Limited Groundwater Sampling Results 16840 116th Avenue Southeast Renton, Washington

ZZA-Terracon Project No. 81087039 January 23, 2008

Prepared for:

MBA Cascade Plaza, LLC P.O. Box 3821 Bellevue, Washington 98009



Lynnwood, Washington

January 23, 2008



18905 33rd Avenue West Suite 117 Lynnwood, Washington 98036 Tel: 425 771 3304 Fac: 425 771 3549 www.Terracon.com

MBA Cascade Plaza, LLC P.O. Box 3821 Bellevue, Washington 98009

Attention: Mr. Bruce Anderson

Re: Limited Groundwater Sampling Results 16840 116th Avenue Southeast Renton, King County, Washington ZZA-Terracon Project No. 81087039

Dear Mr. Anderson:

ZZA-Terracon is pleased to submit three copies of the limited groundwater sampling results for the above referenced site. This investigation was performed in accordance with ZZA-Terracon's proposal dated January 3, 2008 (Proposal No. P-4144).

We appreciate the opportunity to perform these services for MBA Cascade Plaza, LLC. Please contact either of the undersigned at (425) 771-3304 if you have questions regarding the information provided in the report.

Sincerely, ZZA-Terracon

Prepared by:

Michael S. August Staff Geologist



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TABLE OF CONTENTS

Page No.

1.0	INTRODUCTION	.1
2.0	FIELD ACTIVITIES	.3
3.0	LABORATORY ANALYTICAL METHODS	.3
4.0	GROUNDWATER QUALITY	.3
5.0	FINDINGS AND RECOMMENDATIONS	.4

LIST OF APPENDICES

Appendix A:	Figure 1 – Site Sketch
Appendix B:	Laboratory Data Sheets

Limited Groundwater Sampling Results 16840 116th Avenue Southeast Renton, Washington

ZZA-Terracon Project No. 81087039 January 16, 2008

1.0 INTRODUCTION

1.1 Site Description

Site Name	Cascade Retail
Site Location/Address	16840 116 th Avenue Southeast
General Site Description	Retail shopping complex, former gasoline service station

The approximate locations of the groundwater sample collected for this investigation is indicated on Figure 1 – Site Sketch of Appendix A.

1.2 Scope of Work

ZZA-Terracon conducted limited groundwater sampling at the Cascade Retail site located in Renton, King County, Washington. ZZA-Terracon's groundwater sampling was undertaken in response to your request to sample an existing monitoring well located near the onsite drycleaner facility. Specifically, a groundwater sample was collected from monitoring well MW-5, located north of, and in a presumed downgradient position relative to the drycleaner. The monitoring well was previously installed by ZZA-Terracon (formerly Zipper Zeman Associates, Inc.), during a Limited Phase II Environmental Site Assessment completed on 2 and 3 December, 2003 for a portion of Cascade Plaza (Project No. J-1512-02).

The objective of the groundwater sampling was to evaluate the presence of Volatile Organic Compounds (VOC) in groundwater at the sole location of monitoring well MW-5. ZZA-Terracon's groundwater sampling was conducted in accordance with ZZA-Terracon's Proposal No. P-4144 dated January 3, 2008, as authorized by Mr. Bruce Anderson, MBA Cascade Plaza, LLC.

1.3 Standard of Care

ZZA-Terracon's services were performed in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographical area during the same time

Cascade Retail Limited Groundwater Sampling ZZA-Terracon Project Number: 81087039 January 23, 2008

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period. ZZA-Terracon makes no warranties, either express or implied, regarding the findings, conclusions or recommendations presented herein. Please note that ZZA-Terracon does not warrant the work of laboratories, regulatory agencies or other third parties supplying information used in the preparation of this report. These groundwater sampling services were performed in accordance with the scope of work agreed with you, our client, as reflected in our proposal.

1.4 Additional Scope Limitations

Findings, conclusions and recommendations resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work; such information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, non-detectable or not present during these services, and we cannot represent that the site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this sampling event. Subsurface conditions may vary from those encountered at specific explorations or during other surveys, tests, assessments, investigations or exploratory services; the data, interpretations, findings, and our recommendations are based solely upon data obtained at the time at the locations indicated and within the scope of these services.

The location of monitoring well MW-5, at the time of drilling, was selected based on topographic position relative to the drycleaner (e.g., the monitoring well is located at a point lower in elevation than the drycleaner). It should be noted that the Limited Phase II ESA was completed predominantly regarding a former automotive service station near the Northwest corner of the property as a whole, with installation of monitoring well MW-5 as a single data point in a generally downgradient position relative to the drycleaner on the subject site. Due to fluctuations in seasonal groundwater recharge and the variability in subsurface conditions, the groundwater migration direction can only be estimated. The installation of a single groundwater monitoring point may not be sufficient to provide representative data of site groundwater conditions downgradient of the onsite drycleaner. Without the benefit of a minimum of three on-site wells surveyed to a datum, the groundwater migration direction cannot be determined.

1.5 Reliance

This report has been prepared for the exclusive use of MBA Cascade Plaza, LLC and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the site) is prohibited without the express written authorization of MBA Cascade Plaza, LLC and ZZA-Terracon. Reliance by authorized parties will be subject to the terms, conditions and limitations stated in the proposal and this limited groundwater sampling report. The limitation of liability defined

Cascade Retail Limited Groundwater Sampling ZZA-Terracon Project Number: 81087039 January 23, 2008

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in the terms and conditions is the aggregate limit of ZZA-Terracon's liability to the client and all relying parties unless otherwise agreed in writing.

2.0 FIELD ACTIVITIES

2.1 Groundwater Sampling

One groundwater sample was collected and analyzed from the groundwater monitoring well MW-5. Prior to sample collection, the well was developed by removing approximately 5 gallons of groundwater using a disposable polyethylene bailer. Subsequent to sufficient recharge, the groundwater sample was collected with the disposable bailer.

The groundwater sample was collected and placed in laboratory prepared glassware, and placed on ice in a cooler which was secured with a custody seal. The sample coolers and completed chain-ofcustody forms were transported to Friedman and Bruya's analytical laboratory in Seattle, Washington following industry standard and ZZA-Terracon's strict chain-of-custody procedures. Analytical results were requested on an expedited (1-day) turnaround time.

3.0 LABORATORY ANALYTICAL METHODS

The groundwater sample collected from MW-5 was analyzed for VOC using EPA Method 8260B. Laboratory data sheets and the executed chain-of-custody form are provided in Appendix B.

4.0 ANALYTICAL LABORATORY RESULTS

As reported by the analytical laboratory, no VOCs were detected above laboratory method reporting limits.

4.1 Quality Assurance / Quality Control

The analytical results were checked for completeness immediately upon receipt from the laboratory to ensure that data and QA/QC information requested were present. Data quality was assessed by considering hold times, laboratory reporting limits, method blanks, matrix spike and matrix spike duplicate (MS/MSD) results, surrogate recoveries, and analytical sequence as applicable. QA/QC review was completed using guidance described in *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (Draft Final, USEPA, 2005). Our evaluation assumes that the QA/QC is correct as reported by the laboratory, and merely provides an interpretation of the QA/QC results.

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Hold Times. All analyses were completed within specified hold times.

<u>Laboratory Reporting Limits</u>. All reporting limits were below relevant Ecology MTCA Method A cleanup levels.

Method Blanks. VOCs were not detected in the method blanks.

<u>MS/MSD Results</u>. MS and MSD recoveries were all within laboratory limits, and Relative Percent Differences (RPDs) between MS and MSD recoveries were all within laboratory limits.

Surrogate Recoveries. All surrogate recoveries were within laboratory limits.

Based upon our interpretation of quality control information provided by the laboratories, it is our opinion that the overall dataset is useable as intended for the purposes of this assessment.

5.0 FINDINGS AND RECOMMENDATIONS

The findings and recommendations of this investigation are as follows:

VOCs were not detected above laboratory minimum reporting limits in the groundwater sample collected from monitoring well MW-5 on January 12, 2008.

It is our understanding that the on-site structure in which the drycleaning establishment is located will be demolished as part of proposed redevelopment plans. As stated previously, the location of monitoring well MW-5 is not be sufficient to characterize site groundwater conditions relative to the on-site drycleaner as a whole. In order to assess the potential for VOC impacted soils and groundwater that may be present on-site in areas not previously evaluated, additional investigation would be required.

Should the client decide to pursue a higher level of confidence that the site has not been impacted by the on site drycleaner, ZZA-Terracon recommends that one of the following actions be completed during site redevelopment after the structures become unoccupied or demolished, and prior to or during earthwork phases of construction:

• A limited site investigation in the immediate vicinity of the drycleaner to evaluate the potential impact of its historical operation; or,

Cascade Retail Limited Groundwater Sampling ZZA-Terracon Project Number: 81087039 January 23, 2008

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Completion of limited environmental construction monitoring during earthwork and grading
phases of construction of development as proposed. Given this scenario, the environmental
integrity of excavation soils can be evaluated (if necessary) as earthwork progresses. We
recommend this be accomplished by a qualified environmental professional with the grading
plan associated with the development reviewed prior to commencement of earthwork or
grading.

APPENDIX A

Figure 1 – Site Sketch



APPENDIX B

Laboratory Data Sheets

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Charlene Morrow, M.S. Yelena Aravkina, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 FAX: (206) 283-5044 e-mail: fbi@isomedia.com

January 18, 2008

Sean Donnan ZZA-Terracon 18905 33rd Ave W, Suite #117 Lynnwood, WA 98036

Dear Mr. Donnan:

Included are the results from the testing of material submitted on January 14, 2008 from the 81087039, F&BI 801127 project. There are 5 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Colo

Michael Erdahl Project Manager

Enclosures zza0118.DOC

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	MW-5 01/14/08 01/14/08 01/14/08 Water ug/L (ppb)	·	Client: Project: Lab ID: Data File: Instrument: Operator:	ZZA-Terracon 81087039, F&BI 80113 801127-01 011415.D GCMS4 MB	27
			Lower	Upper	
Surrogates:		% Recovery:	Limit:	Limit:	
Dibromofluorometh		91	55	118	
1,2-Dichloroethane-	d4	89	53	121	
Toluene-d8		91	55	121	
4-Bromofluorobenze	ene	81	29	181	
Common la		Concentration	0	1	Concentration
Compounds:		ug/L (ppb)	Compour	nas:	ug/L (ppb)
Dichlorodifluorome	thane	<1		oroethene	<1
Chloromethane		<1		chloromethane	<1
Vinyl chloride		<0.2		omoethane (EDB)	<1
Bromomethane		<1	Chlorobe		<1
Chloroethane		<1	Ethylber		<1
Trichlorofluoromet	hane	<1		`etrachloroethane	<1
Acetone		<10	m,p-Xyle		<2
1,1-Dichloroethene		<1	o-Xylene		<1
Methylene chloride		<5	Styrene		<1
trans-1,2-Dichloroe		<1	Isopropy		<1
1,1-Dichloroethane		<1	Bromofo		<1
2,2-Dichloropropan		<1	n-Propyl		<1
cis-1,2-Dichloroethe	ene	<1	Bromobe		<1
Chloroform		<1		methylbenzene	<1
2-Butanone (MEK)		<10		'etrachloroethane	<1
1,2-Dichloroethane 1,1,1-Trichloroetha		<1 <1	2-Chloro	chloropropane	<1
		<1 <1	4-Chloro		<1 <1
1,1-Dichloropropen Carbon Tetrachlori		<1		ylbenzene	<1
Benzene	ue	<1		imethylbenzene	<1
Trichloroethene		<1		Ibenzene	<1
1,2-Dichloropropan	A	<1		pyltoluene	<1
Bromodichlorometh		<1		lorobenzene	<1
Dibromomethane		<1		lorobenzene	<1
4-Methyl-2-pentanc		<10		lorobenzene	<1
cis-1,3-Dichloroproj		<1		omo-3-chloropropane	<1
Toluene		<1		ichlorobenzene	<1
trans-1,3-Dichlorop	ropene	<1		orobutadiene	<1
1,1,2-Trichloroetha		<1	Naphtha		<1
2-Hexanone		<10	•	ichlorobenzene	<1
1,3-Dichloropropan	e	<1	, ,		

Note: The reporting limit for vinyl chloride is equal to the MDL.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	Method Blar Not Applicat 01/14/08 01/14/08 Water ug/L (ppb)		Client: Project: Lab ID: Data File: Instrument: Operator:	ZZA-Terracon 81087039, F&BI 8011 080031 mb 011406.D GCMS4 MB	27
			Lower	Upper	
Surrogates:		% Recovery:	Limit:	Limit:	
Dibromofluorometh		88	55	118	
1,2-Dichloroethane-	·d4	90	53	121	
Toluene-d8		91	55	121	
4-Bromofluorobenze	ene	87	29	181	
		Concentration			Concentration
Compounds:		ug/L (ppb)	Compour	nds:	ug/L (ppb)
Dichlorodifluorome	thane	<1	Tetrachl	oroethene	<1
Chloromethane		<1	Dibromo	chloromethane	<1
Vinyl chloride		<0.2		omoethane (EDB)	<1
Bromomethane		<1	Chlorobe		<1
Chloroethane		<1	Ethylber	nzene	<1
Trichlorofluorometl	hane	<1	1, 1,1,2- T	Cetrachloroethane	<1
Acetone		<10	m,p-Xyle	ene	<2
1,1-Dichloroethene		<1	o-Xylene	•	<1
Methylene chloride		<5	Styrene		<1
trans-1,2-Dichloroe	thene	<1		lbenzene	<1
1,1-Dichloroethane		<1	Bromofo		<1
2,2-Dichloropropan		<1	n-Propyl		<1
cis-1,2-Dichloroethe	ene	<1	Bromobe		<1
Chloroform		<1		imethylbenzene	<1
2-Butanone (MEK)		<10		letrachloroethane	<1
1,2-Dichloroethane		<1		ichloropropane	<1
1,1,1-Trichloroetha		<1	2-Chloro		<1
1,1-Dichloropropen		<1	4-Chloro		<1
Carbon Tetrachlori	ae	<1		ylbenzene	<1 <1
Benzene		<1		imethylbenzene	<1 <1
Trichloroethene	•	<1 <1		/lbenzene pyltoluene	<1 <1
1,2-Dichloropropan Bromodichlorometh		<1 <1		lorobenzene	<1
Dibromomethane	lane	<1		lorobenzene	<1
4-Methyl-2-pentance	no	<10		lorobenzene	<1
cis-1,3-Dichloroprop		<1		omo-3-chloropropane	<1
Toluene	Serie	<1		ichlorobenzene	<1
trans-1,3-Dichlorop	ropene	<1		orobutadiene	<1
1,1,2-Trichloroetha		<1	Naphtha		<1
2-Hexanone		<10		ichlorobenzene	<1
1,3-Dichloropropan	е	<1			

Note: The reporting limit for vinyl chloride is equal to the MDL.

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ENVIRONMENTAL CHEMISTS

Date of Report: 01/18/08 Date Received: 01/14/08 Project: 81087039, F&BI 801127

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260B

Laboratory Code: 801109-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)			
Dichlorodifluoromethane	ug/L (ppb)	<1	<1	nm			
Chloromethane	ug/L (ppb)	<1	<1	ពភា			
√inyl chloride	ug/L (ppb)	3.0	3.1	3			
Bromomethane	ug/L (ppb)	<1	<1	nm			
Chloroethane	ug/L (ppb)	<1	<1	nm			
	ug/L (ppb)	<	<1	nm			
Trichlorofluoromethane	ug/L (ppb)	<10	<10	nm			
Acetone	ug/L (ppb)	<1	<1	nm			
1,1-Dichloroethene		<5	<5	ກສາ			
Methylene chloride	ug/L (ppb) ug/L (ppb)	<]	<1	กฑ			
trans-1.2-Dichloroethene	ug/L (ppb)	<1	<	ດກ			
I.1-Dichloroethane		<1	<1	กกา			
2,2-Dichloropropane	ug/L (ppb)	33	34	3			
cis-1.2-Dichloroethene	ug/L (ppb)		<]	nm			
Chloroform	ug/L (ppb)	<1	<10	nm			
2-Butanone (MEK)	ug/L (ppb)	<10					
1,2-Dichloreethane (EDC)	ug/L (ppb)	<1	<1	nm			
1,1,1-Trichloroethane	ug/L (ppb)	<1	</td <td>nm</td>	nm			
I,I-Dichloropropene	ug/L (pph)	<1	<1	nm			
Carbon Tetrachloride	ug/L (ppb)	<1	< 1	nm			
Benzene	ug/L (ppb)	<1	<1	nm			
Trichloroethene	սց/Լ (ppb)	29	29	0			
1,2-Dichloropropane	ug/L (ppb)	<1	<1	nm			
Bromodichloromethane	ug/L (ppb)	<	<1	nm			
Dibromomethane	ug/L (ppb)	< 1	<1	nm			
4-Methyl-2-pentanone	ug/L (ppb)	<10	<10	nm			
cis 1,3 Dichloropropene	ug/L (ppb)	<1	<)	nın			
Toluene	ug/L (ppb)	<1	<1	ារព			
trans-1,3-Dichloropropene	ug/L (ppb)	<1	<1	នហ			
1.1.2-Trichloroethane	ug/L (ppb)	<	<1	nm			
2-Hexanone	ug/L (ppb)	<10	<10	nm			
1.3-Dichloropropane	ug/L (ppb)	< 1	< l	nm			
Tetrachloroethene	ug/L (ppb)	770	740	4			
Dibromochloromethane	ug/L (ppb)	< 1	< 1	nm			
1.2-Dibromoethane (EDB)	ug/L (ppb)	<1	< 1	nm			
Chlorobenzene	ug/L (ppb)	<1	< 1	nn			
Ethylbenzene	ug/L (ppb)	<	<1	ma			
1.1.1.2-Tetrachloroethane	ug/L (ppb)	<	<1	nm			
m.pXylene	ug/L (ppb)	<2	<2	nm			
o-Xylene	ug/L (ppb)	<)	<	nm			
	ug/L (ppb)	<1	< 1	nm			
Styrene	ug/L (ppb)	<1	<]	nm			
Isopropylbenzene	ug/L (ppb)	<1	<1	nm			
Bromoform	ug/L (ppb)	<	<1	nm			
n-Propylbenzene	սց/Ն (ppb)	<1	<1	nm			
Bromobenzene	ug/L (ppb)	<	<1	nm			
1.3.5-Trimethylbenzene	սց/Լ (ppb)	< 1	<1	nm			
1,1.2.2-Tetrachloroethane		<1	<1	nm			
1,2,3-Trichloropropane	ug/L (ppb)	<1	<)	nm			
2-Chlorotoluene	ug/L (ppb)		٤] <)	nm			
4-Chlorotoluene	ug/L (ppb)	<]	<1	חתח			
tert-Butylbenzene	ug/L (ppb)	<1					
1.2.4-Trimethylbenzene	ug/L (ppb)	<1	<1	ព ៣			
sec-Butylbenzene	ug/L (ppb)	</td <td><1</td> <td>nm</td>	<1	nm			
p-lsopropyltoluene	ug/L (ppb)	<1	<1	nm			
1,3-Dichlorobenzene	ug/L (ppb)	<1	</td <td>nm</td>	nm			
1,4-Dichlorobenzene	ug/L (ppb)	<1	<1	nm			
1,2-Dichlorobenzene	ug/L (ppb)	<1	<1	nm			
1,2 Dibromo-3-chloropropane	ug/L (ppb)	<1	<1	nm			
1,2,4 Trichlorobenzene	ug/L (ppb)	<1	<1	ពាររ			
Hexachlorobutadiene	ug/L (ppb)	<1	<1	nm			
Naphthalene	ug/L (ppb)	< 1	<	nm			
				nm			

ENVIRONMENTAL CHEMISTS

Date of Report: 01/18/08 Date Received: 01/14/08 Project: 81087039, F&BI 801127

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260B

Laboratory Code: Laboratory Control Sample

			Percent Percent			
	Reporting Units	Spike Level	Recovery LCS	Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Analyte		50	111	105	50-136	6
Dichlorodifluoromethane	ug/L (ppb)	50	126	130	55-134	3
Chloromethane	ug/L (pph) ug/L (pph)	50	140	137	56-144	2
Vinyl chloride	ug/L (ppb)	50	146 vo	141 vo	58-140	3
Bromomethane	ug/L (ppb)	50	135	134	55-144	i
Chloroethane Trichlorofluoromethane	ug/L (ppb)	50	133	133	54-142	Ó
Acetone	ug/L (ppb)	50	92	85	52-162	8
1.1-Dichloroethene	ug/L (ppb)	50	104	105	34-135	i
Methylene chloride	ug/L (ppb)	50	97	95	65-112	2
trans-1,2-Dichloroethene	ug/L (ppb)	50	107	107	66-120	0
1.1-Dichloroethane	ug/L (ppb)	50	108	107	65-119	1
2,2-Dichloropropane	ug/L (ppb)	50	112	107	42-143	5
cis-L2-Dichloroethene	ug/L (ppb)	50	106	106	75-121	0
Chloroform	ug/L (ppb)	50	111	110	63-117	1
2-Butanone (MEK)	ug/L (ppb)	50	90	91	77-125	1
1.2-Dichloroethane (EDC)	ug/L (ppb)	50	110	110	67-116	0
I.I.)-Trichloroethane	ug/L (ppb)	50	118	118	63-124	0
1.1-Dichloropropene	ug/L (ppb)	50	106	108	62-122	2
Carbon Tetrachloride	ug/L (ppb)	50	116	117	63-126	1
Benzene	ug/L (ppb)	50	102	104	55-134	2
Trichloroethene	ug/L (ppb)	50	104	106	75-116	2
1.2-Dichloropropane	ug/L (ppb)	50	104	106	75-118	2
Bromodichloromethane	ug/L (ppb)	50	113	113	69-129	0
Dibromomethane	ug/L (ppb)	50	109	108	68-117	1
4-Methyl-2-pentanone	ug/L (ppb)	50	98	94	68-124	4
cis-1,3-Dichloropropene	ug/L (ppb)	50	109	110	64-123	1
Toluene	ug/L (ppb)	50	88	92	56-140	4 0
trans-1,3-Dichloropropene	ug/L (ppb)	50	100	100	71-124	2
1,1.2 Trichloroethane	ug/L (ppb)	50	89	91	66-123 66-128	5
2-Hexanone	ug/L (ppb)	50	87	83 92	71-125	J
1.3-Dichloropropane	ug/L (ppb)	50	91	92	78-116	2
Tetrachloroethene	ug/L (ppb)	50	91 102	102	75-122	õ
Dibromochloromethane	ug/L (ppb)	50	92	92	72-124	ů
1.2-Dibromoethane (EDB)	ug/L (ppb)	50 50	92	94	72-116	2
Chlorobenzene	ug/L (ppb)	50 50	93	96	76-123	3
Ethylbenzene	ug/L (ppb)	50	99	101	69-121	2
1,1,1,2-Tetrachloroethane	ug/L (ppb) ug/L (ppb)	100	93	94	49-166	1
m.pXylene	ug/L (opb)	50	93	94	68-121	3
o-Xylene	ug/L (ppb)	50	94	95	72-119	1
Styrene Isopropylbenzene	ug/L (ppb)	50	94	96	66-121	2
Bromoform	ug/L (ppb)	50	104	101	70-127	3
n-Propyibenzene	ug/L (ppb)	50	86	93	67-118	8
Bromobenzene	ug/L (ppb)	50	87	93	71-124	7
1.3.5-Trimethylbenzene	ug/L (ppb)	50	88	93	69-116	6
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	82	82	57-128	0
1,2,3-Trichloropropane	ug/L (ppb)	50	80	82	58-126	2
2-Chlorotoluene	ug/L (ppb)	50	88	93	66-116	6
4-Chlorotoluene	ug/L (ppb)	50	87	92	67-117	6
tert-Butylbenzene	ug/L (ppb)	50	89	92	65-121	3
1,2,4-Trimethylbenzene	ug/L (ppb)	50	91	93	69-123	2
sec-Butylbenzene	ug/L (ppb)	50	89	91	70-118	2
p-Isopropyitoluene	ug/L (ppb)	50	91	92	72-120	1
1,3 Dichlorobenzene	ug/L (ppb)	50	90	91	76-114	1
1.4-Dichlorobenzene	ug/L (ppb)	50	87	89	72-113	2
1,2-Dichlorobenzene	ug/L (ppb)	50	91	90	76-115	1
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	91	81	54-131	12 9
1,2.4-Trichlorobenzene	ug/L (ppb)	50	95	87	72-123	9
Hexachlorobutadiene	ug/L (ppb)	50	94	88	80-111 61-137	, 11
Naphthalene	ug/L (ppb)	50	85 87	76 78	74-126	11
1,2,3-Trichlorobenzene	ug/L (ppb)	50	81	10	14-100	

Note: The calibration verification result for methylene chloride and 1,1-dichloroethene exceeded 15% deviation. The average deviation for all compounds was not greater than 15%; therefore, the calibration is considered valid.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probablility.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - The analyte indicated was found in the method blank. The result should be considered an estimate.

fc - The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - The sample was extracted outside of holding time. Results should be considered estimates.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

Ic - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - The value reported exceeded the calibration range established for the analyte. The reported concentration should be considered an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The pattern of peaks present is not indicative of diesel.

y - The pattern of peaks present is not indicative of motor oil.

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