



AN ENVIRONMENTAL ANALYTICAL LABORATORY

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2/3/2009

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 1/21/2009 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'. The signature is fluid and cursive, with the first and last names being clearly legible.

Kelly Buettner  
Project Manager



AN ENVIRONMENTAL ANALYTICAL LABORATORY

## WORK ORDER #: 0901358A

### 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>	01/21/2009	<b>CONTACT:</b>	Kelly Buettner
<b>DATE COMPLETED:</b>	02/03/2009		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>
01A	BMI11-011609	Modified TO-4A
04A	BMI06-011609	Modified TO-4A
05A	Lab Blank	Modified TO-4A
06A	LCS	Modified TO-4A

CERTIFIED BY:

Laboratory Director

DATE: 02/03/09

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# 0901358A**

Two PUF Cartridge samples were received on January 21, 2009. 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**

There were no receiving discrepancies.

**Analytical Notes**

Sampling volume was supplied by the client. A sample volume of 420 m<sup>3</sup> 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: BMI11-011609

Lab ID#: 0901358A-01A

Compound	Rpt. Limit (ug)	Rpt. Limit (uG/m3)	Amount (ug)	Amount (uG/m3)
alpha-BHC	0.10	0.00024	0.14	0.00034

Client Sample ID: BMI06-011609

Lab ID#: 0901358A-04A

Compound	Rpt. Limit (ug)	Rpt. Limit (uG/m3)	Amount (ug)	Amount (uG/m3)
alpha-BHC	0.10	0.00048	0.31	0.0015
4,4'-DDE	0.10	0.00048	0.11	0.00055



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Client Sample ID: BMI11-011609

Lab ID#: 0901358A-01A

MODIFIED EPA METHOD TO-4A GC/ECD

File Name:	8012313	Date of Collection: 1/16/09
Dil. Factor:	1.00	Date of Analysis: 1/23/09 04:47 PM
		Date of Extraction: 1/21/09

Compound	Rpt. Limit (ug)	Rpt. Limit (uG/m3)	Amount (ug)	Amount (uG/m3)
Aldrin	0.10	0.00024	Not Detected	Not Detected
alpha-BHC	0.10	0.00024	0.14	0.00034
beta-BHC	0.10	0.00024	Not Detected	Not Detected
delta-BHC	0.10	0.00024	Not Detected	Not Detected
gamma-BHC (Lindane)	0.10	0.00024	Not Detected	Not Detected
alpha-Chlordane	0.10	0.00024	Not Detected	Not Detected
gamma-Chlordane	0.10	0.00024	Not Detected	Not Detected
4,4'-DDD	0.10	0.00024	Not Detected	Not Detected
4,4'-DDE	0.10	0.00024	Not Detected	Not Detected
4,4'-DDT	0.10	0.00024	Not Detected	Not Detected
Dieldrin	0.10	0.00024	Not Detected	Not Detected
Endosulfan I	0.10	0.00024	Not Detected	Not Detected
Endosulfan II	0.10	0.00024	Not Detected	Not Detected
Endosulfan Sulfate	0.10	0.00024	Not Detected	Not Detected
Endrin	0.10	0.00024	Not Detected	Not Detected
Endrin Aldehyde	0.10	0.00024	Not Detected	Not Detected
Endrin Ketone	0.10	0.00024	Not Detected	Not Detected
Heptachlor	0.10	0.00024	Not Detected	Not Detected
Heptachlor Epoxide	0.10	0.00024	Not Detected	Not Detected
4,4'-Methoxychlor	1.0	0.0024	Not Detected	Not Detected
Toxaphene	1.0	0.0024	Not Detected	Not Detected
Aroclor 1016/1242	1.0	0.0024	Not Detected	Not Detected
Aroclor-1221	1.0	0.0024	Not Detected	Not Detected
Aroclor-1232	1.0	0.0024	Not Detected	Not Detected
Aroclor-1248	1.0	0.0024	Not Detected	Not Detected
Aroclor-1254	1.0	0.0024	Not Detected	Not Detected
Aroclor-1260	1.0	0.0024	Not Detected	Not Detected

Air Sample Volume(L): 418000

PCBs were reported from file #8012313a, analyzed on 1/23/09 with a dilution factor of 1.00.

Container Type: PUF Cartridge

Surrogates	%Recovery	Method Limits
2,4,5,6-Tetrachloro-m-xylene	110	60-120
Decachlorobiphenyl	93	60-120



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: BMI06-011609

Lab ID#: 0901358A-04A

MODIFIED EPA METHOD TO-4A GC/ECD

File Name:	8012314	Date of Collection:	1/16/09
Dil. Factor:	1.00	Date of Analysis:	1/23/09 05:26 PM
		Date of Extraction:	1/21/09

Compound	Rpt. Limit (ug)	Rpt. Limit (uG/m3)	Amount (ug)	Amount (uG/m3)
Aldrin	0.10	0.00048	Not Detected	Not Detected
alpha-BHC	0.10	0.00048	0.31	0.0015
beta-BHC	0.10	0.00048	Not Detected	Not Detected
delta-BHC	0.10	0.00048	Not Detected	Not Detected
gamma-BHC (Lindane)	0.10	0.00048	Not Detected	Not Detected
alpha-Chlordane	0.10	0.00048	Not Detected	Not Detected
gamma-Chlordane	0.10	0.00048	Not Detected	Not Detected
4,4'-DDD	0.10	0.00048	Not Detected	Not Detected
4,4'-DDE	0.10	0.00048	0.11	0.00055
4,4'-DDT	0.10	0.00048	Not Detected	Not Detected
Dieldrin	0.10	0.00048	Not Detected	Not Detected
Endosulfan I	0.10	0.00048	Not Detected	Not Detected
Endosulfan II	0.10	0.00048	Not Detected	Not Detected
Endosulfan Sulfate	0.10	0.00048	Not Detected	Not Detected
Endrin	0.10	0.00048	Not Detected	Not Detected
Endrin Aldehyde	0.10	0.00048	Not Detected	Not Detected
Endrin Ketone	0.10	0.00048	Not Detected	Not Detected
Heptachlor	0.10	0.00048	Not Detected	Not Detected
Heptachlor Epoxide	0.10	0.00048	Not Detected	Not Detected
4,4'-Methoxychlor	1.0	0.0048	Not Detected	Not Detected
Toxaphene	1.0	0.0048	Not Detected	Not Detected
Aroclor 1016/1242	1.0	0.0048	Not Detected	Not Detected
Aroclor-1221	1.0	0.0048	Not Detected	Not Detected
Aroclor-1232	1.0	0.0048	Not Detected	Not Detected
Aroclor-1248	1.0	0.0048	Not Detected	Not Detected
Aroclor-1254	1.0	0.0048	Not Detected	Not Detected
Aroclor-1260	1.0	0.0048	Not Detected	Not Detected

Air Sample Volume(L): 206000

PCBs were reported from file #8012314a, analyzed on 1/23/09 with a dilution factor of 1.00.

Container Type: PUF Cartridge

Surrogates	%Recovery	Method Limits
2,4,5,6-Tetrachloro-m-xylene	110	60-120
Decachlorobiphenyl	96	60-120



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Client Sample ID: Lab Blank

Lab ID#: 0901358A-05A

MODIFIED EPA METHOD TO-4A GC/ECD

File Name:	8012306	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/23/09 12:13 PM
		Date of Extraction: 1/21/09

Compound	Rpt. Limit (ug)	Rpt. Limit (uG/m3)	Amount (ug)	Amount (uG/m3)
Aldrin	0.10	0.00024	Not Detected	Not Detected
alpha-BHC	0.10	0.00024	Not Detected	Not Detected
beta-BHC	0.10	0.00024	Not Detected	Not Detected
delta-BHC	0.10	0.00024	Not Detected	Not Detected
gamma-BHC (Lindane)	0.10	0.00024	Not Detected	Not Detected
alpha-Chlordane	0.10	0.00024	Not Detected	Not Detected
gamma-Chlordane	0.10	0.00024	Not Detected	Not Detected
4,4'-DDD	0.10	0.00024	Not Detected	Not Detected
4,4'-DDE	0.10	0.00024	Not Detected	Not Detected
4,4'-DDT	0.10	0.00024	Not Detected	Not Detected
Dieldrin	0.10	0.00024	Not Detected	Not Detected
Endosulfan I	0.10	0.00024	Not Detected	Not Detected
Endosulfan II	0.10	0.00024	Not Detected	Not Detected
Endosulfan Sulfate	0.10	0.00024	Not Detected	Not Detected
Endrin	0.10	0.00024	Not Detected	Not Detected
Endrin Aldehyde	0.10	0.00024	Not Detected	Not Detected
Endrin Ketone	0.10	0.00024	Not Detected	Not Detected
Heptachlor	0.10	0.00024	Not Detected	Not Detected
Heptachlor Epoxide	0.10	0.00024	Not Detected	Not Detected
4,4'-Methoxychlor	1.0	0.0024	Not Detected	Not Detected
Toxaphene	1.0	0.0024	Not Detected	Not Detected
Aroclor 1016/1242	1.0	0.0024	Not Detected	Not Detected
Aroclor-1221	1.0	0.0024	Not Detected	Not Detected
Aroclor-1232	1.0	0.0024	Not Detected	Not Detected
Aroclor-1248	1.0	0.0024	Not Detected	Not Detected
Aroclor-1254	1.0	0.0024	Not Detected	Not Detected
Aroclor-1260	1.0	0.0024	Not Detected	Not Detected

Air Sample Volume(L): 420000

PCBs were reported from file #8012306a, analyzed on 1/23/09 with a dilution factor of 1.00.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
2,4,5,6-Tetrachloro-m-xylene	100	60-120
Decachlorobiphenyl	93	60-120





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Client Sample ID: LCS

Lab ID#: 0901358A-06A

MODIFIED EPA METHOD TO-4A GC/ECD

File Name:	8012309	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/23/09 02:10 PM
		Date of Extraction: 1/21/09

Compound	%Recovery
Aldrin	92
alpha-BHC	Not Spiked
beta-BHC	Not Spiked
delta-BHC	Not Spiked
gamma-BHC (Lindane)	94
alpha-Chlordane	Not Spiked
gamma-Chlordane	Not Spiked
4,4'-DDD	Not Spiked
4,4'-DDE	Not Spiked
4,4'-DDT	88
Dieldrin	91
Endosulfan I	Not Spiked
Endosulfan II	Not Spiked
Endosulfan Sulfate	Not Spiked
Endrin	92
Endrin Aldehyde	Not Spiked
Endrin Ketone	Not Spiked
Heptachlor	98
Heptachlor Epoxide	Not Spiked
4,4'-Methoxychlor	Not Spiked
Toxaphene	Not Spiked
Aroclor 1016/1242	83
Aroclor-1221	Not Spiked
Aroclor-1232	Not Spiked
Aroclor-1248	Not Spiked
Aroclor-1254	Not Spiked
Aroclor-1260	87

Air Sample Volume(L): 420000

PCBs were reported from file #8012308, analyzed on 1/23/09 with a dilution factor of 1.00.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
2,4,5,6-Tetrachloro-m-xylene	114	60-120
Decachlorobiphenyl	103	60-120