ID#: 0812007A-04A

MODIFIED EPA METHOD TO-4A GC/ECD

File Name:	8120819	Date of Collection: 11/25/08
Dil. Factor:	1.00	Date of Analysis: 12/8/08 09:53 PM
		Date of Extraction: 12/2/08

Compound	Rpt. Limit (ug)	Rpt. Limit (uG/m3)	Amount (ug)	Amount (uG/m3)
Aldrin	0.10	0.00088	Not Detected	Not Detected
alpha-BHC	0.10	0.00088	0.10	0.00090
beta-BHC	0.10	0.00088	Not Detected	Not Detected
delta-BHC	0.10	0.00088	Not Detected	Not Detected
gamma-BHC (Lindane)	0.10	0.00088	Not Detected	Not Detected
alpha-Chlordane	0.10	0.00088	Not Detected	Not Detected
gamma-Chlordane	0.10	0.00088	Not Detected	Not Detected
4,4'-DDD	0.10	0.00088	Not Detected	Not Detected
4,4'-DDE	0.10	0.00088	Not Detected	Not Detected
4,4'-DDT	0.10	0.00088	Not Detected	Not Detected
Dieldrin	0.10	0.00088	Not Detected	Not Detected
Endosulfan I	0.10	0.00088	Not Detected	Not Detected
Endosulfan II	0.10	0.00088	Not Detected	Not Detected
Endosulfan Sulfate	0.10	0.00088	Not Detected	Not Detected
Endrin	0.10	0.00088	Not Detected	Not Detected
Endrin Aldehyde	0.10	0.00088	Not Detected	Not Detected
Endrin Ketone	0.10	0.00088	Not Detected	Not Detected
Heptachlor	0.10	0.00088	Not Detected	Not Detected
Heptachlor Epoxide	0.10	0.00088	Not Detected	Not Detected
4,4'-Methoxychlor	1.0	0.0088	Not Detected	Not Detected
Toxaphene	1.0	0.0088	Not Detected	Not Detected
Aroclor 1016/1242	1.0	0.0088	Not Detected	Not Detected
Aroclor-1221	1.0	0.0088	Not Detected	Not Detected
Aroclor-1232	1.0	0.0088	Not Detected	Not Detected
Aroclor-1248	1.0	0.0088	Not Detected	Not Detected
Aroclor-1254	1.0	0.0088	Not Detected	Not Detected
Aroclor-1260	1.0	0.0088	Not Detected	Not Detected

Air Sample Volume(L): 114000

PCBs were reported from file #8120819a, analyzed on 12/08/08 with a dilution factor of 1.00.

Container Type: PUF Cartridge

Surrogates	%Recovery	Method Limits
2,4,5,6-Tetrachloro-m-xylene	96	60-120
Decachlorobiphenyl	83	60-120



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Client Sample ID: Lab Blank

Lab ID#: 0812007A-05A

MODIFIED EPA METHOD TO-4A GC/ECD

File Name:	8120815	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/8/08 07:16 PM
		Date of Extraction: 12/2/08

Compound	Rpt. Limit (ug)	Rpt. Limit (uG/m3)	Amount (ug)	Amount (uG/m3)
Aldrin	0.10	0.00083	Not Detected	Not Detected
alpha-BHC	0.10	0.00083	Not Detected	Not Detected
beta-BHC	0.10	0.00083	Not Detected	Not Detected
delta-BHC	0.10	0.00083	Not Detected	Not Detected
gamma-BHC (Lindane)	0.10	0.00083	Not Detected	Not Detected
alpha-Chlordane	0.10	0.00083	Not Detected	Not Detected
gamma-Chlordane	0.10	0.00083	Not Detected	Not Detected
4,4'-DDD	0.10	0.00083	Not Detected	Not Detected
4,4'-DDE	0.10	0.00083	Not Detected	Not Detected
4,4'-DDT	0.10	0.00083	Not Detected	Not Detected
Dieldrin	0.10	0.00083	Not Detected	Not Detected
Endosulfan I	0.10	0.00083	Not Detected	Not Detected
Endosulfan II	0.10	0.00083	Not Detected	Not Detected
Endosulfan Sulfate	0.10	0.00083	Not Detected	Not Detected
Endrin	0.10	0.00083	Not Detected	Not Detected
Endrin Aldehyde	0.10	0.00083	Not Detected	Not Detected
Endrin Ketone	0.10	0.00083	Not Detected	Not Detected
Heptachlor	0.10	0.00083	Not Detected	Not Detected
Heptachlor Epoxide	0.10	0.00083	Not Detected	Not Detected
4,4'-Methoxychlor	1.0	0.0083	Not Detected	Not Detected
Toxaphene	1.0	0.0083	Not Detected	Not Detected
Aroclor 1016/1242	1.0	0.0083	Not Detected	Not Detected
Aroclor-1221	1.0	0.0083	Not Detected	Not Detected
Aroclor-1232	1.0	0.0083	Not Detected	Not Detected
Aroclor-1248	1.0	0.0083	Not Detected	Not Detected
Aroclor-1254	1.0	0.0083	Not Detected	Not Detected
Aroclor-1260	1.0	0.0083	Not Detected	Not Detected

Air Sample Volume(L): 120000

PCBs were reported from file #8120815a, analyzed on 12/08/08 with a dilution factor of 1.00.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
2,4,5,6-Tetrachloro-m-xylene	82	60-120
Decachlorobiphenyl	81	60-120





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Client Sample ID: LCS

Lab ID#: 0812007A-06A

MODIFIED EPA METHOD TO-4A GC/ECD

File Name:	8120816	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/8/08 07:55 PM
		Date of Extraction: 12/2/08

Compound	%Recovery
Aldrin	85
alpha-BHC	Not Spiked
beta-BHC	Not Spiked
delta-BHC	Not Spiked
gamma-BHC (Lindane)	88
alpha-Chlordane	Not Spiked
gamma-Chlordane	Not Spiked
4,4'-DDD	Not Spiked
4,4'-DDE	Not Spiked
4,4'-DDT	90
Dieldrin	93
Endosulfan I	Not Spiked
Endosulfan II	Not Spiked
Endosulfan Sulfate	Not Spiked
Endrin	94
Endrin Aldehyde	Not Spiked
Endrin Ketone	Not Spiked
Heptachlor	96
Heptachlor Epoxide	Not Spiked
4,4'-Methoxychlor	Not Spiked
Toxaphene	Not Spiked
Aroclor 1016/1242	87
Aroclor-1221	Not Spiked
Aroclor-1232	Not Spiked
Aroclor-1248	Not Spiked
Aroclor-1254	Not Spiked
Aroclor-1260	98

Air Sample Volume(L): 120000

PCBs were reported from file #8120817, analyzed on 12/08/08 with a dilution factor of 1.00.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
2,4,5,6-Tetrachloro-m-xylene	90	60-120
Decachlorobiphenyl	82	60-120