

Inhalation Pathway Interim Measures Tier 3 Sampling Report

for

**650, 654, 660, & 670 South Lucile Street
Seattle, Washington**

PREPARED BY:

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ACRONYMS AND ABBREVIATIONS

Acronym	Explanation
CEF	Cancer Exceedance Factors
DL	Detection Limits
Ecology	Washington State Department of Ecology
IPIM	Inhalation Pathway Interim Measure
IPIMAL	Inhalation Pathway Interim Measure Action Levels
NCEF	Noncancer Exceedance Factors
MTCA	Model Toxics Control Act
PCE	Tetrachloroethylene
PSC	Philip Services Corporation
TCE	Trichloroethylene
ug/L	micrograms per liter
ug/m ³	micrograms per cubic meter
VOC	Volatile Organic Compound
WAC	Washington Administrative Code

SECTION 1 – INTRODUCTION

Philip Services Corporation (PSC) owns a former Resource Conservation and Recovery Act (RCRA) permitted waste management building on 734 South Lucile Street in the Georgetown community of Seattle, Washington. PSC is conducting corrective action at its Georgetown facility per requirements contained in its RCRA dangerous waste permit (WAD 00081 2909).

PSC is conducting inhalation pathway interim measures (IPIMs) to address the potential for vapor intrusion from groundwater to contaminate indoor air in buildings that reside above groundwater that have concentrations of volatile organic compounds (VOCs) that exceed action levels protective of this exposure pathway. This pathway is evaluated under the Washington State Model Toxics Control Act (MTCA), pursuant to Washington Administrative Code (WAC) 173-340-350, 173-340-720(1)(c), 173-340-720(1)(d)(iv), and 173-340-750. All IPIM work conducted for this report was implemented following methodologies in the approved IPIM Work Plan (PSC, 2002). All groundwater data collected for this IPIM were compared to IPIM action levels (IPIMALs), as provided in the Revised IPIM Technical Memorandum 1 (PSC, 2003)¹.

The area of concern is between the PSC Georgetown facility and the Duwamish Waterway in areas known or reasonably expected to have VOC contamination in the shallow aquifer. As a requirement of the Work Plan, PSC identified buildings that may have exposures to VOCs above levels of concern. Based on agreements with individual property owners and tenants, where applicable, these buildings were sampled to determine whether or not contaminants in groundwater are contributing to excess indoor air contamination that should be mitigated by an IPIM depressurization system.

This report describes the results of environmental sampling conducted at the commercial building at 650, 654, 660, and, 670 South Lucile Street on August 18, 2005.

The building is constructed on a above-grade slab with concrete exterior walls and a flat roof. The building consists of four tenant spaces with each having office and warehouse space. Figure 1 shows the building configuration.

The tenant space at 670 South Lucile Street is located on the eastern side of the building. Safety Team, a commercial safety supply business that delivers safety equipment such as fire extinguishers to businesses, occupies it. 670 South Lucile Street has an office in the front of the building (south side) and a warehouse in the rear (north side) of the building. The office contains cubicles and three individual offices along the eastern wall of the building. The office area is carpeted and the ceilings are approximately eight to nine feet tall. The warehouse ceilings are

¹ The IPIMALs were recalculated using the most current toxicity information in April 2005.

IPIM TIER 3 SAMPLING REPORT FOR 650, 654, 660, 670 SOUTH LUCILE STREET

approximately 20 to 30 feet tall and the floors are concrete. There is a garage door on the east side of the warehouse that is opened periodically.

The tenant space at 660 South Lucile Street is located immediately to the west of 670 South Lucile Street and vacant during the sampling event. 660 South Lucile Street has an office in the front (south side) of the space and a warehouse in the rear (north side) of the space. The office consists of one small open carpeted office area with ceilings that are approximately eight to nine feet tall. The warehouse ceilings are approximately 20 to 30 feet tall and the floors are concrete. There are garage doors located on the north side of the warehouse for loading and unloading.

The tenant space 654 South Lucile Street is located immediately to the west of 660 South Lucile Street and is currently vacant. 654 South Lucile Street has an office area in the front (south side) of the space and a warehouse in the rear (north side) of the space. The office area consists of a reception area up front and several separate offices surrounding it, as shown in Figure 1. The office area is carpeted and tiled and the ceilings are approximately eight to nine feet tall. The warehouse ceilings are approximately 20 to 30 feet tall and the floors are concrete.

The tenant space at 650 South Lucile is the space most western in the building. 650 South Lucile has an open office area with two small separate offices on the west side of the space. The office area is carpeted and the ceilings are approximately eight to nine feet tall.

SECTION 2 – SUMMARY OF THE ENVIRONMENTAL SAMPLING

2.1 Sample Collection and Analyses Summary

This report describes the results of environmental sampling conducted at 650, 654, 660 & 670 South Lucile Street on August 18, 2005. During this sampling event the following samples were collected:

- Four indoor air samples were collected. Two indoor air samples (one regular, one duplicate) were collected from the small office on the south side of tenant space 670. One indoor air sample was collected from the office area on the south side of tenant space 660 and one indoor air sample was collected in the office area in tenant space 654.
- One ambient air sample was collected 30 feet from the north side of the building at a height of 10 feet.
- Two groundwater samples were collected from PSC permanent monitoring wells CG-124-WT and CG-113-S1.

No sub-slab soil gas samples were collected at the request of the property owner.

Figures 1 & 2 show the locations of these samples.

The weather during sampling was partly sunny and in the 70 to 80-degree (F) temperature range. The wind was from the northerly direction at approximately 2-7 mph. Barometric pressure remained relatively steady during the sampling event. No precipitation was recorded. These are acceptable weather conditions for indoor air and soil gas sampling, per the Sampling and Analysis Plan in the Revised IPIM Work Plan (PSC, 2002).

There were no significant problems encountered during the sampling event.

The groundwater samples were sent to Columbia Analytical Services in Kelso, Washington for analysis by EPA Method 8260 SIM and the air samples were sent to Air Toxics Laboratory in Folsom, California for analysis by EPA Method TO-14/15. All data had full data validation packages produced and an independent professional data validator validated all data. Six groundwater samples were qualified as estimated (*J*). No results required restatement as undetected (*U*) or rejected (*R*). The data validator found all the data to be usable for risk analyses. The validator's report is attached in Appendix B.

SECTION 3 – RESULTS AND RISK EVALUATION

3.1 Sampling Results

The sampling results for 650, 654, 660, and, 670 South Lucile Street are provided in Table 1. The detection limits (DLs) for naphthalene, propylbenzene, and sec-butylbenzene exceeded their respective commercial IPIMALs for air in both indoor air samples and ambient air samples (see Table 2). However, these constituents are not typically detected in groundwater associated with the former PSC facility. Therefore, the impact of these elevated DLs on the evaluation is minimal.

3.2 Risk Evaluation

3.2.1 Summary of the Approach

Per the Revised IPIM Work Plan (PSC, 2002), indoor air concentrations were corrected by subtracting the maximum detected ambient air concentration from the maximum detected indoor air concentration, to account for the contribution of ambient air to the measured indoor air concentrations. Noncancer exceedance factors (NCEFs) were calculated by dividing the corrected indoor air concentrations by noncancer-based indoor air IPIMALs. Cancer exceedance factors (CEFs) were calculated by dividing the corrected indoor air concentrations by cancer-based indoor air IPIMALs. The individual NCEFs and CEFs were summed to provide the total NCEF and CEF.

3.2.2 Risk Evaluation Results

The results of the risk evaluation performed at 650, 654, 660, and, 670 South Lucile Street are presented in Table 3. 1,1,1-Trichloroethane, 1,1-dichloroethylene, 1,2,4-trimethylebenzene, 1,3,5-trimthylebenzene, benzene, chloroform, ethylbenzene, tetrachloroethylene (PCE), toluene, and trichloroethylene (TCE) were the constituents detected in groundwater and indoor air at this location. Per the Work Plan (PSC, 2002), no exceedances were calculated for 1,2,4-trimethylebenzene, 1,3,5-trimthylebenzene, benzene, and PCE because the ambient air concentrations were greater than the indoor air, which indicates that there may be other source[s] of these constituents in the area, and that vapor intrusion from groundwater is not significantly contributing to the concentration of these constituents detected in indoor air. However, for the other constituents detected in groundwater and indoor air, the indoor air concentration exceeded the ambient air concentration. For these constituents, the total NCEF at this location is 0.2 and the total CEF at this location is 2.5. The total NCEF is below the Washington State Department of Ecology's (Ecology) noncancer benchmark of 10 and the total CEF is also below Ecology's cancer benchmark of 10 (PSC, 2002).

SECTION 4 – CONCLUSIONS

The results of groundwater, indoor air, and ambient air sampling indicate that indoor air concentrations, associated with volatilization from groundwater, at 650, 654, 660, and 670 South Lucile Street are below Ecology's health risk benchmarks. Therefore, PSC recommends that no further action be taken at this time. However, PSC will continue to periodically evaluate groundwater from wells near the building to determine if conditions change in the future.

REFERENCES

- Philip Services Corporation (PSC). 2002. Revised Inhalation Pathway Interim Measures Work Plan, August 12, 2002 and Errata Document, September 17, 2002.
- Philip Services Corporation (PSC). 2003. Revised Inhalation Pathway Interim Measure, Technical Memorandum 1: Development of GIVFs, Evaluation of Tier 3 Data from GIVF Study, and Evaluation of 2nd Quarter 2002 Groundwater Data. February 2003.

TABLES

Table 1 - Tier 3 Sampling Results for 650, 654, 660, & 670 South Lucile Street

Constituent	Groundwater (ug/L)		Indoor Air (ug/m ³)				Ambient Air (ug/m ³)	Commercial Groundwater IPIMAL (ug/L)		Commercial Air IPIMAL (ug/m ³)	
	CG-113-S1-0805_081805	CG-124-WT-0805_081805	654L-IA1_081805	660L-IA1_081805	670L-9-IA1_081805	670L-IA1_081805	660L-AA1_081805	Noncancer	Cancer	Noncancer	Cancer
	1,1,1-Trichloroethane	2.3	5.8	0.2	0.2	4.2	4.2	0.2 U	4662.64	--	429.24
1,1-Dichloroethane	42	12	0.14 U	0.14 U	0.14 U	0.14 U	0.15 U	3200.44	--	97.33	--
1,1-Dichloroethylene	0.11	11.9	0.069 U	0.068 U	0.068 U	0.072	0.072 U	226.57	--	38.93	--
1,2,4-Trimethylbenzene	22	1 U	1.1	0.7	0.94	0.93	3.2	55.42	--	1.16	--
1,2-Dichloroethane	1 U	0.22 [J]	0.071 U	0.069 U	0.069 U	0.069 U	0.074 U	127.80	30.09	0.95	0.22
1,3,5-Trimethylbenzene	6.1	1 U	0.34	0.25	0.34	0.33	0.7	41.57	--	1.16	--
2-Hexanone	10 U	10 U	0.72 U	0.7 U	0.7 U	0.7 U	0.75 U	2593.26	--	3.41	--
Benzene	1.8	10.9	2.7	1.7	2	2	5.2	174.86	22.42	5.84	0.75
Chloroethane	71	1 U	0.23 U	0.22 U	0.22 U	0.22 U	0.24 U	23154.44	--	1946.67	--
Chloroform	1 U	0.33 [J]	0.21	0.16	0.36	0.38	0.11	360.47	9.60	9.54	0.25
Ethylbenzene	160 D	1 U	5.5	4.2	3.3	3.3	3.5	5375.74	--	194.67	--
Naphthalene	2.87	1 U	4.6 U	4.5 U	4.5 U	4.5 U	4.8 U	251.91	--	0.58	--
Propylbenzene	3.7	1 U	8.6 U	8.4 U	8.4 U	8.4 U	9 U	114.40	--	6.81	--
Tetrachloroethylene (PCE)	1.2	7.2	0.38	0.34	0.36	0.37	0.81	1391.87	11.70	115.83	0.97
Toluene	0.91 [J]	10.4	11	18	14	14	4.8	2112.67	--	77.87	--
Trichloroethylene (TCE)	1.3	27	0.18	0.2	0.15	0.17	0.13	125.92	0.90	6.81	0.05
Vinyl chloride	2.5	8.3	0.045 U	0.044 U	0.044 U	0.044 U	0.047 U	87.83	2.99	19.47	0.66
cis-1,2-Dichloroethylene	4.2	11	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	309.61	--	6.81	--
p-Isopropyltoluene	0.37 [J]	1 U	4.8 U	4.7 U	4.7 U	4.7 U	5 U	318.95	--	77.87	--
sec-Butylbenzene	0.43 [J]	1 U	9.6 U	9.4 U	9.4 U	9.4 U	10 U	98.54	--	6.81	--
trans-1,2-Dichloroethylene	0.66 [J]	0.78 [J]	0.69 U	0.68 U	0.68 U	0.68 U	0.72 U	277.91	--	13.63	--

Notes:

-- = No value

IPIMAL = Inhalation Pathway Interim Measure Action Level

The IPIMALs were developed based on a Commercial Exposure Scenario using the following target risk goals for individual constituents:

Cancer Risk (CR) = 1E-06

Hazard Quotient (HQ) = 0.1

Noncancer = Noncancer-Based IPIMAL

Cancer = Cancer-Based IPIMAL

The Data Qualifiers presented in this table are:

D - The constituent was detected in a sample that required dilution.

J - The constituent was detected and the concentration is estimated.

U - The constituent was not detected (the reporting limit is presented).

ug/L = micrograms per liter

ug/m³ = micrograms per cubic meter

Table 2 - Constituents with Detection Limits that Exceed IPIMALs

Constituent	Maximum Groundwater Concentration (ug/L)	Maximum Indoor Air Concentration (ug/m³)	Maximum Ambient Air Concentration (ug/m³)	Commercial Air IPIMAL (ug/m³)
Naphthalene	2.87 (detected)	4.6 U	4.8 U	0.6
Propylbenzene	3.7 (detected)	8.6 U	9 U	6.8
sec-Butylbenzene	0.43 (detected)	9.6 U	10 U	6.8

Notes:

IPIMAL = Inhalation Pathway Interim Measure Action Level

The Data Qualifiers presented in this table are:

U - The constituent was not detected (the reporting limit is presented).

ug/L = micrograms per liter

ug/m³ = micrograms per cubic meter

Table 3 - Tier 3 IPIM Risk Evaluation for 650, 654, 660, & 670 South Lucile Street

Constituent	Commercial Groundwater IPIMAL (ug/L)		Commercial Air IPIMAL (ug/m ³)		Maximum Groundwater Concentration (ug/L)	Maximum Sub-Slab Soil Gas Concentration (ug/m ³)	Maximum Indoor Air Concentration (ug/m ³)	Maximum Ambient Air Concentration (ug/m ³)	Corrected Indoor Air Concentration (IA - AA) (ug/m ³)	Constituents Detected in Groundwater and Indoor Air	
	Noncancer	Cancer	Noncancer	Cancer						NCEF	CEF
1,1,1-Trichloroethane	4662.64	--	429.24	--	5.8	--	4.2	--	4.2	0.01	--
1,1-Dichloroethane	3200.44	--	97.33	--	42	--	--	--	--	--	--
1,1-Dichloroethylene	226.57	--	38.93	--	11.9	--	0.072	--	0.072	0.002	--
1,2,4-Trimethylbenzene	55.42	--	1.16	--	22	--	1.1	3.2	--	--	--
1,2-Dichloroethane	127.80	30.09	0.95	0.22	0.22	--	--	--	--	--	--
1,3,5-Trimethylbenzene	41.57	--	1.16	--	6.1	--	0.34	0.7	--	--	--
2-Hexanone	2593.26	--	3.41	--	0	--	--	--	--	--	--
Benzene	174.86	22.42	5.84	0.75	10.9	--	2.7	5.2	--	--	--
Chloroethane	23154.44	--	1946.67	--	71	--	--	--	--	--	--
Chloroform	360.47	9.60	9.54	0.25	0.33	--	0.38	0.11	0.27	0.03	1.06
Ethylbenzene	5375.74	--	194.67	--	160	--	5.5	3.5	2	0.01	--
Naphthalene	251.91	--	0.58	--	2.87	--	--	--	--	--	--
Propylbenzene	114.40	--	6.81	--	3.7	--	--	--	--	--	--
Tetrachloroethylene (PCE)	1391.87	11.70	115.83	0.97	7.2	--	0.38	0.81	--	--	--
Toluene	2112.67	--	77.87	--	10.4	--	18	4.8	13.2	0.17	--
Trichloroethylene (TCE)	125.92	0.90	6.81	0.05	27	--	0.2	0.13	0.07	0.01	1.4
Vinyl chloride	87.83	2.99	19.47	0.66	8.3	--	--	--	--	--	--
cis-1,2-Dichloroethylene	309.61	--	6.81	--	11	--	--	--	--	--	--
p-Isopropyltoluene	318.95	--	77.87	--	0.37	--	--	--	--	--	--
sec-Butylbenzene	98.54	--	6.81	--	0.43	--	--	--	--	--	--
trans-1,2-Dichloroethylene	277.91	--	13.63	--	0.78	--	--	--	--	--	--
Total										0.2	2.5

Notes:

-- = No value

IPIMAL = Inhalation Pathway Interim Measure Action Level

The IPIMALs were developed based on a Commercial Exposure Scenario using the following target risk goals for individual constituents:

Cancer Risk (CR) = 1E-06

Hazard Quotient (HQ) = 0.1

Noncancer = Noncancer-Based IPIMAL

Cancer = Cancer-Based IPIMAL

IA = Indoor Air

AA = Ambient Air

NCEF = Noncancer Exceedance Factor = Corrected Indoor Air Concentration / Noncancer IPIMAL

CEF = Cancer Exceedance Factor = Corrected Indoor Air Concentration / Cancer IPIMAL

NCEFs and CEFs were only calculated for constituents that exhibited a complete exposure pathway for the groundwater to

indoor air vapor intrusion pathway (i.e. the constituent was detected in groundwater and indoor air)

ug/L = micrograms per liter

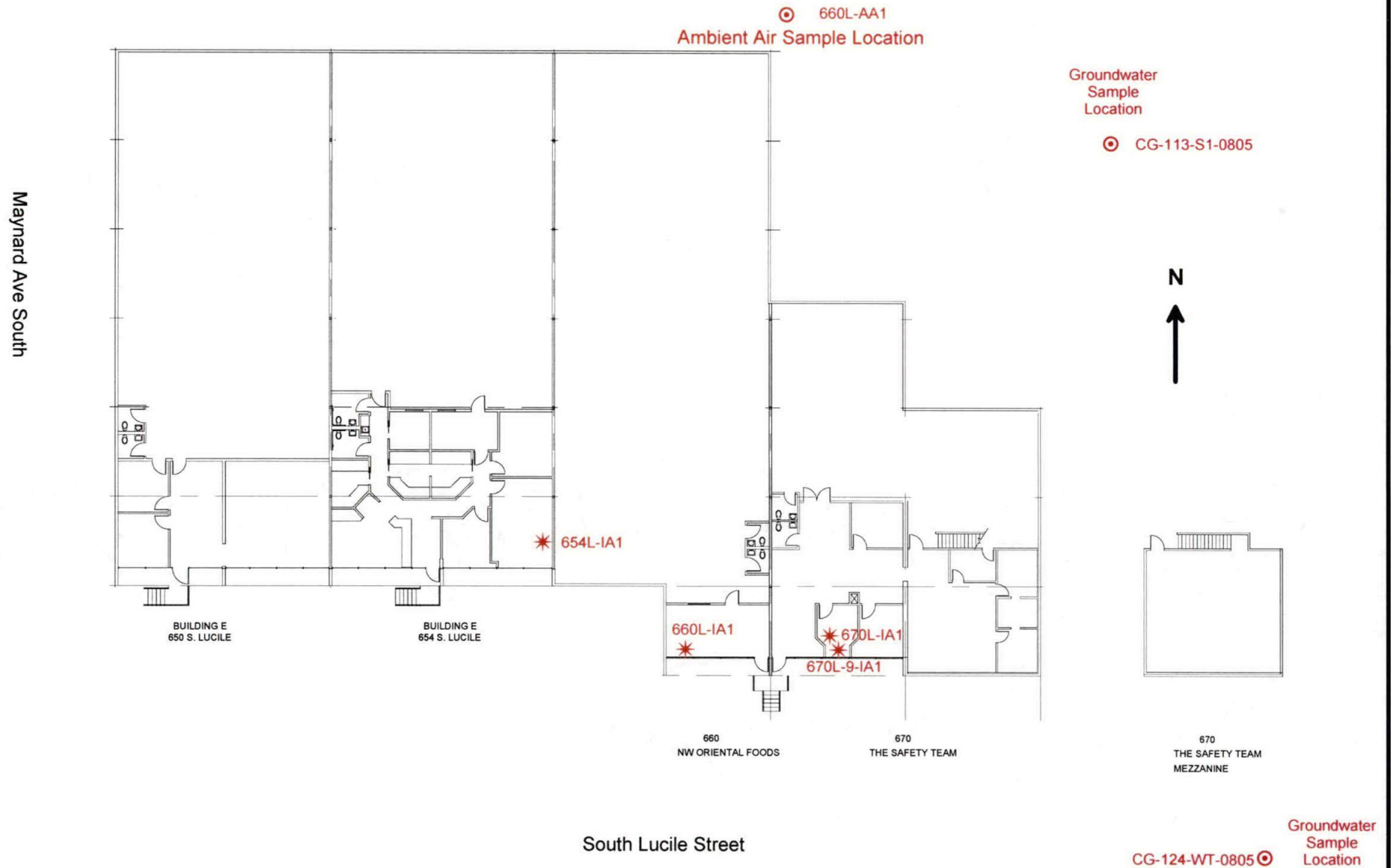
ug/m³ = micrograms per cubic meter

FIGURES

TIER 3 SAMPLING SUPPLEMENTAL INHALATION PATHWAY INTERIM MEASURE SAMPLE LOCATIONS FOR

Figure 1

The building located at
650, 654, 660 and 670 S Lucile Street
Seattle, Washington



APPENDIX A

Laboratory Analytical Data



AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Air Toxics Ltd. Introduces the Electronic Report

Thank you for choosing Air Toxics Ltd. To better serve our customers, we are providing your report by e-mail. This document is provided in Portable Document Format which can be viewed with Acrobat Reader by Adobe.

This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

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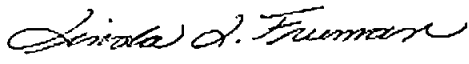
AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0508500A

Work Order Summary

CLIENT:	Mr. Lou LaRosa Philip Services Corp. 18000 72nd Ave. South Suite 217 Kent, WA 98032	BILL TO:	Mr. Lou LaRosa Philip Services Corp. 18000 72nd Ave. South Suite 217 Kent, WA 98032
PHONE:	800-228-7872	P.O. #	
FAX:	425-227-6191	PROJECT #	106207 GTIPIM T-3
DATE RECEIVED:	08/23/2005	CONTACT:	Nicole Danbacher
DATE COMPLETED:	09/06/2005		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	670L-IA1	Modified TO-14A SIM	6.5 "Hg
02A	670L-9-IA1	Modified TO-14A SIM	6.5 "Hg
03A	660L-IA1	Modified TO-14A SIM	6.5 "Hg
04A	654L-IA1	Modified TO-14A SIM	7.0 "Hg
05A	660L-AA1	Modified TO-14A SIM	8.0 "Hg
06A	Lab Blank	Modified TO-14A SIM	NA
07A	CCV	Modified TO-14A SIM	NA
08A	LCS	Modified TO-14A SIM	NA
08AA	LCSD	Modified TO-14A SIM	NA

CERTIFIED BY: 

Laboratory Director

DATE: 09/06/05

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

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-14A SIM
Philip Services Corp.
Workorder# 0508500A

Five 6 Liter Summa Canister (SIM Certified) samples were received on August 23, 2005. The laboratory performed analysis via modified EPA Method TO-14A using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-14A</i>	<i>ATL Modifications</i>
Blanks and standards	Zero Air	Nitrogen
Sample load volume	400 mL	Varied up to 0.5 liter
BFB absolute abundance criteria	Within 10% of that from previous day	CCV internal standard area counts are compared to ICAL, corrective action for > 40% D
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions
Blank acceptance criteria	< 0.2 ppbv	< Reporting Limit
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <= 30% Difference with 10% of compounds allowed out up to <=40%.; flag and narrate outliers
ICAL %RSD acceptance criteria	+/- 30% RSD	Project specific; default criteria is <=30% RSD with 10% of compounds allowed out to < 40% RSD

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

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

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

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 reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

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

AIR TOXICS LTD.

Summary of Detected Compounds MODIFIED EPA METHOD TO-14A GC/MS SIM

Client Sample ID: 670L-IA1

Lab ID#: 0508500A-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.017	0.018	0.068	0.072
Chloroform	0.017	0.077	0.083	0.38
1,1,1-Trichloroethane	0.034	0.77	0.19	4.2
Benzene	0.086	0.62	0.27	2.0
Trichloroethene	0.0051	0.032	0.028	0.17
Toluene	0.034	3.7	0.13	14
Tetrachloroethene	0.034	0.054	0.23	0.37
Ethyl Benzene	0.034	0.77	0.15	3.3
1,3,5-Trimethylbenzene	0.034	0.067	0.17	0.33
1,2,4-Trimethylbenzene	0.034	0.19	0.17	0.93

Client Sample ID: 670L-9-IA1

Lab ID#: 0508500A-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Chloroform	0.017	0.075	0.083	0.36
1,1,1-Trichloroethane	0.034	0.78	0.19	4.2
Benzene	0.086	0.61	0.27	2.0
Trichloroethene	0.0051	0.027	0.028	0.15
Toluene	0.034	3.6	0.13	14
Tetrachloroethene	0.034	0.054	0.23	0.36
Ethyl Benzene	0.034	0.76	0.15	3.3
1,3,5-Trimethylbenzene	0.034	0.070	0.17	0.34
1,2,4-Trimethylbenzene	0.034	0.19	0.17	0.94

Client Sample ID: 660L-IA1

Lab ID#: 0508500A-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Chloroform	0.017	0.032	0.083	0.16
1,1,1-Trichloroethane	0.034	0.037	0.19	0.20
Benzene	0.086	0.52	0.27	1.7
Trichloroethene	0.0051	0.037	0.028	0.20
Toluene	0.034	4.7	0.13	18
Tetrachloroethene	0.034	0.050	0.23	0.34
Ethyl Benzene	0.034	0.98	0.15	4.2
1,3,5-Trimethylbenzene	0.034	0.052	0.17	0.25
1,2,4-Trimethylbenzene	0.034	0.14	0.17	0.70

Client Sample ID: 654L-IA1

Lab ID#: 0508500A-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Chloroform	0.018	0.043	0.085	0.21
1,1,1-Trichloroethane	0.035	0.036	0.19	0.20
Benzene	0.088	0.85	0.28	2.7
Trichloroethene	0.0052	0.034	0.028	0.18
Toluene	0.035	2.9	0.13	11
Tetrachloroethene	0.035	0.056	0.24	0.38
Ethyl Benzene	0.035	1.3	0.15	5.5
1,3,5-Trimethylbenzene	0.035	0.068	0.17	0.34
1,2,4-Trimethylbenzene	0.035	0.23	0.17	1.1

Client Sample ID: 660L-AA1

Lab ID#: 0508500A-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Chloroform	0.018	0.022	0.089	0.11
Benzene	0.092	1.6	0.29	5.2
Trichloroethene	0.0055	0.025	0.030	0.13
Toluene	0.037	1.3	0.14	4.8
Tetrachloroethene	0.037	0.12	0.25	0.81
Ethyl Benzene	0.037	0.80	0.16	3.5
1,3,5-Trimethylbenzene	0.037	0.14	0.18	0.70
1,2,4-Trimethylbenzene	0.037	0.64	0.18	3.2

AIR TOXICS LTD.

Client Sample ID: 670L-IA1

Lab ID#: 0508500A-01A

MODIFIED EPA METHOD TO-14A GC/MS SIM

File Name:	8082912	Date of Collection: 8/18/05
Dil. Factor:	1.71	Date of Analysis: 8/29/05 08:09 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.044	Not Detected
Chloroethane	0.086	Not Detected	0.22	Not Detected
1,1-Dichloroethene	0.017	0.018	0.068	0.072
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Chloroform	0.017	0.077	0.083	0.38
1,1,1-Trichloroethane	0.034	0.77	0.19	4.2
Benzene	0.086	0.62	0.27	2.0
1,2-Dichloroethane	0.017	Not Detected	0.069	Not Detected
Trichloroethene	0.0051	0.032	0.028	0.17
Toluene	0.034	3.7	0.13	14
Tetrachloroethene	0.034	0.054	0.23	0.37
Ethyl Benzene	0.034	0.77	0.15	3.3
1,3,5-Trimethylbenzene	0.034	0.067	0.17	0.33
1,2,4-Trimethylbenzene	0.034	0.19	0.17	0.93
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.14	Not Detected
2-Hexanone	0.17	Not Detected	0.70	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	105	70-130

AIR TOXICS LTD.

Client Sample ID: 670L-9-IA1

Lab ID#: 0508500A-02A

MODIFIED EPA METHOD TO-14A GC/MS SIM

File Name:	8082911	Date of Collection: 8/18/05
Dil. Factor:	1.71	Date of Analysis: 8/29/05 06:59 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.044	Not Detected
Chloroethane	0.086	Not Detected	0.22	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.068	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Chloroform	0.017	0.075	0.083	0.36
1,1,1-Trichloroethane	0.034	0.78	0.19	4.2
Benzene	0.086	0.61	0.27	2.0
1,2-Dichloroethane	0.017	Not Detected	0.069	Not Detected
Trichloroethene	0.0051	0.027	0.028	0.15
Toluene	0.034	3.6	0.13	14
Tetrachloroethene	0.034	0.054	0.23	0.36
Ethyl Benzene	0.034	0.76	0.15	3.3
1,3,5-Trimethylbenzene	0.034	0.070	0.17	0.34
1,2,4-Trimethylbenzene	0.034	0.19	0.17	0.94
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.14	Not Detected
2-Hexanone	0.17	Not Detected	0.70	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	107	70-130

AIR TOXICS LTD.

Client Sample ID: 660L-IA1

Lab ID#: 0508500A-03A

MODIFIED EPA METHOD TO-14A GC/MS SIM

File Name:	8082909	Date of Collection: 8/18/05
Dil. Factor:	1.71	Date of Analysis: 8/29/05 04:54 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.044	Not Detected
Chloroethane	0.086	Not Detected	0.22	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.068	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Chloroform	0.017	0.032	0.083	0.16
1,1,1-Trichloroethane	0.034	0.037	0.19	0.20
Benzene	0.086	0.52	0.27	1.7
1,2-Dichloroethane	0.017	Not Detected	0.069	Not Detected
Trichloroethene	0.0051	0.037	0.028	0.20
Toluene	0.034	4.7	0.13	18
Tetrachloroethene	0.034	0.050	0.23	0.34
Ethyl Benzene	0.034	0.98	0.15	4.2
1,3,5-Trimethylbenzene	0.034	0.052	0.17	0.25
1,2,4-Trimethylbenzene	0.034	0.14	0.17	0.70
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.14	Not Detected
2-Hexanone	0.17	Not Detected	0.70	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	103	70-130

AIR TOXICS LTD.

Client Sample ID: 654L-IA1

Lab ID#: 0508500A-04A

MODIFIED EPA METHOD TO-14A GC/MS SIM

File Name:	8082908	Date of Collection: 8/18/05
Dil. Factor:	1.75	Date of Analysis: 8/29/05 04:01 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.045	Not Detected
Chloroethane	0.088	Not Detected	0.23	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.069	Not Detected
1,1-Dichloroethane	0.035	Not Detected	0.14	Not Detected
Chloroform	0.018	0.043	0.085	0.21
1,1,1-Trichloroethane	0.035	0.036	0.19	0.20
Benzene	0.088	0.85	0.28	2.7
1,2-Dichloroethane	0.018	Not Detected	0.071	Not Detected
Trichloroethene	0.0052	0.034	0.028	0.18
Toluene	0.035	2.9	0.13	11
Tetrachloroethene	0.035	0.056	0.24	0.38
Ethyl Benzene	0.035	1.3	0.15	5.5
1,3,5-Trimethylbenzene	0.035	0.068	0.17	0.34
1,2,4-Trimethylbenzene	0.035	0.23	0.17	1.1
trans-1,2-Dichloroethene	0.18	Not Detected	0.69	Not Detected
cis-1,2-Dichloroethene	0.035	Not Detected	0.14	Not Detected
2-Hexanone	0.18	Not Detected	0.72	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	106	70-130

AIR TOXICS LTD.

Client Sample ID: 660L-AA1

Lab ID#: 0508500A-05A

MODIFIED EPA METHOD TO-14A GC/MS SIM

File Name:	8082907	Date of Collection: 8/18/05
Dil. Factor:	1.83	Date of Analysis: 8/29/05 03:13 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.047	Not Detected
Chloroethane	0.092	Not Detected	0.24	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.072	Not Detected
1,1-Dichloroethane	0.037	Not Detected	0.15	Not Detected
Chloroform	0.018	0.022	0.089	0.11
1,1,1-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Benzene	0.092	1.6	0.29	5.2
1,2-Dichloroethane	0.018	Not Detected	0.074	Not Detected
Trichloroethene	0.0055	0.025	0.030	0.13
Toluene	0.037	1.3	0.14	4.8
Tetrachloroethene	0.037	0.12	0.25	0.81
Ethyl Benzene	0.037	0.80	0.16	3.5
1,3,5-Trimethylbenzene	0.037	0.14	0.18	0.70
1,2,4-Trimethylbenzene	0.037	0.64	0.18	3.2
trans-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
cis-1,2-Dichloroethene	0.037	Not Detected	0.14	Not Detected
2-Hexanone	0.18	Not Detected	0.75	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	116	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	102	70-130

AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0508500A-06A

MODIFIED EPA METHOD TO-14A GC/MS SIM

File Name:	8082906	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/29/05 01:56 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
Chloroethane	0.050	Not Detected	0.13	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Chloroform	0.010	Not Detected	0.049	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.010	Not Detected	0.040	Not Detected
Trichloroethene	0.0030	Not Detected	0.016	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
1,3,5-Trimethylbenzene	0.020	Not Detected	0.098	Not Detected
1,2,4-Trimethylbenzene	0.020	Not Detected	0.098	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
2-Hexanone	0.10	Not Detected	0.41	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	115	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	98	70-130

AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0508500A-07A

MODIFIED EPA METHOD TO-14A GC/MS SIM

File Name:	8082902	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/29/05 10:01 AM

Compound	%Recovery
Vinyl Chloride	91
Chloroethane	100
1,1-Dichloroethene	88
1,1-Dichloroethane	93
Chloroform	98
1,1,1-Trichloroethane	100
Benzene	88
1,2-Dichloroethane	110
Trichloroethene	95
Toluene	103
Tetrachloroethene	96
Ethyl Benzene	106
1,3,5-Trimethylbenzene	107
1,2,4-Trimethylbenzene	103
trans-1,2-Dichloroethene	87
cis-1,2-Dichloroethene	92
2-Hexanone	97

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	110	70-130

AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0508500A-08A

MODIFIED EPA METHOD TO-14A GC/MS SIM

File Name:	8082903	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/29/05 11:04 AM

Compound	%Recovery
Vinyl Chloride	89
Chloroethane	92
1,1-Dichloroethene	81
1,1-Dichloroethane	86
Chloroform	91
1,1,1-Trichloroethane	84
Benzene	74
1,2-Dichloroethane	92
Trichloroethene	76
Toluene	90
Tetrachloroethene	88
Ethyl Benzene	93
1,3,5-Trimethylbenzene	94
1,2,4-Trimethylbenzene	90
trans-1,2-Dichloroethene	104
cis-1,2-Dichloroethene	72
2-Hexanone	50 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	105	70-130

AIR TOXICS LTD.

Client Sample ID: LCS D

Lab ID#: 0508500A-08AA

MODIFIED EPA METHOD TO-14A GC/MS SIM

File Name:	8082904	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/29/05 12:06 PM

Compound	%Recovery
Vinyl Chloride	84
Chloroethane	88
1,1-Dichloroethene	81
1,1-Dichloroethane	87
Chloroform	91
1,1,1-Trichloroethane	85
Benzene	74
1,2-Dichloroethane	92
Trichloroethene	76
Toluene	89
Tetrachloroethene	89
Ethyl Benzene	94
1,3,5-Trimethylbenzene	94
1,2,4-Trimethylbenzene	89
trans-1,2-Dichloroethene	104
cis-1,2-Dichloroethene	72
2-Hexanone	51 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	106	70-130

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Thank you for choosing Air Toxics Ltd. To better serve our customers, we are providing your report by e-mail. This document is provided in Portable Document Format which can be viewed with Acrobat Reader by Adobe.

This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

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Hours 8:00 A.M to 6:00 P.M. Pacific**



AIR TOXICS LTD.

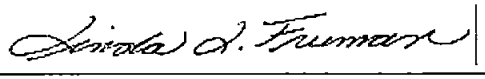
AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0508500B

Work Order Summary

CLIENT:	Mr. Lou LaRosa Philip Services Corp. 18000 72nd Ave. South Suite 217 Kent, WA 98032	BILL TO:	Mr. Lou LaRosa Philip Services Corp. 18000 72nd Ave. South Suite 217 Kent, WA 98032
PHONE:	800-228-7872	P.O. #	
FAX:	425-227-6191	PROJECT #	106207 GTIPIM T-3
DATE RECEIVED:	08/23/2005	CONTACT:	Nicole Danbacher
DATE COMPLETED:	09/06/2005		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	670L-IA1	Modified TO-14	6.5 "Hg
02A	670L-9-IA1	Modified TO-14	6.5 "Hg
03A	660L-IA1	Modified TO-14	6.5 "Hg
04A	654L-IA1	Modified TO-14	7.0 "Hg
05A	660L-AA1	Modified TO-14	8.0 "Hg
05AA	660L-AA1 Duplicate	Modified TO-14	8.0 "Hg
06A	Lab Blank	Modified TO-14	NA
07A	CCV	Modified TO-14	NA
08A	LCS	Modified TO-14	NA
08AA	LCSD	Modified TO-14	NA

CERTIFIED BY: 

DATE: 09/06/05

Laboratory Director

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

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-14A
Philip Services Corp.
Workorder# 0508500B

Five 6 Liter Summa Canister (SIM Certified) samples were received on August 23, 2005. The laboratory performed analysis via modified EPA Method TO-14A using GC/MS in the full scan mode. The method involves concentrating up to 1.0 liter of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-14A</i>	<i>ATL Modifications</i>
Blanks and standards	Zero Air	Nitrogen
Sample load volume	400 mL	Varied to 1.0 liter
BFB absolute abundance criteria	Within 10% of that from previous day	CCV internal standard area counts are compared to ICAL, corrective action for > 40% D
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions
ICAL %RSD acceptance criteria	+/- 30% RSD	30% RSD with 4 compounds allowed out to < 40% RSD
Daily CCV	70 - 130%	70-130% with 4 compounds allowed at 60-140 , flag outliers
Blank acceptance criteria	< 0.2 ppbv	< Reporting Limit
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The reported CCV for each daily batch may be derived from more than one individual analytical file due to the client's request for non-standard compounds.

Non-standard compounds may have different acceptance criteria than the standard TO-14A/TO-15 compound list as per contract or verbal agreement.

Definition of Data Qualifying Flags

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

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

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 reporting limit.

UJ- Non-detected compound associated with low bias in the CCV
N - The identification is based on presumptive evidence.

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

AIR TOXICS LTD.
Summary of Detected Compounds
MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

Client Sample ID: 670L-IA1

Lab ID#: 0508500B-01A

No Detections Were Found.

Client Sample ID: 670L-9-IA1

Lab ID#: 0508500B-02A

No Detections Were Found.

Client Sample ID: 660L-IA1

Lab ID#: 0508500B-03A

No Detections Were Found.

Client Sample ID: 654L-IA1

Lab ID#: 0508500B-04A

No Detections Were Found.

Client Sample ID: 660L-AA1

Lab ID#: 0508500B-05A

No Detections Were Found.

Client Sample ID: 660L-AA1 Duplicate

Lab ID#: 0508500B-05AA

No Detections Were Found.

AIR TOXICS LTD.

Client Sample ID: 670L-IA1

Lab ID#: 0508500B-01A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	7083010	Date of Collection: 8/18/05
Dil. Factor:	1.71	Date of Analysis: 8/30/05 07:23 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Propylbenzene	1.7	Not Detected	8.4	Not Detected
sec-Butylbenzene	1.7	Not Detected	9.4	Not Detected
Naphthalene	0.86	Not Detected	4.5	Not Detected
p-Cymene	0.86	Not Detected	4.7	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	108	70-130

AIR TOXICS LTD.

Client Sample ID: 670L-9-IA1

Lab ID#: 0508500B-02A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	7083011	Date of Collection: 8/18/05
Dil. Factor:	1.71	Date of Analysis: 8/30/05 08:20 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Propylbenzene	1.7	Not Detected	8.4	Not Detected
sec-Butylbenzene	1.7	Not Detected	9.4	Not Detected
Naphthalene	0.86	Not Detected	4.5	Not Detected
p-Cymene	0.86	Not Detected	4.7	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	107	70-130

AIR TOXICS LTD.

Client Sample ID: 660L-IA1

Lab ID#: 0508500B-03A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	7083012	Date of Collection: 8/18/05
Dil. Factor:	1.71	Date of Analysis: 8/30/05 09:12 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Propylbenzene	1.7	Not Detected	8.4	Not Detected
sec-Butylbenzene	1.7	Not Detected	9.4	Not Detected
Naphthalene	0.86	Not Detected	4.5	Not Detected
p-Cymene	0.86	Not Detected	4.7	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	106	70-130

AIR TOXICS LTD.

Client Sample ID: 654L-IA1

Lab ID#: 0508500B-04A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	7083013	Date of Collection: 8/18/05
Dil. Factor:	1.75	Date of Analysis: 8/30/05 10:10 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Propylbenzene	1.8	Not Detected	8.6	Not Detected
sec-Butylbenzene	1.8	Not Detected	9.6	Not Detected
Naphthalene	0.88	Not Detected	4.6	Not Detected
p-Cymene	0.88	Not Detected	4.8	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	105	70-130

AIR TOXICS LTD.

Client Sample ID: 660L-AA1

Lab ID#: 0508500B-05A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	7083014	Date of Collection: 8/18/05
Dil. Factor:	1.83	Date of Analysis: 8/30/05 10:54 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Propylbenzene	1.8	Not Detected	9.0	Not Detected
sec-Butylbenzene	1.8	Not Detected	10	Not Detected
Naphthalene	0.92	Not Detected	4.8	Not Detected
p-Cymene	0.92	Not Detected	5.0	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	105	70-130

AIR TOXICS LTD.

Client Sample ID: 660L-AA1 Duplicate

Lab ID#: 0508500B-05AA

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	7083015	Date of Collection: 8/18/05
Dil. Factor:	1.83	Date of Analysis: 8/30/05 11:58 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Propylbenzene	1.8	Not Detected	9.0	Not Detected
sec-Butylbenzene	1.8	Not Detected	10	Not Detected
Naphthalene	0.92	Not Detected	4.8	Not Detected
p-Cymene	0.92	Not Detected	5.0	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	104	70-130

AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0508500B-06A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	7083007a	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/30/05 03:18 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Propylbenzene	1.0	Not Detected	4.9	Not Detected
sec-Butylbenzene	1.0	Not Detected	5.5	Not Detected
Naphthalene	0.50	Not Detected	2.6	Not Detected
p-Cymene	0.50	Not Detected	2.7	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	104	70-130

AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0508500B-07A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	7083002	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/30/05 09:47 AM

Compound	%Recovery
Propylbenzene	96
sec-Butylbenzene	108
Naphthalene	105
p-Cymene	108

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	107	70-130

AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0508500B-08A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	7083003	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/30/05 10:51 AM

Compound	%Recovery
Propylbenzene	109
sec-Butylbenzene	Not Spiked
Naphthalene	Not Spiked
p-Cymene	Not Spiked

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	107	70-130

AIR TOXICS LTD.

Client Sample ID: LCSD

Lab ID#: 0508500B-08AA

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	7083004	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/30/05 12:08 PM

Compound	%Recovery
Propylbenzene	108
sec-Butylbenzene	Not Spiked
Naphthalene	Not Spiked
p-Cymene	Not Spiked

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	108	70-130

650-670 Lucile



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. Relinquishing signature also indicates 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

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Page 1 of 1

CHAIN-OF-CUSTODY RECORD

Contact Person Loula Rosa
Company Philip Services Corp. Email Loula@contactpse.com
Address 1000 7th Ave S, Suite 217 City Leont State WA Zip 98002
Phone 425-227-6180 Fax 425-204-7164

Project Info:
P.O. # _____
Project # 106207
Project Name STIPIM T-3

Turn Around Time:
 Normal
 Rush
specify _____
Lab Use Only:
Pressurized by: BS
Date: 8/24/05
Pressurization Gas: (N₂) He

Collected by: (Signature) [Signature]

Lab I.D.	Field Sample I.D. (Location)	Date	Time	Analyses Requested	Canister Pressure/Vacuum			
					Initial	Final	Receipt	Final (psi)
01A	670L-IA1	8-18-05	0715	modified TC-14A w/ SIM	29.0	7.0	6.5"Hg	5.0psi
02A	670L-9-IA1	8-18-05	0716		29.0	7.0	6.5"Hg	
03A	660L-IA1	8-18-05	0718		29.0	6.5	6.5"Hg	
04A	654L-IA1	8-18-05	0720		29.0	7.0	7.0"Hg	
05A	660L-AA1	8-18-05	0730		29.5	8.0	8.0"Hg	

Relinquished by: (signature) [Signature] Date/Time 8-18-05/0830
Received by: (signature) [Signature] Date/Time 8/23/05 1030
Notes: See Attached Analyte Lists
Shipped VTA UPS

Relinquished by: (signature) _____ Date/Time _____
Received by: (signature) _____ Date/Time _____

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	<u>WPS</u>	<u>F046 173 621 0</u>	<u>—</u>	<u>Good</u>	<u>Yes No None</u>	<u>0508500</u>

September 14, 2005

Service Request No: K0503232

Lou La Rosa
Philip Services Corporation
18000 72nd Ave SW
Suite 217
Kent, WA 98032

RE: GTIPIM T-3/106207

Dear Lou:

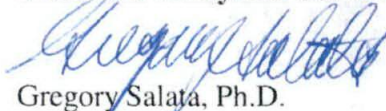
Enclosed are the results of the sample(s) submitted to our laboratory on August 19, 2005. For your reference, these analyses have been assigned our service request number K0503232.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAC standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3376.

Respectfully submitted,

Columbia Analytical Services, Inc.



Gregory Salata, Ph.D.
Project Chemist

GS/jeb

Page 1 of 446

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
 - i The MRL/MDL has been elevated due to a matrix interference.
- X See case narrative.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- B The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL has been elevated due to a matrix interference.
- X See case narrative.
- * The duplicate analysis not within control limits. See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results (25% for CLP Pesticides).
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
 - i The MRL/MDL has been elevated due to a chromatographic interference.
- X See case narrative.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

Summary Package

Case Narrative

COLUMBIA ANALYTICAL SERVICES, INC.

Client: Philip Services Corporation
Project: GTIPIM T-3/106207
Sample Matrix: Water

Service Request No.: K0503232
Date Received: 08/19/05

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier III validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Three water samples were received for analysis at Columbia Analytical Services on 08/19/05. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

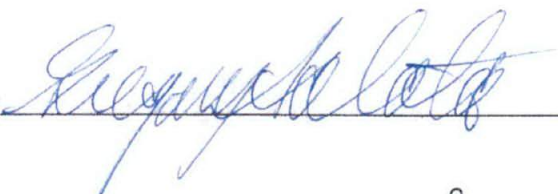
Volatile Organic Compounds by EPA Method 8260B

Initial Calibration (ICAL) Exceptions:

The primary evaluation criterion was exceeded for Bromoform in ICAL ID CAL4674. The primary evaluation criterion was exceeded for Vinyl Chloride and 1,1-Dichloroethene in ICAL ID CAL4721. In accordance with CAS standard operating procedures, the alternative evaluation specified in the EPA method was performed using the mean Relative Standard Deviation (RSD) of all analyte in the calibration. The result of the mean RSD calculation was 8.8% and 9.2%, respectively. The calibration meets the alternative evaluation criteria. Note that CAS/Kelso policy does not allow the use of averaging if any analyte in the ICAL exceeds 30% RSD.

No other anomalies associated with the analysis of these samples were observed.

Approved by



Date

9/16/05

**Chain of Custody
Documentation**



1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 695-7222 x 07 • FAX (360) 636-1068

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

DATE 8-18-05 PAGE 1 OF 1

PROJECT NAME <u>GTIPIM T3 # 106207</u> PROJECT MANAGER <u>Low LaRosa</u> COMPANY/ADDRESS <u>Philip Services Corp.</u> <u>18000 72nd Ave S. Suite 217</u> <u>Kent, WA 98032</u> PHONE: <u>425-227-6180</u> FAX: <u>425-204-7164</u> SAMPLERS SIGNATURE <u>Gary & Brent</u>					NUMBER OF CONTAINERS	ANALYSIS REQUESTED																																																																																																									
<table border="1"> <thead> <tr> <th>SAMPLE I.D.</th> <th>DATE</th> <th>TIME</th> <th>LAB I.D.</th> <th>SAMPLE MATRIX</th> <th colspan="10"></th> <th>REMARKS</th> </tr> </thead> <tbody> <tr> <td>TR01-0805</td> <td>8-18-05</td> <td>0800</td> <td></td> <td>H2O</td> <td>4</td> <td>2</td> <td>2</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td>- Trip Blanks</td> </tr> <tr> <td>CG-113-SI-0805</td> <td></td> <td>0842</td> <td></td> <td></td> <td>6</td> <td>3</td> <td>3</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td>12.5</td> </tr> <tr> <td>CG-124-WT-0805</td> <td></td> <td>0953</td> <td></td> <td></td> <td>6</td> <td>3</td> <td>3</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td>11.0</td> </tr> <tr> <td colspan="22" style="text-align: center;"> Signature: <u>[Signature]</u> Date/Time: <u>8-18-05</u> </td> </tr> </tbody> </table>						SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX											REMARKS	TR01-0805	8-18-05	0800		H2O	4	2	2															- Trip Blanks	CG-113-SI-0805		0842			6	3	3															12.5	CG-124-WT-0805		0953			6	3	3															11.0	 Signature: <u>[Signature]</u> Date/Time: <u>8-18-05</u> 																				
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RELINQUISHED BY: <u>[Signature]</u> Signature <u>Gary L Bond</u> Printed Name <u>PSC</u> Firm <u>8-18-05 / 1100</u> Date/Time					RECEIVED BY: <u>[Signature]</u> Signature <u>[Signature]</u> Printed Name <u>AMS</u> Firm <u>8/19/05 1200</u> Date/Time					TURNAROUND REQUIREMENTS 24 hr ___ 48 hr ___ 5 day ___ <input checked="" type="checkbox"/> Standard (10-15 working days) Provide Verbal Preliminary Results Provide FAX preliminary Results Requested Report Date _____					REPORT REQUIREMENTS <input type="checkbox"/> I. Routine Report <input type="checkbox"/> II. Report (includes DUP, MS, MSD, as required, may be charged as samples) <input type="checkbox"/> III. Data Validation Report (includes All Raw Data) <input type="checkbox"/> IV. CLP Deliverable Report					INVOICE INFORMATION: P.O.# <u>106207</u> Bill To <u>Low LaRosa</u> <u>Philip Services Corp</u>					SAMPLE RECEIPT: Shipping VIA: _____ Shipping #: _____ Condition: _____ Lab No: _____																																																																																						
RELINQUISHED BY: Signature _____ Printed Name _____ Firm _____ Date/Time _____					RECEIVED BY: Signature _____ Printed Name _____ Firm _____ Date/Time _____					SPECIAL INSTRUCTIONS/COMMENTS: <p style="text-align: center; font-size: 1.2em;"> GTIPIM custody seals on cooler shipped VIA UPS </p>																																																																																																					

**Columbia Analytical Services Inc.
Cooler Receipt and Preservation Form**

PC Orey -

Project/Client Philips Work Order K05 03232

Cooler received on 8/19/11 and opened on 8/19/11 by R. Gout

1. Were custody seals on outside of coolers? N
If yes, how many and where? front & back
2. Were custody seals intact? N
3. Were signature and date present on the custody seals? N
4. Is the shipper's airbill available and filed? If no, record airbill number: 949844 N
5. COC# 1577 _____
Temperature of cooler(s) upon receipt: (°C) 8.0 _____
Temperature Blank: (°C) 4.0 _____
- Were samples hand delivered on the same day as collection? Y N
6. Were custody papers properly filled out (ink, signed, etc.)? N
7. Type of packing material present loose ice - brmay
8. Did all bottles arrive in good condition (unbroken)? N
9. Were all bottle labels complete (i.e analysis, preservation, etc.)? N
10. Did all bottle labels and tags agree with custody papers? N
11. Were the correct types of bottles used for the tests indicated? N
12. Were all of the preserved bottles received at the lab with the appropriate pH? N
13. Were VOA vials checked for absence of air bubbles, and if present, noted below? N
14. Did the bottles originate from CAS/K or a branch laboratory? N
15. Are CWA Microbiology samples received with >1/2 the 24hr. hold time remaining from collection? N
16. Was C12/Res negative? N

Explain any discrepancies: _____

RESOLUTION: _____

Samples that required preservation or received out of temperature:

Sample ID	Reagent	Volume	Lot Number	Bottle Type	Rec'd out of Temperature	Initials

**Volatile Organic Compounds
EPA Method 8260B**

Organic Analysis:
Volatile Organic Compounds

Summary Package

Sample and QC Results

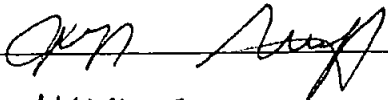
Client: Philip Services Corporation
 Project: GTIPIM T-3/106207

Service Request: K0503232

Cover Page - Organic Analysis Data Package
 Volatile Organic Compounds

Sample Name	Lab Code	Date Collected	Date Received
TB01-0805	K0503232-001	08/18/2005	08/19/2005
CG-113-S1-0805	K0503232-002	08/18/2005	08/19/2005
CG-124-WT-0805	K0503232-003	08/18/2005	08/19/2005
CG-124-WT-0805MS	KWG0514992-1	08/18/2005	08/19/2005
CG-124-WT-0805DMS	KWG0514992-2	08/18/2005	08/19/2005

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: 
 Date: 11/7/05

Name: Jeff Grindstaff
 Title: GLMS Manager

00012

Analytical Results

Client: Philip Services Corporation
 Project: GTIPIM T-3/106207
 Sample Matrix: Water

Service Request: K0503232
 Date Collected: 08/18/2005
 Date Received: 08/19/2005

Volatile Organic Compounds

Sample Name: TB01-0805
 Lab Code: K0503232-001
 Extraction Method: EPA 5030B
 Analysis Method: 8260B

Units: ug/L
 Basis: NA
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
trans-1,2-Dichloroethene	ND	U	1.0	0.15	1	08/27/05	08/27/05	KWG0514992	
1,1-Dichloroethane	ND	U	1.0	0.11	1	08/27/05	08/27/05	KWG0514992	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	08/27/05	08/27/05	KWG0514992	
Chloroethane	ND	U	1.0	0.23	1	08/27/05	08/27/05	KWG0514992	
Chloroform	ND	U	1.0	0.14	1	08/27/05	08/27/05	KWG0514992	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.12	1	08/27/05	08/27/05	KWG0514992	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.12	1	08/27/05	08/27/05	KWG0514992	
Benzene	ND	U	0.50	0.14	1	08/27/05	08/27/05	KWG0514992	
2-Hexanone	ND	U	10	4.0	1	08/27/05	08/27/05	KWG0514992	
Toluene	0.18	J	1.0	0.11	1	08/27/05	08/27/05	KWG0514992	
Tetrachloroethene (PCE)	ND	U	0.50	0.13	1	08/27/05	08/27/05	KWG0514992	
Ethylbenzene	ND	U	1.0	0.13	1	08/27/05	08/27/05	KWG0514992	
Propylbenzene	ND	U	1.0	0.098	1	08/27/05	08/27/05	KWG0514992	
3,5-Trimethylbenzene	ND	U	1.0	0.13	1	08/27/05	08/27/05	KWG0514992	
1,2,4-Trimethylbenzene	ND	U	1.0	0.15	1	08/27/05	08/27/05	KWG0514992	
sec-Butylbenzene	ND	U	1.0	0.13	1	08/27/05	08/27/05	KWG0514992	
4-Isopropyltoluene	ND	U	1.0	0.13	1	08/27/05	08/27/05	KWG0514992	
Naphthalene	ND	U	1.0	0.29	1	08/27/05	08/27/05	KWG0514992	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	96	80-119	08/27/05	Acceptable
Toluene-d8	97	83-113	08/27/05	Acceptable
4-Bromofluorobenzene	92	72-114	08/27/05	Acceptable

Comments:

00013

Analytical Results

Client: Philip Services Corporation
 Project: GTIPIM T-3/106207
 Sample Matrix: Water

Service Request: K0503232
 Date Collected: 08/18/2005
 Date Received: 08/19/2005

Volatile Organic Compounds

Sample Name: CG-113-S1-0805
 Lab Code: K0503232-002
 Extraction Method: EPA 5030B
 Analysis Method: 8260B

Units: ug/L
 Basis: NA
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
trans-1,2-Dichloroethene	0.66	J	1.0	0.15	1	08/28/05	08/28/05	KWG0514992	
1,1-Dichloroethane	42		1.0	0.11	1	08/28/05	08/28/05	KWG0514992	
cis-1,2-Dichloroethene	4.2		1.0	0.12	1	08/28/05	08/28/05	KWG0514992	
Chloroethane	71		1.0	0.23	1	08/28/05	08/28/05	KWG0514992	
Chloroform	ND	U	1.0	0.14	1	08/28/05	08/28/05	KWG0514992	
1,1,1-Trichloroethane (TCA)	2.3		1.0	0.12	1	08/28/05	08/28/05	KWG0514992	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.12	1	08/28/05	08/28/05	KWG0514992	
Benzene	1.8		0.50	0.14	1	08/28/05	08/28/05	KWG0514992	
2-Hexanone	ND	U	10	4.0	1	08/28/05	08/28/05	KWG0514992	
Toluene	0.91	J	1.0	0.11	1	08/28/05	08/28/05	KWG0514992	
Tetrachloroethene (PCE)	1.2		0.50	0.13	1	08/28/05	08/28/05	KWG0514992	
Ethylbenzene	160	D	10	1.3	10	08/27/05	08/27/05	KWG0514992	
n-Propylbenzene	3.7		1.0	0.098	1	08/28/05	08/28/05	KWG0514992	
1,3,5-Trimethylbenzene	6.1		1.0	0.13	1	08/28/05	08/28/05	KWG0514992	
1,2,4-Trimethylbenzene	22		1.0	0.15	1	08/28/05	08/28/05	KWG0514992	
sec-Butylbenzene	0.43	J	1.0	0.13	1	08/28/05	08/28/05	KWG0514992	
4-Isopropyltoluene	0.37	J	1.0	0.13	1	08/28/05	08/28/05	KWG0514992	
Naphthalene	2.8		1.0	0.29	1	08/28/05	08/28/05	KWG0514992	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	94	80-119	08/28/05	Acceptable
Toluene-d8	99	83-113	08/28/05	Acceptable
4-Bromofluorobenzene	98	72-114	08/28/05	Acceptable

Comments:

Analytical Results

Client: Philip Services Corporation
 Project: GTIPIM T-3/106207
 Sample Matrix: Water

Service Request: K0503232
 Date Collected: 08/18/2005
 Date Received: 08/19/2005

Volatile Organic Compounds

Sample Name: CG-124-WT-0805
 Lab Code: K0503232-003
 Extraction Method: EPA 5030B
 Analysis Method: 8260B

Units: ug/L
 Basis: NA
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
trans-1,2-Dichloroethene	0.78	J	1.0	0.15	1	08/27/05	08/27/05	KWG0514992	
1,1-Dichloroethane	12		1.0	0.11	1	08/27/05	08/27/05	KWG0514992	
cis-1,2-Dichloroethene	11		1.0	0.12	1	08/27/05	08/27/05	KWG0514992	
Chloroethane	ND	U	1.0	0.23	1	08/27/05	08/27/05	KWG0514992	
Chloroform	0.33	J	1.0	0.14	1	08/27/05	08/27/05	KWG0514992	
1,1,1-Trichloroethane (TCA)	5.8		1.0	0.12	1	08/27/05	08/27/05	KWG0514992	
1,2-Dichloroethane (EDC)	0.22	J	1.0	0.12	1	08/27/05	08/27/05	KWG0514992	
Benzene	0.18	J	0.50	0.14	1	08/27/05	08/27/05	KWG0514992	
2-Hexanone	ND	U	10	4.0	1	08/27/05	08/27/05	KWG0514992	
Toluene	ND	U	1.0	0.11	1	08/27/05	08/27/05	KWG0514992	
Tetrachloroethene (PCE)	7.2		0.50	0.13	1	08/27/05	08/27/05	KWG0514992	
Ethylbenzene	ND	U	1.0	0.13	1	08/27/05	08/27/05	KWG0514992	
Propylbenzene	ND	U	1.0	0.098	1	08/27/05	08/27/05	KWG0514992	
3,5-Trimethylbenzene	ND	U	1.0	0.13	1	08/27/05	08/27/05	KWG0514992	
1,2,4-Trimethylbenzene	ND	U	1.0	0.15	1	08/27/05	08/27/05	KWG0514992	
sec-Butylbenzene	ND	U	1.0	0.13	1	08/27/05	08/27/05	KWG0514992	
4-Isopropyltoluene	ND	U	1.0	0.13	1	08/27/05	08/27/05	KWG0514992	
Naphthalene	ND	U	1.0	0.29	1	08/27/05	08/27/05	KWG0514992	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	97	80-119	08/27/05	Acceptable
Toluene-d8	97	83-113	08/27/05	Acceptable
4-Bromofluorobenzene	90	72-114	08/27/05	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Philip Services Corporation
 Project: GTIPIM T-3/106207
 Sample Matrix: Water

Service Request: K0503232
 Date Collected: 08/18/2005
 Date Received: 08/19/2005

Volatile Organic Compounds

Sample Name: CG-124-WT-0805
 Lab Code: K0503232-003
 Extraction Method: EPA 5030B
 Analysis Method: 8260B

Units: ug/L
 Basis: NA
 Level: Low

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Vinyl Chloride	8.3	0.50	0.042	1	08/27/05	08/27/05	KWG0514992	
1,1-Dichloroethene	0.84	0.50	0.13	1	08/27/05	08/27/05	KWG0514992	
Trichloroethene (TCE)	27	0.50	0.14	1	08/27/05	08/27/05	KWG0514992	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	97	80-119	08/27/05	Acceptable
Toluene-d8	97	83-113	08/27/05	Acceptable
4-Bromofluorobenzene	90	72-114	08/27/05	Acceptable

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Philip Services Corporation
 Project: GTIPIM T-3/106207
 Sample Matrix: Water

Service Request: K0503232
 Date Collected: NA
 Date Received: NA

Volatile Organic Compounds

Sample Name: Method Blank
 Lab Code: KWG0514992-4
 Extraction Method: EPA 5030B
 Analysis Method: 8260B

Units: ug/L
 Basis: NA
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
trans-1,2-Dichloroethene	ND	U	1.0	0.15	1	08/27/05	08/27/05	KWG0514992	
1,1-Dichloroethane	ND	U	1.0	0.11	1	08/27/05	08/27/05	KWG0514992	
cis-1,2-Dichloroethene	ND	U	1.0	0.12	1	08/27/05	08/27/05	KWG0514992	
Chloroethane	ND	U	1.0	0.23	1	08/27/05	08/27/05	KWG0514992	
Chloroform	ND	U	1.0	0.14	1	08/27/05	08/27/05	KWG0514992	
1,1,1-Trichloroethane (TCA)	ND	U	1.0	0.12	1	08/27/05	08/27/05	KWG0514992	
1,2-Dichloroethane (EDC)	ND	U	1.0	0.12	1	08/27/05	08/27/05	KWG0514992	
Benzene	ND	U	0.50	0.14	1	08/27/05	08/27/05	KWG0514992	
2-Hexanone	ND	U	10	4.0	1	08/27/05	08/27/05	KWG0514992	
Toluene	ND	U	1.0	0.11	1	08/27/05	08/27/05	KWG0514992	
Tetrachloroethene (PCE)	ND	U	0.50	0.13	1	08/27/05	08/27/05	KWG0514992	
Ethylbenzene	ND	U	1.0	0.13	1	08/27/05	08/27/05	KWG0514992	
n-Propylbenzene	ND	U	1.0	0.098	1	08/27/05	08/27/05	KWG0514992	
m,3,5-Trimethylbenzene	ND	U	1.0	0.13	1	08/27/05	08/27/05	KWG0514992	
1,2,4-Trimethylbenzene	ND	U	1.0	0.15	1	08/27/05	08/27/05	KWG0514992	
sec-Butylbenzene	ND	U	1.0	0.13	1	08/27/05	08/27/05	KWG0514992	
4-Isopropyltoluene	ND	U	1.0	0.13	1	08/27/05	08/27/05	KWG0514992	
Naphthalene	ND	U	1.0	0.29	1	08/27/05	08/27/05	KWG0514992	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	96	80-119	08/27/05	Acceptable
Toluene-d8	102	83-113	08/27/05	Acceptable
4-Bromofluorobenzene	93	72-114	08/27/05	Acceptable

Comments:

00016

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Philip Services Corporation
 Project: GTIPIM T-3/106207
 Sample Matrix: Water

Service Request: K0503232

Surrogate Recovery Summary
 Volatile Organic Compounds

Extraction Method: EPA 5030B
 Analysis Method: 8260B

Units: PERCENT
 Level: Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>	<u>Sur2</u>	<u>Sur3</u>
TB01-0805	K0503232-001	96	97	92
CG-113-S1-0805	K0503232-002	94	99	98
CG-124-WT-0805	K0503232-003	97	97	90
Method Blank	KWG0514992-4	96	102	93
CG-124-WT-0805MS	KWG0514992-1	95	107	100
CG-124-WT-0805DMS	KWG0514992-2	95	105	100
Lab Control Sample	KWG0514992-3	95	107	100

Surrogate Recovery Control Limits (%)

Sur1 = Dibromofluoromethane	80-119
Sur2 = Toluene-d8	83-113
Sur3 = 4-Bromofluorobenzene	72-114

Results flagged with an asterisk (*) indicate values outside control criteria.
 Results flagged with a pound (#) indicate the control criteria is not applicable.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Philip Services Corporation
Project: GTIPIM T-3/106207

Service Request: K0503232
Date Analyzed: 08/27/2005
Time Analyzed: 13:40

Internal Standard Area and RT Summary
Volatile Organic Compounds

File ID: J:\MS13\DATA\082605\0826F046.D
Instrument ID: MS13
Analysis Method: 8260B

Lab Code: KWG0514991-2
Analysis Lot: KWG0514991

	Fluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
	Area	RT	Area	RT	Area	RT
Results ==>	760,730	5.60	346,916	11.58	325,247	14.70
Upper Limit ==>	1,521,460	6.10	693,832	12.08	650,494	15.20
Lower Limit ==>	380,365	5.10	173,458	11.08	162,624	14.20
ICAL Result ==>	662,282	5.60	276,871	11.58	294,582	14.70

Associated Analyses

Lab Control Sample	KWG0514992-3	765,099	5.60	350,296	11.58	328,532	14.70
CG-124-WT-0805MS	KWG0514992-1	772,008	5.60	360,435	11.58	332,668	14.70
CG-124-WT-0805DMS	KWG0514992-2	787,133	5.60	358,615	11.58	334,591	14.70
Method Blank	KWG0514992-4	735,039	5.60	332,079	11.58	300,108	14.70
TB01-0805	K0503232-001	734,181	5.60	314,815	11.58	272,137	14.70
CG-113-S1-0805DL	K0503232-002	730,546	5.60	315,665	11.58	283,266	14.70
CG-124-WT-0805	K0503232-003	739,572	5.60	320,070	11.58	274,699	14.70
CG-113-S1-0805	K0503232-002	709,327	5.60	312,435	11.58	288,883	14.70

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Philip Services Corporation
 Project: GTIPIM T-3/106207
 Sample Matrix: Water

Service Request: K0503232
 Date Extracted: 08/27/2005
 Date Analyzed: 08/27/2005

Matrix Spike/Duplicate Matrix Spike Summary
 Volatile Organic Compounds

Sample Name: CG-124-WT-0805
 Lab Code: K0503232-003
 Extraction Method: EPA 5030B
 Analysis Method: 8260B

Units: ug/L
 Basis: NA
 Level: Low
 Extraction Lot: KWG0514992

Analyte Name	Sample Result	CG-124-WT-0805MS KWG0514992-1 Matrix Spike			CG-124-WT-0805DMS KWG0514992-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Expected	%Rec	Result	Expected	%Rec			
Benzene	0.18	10.9	10.0	107	10.3	10.0	102	75-130	5	30
Toluene	ND	10.4	10.0	104	9.80	10.0	98	72-132	6	30
Naphthalene	ND	11.0	10.0	110	11.1	10.0	111	56-155	1	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

00019

QA/QC Report

Client: Philip Services Corporation
 Project: GTIPIM T-3/106207
 Sample Matrix: Water

Service Request: K0503232
 Date Extracted: 08/27/2005
 Date Analyzed: 08/27/2005

Lab Control Spike Summary
 Volatile Organic Compounds

Extraction Method: EPA 5030B
 Analysis Method: 8260B

Units: ug/L
 Basis: NA
 Level: Low
 Extraction Lot: KWG0514992

Analyte Name	Lab Control Sample KWG0514992-3 Lab Control Spike			%Rec Limits
	Result	Expected	%Rec	
trans-1,2-Dichloroethene	9.95	10.0	100	81-121
1,1-Dichloroethane	10.9	10.0	109	76-117
cis-1,2-Dichloroethene	9.76	10.0	98	83-118
Chloroethane	11.2	10.0	112	62-125
Chloroform	9.51	10.0	95	76-121
1,1,1-Trichloroethane (TCA)	10.9	10.0	109	72-132
1,2-Dichloroethane (EDC)	10.7	10.0	107	74-121
Benzene	10.5	10.0	105	78-121
2-Hexanone	51.2	50.0	102	67-127
Toluene	10.4	10.0	104	76-122
Tetrachloroethene (PCE)	8.07	10.0	81	72-124
ethylbenzene	9.35	10.0	94	84-122
Propylbenzene	10.2	10.0	102	78-124
1,3,5-Trimethylbenzene	10.3	10.0	103	78-132
1,2,4-Trimethylbenzene	9.89	10.0	99	74-138
sec-Butylbenzene	10.0	10.0	100	72-133
4-Isopropyltoluene	8.62	10.0	86	62-132
Naphthalene	10.7	10.0	107	53-157

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

00020

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Philip Services Corporation
Project: GTIPIM T-3/106207
Sample Matrix: Water

Service Request: K0503232
Date Extracted: 08/27/2005
Date Analyzed: 08/27/2005
Time Analyzed: 15:58

Method Blank Summary
Volatile Organic Compounds

Sample Name: Method Blank
Lab Code: KWG0514992-4
Extraction Method: EPA 5030B
Analysis Method: 8260B

File ID: J:\MS13\DATA\082605\0826F051.D
Instrument ID: MS13
Level: Low
Extraction Lot: KWG0514992

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG0514992-3	J:\MS13\DATA\082605\0826F047.D	08/27/05	14:08
CG-124-WT-0805MS	KWG0514992-1	J:\MS13\DATA\082605\0826F048.D	08/27/05	14:35
CG-124-WT-0805DMS	KWG0514992-2	J:\MS13\DATA\082605\0826F049.D	08/27/05	15:03
TB01-0805	K0503232-001	J:\MS13\DATA\082605\0826F062.D	08/27/05	21:01
CG-113-S1-0805	K0503232-002	J:\MS13\DATA\082605\0826F063.D	08/27/05	21:29
CG-124-WT-0805	K0503232-003	J:\MS13\DATA\082605\0826F064.D	08/27/05	21:57
CG-113-S1-0805	K0503232-002	J:\MS13\DATA\082605\0826F071.D	08/28/05	01:08

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Philip Services Corporation
Project: GTIPIM T-3/106207
Sample Matrix: Water

Service Request: K0503232
Date Extracted: 08/27/2005
Date Analyzed: 08/27/2005
Time Analyzed: 14:08

**Lab Control Sample Summary
 Volatile Organic Compounds**

Sample Name: Lab Control Sample **File ID:** J:\MS13\DATA\082605\0826F047.D
Lab Code: KWG0514992-3 **Instrument ID:** MS13
Extraction Method: EPA 5030B **Level:** Low
Analysis Method: 8260B **Extraction Lot:** KWG0514992

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
CG-124-WT-0805MS	KWG0514992-1	J:\MS13\DATA\082605\0826F048.D	08/27/05	14:35
CG-124-WT-0805DMS	KWG0514992-2	J:\MS13\DATA\082605\0826F049.D	08/27/05	15:03
Method Blank	KWG0514992-4	J:\MS13\DATA\082605\0826F051.D	08/27/05	15:58
TB01-0805	K0503232-001	J:\MS13\DATA\082605\0826F062.D	08/27/05	21:01
CG-113-S1-0805	K0503232-002	J:\MS13\DATA\082605\0826F063.D	08/27/05	21:29
CG-124-WT-0805	K0503232-003	J:\MS13\DATA\082605\0826F064.D	08/27/05	21:57
CG-113-S1-0805	K0503232-002	J:\MS13\DATA\082605\0826F071.D	08/28/05	01:08

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: Philip Services Corporation
 Project: GTIPIM T-3/106207

Service Request: K0503232

Analysis Run Log
 Volatile Organic Compounds

Analysis Method: 8260B

Analysis Lot: KWG0514991
 Instrument ID: MS13

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
0826F045.D	GC/MS Tuning - Generic	KWG0514991-1	8/27/2005	13:13		8/27/2005	13:32
0826F046.D	Continuing Calibration Verification	KWG0514991-2	8/27/2005	13:40		8/27/2005	13:59
0826F047.D	Lab Control Sample	KWG0514992-3	8/27/2005	14:08		8/27/2005	14:27
0826F048.D	CG-124-WT-0805MS	KWG0514992-1	8/27/2005	14:35		8/27/2005	14:54
0826F049.D	CG-124-WT-0805DMS	KWG0514992-2	8/27/2005	15:03		8/27/2005	15:22
0826F051.D	Method Blank	KWG0514992-4	8/27/2005	15:58		8/27/2005	16:17
0826F052.D	ZZZZZZ	ZZZZZZ	8/27/2005	16:25		8/27/2005	16:44
0826F053.D	ZZZZZZ	ZZZZZZ	8/27/2005	16:53		8/27/2005	17:12
0826F054.D	ZZZZZZ	ZZZZZZ	8/27/2005	17:21		8/27/2005	17:40
0826F055.D	ZZZZZZ	ZZZZZZ	8/27/2005	17:48		8/27/2005	18:07
0826F056.D	ZZZZZZ	ZZZZZZ	8/27/2005	18:16		8/27/2005	18:35
0826F057.D	ZZZZZZ	ZZZZZZ	8/27/2005	18:43		8/27/2005	19:02
0826F058.D	ZZZZZZ	ZZZZZZ	8/27/2005	19:11		8/27/2005	19:30
0826F059.D	ZZZZZZ	ZZZZZZ	8/27/2005	19:39		8/27/2005	19:58
0826F060.D	ZZZZZZ	ZZZZZZ	8/27/2005	20:06		8/27/2005	20:25
0826F061.D	ZZZZZZ	ZZZZZZ	8/27/2005	20:34		8/27/2005	20:53
0826F062.D	TB01-0805	K0503232-001	8/27/2005	21:01		8/27/2005	21:20
0826F063.D	CG-113-S1-0805	K0503232-002	8/27/2005	21:29		8/27/2005	21:48
0826F064.D	CG-124-WT-0805	K0503232-003	8/27/2005	21:57		8/27/2005	22:16
0826F065.D	ZZZZZZ	ZZZZZZ	8/27/2005	22:24		8/27/2005	22:43
0826F066.D	ZZZZZZ	ZZZZZZ	8/27/2005	22:51		8/27/2005	23:10
0826F067.D	ZZZZZZ	ZZZZZZ	8/27/2005	23:19		8/27/2005	23:38
0826F068.D	ZZZZZZ	ZZZZZZ	8/27/2005	23:46		8/28/2005	00:05
0826F069.D	ZZZZZZ	ZZZZZZ	8/28/2005	00:13		8/28/2005	00:32
0826F070.D	ZZZZZZ	ZZZZZZ	8/28/2005	00:41		8/28/2005	01:00
0826F071.D	CG-113-S1-0805	K0503232-002	8/28/2005	01:08		8/28/2005	01:27

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: Philip Services Corporation
Project: GTIPIM T-3/106207
Sample Matrix: Water

Service Request: K0503232
Date Extracted: 08/27/2005

Extraction Prep Log
Volatile Organic Compounds

Extraction Method: EPA 5030B
Analysis Method: 8260B

Extraction Lot: KWG0514992
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
TB01-0805	K0503232-001	08/18/05	08/19/05	10ml	10ml	NA	
CG-113-S1-0805DL	K0503232-002	08/18/05	08/19/05	10ml	10ml	NA	
CG-113-S1-0805	K0503232-002	08/18/05	08/19/05	10ml	10ml	NA	
CG-124-WT-0805	K0503232-003	08/18/05	08/19/05	10ml	10ml	NA	
Method Blank	KWG0514992-4	NA	NA	10ml	10ml	NA	
CG-124-WT-0805MS	KWG0514992-1	08/18/05	08/19/05	10ml	10ml	NA	
CG-124-WT-0805DMS	KWG0514992-2	08/18/05	08/19/05	10ml	10ml	NA	
Lab Control Sample	KWG0514992-3	NA	NA	10ml	10ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

**Volatile Organic Compounds
EPA Method 8260B SIM**

Organic Analysis:
Volatile Organic Compounds

Summary Package

Sample and QC Results

COLUMBIA ANALYTICAL SERVICES, INC.

Client: Philip Services Corporation
Project: GTIPIM T-3/106207

Service Request: K0503232

Cover Page - Organic Analysis Data Package
Volatile Organic Compounds

Sample Name	Lab Code	Date Collected	Date Received
TB01-0805	K0503232-001	08/18/2005	08/19/2005
CG-113-S1-0805	K0503232-002	08/18/2005	08/19/2005
CG-113-S1-0805MS	KWG0515262-1	08/18/2005	08/19/2005
CG-113-S1-0805DMS	KWG0515262-2	08/18/2005	08/19/2005

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: 

Name: Jeff Grindstaff

Date: 9/14/05

Title: GC/MS Manager

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Philip Services Corporation
Project: GTIPIM T-3/106207
Sample Matrix: Water

Service Request: K0503232
Date Collected: 08/18/2005
Date Received: 08/19/2005

Volatile Organic Compounds

Sample Name: TB01-0805
Lab Code: K0503232-001
Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Vinyl Chloride	ND	U	0.020	0.0081	1	08/31/05	08/31/05	KWG0515262	
1,1-Dichloroethene	ND	U	0.050	0.0047	1	08/31/05	08/31/05	KWG0515262	
Trichloroethene (TCE)	ND	U	0.050	0.0050	1	08/31/05	08/31/05	KWG0515262	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	109	70-130	08/31/05	Acceptable
Toluene-d8	102	70-130	08/31/05	Acceptable
4-Bromofluorobenzenc	89	70-130	08/31/05	Acceptable

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Philip Services Corporation
Project: GTIPIM T-3/106207
Sample Matrix: Water

Service Request: K0503232
Date Collected: 08/18/2005
Date Received: 08/19/2005

Volatile Organic Compounds

Sample Name: CG-113-S1-0805 **Units:** ug/L
Lab Code: K0503232-002 **Basis:** NA
Extraction Method: EPA 5030B **Level:** Low
Analysis Method: 8260B

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Vinyl Chloride	2.5	0.020	0.0081	1	08/31/05	08/31/05	KWG0515262	
1,1-Dichloroethene	0.11	0.050	0.0047	1	08/31/05	08/31/05	KWG0515262	
Trichloroethene (TCE)	1.3	0.050	0.0050	1	08/31/05	08/31/05	KWG0515262	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	116	70-130	08/31/05	Acceptable
Toluene-d8	103	70-130	08/31/05	Acceptable
4-Bromofluorobenzene	71	70-130	08/31/05	Acceptable

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Philip Services Corporation
Project: GTIPIM T-3/106207
Sample Matrix: Water

Service Request: K0503232
Date Collected: NA
Date Received: NA

Volatile Organic Compounds

Sample Name: Method Blank
Lab Code: KWG0515262-4
Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Vinyl Chloride	ND	U	0.020	0.0081	1	08/31/05	08/31/05	KWG0515262	
1,1-Dichloroethene	ND	U	0.050	0.0047	1	08/31/05	08/31/05	KWG0515262	
Trichloroethene (TCE)	ND	U	0.050	0.0050	1	08/31/05	08/31/05	KWG0515262	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	126	70-130	08/31/05	Acceptable
Toluene-d8	108	70-130	08/31/05	Acceptable
4-Bromofluorobenzene	91	70-130	08/31/05	Acceptable

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Philip Services Corporation
 Project: GTIPIM T-3/106207
 Sample Matrix: Water

Service Request: K0503232

Surrogate Recovery Summary
 Volatile Organic Compounds

Extraction Method: EPA 5030B
 Analysis Method: 8260B

Units: PERCENT
 Level: Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>	<u>Sur2</u>	<u>Sur3</u>
TB01-0805	K0503232-001	109	102	89
CG-113-S1-0805	K0503232-002	116	103	71
Method Blank	KWG0515262-4	126	108	91
CG-113-S1-0805MS	KWG0515262-1	104	105	91
CG-113-S1-0805DMS	KWG0515262-2	105	105	119
Lab Control Sample	KWG0515262-3	82	105	100

Surrogate Recovery Control Limits (%)

Sur1 = Dibromofluoromethane	70-130
Sur2 = Toluene-d8	70-130
Sur3 = 4-Bromofluorobenzene	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.
 Results flagged with a pound (#) indicate the control criteria is not applicable.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Philip Services Corporation
Project: GTIPIM T-3/106207

Service Request: K0503232
Date Analyzed: 08/31/2005
Time Analyzed: 13:45

**Internal Standard Area and RT Summary
 Volatile Organic Compounds**

File ID: J:\MS02\DATA\083105\0830F002.D
Instrument ID: MS02
Analysis Method: 8260B

Lab Code: KWG0515261-2
Analysis Lot: KWG0515261

	Fluorobenzene		Chlorobenzene-d5	
	<u>Area</u>	<u>RT</u>	<u>Area</u>	<u>RT</u>
Results ==>	995,720	9.56	846,742	14.24
Upper Limit ==>	1,991,440	10.06	1,693,484	14.74
Lower Limit ==>	497,860	9.06	423,371	13.74
ICAL Result ==>	899,495	9.55	720,048	14.24

Associated Analyses

Lab Control Sample	KWG0515262-3	994,835	9.55	805,326	14.23
Method Blank	KWG0515262-4	688,327	9.54	575,427	14.24
TB01-0805	K0503232-001	961,222	9.55	749,848	14.24
CG-113-S1-0805	K0503232-002	990,659	9.54	1,352,518	14.23
CG-113-S1-0805MS	KWG0515262-1	1,000,755	9.55	830,068	14.23
CG-113-S1-0805DMS	KWG0515262-2	1,016,113	9.55	832,954	14.22

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Philip Services Corporation
Project: GTIPIM T-3/106207
Sample Matrix: Water

Service Request: K0503232
Date Extracted: 08/31/2005
Date Analyzed: 08/31/2005

**Matrix Spike/Duplicate Matrix Spike Summary
 Volatile Organic Compounds**

Sample Name: CG-113-S1-0805
Lab Code: K0503232-002
Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG0515262

Analyte Name	Sample Result	CG-113-S1-0805MS KWG0515262-1 Matrix Spike			CG-113-S1-0805DMS KWG0515262-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Expected	%Rec	Result	Expected	%Rec			
Vinyl Chloride	2.5	3.26	1.00	73	3.37	1.00	84	70-130	3	30
1,1-Dichloroethene	0.11	1.07	1.00	96	1.08	1.00	97	70-130	1	30
Trichloroethene (TCE)	1.3	2.30	1.00	105	2.30	1.00	104	70-130	0	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Philip Services Corporation
Project: GTIPIM T-3/106207
Sample Matrix: Water

Service Request: K0503232
Date Extracted: 08/31/2005
Date Analyzed: 08/31/2005

**Lab Control Spike Summary
 Volatile Organic Compounds**

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG0515262

Analyte Name	Lab Control Sample KWG0515262-3 Lab Control Spike			%Rec Limits
	Result	Expected	%Rec	
Vinyl Chloride	0.945	1.00	94	70-130
1,1-Dichloroethene	0.912	1.00	91	70-130
Trichloroethene (TCE)	1.01	1.00	101	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Philip Services Corporation
Project: GTIPIM T-3/106207
Sample Matrix: Water

Service Request: K0503232
Date Extracted: 08/31/2005
Date Analyzed: 08/31/2005
Time Analyzed: 15:11

Method Blank Summary
Volatile Organic Compounds

Sample Name: Method Blank
Lab Code: KWG0515262-4
Extraction Method: EPA 5030B
Analysis Method: 8260B

File ID: J:\MS02\DATA\083105\0830F005.D
Instrument ID: MS02
Level: Low
Extraction Lot: KWG0515262

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG0515262-3	J:\MS02\DATA\083105\0830F003.D	08/31/05	14:13
TB01-0805	K0503232-001	J:\MS02\DATA\083105\0830F006.D	08/31/05	15:45
CG-113-S1-0805	K0503232-002	J:\MS02\DATA\083105\0830F007.D	08/31/05	16:14
CG-113-S1-0805MS	KWG0515262-1	J:\MS02\DATA\083105\0830F008.D	08/31/05	16:42
CG-113-S1-0805DMS	KWG0515262-2	J:\MS02\DATA\083105\0830F009.D	08/31/05	17:11

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Philip Services Corporation
Project: GTIPIM T-3/106207
Sample Matrix: Water

Service Request: K0503232
Date Extracted: 08/31/2005
Date Analyzed: 08/31/2005
Time Analyzed: 14:13

Lab Control Sample Summary
Volatile Organic Compounds

Sample Name: Lab Control Sample
Lab Code: KWG0515262-3
Extraction Method: EPA 5030B
Analysis Method: 8260B

File ID: J:\MS02\DATA\083105\0830F003.D
Instrument ID: MS02
Level: Low
Extraction Lot: KWG0515262

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG0515262-4	J:\MS02\DATA\083105\0830F005.D	08/31/05	15:11
TB01-0805	K0503232-001	J:\MS02\DATA\083105\0830F006.D	08/31/05	15:45
CG-113-S1-0805	K0503232-002	J:\MS02\DATA\083105\0830F007.D	08/31/05	16:14
CG-113-S1-0805MS	KWG0515262-1	J:\MS02\DATA\083105\0830F008.D	08/31/05	16:42
CG-113-S1-0805DMS	KWG0515262-2	J:\MS02\DATA\083105\0830F009.D	08/31/05	17:11

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: Philip Services Corporation
Project: GTIPIM T-3/106207

Service Request: K0503232

**Analysis Run Log
 Volatile Organic Compounds**

Analysis Method: 8260B

Analysis Lot: KWG0515261
Instrument ID: MS02

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
0830F001.D	GC/MS Tuning - Generic	KWG0515261-1	8/31/2005	13:15		8/31/2005	13:38
0830F002.D	Continuing Calibration Verification	KWG0515261-2	8/31/2005	13:45		8/31/2005	14:08
0830F003.D	Lab Control Sample	KWG0515262-3	8/31/2005	14:13		8/31/2005	14:36
0830F005.D	Method Blank	KWG0515262-4	8/31/2005	15:11		8/31/2005	15:34
0830F006.D	TB01-0805	K0503232-001	8/31/2005	15:45		8/31/2005	16:08
0830F007.D	CG-113-S1-0805	K0503232-002	8/31/2005	16:14		8/31/2005	16:37
0830F008.D	CG-113-S1-0805MS	KWG0515262-1	8/31/2005	16:42		8/31/2005	17:05
0830F009.D	CG-113-S1-0805DMS	KWG0515262-2	8/31/2005	17:11		8/31/2005	17:34

Results flagged with an asterisk(*) indicate the holding time was exceeded for the analysis

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: Philip Services Corporation
Project: GTIPIM T-3/106207
Sample Matrix: Water

Service Request: K0503232
Date Extracted: 08/31/2005

Extraction Prep Log
Volatile Organic Compounds

Extraction Method: EPA 5030B
Analysis Method: 8260B

Extraction Lot: KWG0515262
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
TB01-0805	K0503232-001	08/18/05	08/19/05	10ml	10ml	NA	
CG-113-S1-0805	K0503232-002	08/18/05	08/19/05	10ml	10ml	NA	
Method Blank	KWG0515262-4	NA	NA	10ml	10ml	NA	
CG-113-S1-0805MS	KWG0515262-1	08/18/05	08/19/05	10ml	10ml	NA	
CG-113-S1-0805DMS	KWG0515262-2	08/18/05	08/19/05	10ml	10ml	NA	
Lab Control Sample	KWG0515262-3	NA	NA	10ml	10ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Appendix B

Data Validation Report



Exponent
5335 SW Meadows Road
Suite 365
Lake Oswego, OR 97035

November 7, 2005

telephone 503-624-5520
facsimile 503-624-5599
www.exponent.com

Louis S. La Rosa III, RPG
Groundwater Monitoring Group Manager
Regulatory Affairs Department
Philip Services Corporation
18000 72nd Avenue South
Kent, Washington 98032

Subject: Data Validation Report for Georgetown Facility: Tier 3 IPIM Indoor Air, Ambient Air, Soil Gas, and Groundwater Sampling Events (654L, 660L, 670L Air Samples and associated Groundwater Samples)
Exponent Contract No. 8601793.001 0101

Dear Lou:

Pursuant to your request, this letter documents the results of a quality assurance review of data reported for the analysis of volatile organic compounds (VOCs) in indoor air, ambient air, soil gas, and groundwater samples (including a trip blank). The data reported for the samples collected are associated with the three Tier 3 inhalation pathway interim measures (IPIM) sampling events that were completed on August 18, 2005 near Philip Services Corporation's (PSC's) Georgetown facility in Seattle, Washington. A summary of the samples collected and the analyses completed on the air samples and groundwater samples is presented in Tables 1 and 2, respectively. Overall, the data reported are of good quality. Ten groundwater sample results were qualified as estimated (*J*). No results required restatement as undetected (*U*) or rejection (*R*). A summary of the qualified data is presented in Table 3.

The indoor air, ambient air, and soil gas samples were collected in 6-L Summa[®] canisters and analyzed for selected VOCs by Air Toxics, Ltd. (ATL) located in Folsom, California. The ATL work orders (i.e., data packages) for these data were 0508500A and 0508500B. The groundwater samples and trip blank were collected in 40-mL glass bottles with Teflon[®] liners and were analyzed for selected VOCs by Columbia Analytical Services, Inc. (CAS) located in Kelso, Washington. The CAS work order (i.e., data package) for these data was K0503232.

The quality assurance review was conducted to verify that the laboratory quality assurance and quality control procedures were documented and that the quality of the data is sufficient to support the use of the data for their intended purpose. The quality assurance review included evaluating the applicable quality control results reported by the laboratory. The adequacy of the sampling procedures was not assessed. A summary of the overall quality of the analytical results, data validation procedures, and the analytical methods used to complete the analyses is presented below.

Overall Quality of the Analytical Results

The results for all applicable quality control measurements reported by the laboratory were generally acceptable. Ten results (groundwater samples and the trip blank only) required qualification as estimated (*J*) during the quality assurance review because the concentration reported as detected was above the method detection limit (MDL), but less than the method reporting limit (MRL). No results required qualification as estimated (*J*), restatement as undetected (*U*), or rejection (*R*).

In some instances, data-validation-specified quality control criteria were not met, as identified during the quality assurance review. However, the quality control criteria that were not met did not require qualification of sample results because the exceedances were determined to be minor. Examples of the minor quality control criteria that were not met included the following:

- For the analyses of the air samples, a relative standard deviation (RSD) of 30.106 percent for benzene in the associated initial calibration was above the method-specific control limit (U.S. EPA 1999a) of 30 percent. No action was required because this RSD exceedance was only slightly over the method-specific control limit.
- For the analysis of the groundwater samples and the trip blank, the 15 percent relative standard deviation (RSD) method-specific control limit stated in Method 8260B (U.S. EPA 2005) was not met for three target analytes (bromoform, 1,1-dichloroethene, and vinyl chloride) in the initial calibrations. No action was required because the RSD exceedances were minor (i.e., 17.2 percent RSD for bromoform, 15.04 percent RSD for 1,1-dichloroethene, and 15.6 percent RSD for vinyl chloride). The results of the alternative evaluation procedure allowed in SW-846 Method 8000B (U.S. EPA 2005) (i.e., the initial calibration is acceptable if the overall average of the RSDs for all compounds used in the initial calibration is ≤ 15 percent) were acceptable.
- For the analysis of the groundwater samples and the trip blank, the relative response factors (RRFs) for selected VOCs were less than the data validation criterion (U.S. EPA 1999b) of 0.05 in the initial calibration and the CCVs for 2-butanone and 4-methyl-2-pentanone. The ≥ 0.05 RRF data validation criterion is applicable for analyses completed using the EPA Contract Laboratory Program (CLP) method. Since the VOC analyses associated with this data set were completed using SW-846 Method 8260B (U.S. EPA 2005), no action was required because all RRFs met the method-specific criteria requiring the RRFs be ≥ 0.1 or ≥ 0.3 for the five system performance check compounds (SPCCs) and ≥ 0.01 for all other target compounds.

- For the analyses of the groundwater samples, toluene was detected in the trip blank. No action was required because this VOC was detected in one sample at a concentration above the 5-times action limit (U.S. EPA 1999b) and was not detected in the other sample.

For the analysis of the groundwater samples, the laboratory completed dilutions, as required by the analytical methods, to obtain concentrations that are within the linear range of the instrument to obtain reportable results. As requested by the regulatory agencies, a summary of all dilutions completed is presented in Table 4.

Data Validation Procedures

Data validation procedures included evaluating the sample results and applicable quality control results reported by the laboratory. The data were validated following the general guidance specified by the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review* (U.S. EPA 1999b) for organic compound analyses and in the context of method-specific and laboratory-established quality control requirements.

Results reported by the laboratories were validated according to 100-percent validation requirements. The following laboratory deliverables were reviewed:

- Case narratives discussing analytical problems (if any) and procedures
- Chain-of-custody documentation to verify completeness of the data set
- Sample preparation logs or laboratory summary result forms to verify analytical holding time constraints were met
- Results for instrument tuning, initial calibration, and continuing calibration to assess instrument performance
- Results for method blanks and the trip blank to determine whether an analyte reported as detected in any sample was the result of possible contamination at the laboratory or contamination during transport of samples, respectively
- Results for internal standards performance to ensure that instrument sensitivity and response were stable during the analysis of the samples
- Results for surrogate compound, laboratory control samples (LCSs) (i.e., a blank spike), duplicate LCS, matrix spike (MS), and matrix spike duplicate (MSD) recoveries, as applicable, to assess analytical accuracy
- Results for laboratory duplicate LCS and MSD analyses, as applicable, to assess analytical precision

- Instrument printouts (e.g., chromatograms, mass spectra, and quantification reports) to assess the validity of analyte identification as either detected or undetected and to verify quantification of sample results
- Laboratory summaries of analytical results
- Field duplicate sample results to provide additional information in support of the quality assurance review.

The laboratory case narratives did not indicate any significant problems were encountered during the analysis of the samples. All criteria for instrument tuning, calibration (except as noted above), internal standards responses, and retention times for the internal standards were met. No VOCs were reported as detected in the method blanks. The recoveries for the surrogate compounds, LCSs, LCS duplicates, and MS/MSDs were within applicable control limits.

Data qualifiers were assigned during the quality assurance review if applicable control limits were not met, in accordance with U.S. EPA (1999b) and the quality control requirements stated in the applicable analytical methods. All data qualified as estimated (*J*) have an acceptable degree of uncertainty and represent data of good quality and reasonable confidence (U.S. EPA 1989, 1996).

Analytical Methods

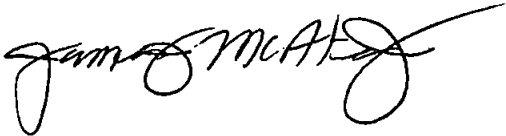
Analyses were completed for VOCs in air samples by gas chromatography/mass spectrometry (GC/MS) operated in the selected ion monitoring (SIM) mode for 17 target analytes to achieve lower reporting limits and by GC/MS operated in the full-scan mode for four target analytes. Analyses were completed using the laboratory-modified version of EPA Method TO-14A (determination of VOCs in ambient air using specially prepared canisters, with subsequent analysis by GC/MS) and EPA Method TO-15 (determination of VOCs in air collected in specially prepared canisters analyzed by GC/MS) (U.S. EPA 1999a).

Analyses were completed for VOCs in water samples by purge and trap and analysis by GC/MS operated in the full-scan mode (18 target analytes) and by GC/MS operated in the SIM mode (3 target analytes) to achieve lower reporting limits using U.S. EPA SW-846 Methods 5030B and 8260B (U.S. EPA 2005).

Louis S. La Rosa III, RPG
November 7, 2005
Page 5

Should you have any questions regarding the information presented herein, please call me at (503) 624-5527.

Cordially,

A handwritten signature in black ink, appearing to read "James J. Mc Ateer, Jr.", with a stylized flourish extending from the end.

James J. Mc Ateer, Jr.
Senior Scientist

Attachments

cc: Chris Waldron, Pioneer Technologies Corporation

References

- U.S. EPA. 1989. J-qualified CLP data and recommendations for its use. Memorandum from H.M. Fribush, Technical Project Officer, Analytical Operations Branch, to S. Wells, Chief, NPL Criteria Section, Site Assessment Branch. U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response, Washington, DC.
- U.S. EPA. 1996. Using qualified data to document an observed release and observed contamination. EPA 540-F-94-028. November 1996. Office of Solid Waste and Emergency Response, U.S. Environmental Protection Agency, Washington, DC.
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**Table 1. Summary of analyses: Georgetown Tier 3 IPIM VOC air sampling event
(654L, 660L, and 670L Samples)**

Sample ID	Laboratory Sample ID	Date Sampled	Matrix	Laboratory	VOCs	VOCs
					by TO-14A	by TO-14A SIM
654L-IA1 (Indoor air)	0508500B-04A	08/18/05	AIR	ATL	X	--
654L-IA1 (Indoor air)	0508500A-04A	08/18/05	AIR	ATL	--	X
660L-AA1 (Ambient air)	0508500B-05A	08/18/05	AIR	ATL	X	--
660L-AA1 (Ambient air)	0508500A-05A	08/18/05	AIR	ATL	--	X
660L-IA1 (Indoor air)	0508500B-03A	08/18/05	AIR	ATL	X	--
660L-IA1 (Indoor air)	0508500A-03A	08/18/05	AIR	ATL	--	X
670L-IA1 (Indoor air)	0508500B-01A	08/18/05	AIR	ATL	X	--
670L-IA1 (Indoor air)	0508500A-01A	08/18/05	AIR	ATL	--	X
670L-9-IA1 (Indoor air field duplicate)	0508500B-02A	08/18/05	AIR	ATL	X	--
670L-9-IA1 (Indoor air field duplicate)	0508500A-02A	08/18/05	AIR	ATL	--	X

Note: -- not analyzed
 ATL - Air Toxics, Ltd.
 IPIM - inhalation pathway interim measures
 SIM - selected ion monitoring
 VOC - volatile organic compound

Table 2. Summary of analyses: Georgetown Tier 3 IPIM VOC groundwater sampling event

Sample ID	Laboratory Sample ID	Date Sampled	Matrix	Laboratory	VOCs by 8260B	VOCs by 8260B-SIM
CG-113-S1-0805	K0503232-002	08/18/05	GW	CAS	X	X
CG-124-WT-0805	K0503232-003	08/18/05	GW	CAS	X	--
TB01-0805	K0503232-001	08/18/05	GW	CAS	X	X

Note: GW - groundwater
SIM - selected ion monitoring
VOC - volatile organic compound

Table 3. Summary of qualified data for Tier 3 August 2005 Georgetown sampling event^a

Sample ID	Laboratory Sample ID	Analyte	Result Units	Lab Flag	Validation Qualifier	Quality Control Reason	Quality Control Result	Possible Bias
TB01-0805	K0503232-001	Toluene	0.18 µg/L		J	Concentration > MDL, < MRL	NA	Low or high
CG-113-S1-0805	K0503232-002	Toluene	0.91 µg/L		J	Concentration > MDL, < MRL	NA	Low or high
		<i>trans</i> -1,2-Dichloroethene	0.66 µg/L		J	Concentration > MDL, < MRL	NA	Low or high
		<i>sec</i> -Butylbenzene	0.43 µg/L		J	Concentration > MDL, < MRL	NA	Low or high
		4-Isopropyltoluene	0.43 µg/L		J	Concentration > MDL, < MRL	NA	Low or high
CG-124-WT-0805	K0503232-003	1,1-Dichloroethene	0.84 µg/L		J	Concentration > MDL, < MRL	NA	Low or high
		Benzene	0.18 µg/L		J	Concentration > MDL, < MRL	NA	Low or high
		<i>trans</i> -1,2-Dichloroethene	0.78 µg/L		J	Concentration > MDL, < MRL	NA	Low or high
		Chloroform	0.33 µg/L		J	Concentration > MDL, < MRL	NA	Low or high
		1,2-Dichloroethane	0.22 µg/L		J	Concentration > MDL, < MRL	NA	Low or high

Note: J - estimated

^a Summary of qualified data is for natural samples only and does not include laboratory duplicate sample results.

**Table 4. Summary of VOC dilution analyses for August 2005 Tier 3
Georgetown groundwater sampling event**

Sample ID	Laboratory Sample ID	Date Sampled	VOCs by 8260B		VOCs by 8260B-SIM
			Dilution 1	Dilution 2	
CG-113-S1-0805	K0503232-002	08/18/05	1:1	1:10	1:1
CG-124-WT-0805	K0503232-003	08/18/05	1:1	--	^a
TB01-0805	K0503232-001	08/18/05	1:1	--	1:1

Note: -- - No dilution performed
SIM - selected ion monitoring
VOC - volatile organic compound

^a SIM analysis not completed due to high concentration of target and/or non-target VOCs in the sample.