



March 8, 2001

Service Request No: K2101258

John Strand
Airport Communities Coalition
1314 Cedar
Richland, WA 99352

Re: Water Quality Monitoring/00-101B

Dear John:

Enclosed are the results of the sample(s) submitted to our laboratory on February 20, 2001. For your reference, these analyses have been assigned our service request number K2101258.

All analyses were performed according to our laboratory's quality assurance program. 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 samples analyzed.

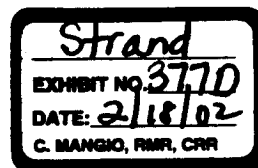
Please call if you have any questions. My extension is 3316.

Respectfully submitted,

Columbia Analytical Services, Inc.

Jeff Christian
Laboratory Director

JC/gep



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Acronyms

ASTM	American Society for Testing and Materials
AZLA	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.

00002

AR 021625

~~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 reported value is estimated because of the presence of matrix interference.
- 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.

01003

AR 021626

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Airport Communities Coalition
Project: Water Quality Monitoring
Sample Matrix: Water

Service Request: K2101258
Date Collected: 02/19/2001
Date Received: 02/20/2001

Glycols

Sample Name: #1
Lab Code: K2101258-001
Extraction Method: METHOD
Analysis Method: 8015B

Units: mg/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Ethylene Glycol	ND	U	5.0	1	02/21/01	02/22/01	KWG0100851	
Propylene Glycol	ND	U	5.0	1	02/21/01	02/22/01	KWG0100851	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,3-Butylene Glycol	97	50-150	02/22/01	Acceptable

00004

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Airport Communities Coalition
Project: Water Quality Monitoring
Sample Matrix: Water

Service Request: K2101258
Date Collected: 02/19/2001
Date Received: 02/20/2001

Glycols

Sample Name: #2
Lab Code: K2101258-002
Extraction Method: METHOD
Analysis Method: 8015B

Units: mg/L
Basis: NA
Level: Low

Analyte Name	Result Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Ethylene Glycol	ND U	5.0	1	02/21/01	02/22/01	KWG0100851	
Propylene Glycol	ND U	5.0	1	02/21/01	02/22/01	KWG0100851	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,3-Butylene Glycol	89	50-150	02/22/01	Acceptable

00005

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Airport Communities Coalition
Project: Water Quality Monitoring
Sample Matrix: Water

Service Request: K2101258
Date Collected: 02/19/2001
Date Received: 02/20/2001

Glycols

Sample Name: #3
Lab Code: K2101258-003
Extraction Method: METHOD
Analysis Method: 8015B

Units: mg/L
Basis: NA
Level: Low

Analyte Name	Result Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Ethylene Glycol	ND U	5.0	1	02/21/01	02/22/01	KWG0100851	
Propylene Glycol	ND U	5.0	1	02/21/01	02/22/01	KWG0100851	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,3-Butylene Glycol	87	50-150	02/22/01	Acceptable

00006

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Airport Communities Coalition
Project: Water Quality Monitoring
Sample Matrix: Water

Service Request: K2101258
Date Collected: 02/19/2001
Date Received: 02/20/2001

Glycols

Sample Name: #4
Lab Code: K2101258-004
Extraction Method: METHOD
Analysis Method: 8015B

Units: mg/L
Basis: NA
Level: Low

Analyte Name	Result Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Ethylene Glycol	ND U	5.0	1	02/21/01	02/22/01	KWG0100851	
Propylene Glycol	ND U	5.0	1	02/21/01	02/22/01	KWG0100851	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,3-Butylene Glycol	90	50-150	02/22/01	Acceptable

00007

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Airport Communities Coalition
Project: Water Quality Monitoring
Sample Matrix: Water

Service Request: K2101258
Date Collected: 02/19/2001
Date Received: 02/20/2001

Glycols

Sample Name: #5
Lab Code: K2101258-005
Extraction Method: METHOD
Analysis Method: 8015B

Units: mg/L
Basis: NA
Level: Low

Analyte Name	Result Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Ethylene Glycol	ND U	5.0	1	02/21/01	02/22/01	KWG0100851	
Propylene Glycol	ND U	5.0	1	02/21/01	02/22/01	KWG0100851	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,3-Butylene Glycol	90	50-150	02/22/01	Acceptable

00008

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Airport Communities Coalition
Project: Water Quality Monitoring
Sample Matrix: Water

Service Request: K2101258
Date Collected: 02/19/2001
Date Received: 02/20/2001

Glycols

Sample Name: #6
Lab Code: K2101258-006
Extraction Method: METHOD
Analysis Method: 8015B

Units: mg/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Ethylene Glycol	ND	U	5.0	1	02/21/01	02/22/01	KWG0100851	
Propylene Glycol	ND	U	5.0	1	02/21/01	02/22/01	KWG0100851	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,3-Butylene Glycol	87	50-150	02/22/01	Acceptable

00009

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Airport Communities Coalition
Project: Water Quality Monitoring
Sample Matrix: Water

Service Request: K2101258
Date Collected: 02/19/2001
Date Received: 02/20/2001

Glycols

Sample Name: #7
Lab Code: K2101258-007
Extraction Method: METHOD
Analysis Method: 8015B

Units: mg/L
Basis: NA
Level: Low

Analyte Name	Result Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Ethylene Glycol	ND U	5.0	1	02/21/01	02/22/01	KWG0100851	
Propylene Glycol	16	5.0	1	02/21/01	02/22/01	KWG0100851	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,3-Butylene Glycol	94	50-150	02/22/01	Acceptable

00010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Airport Communities Coalition
Project: Water Quality Monitoring
Sample Matrix: Water

Service Request: K2101258
Date Collected: 02/19/2001
Date Received: 02/20/2001

Glycols

Sample Name: #8
Lab Code: K2101258-008
Extraction Method: METHOD
Analysis Method: 8015B

Units: mg/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Ethylene Glycol	ND	U	5.0	1	02/21/01	02/23/01	KWG0100851	
Propylene Glycol	17		5.0	1	02/21/01	02/23/01	KWG0100851	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,3-Butylene Glycol	102	50-150	02/23/01	Acceptable

00011

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Airport Communities Coalition
 Project: Water Quality Monitoring
 Sample Matrix: Water

Service Request: K2101258
 Date Collected: NA
 Date Received: NA

Glycols

Sample Name: Method Blank
 Lab Code: KWG0100851-10
 Extraction Method: METHOD
 Analysis Method: 8015B

Units: mg/L
 Basis: NA
 Level: Low

Analyte Name	Result Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Ethylene Glycol	7.8	5.0	1	02/21/01	02/21/01	KWG0100851	
Propylene Glycol	ND U	5.0	1	02/21/01	02/21/01	KWG0100851	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,3-Butylene Glycol	78	50-150	02/21/01	Acceptable

Appendix A

QA/QC Results

00013

AR 021636

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Airport Communities Coalition
Project: Water Quality Monitoring
Sample Matrix: Water

Service Request: K2101258

Surrogate Recovery Summary
Glycols

Extraction Method: METHOD
Analysis Method: 8015B

Units: PERCENT
Level: Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>
#1	K2101258-001	97
#2	K2101258-002	89
#3	K2101258-003	87
#4	K2101258-004	90
#5	K2101258-005	90
#6	K2101258-006	87
#7	K2101258-007	94
#8	K2101258-008	102
Method Blank	KWG0100851-10	78
#7MS	KWG0100851-5	99
#7DMS	KWG0100851-6	81
Lab Control Sample	KWG0100851-9	95

Surrogate Recovery Control Limits (%)

Sur1 = 2,3-Butylene Glycol 50-150

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

00014

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Airport Communities Coalition
 Project: Water Quality Monitoring
 Sample Matrix: Water

Service Request: K2101258
 Date Extracted: 02/21/2001
 Date Analyzed: 02/22/2001

Matrix Spike/Duplicate Matrix Spike Summary
 Glycols

Sample Name: #7
 Lab Code: K2101258-007
 Extraction Method: METHOD
 Analysis Method: 8015B

Units: mg/L
 Basis: NA
 Level: Low
 Extraction Lot: KWG0100851

Analyte Name	Sample Result	#7MS KWG0100851-5 Matrix Spike			#7DMS KWG0100851-6 Duplicate Matrix Spike			%Rec Limits	RPD	RPI Limi
		Result	Expected	%Rec	Result	Expected	%Rec			
Ethylene Glycol	ND	87	100	87	92	100	92	50-150	6	30
Propylene Glycol	16	100	100	84	100	100	84	50-150	0	30

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

00015

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Airport Communities Coalition
Project: Water Quality Monitoring
Sample Matrix: Water

Service Request: K2101258
Date Extracted: 02/21/2001
Date Analyzed: 02/21/2001

Lab Control Spike Summary
Glycols

Extraction Method: METHOD
Analysis Method: 8015B

Units: mg/L
Basis: NA
Level: Low
Extraction Lot: KWG0100851

Analyte Name	Lab Control Sample KWG0100851-9 Lab Control Spike			%Rec Limits
	Result	Expected	%Rec	
Ethylene Glycol	110	100	110	50-150
Propylene Glycol	100	100	100	50-150

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

Printed: 03/01/2001 15:07:50

Form 3C - Organic

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SuperSet Reference: RR5989

AR 021639

Appendix B
Chain of Custody
Information

00017

AR 021640



CHAIN OF CUSTODY

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 685-7222 • FAX (360) 636-1068

SR#: K410125X

PAGE OF COC #

PROJECT NAME	PROJECT NUMBER	PROJECT MANAGER	COMPANY/ADDRESS	PHONE #	FAX #	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS		REMARKS
										SEMIVOLATILE ORGANICS BY GC/MS	VOLATILE ORGANICS BY GC/MS	
WATER QUALITY MONITORING	00-1013	JOHN STRAND	A.C.C.	21630	11th AVE S. PILES MINE 98190	2/19/01	9:45 AM	1	W	1	1	
				509 943-4347	509 946-1467	2/19/01	9:46 AM	2	W	1	1	
						2/19/01	10:08 AM	3	W	1	1	
						2/18/01	10:09 AM	4	W	1	1	
						2/19/01	10:29 AM	5	W	1	1	
						2/19/01	10:30 AM	6	W	1	1	
						2/19/01	10:48 AM	7	W	1	1	
						2/19/01	10:49 AM	8	W	1	1	

REPORT REQUIREMENTS i. Routine Report: Method Blank, Surrogate, as required ii. Report Dup., MS, MSD as required iii. Data Validation Report (includes all raw data) iv. CLP Deliverable Report v. EDD	INVOICE INFORMATION P.O. # _____ Bill To: _____	TURNAROUND REQUIREMENTS 24 hr. _____ 48 hr. _____ 5 Day _____ Standard (10-15 working days) Provide FAX Results Requested Report Date _____
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RELIQUISHED BY: Signature: <u>Charles Martin</u> Date/Time: <u>2/19/01 12:00 pm</u> Printed Name: <u>Charles Martin</u> Firm: <u>ACC</u>	RELIQUISHED BY: Signature: <u>[Signature]</u> Date/Time: <u>2/20/01</u> Printed Name: <u>IVANOVICH CAS</u> Firm: <u> </u>	RECEIVED BY: Signature: _____ Date/Time: _____ Printed Name: _____ Firm: _____
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Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg
 Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: _____ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS: W = WATER