UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, Washington 98101

Reply To
Attn Of OEA-095

September 30, 1998

MEMORANDUM

Subject: Data Validation Report for the Volatile Organic Analysis (VOAs) of Samples from Duwamish River Expanded Site Investigation - Week 38 Sampling

From: Ginna Grepo-Grove, Chemist
Quality Assurance & Data Unit, OEA

To: Dave Bennett, Site Manager
Office of Environmental Cleanup

CC: Dana Hughes, Roy F. Weston, Inc.

The quality assurance (QA) review of nine sediment/soil samples collected from the above referenced site has been completed. These sample were analyzed for volatile organics (VOAs) in accordance with the USEPA Contract Laboratory Program (CLP) Statement of Work (SOW) for Organic Analyses (OLM03.2) and USEPA SW-846 Method 8260A by the US Environmental protection Agency's Manchester Environmental Laboratory located at Port Orchard, WA. The following samples were evaluated in this validation report:

98384002	98384004	98384008
98384016	98384021	98384022
98384023	98384024	98384025

DATA QUALIFICATIONS

The following comments refer to the laboratory performance in meeting the Quality Control Specifications outlined in the USEPA CLP SOW for Organic Analysis (OLM03.2), SW846 Method 8260A, the site's Sampling and Quality Assurance Plan (SQAP) and the USEPA CLP National Functional Guidelines for Organic Data Review (2/94).

The conclusions presented herein are based on the information provided for the review.

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Holding Time - Acceptable

All of the samples met the technical (40 CFR 136) required holding times. The samples were analyzed within 7 days of sample collection date. None of the data were qualified on this basis. The Holding Times Summary listing the pertinent sample collection, receipt and analysis dates is attached at the end of this validation report.

Instrument Performance - Acceptable

One GC/MS system (Kirk) was used for the analyses. The system met the SOW specified technical acceptance criteria prior to sample analyses i.e, tuning and GC/MS performance checks, resolution, response factors and calibrations. The system remained stable throughout the course of analyses. Instrument blanks were all clean and there were no indications of carry-over.

Initial Calibration

An initial calibration was performed on 09/01/98. The frequency of analysis, the percent relative standard deviations (%RSDs) and correlation coefficients (r) met the required criteria with the following exceptions:

- the correlation coefficients (r) for acetone was less than 0.995 Due to possible bias, the reported results for acetone were qualified as estimated, "J/UJ".

- the mean response factors for acrylonitrile, tetrahydrofuran and chloroacetonitrile were <0.05 for both initial calibration curves. Due to possible bias, the non-detected acrylonitrile, tetrahydrofuran and chloroacetonitrile in the associated samples were qualified as unusable, "R".

Continuing Calibrations - Acceptable

The continuing calibration verification standards (CCVs) met the criteria for frequency of analysis, the minimum response factor, the retention times and the percent differences (%Ds) criteria. None of the data were qualified on this basis.

Compound Quantitation Limits

All of the samples were analyzed at the method required quantitation limits (QLs). All of the reported results were adjusted for sample amount analyzed, percent solids and dilution factors. The concentration of acetone detected in sample 98384008 was over the calibration linear range. This compound was qualified as estimated, "J". Data users should consider this value as the minimum amount present in the sample. Target compounds that were detected at concentrations less than the quantitation limits were qualified as estimated, "J".

Blanks

The frequency of analysis of laboratory blanks was met. Background levels for all target compounds in the method blanks were below the CRQLs Traces of methylene chloride, acetone, toluene, hexachlorobutadiene, naphthalene, 1,2,4- and 1,2,3-trichlorobenzene were detected in the method blanks. The acetone, and methylene chloride detected in the samples at concentrations that were less than ten times the concentrations in their associated blanks were qualified as non-detects, "U". The rest of the compounds listed were flagged as non-detects, "U", when the compounds' concentrations were less than five times the value in their associated blanks.

Analytical Sequence - Acceptable

All of the standards, blanks, samples and QC samples were analyzed in accordance with the SOW-specified analytical sequence and within the acceptable 12-hour QC period. None of the data were qualified on this basis.

Surrogate Recoveries - Acceptable

The surrogate recoveries met the applicable QC criteria for all of the analyses performed. The recoveries ranged from 85 - 111%. None of the data were qualified on this basis.

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Sample 98384004 was analyzed for MS/MSD. The frequency of analysis, the recoveries and relative percent differences (RPD) criteria were met the following exceptions:

- There were no recoveries for chloroacetonitrile, 1,1-dichloropropanone, and trans-1,4-dichloro-2-butene. Associated results were qualified as unusable, "R".

- The recoveries for the following compounds were less than the specified control limits, indicating low bias and were qualified as estimated, "UJ": methyl iodide, carbon tetrachloride, bromodichloromethane, bromoform, ethylmethacylate, trans-1,3-dichloropropene, 1,1,1,2-tetrachloroethane, dibromochloromethane, 1,2,3- and 1,2,4-trichlorobenzene, pentachloroethane, hexachloroethane and hexachlorobutadiene.

Internal Standards - Acceptable

The acceptance criteria for internal standards (IS) are ± 0.5 minutes for retention time shifts and -50% to +100% of the IS area as compared to the IS retention time and area of the continuing calibration standard.

All of the GC/MS analyses met the IS area and retention time shift criteria. None of the data were qualified on this basis.

Compound Identification - Acceptable

All of the compounds detected were within the retention time windows, met the USEPA spectral matching criteria and were judged to be acceptable. None of the data were qualified on this basis.

Tentatively Identified Compounds

Peaks that were detected in the samples with areas >10% of the internal standards and were not part of the target compound lists were identified as tentatively identified compounds (TICs). All of the TICs reported were qualified as tentatively identified at estimated concentration, "JN".

Laboratory Contact

The laboratory was not contacted for this review.

Overall Assessment

All of the samples were analyzed in accordance with the method and SQAP specifications. Data results, as qualified, are acceptable and can be used for all purposes.

DATA QUALIFIERS

U	-	The analyte was not detected at or above the reported result.
J	-	The analyte was positively identified. The associated numerical result is an estimate.
R	-	The data are unusable for all purposes.
N	-	There is evidence the analyte is present in this sample.
JN	-	There is evidence that the analyte is present. The associated numerical result is an estimate.
UJ	-	The analyte was not detected at or above the reported estimated result. The associated numerical value is an estimate of the quantitation limit of the analyte in this sample
L	-	Low bias.
H	-	High bias.
Q	-	The result is estimated because the concentration is below the Contract Required Quantitation Limits (CRQLs).
K	-	Unknown Bias.

Holding Time Summary

Sample Number	Collection Date	VTSR*	Analysis Date
98384002	09/14/98	09/16/98	09/17/98
98384004	09/14/98	09/16/98	09/17/98
98384008	09/14/98	09/16/98	09/17/98
98384016	09/15/98	09/16/98	09/17/98
98384021	09/16/98	09/17/98	09/21/98
98384022	09/16/98	09/17/98	09/21/98
98384023	09/16/98	09/17/98	09/21/98
98384024	09/16/98	09/17/98	09/21/98
98384025	09/16/98	09/17/98	09/21/98

* VTSR - Verified Time of Sample Receipt in the Laboratory

Project Code:	TEC-720B	**Collected:**	9/14/98
Project Name:	DUWAMISH RIVER SITE	**Matrix:**	Solid
Project Officer:	DAVID BENNETT	**Sample Number:**	98384002
Account Code:	98T10PFAX10ZZLA00	**Type:**	Reg sample
Station Description:			

GCMS

Parameter . Volatiles
Method · 8260-M
Prep Method.

		Result	Units	Qlfr
Analytes 107131	Acrylonitrile			R
107142	Chloroacetonitrile			R
109999	Furan, tetrahydro-			R
630206	1,1,1,2-Tetrachloroethane	2.5	ug/kg	U
71556	1,1,1-Trichloroethane	2 5	ug/kg	U
79005	1,1,2-Trichloroethane	2.5	ug/kg	U
75343	1,1-Dichloroethane	2.5	ug/kg	U
75354	1,1-Dichloroethene	2.5	ug/kg	U
513882	1,1-Dichloropropanone	5.0	ug/kg	U
563586	1,1-Dichloropropene	2.5	ug/kg	U
87616	1,2,3-Trichlorobenzene	5.0	ug/kg	U
96184	1,2,3-Trichloropropane	2 5	ug/kg	U
120821	1,2,4-Trichlorobenzene	5.0	ug/kg	U
96128	1,2-Dibromo-3-chloropropane	12 6	ug/kg	U
107062	1,2-Dichloroethane	2.5	ug/kg	U
78875	1,2-Dichloropropane	2 5	ug/kg	U
142289	1,3-Dichloropropane	2.5	ug/kg	U
109693	1-Chlorobutane	2.5	ug/kg	U
594207	2,2-Dichloropropane	2.5	ug/kg	U
78933	2-Butanone	5 0	ug/kg	U
95498	2-Chlorotoluene	2.5	ug/kg	U
591786	2-Hexanone	5 0	ug/kg	U
79469	2-Nitropropane	12 6	ug/kg	U
108101	2-Pentanone, 4-methyl-	5 0	ug/kg	U
67641	2-Propanone	25.1	ug/kg	UJK
80626	2-Propenoic acid, 2-methyl-, m ethyl este	5 0	ug/kg	U
106434	4-Chlorotoluene	2.5	ug/kg	U
107051	Allyl Chloride	2 5	ug/kg	U
71432	Benzene	2 5	ug/kg	U
98828	Benzene, (1-methylethyl)-	12.6	ug/kg	U
95636	Benzene, 1,2,4-trimethyl-	2 5	ug/kg	U
95501	Benzene, 1,2-dichloro-	2.5	ug/kg	U
95476	Benzene, 1,2-dimethyl-	2 5	ug/kg	U
108678	Benzene, 1,3,5-trimethyl-	2 5	ug/kg	U
541731	Benzene, 1,3-dichloro-	2.5	ug/kg	U
106467	Benzene, 1,4-dichloro-	2 5	ug/kg	U

Sent to -
David Bennett
Dana Hughes

			Result	Units	Qlfr
Analytes	99876	Benzene, 1-methyl-4-(1-methyle thyl)-	2 5	ug/kg	U
	108907	Benzene, chloro-	2 5	ug/kg	U
	100425	Benzene, ethenyl-	2 5	ug/kg	U
	103651	Benzene, propyl-	2 5	ug/kg	U
	98066	Benzene, tert-butyl-	2 5	ug/kg	U
	108861	Bromobenzene	2 5	ug/kg	U
	74975	Bromochloromethane	2 5	ug/kg	U
	75274	Bromodichloromethane	2 5	ug/kg	U
	75252	Bromoform	5 0	ug/kg	U
	74839	Bromomethane	12 6	ug/kg	U
	75150	Carbon disulfide	5.0	ug/kg	U
	56235	Carbon Tetrachloride	2.5	ug/kg	U
	156592	cis-1,2-Dichloroethene	2 5	ug/kg	U
	10061015	cis-1,3-Dichloropropene	2.7	ug/kg	U
	124481	Dibromochloromethane	2 5	ug/kg	U
	74953	Dibromomethane	2.5	ug/kg	U
	60297	Diethyl ether	2.5	ug/kg	U
	79345	Ethane, 1,1,2,2-tetrachloro-	2 5	ug/kg	U
	106934	Ethane, 1,2-dibromo-	2 5	ug/kg	U
	156605	Ethene, 1,2-dichloro-, (E)-	2.5	ug/kg	U
	79016	Ethene, trichloro-	2 5	ug/kg	U
	75003	Ethyl Chloride	5 0	ug/kg	U
	100414	Ethylbenzene	2 5	ug/kg	U
	97632	Ethylmethacrylate	2.5	ug/kg	U
	75694	Freon 11	2.5	ug/kg	U
	76131	Freon 113	2 5	ug/kg	U
	75718	Freon 12	2 5	ug/kg	U
	87683	Hexachlorobutadiene	5.0	ug/kg	U
	67721	Hexachloroethane	2.5	ug/kg	U
	126987	Methacrylonitrile	12 6	ug/kg	U
	74873	Methane, chloro-	2 5	ug/kg	U
	67663	Methane, trichloro-	2.5	ug/kg	U
	96333	Methyl acrylate	12 6	ug/kg	U
	74884	Methyl Iodide	2.5	ug/kg	U
	75092	Methylene Chloride	12.6	ug/kg	U
	*1330207	MP-Xylene	5.0	ug/kg	U
	104518	n-Butylbenzene	2 5	ug/kg	U
	91203	Naphthalene	2 5	ug/kg	U
	76017	Pentachloroethane	2.5	ug/kg	U
	1634044	Propane, 2-methoxy-2-methyl-	2.5	ug/kg	U
	135988	sec-Butylbenzene	2.5	ug/kg	U
	127184	Tetrachloroethene	2 5	ug/kg	U
	108883	Toluene	2 5	ug/kg	U
	10061026	Trans-1,3-Dichloropropene	4 7	ug/kg	U
	110576	trans-1,4-Dichloro-2-butene	12 6	ug/kg	U
	75014	Vinyl Chloride	2.5	ug/kg	U
	2199691	1,2-Dichlorobenzene-d4	101	%Rec	

			Result	Units	Qlfr
Analytes	17060070	1,2-Dichloroethane-d4	108	%Rec	
	540363	Benzene, 1,4-difluoro-	101	%Rec	
	460004	p-Bromofluorobenzene	91.4	%Rec	
	2037265	Toluene-d8	105	%Rec	

Parameter : Volatiles - Tentatives
Method : 8260-M
Prep Method

Analytes	**75183**	**Methane, thiobis-**	**234**	**ug/kg**	**NJ**

Manchester Environmental Laboratory

Report by Parameter for Project TEC-720B

Project Code: TEC-720B
Project Name: DUWAMISH RIVER SITE
Project Officer: DAVID BENNETT
Account Code: 98T10PFAX10ZZLA00
Station Description:

Collected: 9/14/98
Matrix: Solid
Sample Number: 98384004
Type: Reg sample

GCMS

Parameter : Volatiles
Method 8260-M
Prep Method
Analytes

		Result	Units	Qlfr
513882	1,1-Dichloropropanone			R
107131	Acrylonitrile			R
107142	Chloroacetonitrile			R
109999	Furan, tetrahydro-			R
110576	trans-1,4-Dichloro-2-butene			R
630206	1,1,1,2-Tetrachloroethane	3 3	ug/kg	UJK
71556	1,1,1-Trichloroethane	3 3	ug/kg	U
79005	1,1,2-Trichloroethane	3 3	ug/kg	U
75343	1,1-Dichloroethane	3.3	ug/kg	U
75354	1,1-Dichloroethene	3 3	ug/kg	U
563586	1,1-Dichloropropene	3 3	ug/kg	U
87616	1,2,3-Trichlorobenzene	6 5	ug/kg	UJK
96184	1,2,3-Trichloropropane	3.3	ug/kg	U
120821	1,2,4-Trichlorobenzene	6 5	ug/kg	UJK
96128	1,2-Dibromo-3-chloropropane	16 3	ug/kg	U
107062	1,2-Dichloroethane	3.3	ug/kg	U
78875	1,2-Dichloropropane	3 3	ug/kg	U
142289	1,3-Dichloropropane	3 3	ug/kg	U
109693	1-Chlorobutane	3.3	ug/kg	U
594207	2,2-Dichloropropane	3.3	ug/kg	U
78933	2-Butanone	6 5	ug/kg	U
95498	2-Chlorotoluene	3 3	ug/kg	U
591786	2-Hexanone	6 5	ug/kg	U
79469	2-Nitropropane	16 3	ug/kg	U
108101	2-Pentanone, 4-methyl-	6 5	ug/kg	U
67641	2-Propanone	32.6	ug/kg	UJK
80626	2-Propenoic acid, 2-methyl-, m ethyl este	6 5	ug/kg	U
106434	4-Chlorotoluene	3 3	ug/kg	U
107051	Allyl Chloride	3 3	ug/kg	U
71432	Benzene	3 3	ug/kg	U
98828	Benzene, (1-methylethyl)-	16 3	ug/kg	U
95636	Benzene, 1,2,4-trimethyl-	3 3	ug/kg	U
95501	Benzene, 1,2-dichloro-	3 3	ug/kg	U
95476	Benzene, 1,2-dimethyl-	3.3	ug/kg	U
108678	Benzene, 1,3,5-trimethyl-	3 3	ug/kg	U
541731	Benzene, 1,3-dichloro-	3 3	ug/kg	U

Manchester Environmental Laboratory
Report by Parameter for Project TEC-720B

			Result	Units	Qlfr
Analytes	106467	Benzene, 1,4-dichloro-	3.3	ug/kg	U
	99876	Benzene, 1-methyl-4-(1-methyle thyl)-	3 3	ug/kg	U
	108907	Benzene, chloro-	3.3	ug/kg	U
	100425	Benzene, ethenyl-	3 3	ug/kg	U
	103651	Benzene, propyl-	3 3	ug/kg	U
	98066	Benzene, tert-butyl-	3 3	ug/kg	U
	108861	Bromobenzene	3 3	ug/kg	U
	74975	Bromochloromethane	3.3	ug/kg	U
	75274	Bromodichloromethane	3.3	ug/kg	UJK
	75252	Bromoform	6.5	ug/kg	UJK
	74839	Bromomethane	16.3	ug/kg	U
	75150	Carbon disulfide	6 5	ug/kg	U
	56235	Carbon Tetrachloride	3 3	ug/kg	UJK
	156592	cis-1,2-Dichloroethene	3 3	ug/kg	U
	10061015	cis-1,3-Dichloropropene	3 5	ug/kg	U
	124481	Dibromochloromethane	3.3	ug/kg	UJK
	74953	Dibromomethane	3.3	ug/kg	U
	60297	Diethyl ether	3.3	ug/kg	U
	79345	Ethane, 1,1,2,2-tetrachloro-	3 3	ug/kg	U
	106934	Ethane, 1,2-dibromo-	3 3	ug/kg	U
	156605	Ethene, 1,2-dichloro-, (E)-	3 3	ug/kg	U
	79016	Ethene, trichloro-	3 3	ug/kg	U
	75003	Ethyl Chloride	6.5	ug/kg	U
	100414	Ethylbenzene	3.3	ug/kg	U
	97632	Ethylmethacrylate	3.3	ug/kg	UJK
	75694	Freon 11	3 3	ug/kg	U
	76131	Freon 113	3.3	ug/kg	U
	75718	Freon 12	3.3	ug/kg	U
	87683	Hexachlorobutadiene	6 5	ug/kg	UJK
	67721	Hexachloroethane	3 3	ug/kg	U
	126987	Methacrylonitrile	16.3	ug/kg	U
	74873	Methane, chloro-	3.3	ug/kg	U
	67663	Methane, trichloro-	3 3	ug/kg	U
	96333	Methyl acrylate	16 3	ug/kg	U
	74884	Methyl Iodide	3 3	ug/kg	UJK
	75092	Methylene Chloride	16.3	ug/kg	U
	*1330207	MP-Xylene	6.5	ug/kg	U
	104518	n-Butylbenzene	3 3	ug/kg	U
	91203	Naphthalene	3 3	ug/kg	U
	76017	Pentachloroethane	3.3	ug/kg	UJK
	1634044	Propane, 2-methoxy-2-methyl-	3 3	ug/kg	U
	135988	sec-Butylbenzene	3 3	ug/kg	U
	127184	Tetrachloroethene	3 3	ug/kg	U
	108883	Toluene	3.3	ug/kg	U
	10061026	Trans-1,3-Dichloropropene	6 1	ug/kg	UJK
	75014	Vinyl Chloride	3 3	ug/kg	U
	2199691	1,2-Dichlorobenzene-d4	92 4	%Rec	

			Result	Units	Qlfr
Analytes	17060070	1,2-Dichloroethane-d4	102	%Rec	
	540363	Benzene, 1,4-difluoro-	98 5	%Rec	
	460004	p-Bromofluorobenzene	86 2	%Rec	
	2037265	Toluene-d8	108	%Rec	
Parameter	Volatiles - Tentatives				
Method	8260-M				
Prep Method					
Analytes	54676390	Cyclohexane, 2-butyl-1,1,3-tri methyl-	34.7	ug/kg	NJ
	75183	Methane, thiobis-	213	ug/kg	NJ
	62185540	Nonane, 5-(1-methylpropyl)-	26.8	ug/kg	NJ
	7146603	Octane, 2,3-dimethyl-	22.4	ug/kg	NJ
	62016142	Octane, 2,5,6-trimethyl-	14.8	ug/kg	NJ
	15869940	Octane, 3,6-dimethyl-	16.1	ug/kg	NJ
	1186534	Pentane, 2,2,3,4-tetramethyl-	25.0	ug/kg	NJ
	*3005001	Unknown Hydrocarbon 01	10.2	ug/kg	NJ
	*3005002	Unknown Hydrocarbon 02	11.2	ug/kg	NJ
	*3005003	Unknown Hydrocarbon 03	23.8	ug/kg	NJ
	*3005004	Unknown Hydrocarbon 04	16.8	ug/kg	NJ
	*3005005	Unknown Hydrocarbon 05	13.5	ug/kg	NJ
	*3005006	Unknown Hydrocarbon 06	34.6	ug/kg	NJ
	*3005007	Unknown hydrocarbon 07	23.5	ug/kg	NJ
	*3005008	Unknown hydrocarbon 08	40.0	ug/kg	NJ

Project Code:	TEC-720B	**Collected:**	
Project Name:	DUWAMISH RIVER SITE	**Matrix:**	Solid
Project Officer:	DAVID BENNETT	**Sample Number:**	98384004
Account Code:	98T10PFAX10ZZLA00	**Type:**	Matrix Spike
Station Description:			

GCMS

Parameter : Volatiles
Method 8260-M
Prep Method
Analytes :

		Result	Units	Qlfr
630206	1,1,1,2-Tetrachloroethane	53.5	%Rec	
71556	1,1,1-Trichloroethane	105 4	%Rec	
79005	1,1,2-Trichloroethane	118 5	%Rec	
75343	1,1-Dichloroethane	96 2	%Rec	
75354	1,1-Dichloroethene	96 9	%Rec	
513882	1,1-Dichloropropanone	0.0	%Rec	
563586	1,1-Dichloropropene	100 6	%Rec	
87616	1,2,3-Trichlorobenzene	41 7	%Rec	
96184	1,2,3-Trichloropropane	158 8	%Rec	
120821	1,2,4-Trichlorobenzene	49.7	%Rec	
96128	1,2-Dibromo-3-chloropropane	68.1	%Rec	
2199691	1,2-Dichlorobenzene-d4	91 89	%Rec	
107062	1,2-Dichloroethane	85 6	%Rec	
17060070	1,2-Dichloroethane-d4	95.22	%Rec	
78875	1,2-Dichloropropane	104.0	%Rec	
142289	1,3-Dichloropropane	91.5	%Rec	
109693	1-Chlorobutane	94 5	%Rec	
594207	2,2-Dichloropropane	104.8	%Rec	
78933	2-Butanone	62.3	%Rec	
95498	2-Chlorotoluene	112.3	%Rec	
591786	2-Hexanone	65 1	%Rec	
79469	2-Nitropropane	112.4	%Rec	
108101	2-Pentanone, 4-methyl-	89 7	%Rec	
67641	2-Propanone	58 7	%Rec	
80626	2-Propenoic acid, 2-methyl-, m ethyl este	98.2	%Rec	
106434	4-Chlorotoluene	108 4	%Rec	
107131	Acrylonitrile	72.2	%Rec	
107051	Allyl Chloride	57.5	%Rec	
71432	Benzene	102.5	%Rec	
98828	Benzene, (1-methylethyl)-	117.2	%Rec	
95636	Benzene, 1,2,4-trimethyl-	102.9	%Rec	
95501	Benzene, 1,2-dichloro-	84 9	%Rec	
95476	Benzene, 1,2-dimethyl-	91.3	%Rec	
108678	Benzene, 1,3,5-trimethyl-	100 5	%Rec	
541731	Benzene, 1,3-dichloro-	89 7	%Rec	
106467	Benzene, 1,4-dichloro-	88 8	%Rec	

			Result	Units	Qlfr
Analytes	540363	Benzene, 1,4-difluoro-	99 02	%Rec	
	99876	Benzene, 1-methyl-4-(1-methyle thyl)-	79 8	%Rec	
	108907	Benzene, chloro-	91 5	%Rec	
	100425	Benzene, ethenyl-	81 6	%Rec	
	103651	Benzene, propyl-	106 4	%Rec	
	98066	Benzene, tert-butyl-	91 9	%Rec	
	108861	Bromobenzene	112.5	%Rec	
	74975	Bromochloromethane	112 7	%Rec	
	75274	Bromodichloromethane	34.3	%Rec	
	75252	Bromoform	25.0	%Rec	
	74839	Bromomethane	60 5	%Rec	
	75150	Carbon disulfide	56 5	%Rec	
	56235	Carbon Tetrachloride	44 4	%Rec	
	107142	Chloroacetonitrile	0.0	%Rec	
	156592	cis-1,2-Dichloroethene	93 3	%Rec	
	10061015	cis-1,3-Dichloropropene	53 1	%Rec	
	124481	Dibromochloromethane	20 7	%Rec	
	74953	Dibromomethane	123 9	%Rec	
	60297	Diethyl ether	87 1	%Rec	
	79345	Ethane, 1,1,2,2-tetrachloro-	105 9	%Rec	
	106934	Ethane, 1,2-dibromo-	80 4	%Rec	
	156605	Ethene, 1,2-dichloro-, (E)-	88 2	%Rec	
	79016	Ethene, trichloro-	114 2	%Rec	
	75003	Ethyl Chloride	90 2	%Rec	
	100414	Ethylbenzene	93.7	%Rec	
	97632	Ethylmethacrylate	49 3	%Rec	
	75694	Freon 11	72.3	%Rec	
	76131	Freon 113	94 4	%Rec	
	75718	Freon 12	77.3	%Rec	
	109999	Furan, tetrahydro-	74.5	%Rec	
	87683	Hexachlorobutadiene	20 5	%Rec	
	67721	Hexachloroethane	37.3	%Rec	
	126987	Methacrylonitrile	71.4	%Rec	
	74873	Methane, chloro-	77.8	%Rec	
	67663	Methane, trichloro-	117 0	%Rec	
	96333	Methyl acrylate	56 2	%Rec	
	74884	Methyl Iodide	49 7	%Rec	
	75092	Methylene Chloride	155 0	%Rec	
	*1330207	MP-Xylene	91 6	%Rec	
	104518	n-Butylbenzene	66 9	%Rec	
	91203	Naphthalene	54 2	%Rec	
	460004	p-Bromofluorobenzene	85 21	%Rec	
	76017	Pentachloroethane	55 7	%Rec	
	1634044	Propane, 2-methoxy-2-methyl-	103 7	%Rec	
	135988	sec-Butylbenzene	80.6	%Rec	
	127184	Tetrachloroethene	104.7	%Rec	
	108883	Toluene	100.5	%Rec	

			Result	Units	Qlfr
Analytes	2037265	Toluene-d8	106.94	%Rec	
	10061026	Trans-1,3-Dichloropropene	53.8	%Rec	
	110576	trans-1,4-Dichloro-2-butene	0 0	%Rec	
	75014	Vinyl Chloride	83.7	%Rec	

Project Code:	TEC-720B	**Collected:**	
Project Name:	DUWAMISH RIVER SITE	**Matrix:**	Solid
Project Officer:	DAVID BENNETT	**Sample Number:**	98384004
Account Code:	98T10PFAX10ZZLA00	**Type:**	Matrix Spike Dupl
Station Description:			

GCMS

Parameter : Volatiles
Method : 8260-M
Prep Method

Analytes		Result	Units	Qlfr
630206	1,1,1,2-Tetrachloroethane	45 4	%Rec	
71556	1,1,1-Trichloroethane	107 8	%Rec	
79005	1,1,2-Trichloroethane	128 1	%Rec	
75343	1,1-Dichloroethane	97.1	%Rec	
75354	1,1-Dichloroethene	99.9	%Rec	
513882	1,1-Dichloropropanone	0.0	%Rec	
563586	1,1-Dichloropropene	103 5	%Rec	
87616	1,2,3-Trichlorobenzene	35 2	%Rec	
96184	1,2,3-Trichloropropane	152 5	%Rec	
120821	1,2,4-Trichlorobenzene	39 5	%Rec	
96128	1,2-Dibromo-3-chloropropane	69 7	%Rec	
2199691	1,2-Dichlorobenzene-d4	94 64	%Rec	
107062	1,2-Dichloroethane	88 3	%Rec	
17060070	1,2-Dichloroethane-d4	99.67	%Rec	
78875	1,2-Dichloropropane	105 6	%Rec	
142289	1,3-Dichloropropane	95.7	%Rec	
109693	1-Chlorobutane	92.7	%Rec	
594207	2,2-Dichloropropane	102.1	%Rec	
78933	2-Butanone	69.8	%Rec	
95498	2-Chlorotoluene	110.5	%Rec	
591786	2-Hexanone	74 4	%Rec	
79469	2-Nitropropane	112.7	%Rec	
108101	2-Pentanone, 4-methyl-	98 5	%Rec	
67641	2-Propanone	79.6	%Rec	
80626	2-Propenoic acid, 2-methyl-, m ethyl este	110.3	%Rec	
106434	4-Chlorotoluene	101 7	%Rec	
107131	Acrylonitrile	77.1	%Rec	
107051	Allyl Chloride	54.2	%Rec	
71432	Benzene	105 2	%Rec	
98828	Benzene, (1-methylethyl)-	110 5	%Rec	
95636	Benzene, 1,2,4-trimethyl-	97 4	%Rec	
95501	Benzene, 1,2-dichloro-	81 9	%Rec	
95476	Benzene, 1,2-dimethyl-	91 9	%Rec	
108678	Benzene, 1,3,5-trimethyl-	95.0	%Rec	
541731	Benzene, 1,3-dichloro-	85.7	%Rec	
106467	Benzene, 1,4-dichloro-	87.6	%Rec	

			Result	Units	Qlfr
Analytes	540363	Benzene, 1,4-difluoro-	98 54	%Rec	
	99876	Benzene, 1-methyl-4-(1-methyle thyl)-	75.0	%Rec	
	108907	Benzene, chloro-	89.5	%Rec	
	100425	Benzene, ethenyl-	81 6	%Rec	
	103651	Benzene, propyl-	99.6	%Rec	
	98066	Benzene, tert-butyl-	90 5	%Rec	
	108861	Bromobenzene	107 1	%Rec	
	74975	Bromochloromethane	115 4	%Rec	
	75274	Bromodichloromethane	29 6	%Rec	
	75252	Bromoform	17 3	%Rec	
	74839	Bromomethane	57 5	%Rec	
	75150	Carbon disulfide	50 8	%Rec	
	56235	Carbon Tetrachloride	37 9	%Rec	
	107142	Chloroacetonitrile	0 0	%Rec	
	156592	cis-1,2-Dichloroethene	92.7	%Rec	
	10061015	cis-1,3-Dichloropropene	46.4	%Rec	
	124481	Dibromochloromethane	14 4	%Rec	
	74953	Dibromomethane	129.2	%Rec	
	60297	Diethyl ether	88 4	%Rec	
	79345	Ethane, 1,1,2,2-tetrachloro-	103 4	%Rec	
	106934	Ethane, 1,2-dibromo-	83 2	%Rec	
	156605	Ethene, 1,2-dichloro-, (E)-	87.4	%Rec	
	79016	Ethene, trichloro-	116 7	%Rec	
	75003	Ethyl Chloride	90 3	%Rec	
	100414	Ethylbenzene	94 4	%Rec	
	97632	Ethylmethacrylate	35 0	%Rec	
	75694	Freon 11	66 3	%Rec	
	76131	Freon 113	89.8	%Rec	
	75718	Freon 12	71 8	%Rec	
	109999	Furan, tetrahydro-	95 2	%Rec	
	87683	Hexachlorobutadiene	20 7	%Rec	
	67721	Hexachloroethane	26 9	%Rec	
	126987	Methacrylonitrile	86 3	%Rec	
	74873	Methane, chloro-	75 8	%Rec	
	67663	Methane, trichloro-	119 8	%Rec	
	96333	Methyl acrylate	61 9	%Rec	
	74884	Methyl Iodide	42 1	%Rec	
	75092	Methylene Chloride	148 4	%Rec	
	*1330207	MP-Xylene	89 1	%Rec	
	104518	n-Butylbenzene	62 6	%Rec	
	91203	Naphthalene	54 9	%Rec	
	460004	p-Bromofluorobenzene	86 06	%Rec	
	76017	Pentachloroethane	41.5	%Rec	
	1634044	Propane, 2-methoxy-2-methyl-	102 6	%Rec	
	135988	sec-Butylbenzene	74 0	%Rec	
	127184	Tetrachloroethene	106 4	%Rec	
	108883	Toluene	99.5	%Rec	

			Result	Units	Qlfr
Analytes	2037265	Toluene-d8	110 17	%Rec	
	10061026	Trans-1,3-Dichloropropene	45.5	%Rec	
	110576	trans-1,4-Dichloro-2-butene	0.0	%Rec	
	75014	Vinyl Chloride	71.6	%Rec	

Project Code:	TEC-720B	**Collected:**	9/14/98
Project Name:	DUWAMISH RIVER SITE	**Matrix:**	Solid
Project Officer:	DAVID BENNETT	**Sample Number:**	98384008
Account Code:	98T10PFAX10ZZLA00	**Type:**	Reg sample
Station Description:			

GCMS

Parameter : Volatiles
Method : 8260-M
Prep Method

Analytes			Result	Units	Qlfr
	107131	Acrylonitrile			R
	107142	Chloroacetonitrile			R
	109999	Furan, tetrahydro-			R
	630206	1,1,1,2-Tetrachloroethane	3 0	ug/kg	U
	71556	1,1,1-Trichloroethane	3.0	ug/kg	U
	79005	1,1,2-Trichloroethane	3.0	ug/kg	U
	75343	1,1-Dichloroethane	3.0	ug/kg	U
	75354	1,1-Dichloroethene	3 0	ug/kg	U
	513882	1,1-Dichloropropanone	6 0	ug/kg	U
	563586	1,1-Dichloropropene	3 0	ug/kg	U
	87616	1,2,3-Trichlorobenzene	6 0	ug/kg	U
	96184	1,2,3-Trichloropropane	3 0	ug/kg	U
	120821	1,2,4-Trichlorobenzene	6 0	ug/kg	U
	96128	1,2-Dibromo-3-chloropropane	15 1	ug/kg	U
	107062	1,2-Dichloroethane	3.0	ug/kg	U
	78875	1,2-Dichloropropane	3.0	ug/kg	U
	142289	1,3-Dichloropropane	3.0	ug/kg	U
	109693	1-Chlorobutane	3 0	ug/kg	U
	594207	2,2-Dichloropropane	3 0	ug/kg	U
	78933	2-Butanone	6 0	ug/kg	U
	95498	2-Chlorotoluene	3.0	ug/kg	U
	591786	2-Hexanone	6.0	ug/kg	U
	79469	2-Nitropropane	15 1	ug/kg	U
	108101	2-Pentanone, 4-methyl-	6 0	ug/kg	U
	67641	**2-Propanone**	**1020**	**ug/kg**	**JL**
	80626	2-Propenoic acid, 2-methyl-, m ethyl este	6 0	ug/kg	U
	106434	4-Chlorotoluene	3.0	ug/kg	U
	107051	Allyl Chloride	3.0	ug/kg	U
	71432	Benzene	3.0	ug/kg	U
	98828	Benzene, (1-methylethyl)-	15 1	ug/kg	U
	95636	Benzene, 1,2,4-trimethyl-	3 0	ug/kg	U
	95501	Benzene, 1,2-dichloro-	3 0	ug/kg	U
	95476	Benzene, 1,2-dimethyl-	3.0	ug/kg	U
	108678	Benzene, 1,3,5-trimethyl-	3 0	ug/kg	U
	541731	Benzene, 1,3-dichloro-	3 0	ug/kg	U
	106467	Benzene, 1,4-dichloro-	3 0	ug/kg	U

			Result	Units	Qlfr
Analytes	99876	Benzene, 1-methyl-4-(1-methyle thyl)-	3.0	ug/kg	U
	108907	Benzene, chloro-	3 0	ug/kg	U
	100425	Benzene, ethenyl-	3 0	ug/kg	U
	103651	Benzene, propyl-	3 0	ug/kg	U
	98066	Benzene, tert-butyl-	3 0	ug/kg	U
	108861	Bromobenzene	3 0	ug/kg	U
	74975	Bromochloromethane	3 0	ug/kg	U
	75274	Bromodichloromethane	3 0	ug/kg	U
	75252	Bromoform	6 0	ug/kg	U
	74839	Bromomethane	15.1	ug/kg	U
	75150	Carbon disulfide	6 0	ug/kg	U
	56235	Carbon Tetrachloride	3 0	ug/kg	U
	156592	cis-1,2-Dichloroethene	3 0	ug/kg	U
	10061015	cis-1,3-Dichloropropene	3 2	ug/kg	U
	124481	Dibromochloromethane	3 0	ug/kg	U
	74953	Dibromomethane	3 0	ug/kg	U
	60297	Diethyl ether	3 0	ug/kg	U
	79345	Ethane, 1,1,2,2-tetrachloro-	3 0	ug/kg	U
	106934	Ethane, 1,2-dibromo-	3 0	ug/kg	U
	156605	Ethene, 1,2-dichloro-, (E)-	3.0	ug/kg	U
	79016	Ethene, trichloro-	3.0	ug/kg	U
	75003	Ethyl Chloride	6 0	ug/kg	U
	100414	Ethylbenzene	3 0	ug/kg	U
	97632	Ethylmethacrylate	3 0	ug/kg	U
	75694	Freon 11	3 0	ug/kg	U
	76131	Freon 113	3 0	ug/kg	U
	75718	Freon 12	3 0	ug/kg	U
	87683	Hexachlorobutadiene	6 0	ug/kg	U
	67721	Hexachloroethane	3.0	ug/kg	U
	126987	Methacrylonitrile	15 1	ug/kg	U
	74873	Methane, chloro-	3 0	ug/kg	U
	67663	Methane, trichloro-	3 0	ug/kg	U
	96333	Methyl acrylate	15 1	ug/kg	U
	74884	Methyl Iodide	3 0	ug/kg	U
	75092	Methylene Chloride	15 1	ug/kg	U
	*1330207	MP-Xylene	6 0	ug/kg	U
	104518	n-Butylbenzene	3 0	ug/kg	U
	91203	Naphthalene	3.0	ug/kg	U
	76017	Pentachloroethane	3.0	ug/kg	U
	1634044	Propane, 2-methoxy-2-methyl-	3 0	ug/kg	U
	135988	sec-Butylbenzene	3 0	ug/kg	U
	127184	Tetrachloroethene	3 0	ug/kg	U
	108883	Toluene	3 0	ug/kg	U
	10061026	Trans-1,3-Dichloropropene	5.7	ug/kg	U
	110576	trans-1,4-Dichloro-2-butene	15 1	ug/kg	U
	75014	Vinyl Chloride	3 0	ug/kg	U
	2199691	1,2-Dichlorobenzene-d4	98 7	%Rec	

			Result	Units	Qlfr
Analytes :	17060070	1,2-Dichloroethane-d4	106	%Rec	
	540363	Benzene, 1,4-difluoro-	99 9	%Rec	
	460004	p-Bromofluorobenzene	92 1	%Rec	
	2037265	Toluene-d8	105	%Rec	
Parameter	Volatiles - Tentatives				
Method :	8260-M				
Prep Method:					
Analytes :	**75183**	**Methane, thiobis-**	**817**	**ug/kg**	**NJ**

Project Code:	TEC-720B	**Collected:**	9/15/98
Project Name:	DUWAMISH RIVER SITE	**Matrix:**	Solid
Project Officer:	DAVID BENNETT	**Sample Number:**	98384016
Account Code:	98T10PFAX10ZZLA00	**Type:**	Reg sample
Station Description:			

GCMS

Parameter · Volatiles
Method . 8260-M
Prep Method

			Result	Units	Qlfr
Analytes ·	107131	Acrylonitrile			R
	107142	Chloroacetonitrile			R
	109999	Furan, tetrahydro-			R
	630206	1,1,1,2-Tetrachloroethane	2 7	ug/kg	U
	71556	1,1,1-Trichloroethane	2.7	ug/kg	U
	79005	1,1,2-Trichloroethane	2 7	ug/kg	U
	75343	1,1-Dichloroethane	2 7	ug/kg	U
	75354	1,1-Dichloroethene	2 7	ug/kg	U
	513882	1,1-Dichloropropanone	5 5	ug/kg	U
	563586	1,1-Dichloropropene	2 7	ug/kg	U
	87616	1,2,3-Trichlorobenzene	5 5	ug/kg	U
	96184	1,2,3-Trichloropropane	2 7	ug/kg	U
	120821	1,2,4-Trichlorobenzene	5.5	ug/kg	U
	96128	1,2-Dibromo-3-chloropropane	13.7	ug/kg	U
	107062	1,2-Dichloroethane	2 7	ug/kg	U
	78875	1,2-Dichloropropane	2 7	ug/kg	U
	142289	1,3-Dichloropropane	2 7	ug/kg	U
	109693	1-Chlorobutane	2 7	ug/kg	U
	594207	2,2-Dichloropropane	2.7	ug/kg	U
	78933	2-Butanone	5 5	ug/kg	U
	95498	2-Chlorotoluene	2 7	ug/kg	U
	591786	2-Hexanone	5.5	ug/kg	U
	79469	2-Nitropropane	13.7	ug/kg	U
	108101	2-Pentanone, 4-methyl-	5.5	ug/kg	U
	67641	2-Propanone	27 4	ug/kg	UJK
	80626	2-Propenoic acid, 2-methyl-, m ethyl este	5 5	ug/kg	U
	106434	4-Chlorotoluene	2.7	ug/kg	U
	107051	Allyl Chloride	2 7	ug/kg	U
	71432	Benzene	2.7	ug/kg	U
	98828	Benzene, (1-methylethyl)-	13 7	ug/kg	U
	95636	Benzene, 1,2,4-trimethyl-	2.7	ug/kg	U
	95501	Benzene, 1,2-dichloro-	2 7	ug/kg	U
	95476	Benzene, 1,2-dimethyl-	2 7	ug/kg	U
	108678	Benzene, 1,3,5-trimethyl-	2.7	ug/kg	U
	541731	Benzene, 1,3-dichloro-	2.7	ug/kg	U
	106467	Benzene, 1,4-dichloro-	2.7	ug/kg	U

			Result	Units	Qlfr
Analytes	99876	Benzene, 1-methyl-4-(1-methyle thyl)-	2 7	ug/kg	U
	108907	Benzene, chloro-	2.7	ug/kg	U
	100425	Benzene, ethenyl-	2.7	ug/kg	U
	103651	Benzene, propyl-	2.7	ug/kg	U
	98066	Benzene, tert-butyl-	2.7	ug/kg	U
	108861	Bromobenzene	2.7	ug/kg	U
	74975	Bromochloromethane	2 7	ug/kg	U
	75274	Bromodichloromethane	2 7	ug/kg	U
	75252	Bromoform	5 5	ug/kg	U
	74839	Bromomethane	13 7	ug/kg	U
	75150	Carbon disulfide	5 5	ug/kg	U
	56235	Carbon Tetrachloride	2 7	ug/kg	U
	156592	cis-1,2-Dichloroethene	2.7	ug/kg	U
	10061015	cis-1,3-Dichloropropene	2 9	ug/kg	U
	124481	Dibromochloromethane	2 7	ug/kg	U
	74953	Dibromomethane	2 7	ug/kg	U
	60297	Diethyl ether	2 7	ug/kg	U
	79345	Ethane, 1,1,2,2-tetrachloro-	2 7	ug/kg	U
	106934	Ethane, 1,2-dibromo-	2.7	ug/kg	U
	156605	Ethene, 1,2-dichloro-, (E)-	2.7	ug/kg	U
	79016	Ethene, trichloro-	2 7	ug/kg	U
	75003	Ethyl Chloride	5 5	ug/kg	U
	100414	Ethylbenzene	2 7	ug/kg	U
	97632	Ethylmethacrylate	2.7	ug/kg	U
	75694	Freon 11	2 7	ug/kg	U
	76131	Freon 113	2 7	ug/kg	U
	75718	Freon 12	2 7	ug/kg	U
	87683	Hexachlorobutadiene	5 5	ug/kg	U
	67721	Hexachloroethane	2.7	ug/kg	U
	126987	Methacrylonitrile	13 7	ug/kg	U
	74873	Methane, chloro-	2 7	ug/kg	U
	67663	Methane, trichloro-	2.7	ug/kg	U
	96333	Methyl acrylate	13 7	ug/kg	U
	74884	Methyl Iodide	2.7	ug/kg	U
	75092	Methylene Chloride	13 7	ug/kg	U
	*1330207	MP-Xylene	5 5	ug/kg	U
	104518	n-Butylbenzene	2.7	ug/kg	U
	91203	Naphthalene	2.7	ug/kg	U
	76017	Pentachloroethane	2 7	ug/kg	U
	1634044	Propane, 2-methoxy-2-methyl-	2 7	ug/kg	U
	135988	sec-Butylbenzene	2 7	ug/kg	U
	127184	Tetrachloroethene	2 7	ug/kg	U
	108883	Toluene	2.7	ug/kg	U
	10061026	Trans-1,3-Dichloropropene	5 2	ug/kg	U
	110576	trans-1,4-Dichloro-2-butene	13 7	ug/kg	U
	75014	Vinyl Chloride	2 7	ug/kg	U
	2199691	1,2-Dichlorobenzene-d4	102	%Rec	

			Result	Units	Qlfr
Analytes	17060070	1,2-Dichloroethane-d4	101	%Rec	
	540363	Benzene, 1,4-difluoro-	98 6	%Rec	
	460004	p-Bromofluorobenzene	88 7	%Rec	
	2037265	Toluene-d8	105	%Rec	
Parameter	Volatiles - Tentatives				
Method	8260-M				
Prep Method					
Analytes	**75183**	**Methane, thiobis-**	**13.7**	**ug/kg**	**NJ**

Project Code:	TEC-720B	**Collected:**	9/16/98
Project Name:	DUWAMISH RIVER SITE	**Matrix:**	Solid
Project Officer:	DAVID BENNETT	**Sample Number:**	98384021
Account Code:	98T10PFAX10ZZLA00	**Type:**	Reg sample
Station Description:			

GCMS

Parameter . Volatiles
Method . 8260-M
Prep Method

			Result	Units	Qlfr
Analytes	630206	1,1,1,2-Tetrachloroethane	1 5	ug/kg	U
	71556	1,1,1-Trichloroethane	1 5	ug/kg	U
	79005	1,1,2-Trichloroethane	1 5	ug/kg	U
	75343	1,1-Dichloroethane	1 5	ug/kg	U
	75354	1,1-Dichloroethene	1 5	ug/kg	U
	513882	1,1-Dichloropropanone	3.0	ug/kg	U
	563586	1,1-Dichloropropene	1 5	ug/kg	U
	87616	1,2,3-Trichlorobenzene	3 0	ug/kg	U
	96184	1,2,3-Trichloropropane	1 5	ug/kg	U
	120821	1,2,4-Trichlorobenzene	3 0	ug/kg	U
	96128	1,2-Dibromo-3-chloropropane	7 6	ug/kg	U
	107062	1,2-Dichloroethane	1 5	ug/kg	U
	78875	1,2-Dichloropropane	1 5	ug/kg	U
	142289	1,3-Dichloropropane	1 5	ug/kg	U
	109693	1-Chlorobutane	1.5	ug/kg	U
	594207	2,2-Dichloropropane	1.5	ug/kg	U
	78933	2-Butanone	3.0	ug/kg	U
	95498	2-Chlorotoluene	1.5	ug/kg	U
	591786	2-Hexanone	3.0	ug/kg	U
	79469	2-Nitropropane	7 6	ug/kg	U
	108101	2-Pentanone, 4-methyl-	3 0	ug/kg	U
	67641	2-Propanone	15.2	ug/kg	U
	80626	2-Propenoic acid, 2-methyl-, m ethyl este	3.0	ug/kg	U
	106434	4-Chlorotoluene	1.5	ug/kg	U
	107131	Acrylonitrile	7 6	ug/kg	U
	107051	Allyl Chloride	1 5	ug/kg	U
	71432	Benzene	1.5	ug/kg	U
	98828	Benzene, (1-methylethyl)-	7 6	ug/kg	U
	95636	Benzene, 1,2,4-trimethyl-	1 5	ug/kg	U
	95501	Benzene, 1,2-dichloro-	1.5	ug/kg	U
	95476	Benzene, 1,2-dimethyl-	1.5	ug/kg	U
	108678	Benzene, 1,3,5-trimethyl-	1 5	ug/kg	U
	541731	Benzene, 1,3-dichloro-	1 5	ug/kg	U
	106467	Benzene, 1,4-dichloro-	1 5	ug/kg	U
	99876	Benzene, 1-methyl-4-(1-methyle thyl)-	1.5	ug/kg	U
	108907	Benzene, chloro-	1.5	ug/kg	U

			Result	Units	Qlfr
Analytes	100425	Benzene, ethenyl-	1 5	ug/kg	U
	103651	Benzene, propyl-	1 5	ug/kg	U
	98066	Benzene, tert-butyl-	1 5	ug/kg	U
	108861	Bromobenzene	1 5	ug/kg	U
	74975	Bromochloromethane	1.5	ug/kg	U
	75274	Bromodichloromethane	1.5	ug/kg	U
	75252	Bromoform	3.0	ug/kg	U
	74839	Bromomethane	7 6	ug/kg	U
	75150	Carbon disulfide	3 0	ug/kg	U
	56235	Carbon Tetrachloride	1.5	ug/kg	U
	107142	Chloroacetonitrile	7 6	ug/kg	U
	156592	cis-1,2-Dichloroethene	1 5	ug/kg	U
	10061015	cis-1,3-Dichloropropene	1.6	ug/kg	U
	124481	Dibromochloromethane	1 5	ug/kg	U
	74953	Dibromomethane	1 5	ug/kg	U
	60297	Diethyl ether	1 5	ug/kg	U
	79345	Ethane, 1,1,2,2-tetrachloro-	1 5	ug/kg	U
	106934	Ethane, 1,2-dibromo-	1 5	ug/kg	U
	156605	Ethene, 1,2-dichloro-, (E)-	1 5	ug/kg	U
	79016	Ethene, trichloro-	1 5	ug/kg	U
	75003	Ethyl Chloride	3 0	ug/kg	U
	100414	Ethylbenzene	1 5	ug/kg	U
	97632	Ethylmethacrylate	1.5	ug/kg	U
	75694	Freon 11	1.5	ug/kg	U
	76131	Freon 113	1.5	ug/kg	U
	75718	Freon 12	1.5	ug/kg	U
	109999	Furan, tetrahydro-	7 6	ug/kg	U
	87683	Hexachlorobutadiene	3 0	ug/kg	U
	67721	Hexachloroethane	1.5	ug/kg	U
	126987	Methacrylonitrile	7.6	ug/kg	U
	74873	Methane, chloro-	1 5	ug/kg	U
	67663	Methane, trichloro-	1 5	ug/kg	U
	96333	Methyl acrylate	7 6	ug/kg	U
	74884	Methyl Iodide	1 5	ug/kg	U
	75092	Methylene Chloride	7 6	ug/kg	U
	*1330207	MP-Xylene	3 0	ug/kg	U
	104518	n-Butylbenzene	1.5	ug/kg	U
	91203	Naphthalene	1.5	ug/kg	U
	76017	Pentachloroethane	1 5	ug/kg	U
	1634044	Propane, 2-methoxy-2-methyl-	1 5	ug/kg	U
	135988	sec-Butylbenzene	1 5	ug/kg	U
	127184	**Tetrachloroethene**	**0.52**	**ug/kg**	**JQ**
	108883	Toluene	1 5	ug/kg	U
	10061026	Trans-1,3-Dichloropropene	2 8	ug/kg	U
	110576	trans-1,4-Dichloro-2-butene	7 6	ug/kg	U
	75014	Vinyl Chloride	1.5	ug/kg	U
	2199691	1,2-Dichlorobenzene-d4	102	%Rec	

			Result	Units	Qlfr
Analytes	17060070	1,2-Dichloroethane-d4	109	%Rec	
	540363	Benzene, 1,4-difluoro-	100	%Rec	
	460004	p-Bromofluorobenzene	93 5	%Rec	
	2037265	Toluene-d8	101	%Rec	

Project Code:	TEC-720B	**Collected:**	9/16/98
Project Name:	DUWAMISH RIVER SITE	**Matrix:**	Solid
Project Officer:	DAVID BENNETT	**Sample Number:**	98384022
Account Code:	98T10PFAX10ZZLA00	**Type:**	Reg sample
Station Description:			

GCMS

Parameter : Volatiles
Method 8260-M
Prep Method

		Result	Units	Qlfr
Analytes 107131	Acrylonitrile			R
107142	Chloroacetonitrile			R
126987	Methacrylonitrile			R
630206	1,1,1,2-Tetrachloroethane	1 6	ug/kg	U
71556	1,1,1-Trichloroethane	1 6	ug/kg	U
79005	1,1,2-Trichloroethane	1 6	ug/kg	U
75343	1,1-Dichloroethane	1 6	ug/kg	U
75354	1,1-Dichloroethene	1 6	ug/kg	U
513882	1,1-Dichloropropanone	3 1	ug/kg	U
563586	1,1-Dichloropropene	1 6	ug/kg	U
87616	1,2,3-Trichlorobenzene	3 1	ug/kg	U
96184	1,2,3-Trichloropropane	1 6	ug/kg	U
120821	1,2,4-Trichlorobenzene	3 1	ug/kg	U
96128	1,2-Dibromo-3-chloropropane	7 8	ug/kg	U
107062	1,2-Dichloroethane	1 6	ug/kg	U
78875	1,2-Dichloropropane	1.6	ug/kg	U
142289	1,3-Dichloropropane	1.6	ug/kg	U
109693	1-Chlorobutane	1.6	ug/kg	U
594207	2,2-Dichloropropane	1 6	ug/kg	U
78933	2-Butanone	3 1	ug/kg	U
95498	2-Chlorotoluene	1 6	ug/kg	U
591786	2-Hexanone	3 1	ug/kg	U
79469	2-Nitropropane	7 8	ug/kg	U
108101	2-Pentanone, 4-methyl-	3 1	ug/kg	U
67641	2-Propanone	15 5	ug/kg	UJK
80626	2-Propenoic acid, 2-methyl-, m ethyl este	3.1	ug/kg	U
106434	4-Chlorotoluene	1 6	ug/kg	U
107051	Allyl Chloride	1 6	ug/kg	U
71432	Benzene	1 6	ug/kg	U
98828	Benzene, (1-methylethyl)-	7 8	ug/kg	U
95636	Benzene, 1,2,4-trimethyl-	1 6	ug/kg	U
95501	Benzene, 1,2-dichloro-	1 6	ug/kg	U
95476	Benzene, 1,2-dimethyl-	1 6	ug/kg	U
108678	Benzene, 1,3,5-trimethyl-	1.6	ug/kg	U
541731	Benzene, 1,3-dichloro-	1.6	ug/kg	U
106467	Benzene, 1,4-dichloro-	1 6	ug/kg	U

			Result	Units	Qlfr
Analytes	99876	Benzene, 1-methyl-4-(1-methyle thyl)-	1 6	ug/kg	U
	108907	Benzene, chloro-	1.6	ug/kg	U
	100425	Benzene, ethenyl-	1.6	ug/kg	U
	103651	Benzene, propyl-	1.6	ug/kg	U
	98066	Benzene, tert-butyl-	1 6	ug/kg	U
	108861	Bromobenzene	1 6	ug/kg	U
	74975	Bromochloromethane	1.6	ug/kg	U
	75274	Bromodichloromethane	1.6	ug/kg	U
	75252	Bromoform	3.1	ug/kg	U
	74839	Bromomethane	7 8	ug/kg	U
	75150	Carbon disulfide	3 1	ug/kg	U
	56235	Carbon Tetrachloride	1 6	ug/kg	U
	156592	cis-1,2-Dichloroethene	1 6	ug/kg	U
	10061015	cis-1,3-Dichloropropene	1 6	ug/kg	U
	124481	Dibromochloromethane	1.6	ug/kg	U
	74953	Dibromomethane	1 6	ug/kg	U
	60297	Diethyl ether	1 6	ug/kg	U
	79345	Ethane, 1,1,2,2-tetrachloro-	1 6	ug/kg	U
	106934	Ethane, 1,2-dibromo-	1 6	ug/kg	U
	156605	Ethene, 1,2-dichloro-, (E)-	1.6	ug/kg	U
	79016	Ethene, trichloro-	1 6	ug/kg	U
	75003	Ethyl Chloride	3 1	ug/kg	U
	100414	Ethylbenzene	1 6	ug/kg	U
	97632	Ethylmethacrylate	1.6	ug/kg	U
	75694	Freon 11	1.6	ug/kg	U
	76131	Freon 113	1 6	ug/kg	U
	75718	Freon 12	1 6	ug/kg	U
	109999	Furan, tetrahydro-	7 8	ug/kg	U
	87683	Hexachlorobutadiene	3 1	ug/kg	U
	67721	Hexachloroethane	1.6	ug/kg	U
	74873	Methane, chloro-	1 6	ug/kg	U
	67663	Methane, trichloro-	1.6	ug/kg	U
	96333	Methyl acrylate	7 8	ug/kg	U
	74884	Methyl Iodide	1.6	ug/kg	U
	75092	Methylene Chloride	7 8	ug/kg	U
	*1330207	MP-Xylene	3 1	ug/kg	U
	104518	n-Butylbenzene	1 6	ug/kg	U
	91203	Naphthalene	1 6	ug/kg	U
	76017	Pentachloroethane	1.6	ug/kg	U
	1634044	Propane, 2-methoxy-2-methyl-	1 6	ug/kg	U
	135988	sec-Butylbenzene	1 6	ug/kg	U
	127184	Tetrachloroethene	1 6	ug/kg	U
	108883	Toluene	1 6	ug/kg	U
	10061026	Trans-1,3-Dichloropropene	2.9	ug/kg	U
	110576	trans-1,4-Dichloro-2-butene	7.8	ug/kg	U
	75014	Vinyl Chloride	1.6	ug/kg	U
	2199691	1,2-Dichlorobenzene-d4	101	%Rec	

			Result	Units	Qlfr
Analytes	17060070	1,2-Dichloroethane-d4	109	%Rec	
	540363	Benzene, 1,4-difluoro-	101	%Rec	
	460004	p-Bromofluorobenzene	96 4	%Rec	
	2037265	Toluene-d8	101	%Rec	

Project Code:	TEC-720B	**Collected:**	9/16/98
Project Name:	DUWAMISH RIVER SITE	**Matrix:**	Solid
Project Officer:	DAVID BENNETT	**Sample Number:**	98384023
Account Code:	98T10PFAX10ZZLA00	**Type:**	Reg sample
Station Description:			

GCMS

Parameter : Volatiles
Method 8260-M
Prep Method

		Result	Units	Qlfr
Analytes 107131	Acrylonitrile			R
107142	Chloroacetonitrile			R
109999	Furan, tetrahydro-			R
630206	1,1,1,2-Tetrachloroethane	1 5	ug/kg	U
71556	1,1,1-Trichloroethane	1.5	ug/kg	U
79005	1,1,2-Trichloroethane	1 5	ug/kg	U
75343	1,1-Dichloroethane	1.5	ug/kg	U
75354	1,1-Dichloroethene	1.5	ug/kg	U
513882	1,1-Dichloropropanone	3.1	ug/kg	U
563586	1,1-Dichloropropene	1 5	ug/kg	U
87616	1,2,3-Trichlorobenzene	3 1	ug/kg	U
96184	1,2,3-Trichloropropane	1 5	ug/kg	U
120821	1,2,4-Trichlorobenzene	3.1	ug/kg	U
96128	1,2-Dibromo-3-chloropropane	7.7	ug/kg	U
107062	1,2-Dichloroethane	1.5	ug/kg	U
78875	1,2-Dichloropropane	1 5	ug/kg	U
142289	1,3-Dichloropropane	1.5	ug/kg	U
109693	1-Chlorobutane	1 5	ug/kg	U
594207	2,2-Dichloropropane	1.5	ug/kg	U
78933	2-Butanone	3.1	ug/kg	U
95498	2-Chlorotoluene	1 5	ug/kg	U
591786	2-Hexanone	3 1	ug/kg	U
79469	2-Nitropropane	7 7	ug/kg	U
108101	2-Pentanone, 4-methyl-	3.1	ug/kg	U
67641	2-Propanone	15 5	ug/kg	UJK
80626	2-Propenoic acid, 2-methyl-, m ethyl este	3 1	ug/kg	U
106434	4-Chlorotoluene	1 5	ug/kg	U
107051	Allyl Chloride	1 5	ug/kg	U
71432	Benzene	1.5	ug/kg	U
98828	Benzene, (1-methylethyl)-	7.7	ug/kg	U
95636	Benzene, 1,2,4-trimethyl-	1.5	ug/kg	U
95501	Benzene, 1,2-dichloro-	1.5	ug/kg	U
95476	Benzene, 1,2-dimethyl-	1 5	ug/kg	U
108678	Benzene, 1,3,5-trimethyl-	1 5	ug/kg	U
541731	Benzene, 1,3-dichloro-	1 5	ug/kg	U
106467	Benzene, 1,4-dichloro-	1.5	ug/kg	U

			Result	Units	Qlfr
Analytes	99876	Benzene, 1-methyl-4-(1-methyle thyl)-	1 5	ug/kg	U
	108907	Benzene, chloro-	1 5	ug/kg	U
	100425	Benzene, ethenyl-	1 5	ug/kg	U
	103651	Benzene, propyl-	1 5	ug/kg	U
	98066	Benzene, tert-butyl-	1 5	ug/kg	U
	108861	Bromobenzene	1 5	ug/kg	U
	74975	Bromochloromethane	1 5	ug/kg	U
	75274	Bromodichloromethane	1.5	ug/kg	U
	75252	Bromoform	3.1	ug/kg	U
	74839	Bromomethane	7.7	ug/kg	U
	75150	Carbon disulfide	3 1	ug/kg	U
	56235	Carbon Tetrachloride	1.5	ug/kg	U
	156592	cis-1,2-Dichloroethene	1 5	ug/kg	U
	10061015	cis-1,3-Dichloropropene	1.6	ug/kg	U
	124481	Dibromochloromethane	1 5	ug/kg	U
	74953	Dibromomethane	1 5	ug/kg	U
	60297	Diethyl ether	1 5	ug/kg	U
	79345	Ethane, 1,1,2,2-tetrachloro-	1 5	ug/kg	U
	106934	Ethane, 1,2-dibromo-	1 5	ug/kg	U
	156605	Ethene, 1,2-dichloro-, (E)-	1.5	ug/kg	U
	79016	Ethene, trichloro-	1 5	ug/kg	U
	75003	Ethyl Chloride	3.1	ug/kg	U
	100414	Ethylbenzene	1 5	ug/kg	U
	97632	Ethylmethacrylate	1.5	ug/kg	U
	75694	Freon 11	1.5	ug/kg	U
	76131	Freon 113	1 5	ug/kg	U
	75718	Freon 12	1.5	ug/kg	U
	87683	Hexachlorobutadiene	3.1	ug/kg	U
	67721	Hexachloroethane	1 5	ug/kg	U
	126987	Methacrylonitrile	7.7	ug/kg	U
	74873	Methane, chloro-	1 5	ug/kg	U
	67663	Methane, trichloro-	1 5	ug/kg	U
	96333	Methyl acrylate	7 7	ug/kg	U
	74884	Methyl Iodide	1 5	ug/kg	U
	75092	Methylene Chloride	7 7	ug/kg	U
	*1330207	MP-Xylene	3 1	ug/kg	U
	104518	n-Butylbenzene	1 5	ug/kg	U
	91203	Naphthalene	1.5	ug/kg	U
	76017	Pentachloroethane	1.5	ug/kg	U
	1634044	Propane, 2-methoxy-2-methyl-	1.5	ug/kg	U
	135988	sec-Butylbenzene	1 5	ug/kg	U
	127184	**Tetrachloroethene**	**0.21**	**ug/kg**	**JQ**
	108883	Toluene	1.5	ug/kg	U
	10061026	Trans-1,3-Dichloropropene	2 9	ug/kg	U
	110576	trans-1,4-Dichloro-2-butene	7 7	ug/kg	U
	75014	Vinyl Chloride	1 5	ug/kg	U
	2199691	1,2-Dichlorobenzene-d4	103	%Rec	

			Result	Units	Qlfr
Analytes	17060070	1,2-Dichloroethane-d4	111	%Rec	
	540363	Benzene, 1,4-difluoro-	100	%Rec	
	460004	p-Bromofluorobenzene	99 1	%Rec	
	2037265	Toluene-d8	99.4	%Rec	

Project Code:	TEC-720B	**Collected:**	9/16/98
Project Name:	DUWAMISH RIVER SITE	**Matrix:**	Solid
Project Officer:	DAVID BENNETT	**Sample Number:**	98384024
Account Code:	98T10PFAX10ZZLA00	**Type:**	Reg sample
Station Description:			

GCMS

Parameter · Volatiles
Method · 8260-M
Prep Method

		Result	Units	Qlfr
Analytes · 107131	Acrylonitrile			R
107142	Chloroacetonitrile			R
109999	Furan, tetrahydro-			R
630206	1,1,1,2-Tetrachloroethane	1 5	ug/kg	U
71556	1,1,1-Trichloroethane	1 5	ug/kg	U
79005	1,1,2-Trichloroethane	1 5	ug/kg	U
75343	1,1-Dichloroethane	1 5	ug/kg	U
75354	1,1-Dichloroethene	1 5	ug/kg	U
513882	1,1-Dichloropropanone	3 1	ug/kg	U
563586	1,1-Dichloropropene	1 5	ug/kg	U
87616	1,2,3-Trichlorobenzene	3 1	ug/kg	U
96184	1,2,3-Trichloropropane	1 5	ug/kg	U
120821	1,2,4-Trichlorobenzene	3.1	ug/kg	U
96128	1,2-Dibromo-3-chloropropane	7.7	ug/kg	U
107062	1,2-Dichloroethane	1 5	ug/kg	U
78875	1,2-Dichloropropane	1 5	ug/kg	U
142289	1,3-Dichloropropane	1.5	ug/kg	U
109693	1-Chlorobutane	1.5	ug/kg	U
594207	2,2-Dichloropropane	1 5	ug/kg	U
78933	2-Butanone	3 1	ug/kg	U
95498	2-Chlorotoluene	1 5	ug/kg	U
591786	2-Hexanone	3 1	ug/kg	U
79469	2-Nitropropane	7 7	ug/kg	U
108101	2-Pentanone, 4-methyl-	3 1	ug/kg	U
67641	2-Propanone	15 4	ug/kg	UJK
80626	2-Propenoic acid, 2-methyl-, m ethyl este	3.1	ug/kg	U
106434	4-Chlorotoluene	1 5	ug/kg	U
107051	Allyl Chloride	1 5	ug/kg	U
71432	Benzene	1 5	ug/kg	U
98828	Benzene, (1-methylethyl)-	7.7	ug/kg	U
95636	Benzene, 1,2,4-trimethyl-	1 5	ug/kg	U
95501	Benzene, 1,2-dichloro-	1.5	ug/kg	U
95476	Benzene, 1,2-dimethyl-	1 5	ug/kg	U
108678	Benzene, 1,3,5-trimethyl-	1 5	ug/kg	U
541731	Benzene, 1,3-dichloro-	1.5	ug/kg	U
106467	Benzene, 1,4-dichloro-	1 5	ug/kg	U

			Result	Units	Qlfr
Analytes	99876	Benzene, 1-methyl-4-(1-methyle thyl)-	1 5	ug/kg	U
	108907	Benzene, chloro-	1.5	ug/kg	U
	100425	Benzene, ethenyl-	1.5	ug/kg	U
	103651	Benzene, propyl-	1.5	ug/kg	U
	98066	Benzene, tert-butyl-	1 5	ug/kg	U
	108861	Bromobenzene	1 5	ug/kg	U
	74975	Bromochloromethane	1.5	ug/kg	U
	75274	Bromodichloromethane	1.5	ug/kg	U
	75252	Bromoform	3 1	ug/kg	U
	74839	Bromomethane	7.7	ug/kg	U
	75150	Carbon disulfide	3.1	ug/kg	U
	56235	Carbon Tetrachloride	1.5	ug/kg	U
	156592	cis-1,2-Dichloroethene	1 5	ug/kg	U
	10061015	cis-1,3-Dichloropropene	1.6	ug/kg	U
	124481	Dibromochloromethane	1 5	ug/kg	U
	74953	Dibromomethane	1.5	ug/kg	U
	60297	Diethyl ether	1 5	ug/kg	U
	79345	Ethane, 1,1,2,2-tetrachloro-	1 5	ug/kg	U
	106934	Ethane, 1,2-dibromo-	1 5	ug/kg	U
	156605	Ethene, 1,2-dichloro-, (E)-	1 5	ug/kg	U
	79016	Ethene, trichloro-	1 5	ug/kg	U
	75003	Ethyl Chloride	3 1	ug/kg	U
	100414	Ethylbenzene	1 5	ug/kg	U
	97632	Ethylmethacrylate	1 5	ug/kg	U
	75694	Freon 11	1.5	ug/kg	U
	76131	Freon 113	1 5	ug/kg	U
	75718	Freon 12	1 5	ug/kg	U
	87683	Hexachlorobutadiene	3.1	ug/kg	U
	67721	Hexachloroethane	1 5	ug/kg	U
	126987	Methacrylonitrile	7.7	ug/kg	U
	74873	Methane, chloro-	1.5	ug/kg	U
	67663	Methane, trichloro-	1 5	ug/kg	U
	96333	Methyl acrylate	7.7	ug/kg	U
	74884	Methyl Iodide	1 5	ug/kg	U
	75092	Methylene Chloride	7 7	ug/kg	U
	*1330207	MP-Xylene	3 1	ug/kg	U
	104518	n-Butylbenzene	1 5	ug/kg	U
	91203	Naphthalene	1 5	ug/kg	U
	76017	Pentachloroethane	1 5	ug/kg	U
	1634044	Propane, 2-methoxy-2-methyl-	1 5	ug/kg	U
	135988	sec-Butylbenzene	1.5	ug/kg	U
	127184	Tetrachloroethene	1 5	ug/kg	U
	108883	Toluene	1.5	ug/kg	U
	10061026	Trans-1,3-Dichloropropene	2 9	ug/kg	U
	110576	trans-1,4-Dichloro-2-butene	7.7	ug/kg	U
	75014	Vinyl Chloride	1 5	ug/kg	U
	2199691	1,2-Dichlorobenzene-d4	106	%Rec	

			Result	Units	Qlfr
Analytes	: 17060070	1,2-Dichloroethane-d4	107	%Rec	
	540363	Benzene, 1,4-difluoro-	97.4	%Rec	
	460004	p-Bromofluorobenzene	97.3	%Rec	
	2037265	Toluene-d8	103	%Rec	

Project Code:	TEC-720B	**Collected:**	9/16/98
Project Name:	DUWAMISH RIVER SITE	**Matrix:**	Solid
Project Officer:	DAVID BENNETT	**Sample Number:**	98384025
Account Code:	98T10PFAX10ZZLA00	**Type:**	Reg sample
Station Description:			

GCMS

Parameter Volatiles
Method : 8260-M
Prep Method

Analytes			Result	Units	Qlfr
	107131	Acrylonitrile			R
	107142	Chloroacetonitrile			R
	109999	Furan, tetrahydro-			R
	630206	1,1,1,2-Tetrachloroethane	1.6	ug/kg	U
	71556	1,1,1-Trichloroethane	1.6	ug/kg	U
	79005	1,1,2-Trichloroethane	1.6	ug/kg	U
	75343	1,1-Dichloroethane	1 6	ug/kg	U
	75354	1,1-Dichloroethene	1.6	ug/kg	U
	513882	1,1-Dichloropropanone	3 2	ug/kg	U
	563586	1,1-Dichloropropene	1.6	ug/kg	U
	87616	1,2,3-Trichlorobenzene	3 2	ug/kg	U
	96184	1,2,3-Trichloropropane	1 6	ug/kg	U
	120821	1,2,4-Trichlorobenzene	3.2	ug/kg	U
	96128	1,2-Dibromo-3-chloropropane	8 1	ug/kg	U
	107062	1,2-Dichloroethane	1 6	ug/kg	U
	78875	1,2-Dichloropropane	1.6	ug/kg	U
	142289	1,3-Dichloropropane	1.6	ug/kg	U
	109693	1-Chlorobutane	1.6	ug/kg	U
	594207	2,2-Dichloropropane	1 6	ug/kg	U
	78933	2-Butanone	3.2	ug/kg	U
	95498	2-Chlorotoluene	1.6	ug/kg	U
	591786	2-Hexanone	3 2	ug/kg	U
	79469	2-Nitropropane	8.1	ug/kg	U
	108101	2-Pentanone, 4-methyl-	3.2	ug/kg	U
	67641	2-Propanone	16.2	ug/kg	UJK
	80626	2-Propenoic acid, 2-methyl-, m ethyl este	3 2	ug/kg	U
	106434	4-Chlorotoluene	1 6	ug/kg	U
	107051	Allyl Chloride	1.6	ug/kg	U
	71432	Benzene	1 6	ug/kg	U
	98828	Benzene, (1-methylethyl)-	8 1	ug/kg	U
	95636	Benzene, 1,2,4-trimethyl-	1.6	ug/kg	U
	95501	Benzene, 1,2-dichloro-	1 6	ug/kg	U
	95476	Benzene, 1,2-dimethyl-	1 6	ug/kg	U
	108678	Benzene, 1,3,5-trimethyl-	1.6	ug/kg	U
	541731	Benzene, 1,3-dichloro-	1 6	ug/kg	U
	106467	Benzene, 1,4-dichloro-	1 6	ug/kg	U

			Result	Units	Qlfr
Analytes	99876	Benzene, 1-methyl-4-(1-methyle thyl)-	1 6	ug/kg	U
	108907	Benzene, chloro-	1 6	ug/kg	U
	100425	Benzene, ethenyl-	1 6	ug/kg	U
	103651	Benzene, propyl-	1 6	ug/kg	U
	98066	Benzene, tert-butyl-	1 6	ug/kg	U
	108861	Bromobenzene	1 6	ug/kg	U
	74975	Bromochloromethane	1.6	ug/kg	U
	75274	Bromodichloromethane	1 6	ug/kg	U
	75252	Bromoform	3.2	ug/kg	U
	74839	Bromomethane	8 1	ug/kg	U
	75150	Carbon disulfide	3 2	ug/kg	U
	56235	Carbon Tetrachloride	1.6	ug/kg	U
	156592	cis-1,2-Dichloroethene	1 6	ug/kg	U
	10061015	cis-1,3-Dichloropropene	1.7	ug/kg	U
	124481	Dibromochloromethane	1.6	ug/kg	U
	74953	Dibromomethane	1.6	ug/kg	U
	60297	Diethyl ether	1.6	ug/kg	U
	79345	Ethane, 1,1,2,2-tetrachloro-	1 6	ug/kg	U
	106934	Ethane, 1,2-dibromo-	1.6	ug/kg	U
	156605	Ethene, 1,2-dichloro-, (E)-	1.6	ug/kg	U
	79016	Ethene, trichloro-	1 6	ug/kg	U
	75003	Ethyl Chloride	3.2	ug/kg	U
	100414	Ethylbenzene	1 6	ug/kg	U
	97632	Ethylmethacrylate	1 6	ug/kg	U
	75694	Freon 11	1 6	ug/kg	U
	76131	Freon 113	1 6	ug/kg	U
	75718	Freon 12	1 6	ug/kg	U
	87683	Hexachlorobutadiene	3 2	ug/kg	U
	67721	Hexachloroethane	1 6	ug/kg	U
	126987	Methacrylonitrile	8.1	ug/kg	U
	74873	Methane, chloro-	1 6	ug/kg	U
	67663	Methane, trichloro-	1 6	ug/kg	U
	96333	Methyl acrylate	8 1	ug/kg	U
	74884	Methyl Iodide	1 6	ug/kg	U
	75092	Methylene Chloride	8 1	ug/kg	U
	*1330207	MP-Xylene	3 2	ug/kg	U
	104518	n-Butylbenzene	1 6	ug/kg	U
	91203	Naphthalene	1 6	ug/kg	U
	76017	Pentachloroethane	1 6	ug/kg	U
	1634044	Propane, 2-methoxy-2-methyl-	1 6	ug/kg	U
	135988	sec-Butylbenzene	1 6	ug/kg	U
	127184	Tetrachloroethene	1 6	ug/kg	U
	108883	Toluene	1.6	ug/kg	U
	10061026	Trans-1,3-Dichloropropene	3 0	ug/kg	U
	110576	trans-1,4-Dichloro-2-butene	8 1	ug/kg	U
	75014	Vinyl Chloride	1 6	ug/kg	U
	2199691	1,2-Dichlorobenzene-d4	99 4	%Rec	

			Result	Units	Qlfr
Analytes :	17060070	1,2-Dichloroethane-d4	107	%Rec	
	540363	Benzene, 1,4-difluoro-	97.9	%Rec	
	460004	p-Bromofluorobenzene	97 2	%Rec	
	2037265	Toluene-d8	101	%Rec	
Parameter	Volatiles - Tentatives				
Method :	8260-M				
Prep Method					
Analytes	**624920**	**Disulfide, dimethyl**	**0.94**	**ug/kg**	**NJ**
	75183	**Methane, thiobis-**	**31.7**	**ug/kg**	**NJ**

Project Code:	TEC-720B	**Collected:**	
Project Name:	DUWAMISH RIVER SITE	**Matrix:**	Solid
Project Officer:	DAVID BENNETT	**Sample Number:**	okbs8260
Account Code:	98T10PFAX10ZZLA00	**Type:**	Blank
Station Description:			

GCMS

Parameter : Volatiles
Method : 8260-M
Prep Method

Analytes			Result	Units	Qlfr
	630206	1,1,1,2-Tetrachloroethane	2.0	ug/kg	U
	71556	1,1,1-Trichloroethane	2.0	ug/kg	U
	79005	1,1,2-Trichloroethane	2 0	ug/kg	U
	75343	1,1-Dichloroethane	2 0	ug/kg	U
	75354	1,1-Dichloroethene	2 0	ug/kg	U
	513882	1,1-Dichloropropanone	4 0	ug/kg	U
	563586	1,1-Dichloropropene	2 0	ug/kg	U
	87616	1,2,3-Trichlorobenzene	4 0	ug/kg	U
	96184	1,2,3-Trichloropropane	2 0	ug/kg	U
	120821	1,2,4-Trichlorobenzene	4 0	ug/kg	U
	96128	1,2-Dibromo-3-chloropropane	10.0	ug/kg	U
	107062	1,2-Dichloroethane	2 0	ug/kg	U
	78875	1,2-Dichloropropane	2.0	ug/kg	U
	142289	1,3-Dichloropropane	2 0	ug/kg	U
	109693	1-Chlorobutane	2 0	ug/kg	U
	594207	2,2-Dichloropropane	2 0	ug/kg	U
	78933	2-Butanone	4 0	ug/kg	U
	95498	2-Chlorotoluene	2.0	ug/kg	U
	591786	2-Hexanone	4 0	ug/kg	U
	79469	2-Nitropropane	10.0	ug/kg	U
	108101	2-Pentanone, 4-methyl-	4 0	ug/kg	U
	67641	**2-Propanone**	**19**	**ug/kg**	**J**
	80626	2-Propenoic acid, 2-methyl-, m ethyl este	4 0	ug/kg	U
	106434	4-Chlorotoluene	2.0	ug/kg	U
	107131	Acrylonitrile	10 0	ug/kg	U
	107051	Allyl Chloride	2.0	ug/kg	U
	71432	Benzene	2 0	ug/kg	U
	98828	Benzene, (1-methylethyl)-	10 0	ug/kg	U
	95636	Benzene, 1,2,4-trimethyl-	2 0	ug/kg	U
	95501	Benzene, 1,2-dichloro-	2 0	ug/kg	U
	95476	Benzene, 1,2-dimethyl-	2 0	ug/kg	U
	108678	Benzene, 1,3,5-trimethyl-	2 0	ug/kg	U
	541731	Benzene, 1,3-dichloro-	2.0	ug/kg	U
	106467	Benzene, 1,4-dichloro-	2 0	ug/kg	U
	99876	Benzene, 1-methyl-4-(1-methyle thyl)-	2 0	ug/kg	U
	108907	Benzene, chloro-	2 0	ug/kg	U

			Result	Units	Qlfr
Analytes :	100425	Benzene, ethenyl-	2.0	ug/kg	U
	103651	Benzene, propyl-	2.0	ug/kg	U
	98066	Benzene, tert-butyl-	2.0	ug/kg	U
	108861	Bromobenzene	2.0	ug/kg	U
	74975	Bromochloromethane	2.0	ug/kg	U
	75274	Bromodichloromethane	2 0	ug/kg	U
	75252	Bromoform	4 0	ug/kg	U
	74839	Bromomethane	10 0	ug/kg	U
	75150	Carbon disulfide	4 0	ug/kg	U
	56235	Carbon Tetrachloride	2 0	ug/kg	U
	107142	Chloroacetonitrile	10 0	ug/kg	U
	156592	cis-1,2-Dichloroethene	2 0	ug/kg	U
	10061015	cis-1,3-Dichloropropene	2 1	ug/kg	U
	124481	Dibromochloromethane	2 0	ug/kg	U
	74953	Dibromomethane	2 0	ug/kg	U
	60297	Diethyl ether	2 0	ug/kg	U
	79345	Ethane, 1,1,2,2-tetrachloro-	2.0	ug/kg	U
	106934	Ethane, 1,2-dibromo-	2 0	ug/kg	U
	156605	Ethene, 1,2-dichloro-, (E)-	2.0	ug/kg	U
	79016	Ethene, trichloro-	2 0	ug/kg	U
	75003	Ethyl Chloride	4 0	ug/kg	U
	100414	Ethylbenzene	2.0	ug/kg	U
	97632	Ethylmethacrylate	2.0	ug/kg	U
	75694	Freon 11	2.0	ug/kg	U
	76131	Freon 113	2 0	ug/kg	U
	75718	Freon 12	2 0	ug/kg	U
	109999	Furan, tetrahydro-	10 0	ug/kg	U
	87683	Hexachlorobutadiene	4.0	ug/kg	U
	67721	Hexachloroethane	2 0	ug/kg	U
	126987	Methacrylonitrile	10 0	ug/kg	U
	74873	Methane, chloro-	2 0	ug/kg	U
	67663	Methane, trichloro-	2 0	ug/kg	U
	96333	Methyl acrylate	10 0	ug/kg	U
	74884	Methyl Iodide	2 0	ug/kg	U
	75092	**Methylene Chloride**	**4.8**	**ug/kg**	**J**
	*1330207	MP-Xylene	4 0	ug/kg	U
	104518	n-Butylbenzene	2 0	ug/kg	U
	91203	Naphthalene	2 0	ug/kg	U
	76017	Pentachloroethane	2 0	ug/kg	U
	1634044	Propane, 2-methoxy-2-methyl-	2 0	ug/kg	U
	135988	sec-Butylbenzene	2 0	ug/kg	U
	127184	Tetrachloroethene	2 0	ug/kg	U
	108883	Toluene	2 0	ug/kg	U
	10061026	Trans-1,3-Dichloropropene	3 8	ug/kg	U
	110576	trans-1,4-Dichloro-2-butene	10 0	ug/kg	U
	75014	Vinyl Chloride	2 0	ug/kg	U
	2199691	1,2-Dichlorobenzene-d4	102	%Rec	

			Result	Units	Qlfr
Analytes	17060070	1,2-Dichloroethane-d4	102	%Rec	
	540363	Benzene, 1,4-difluoro-	98 2	%Rec	
	460004	p-Bromofluorobenzene	97.7	%Rec	
	2037265	Toluene-d8	103	%Rec	

Project Code:	TEC-720B	**Collected:**	
Project Name:	DUWAMISH RIVER SITE	**Matrix:**	Solid
Project Officer:	DAVID BENNETT	**Sample Number:**	okbs8264
Account Code:	98T10PFAX10ZZLA00	**Type:**	Blank
Station Description:			

GCMS

Parameter : Volatiles
Method : 8260-M
Prep Method

			Result	Units	Qlfr
Analytes	630206	1,1,1,2-Tetrachloroethane	4 2	ug/kg	U
	71556	**1,1,1-Trichloroethane**	**3.6**	**ug/kg**	**J**
	79005	1,1,2-Trichloroethane	4 2	ug/kg	U
	75343	1,1-Dichloroethane	4.2	ug/kg	U
	75354	1,1-Dichloroethene	4 2	ug/kg	U
	513882	1,1-Dichloropropanone	8 3	ug/kg	U
	563586	1,1-Dichloropropene	4 2	ug/kg	U
	87616	1,2,3-Trichlorobenzene	8 3	ug/kg	U
	96184	1,2,3-Trichloropropane	4.2	ug/kg	U
	120821	1,2,4-Trichlorobenzene	8 3	ug/kg	U
	96128	1,2-Dibromo-3-chloropropane	20 8	ug/kg	U
	107062	1,2-Dichloroethane	4.2	ug/kg	U
	78875	1,2-Dichloropropane	4.2	ug/kg	U
	142289	1,3-Dichloropropane	4 2	ug/kg	U
	109693	1-Chlorobutane	4 2	ug/kg	U
	594207	2,2-Dichloropropane	4 2	ug/kg	U
	78933	2-Butanone	8 3	ug/kg	U
	95498	2-Chlorotoluene	4 2	ug/kg	U
	591786	2-Hexanone	8 3	ug/kg	U
	79469	2-Nitropropane	20 8	ug/kg	U
	108101	2-Pentanone, 4-methyl-	8 3	ug/kg	U
	67641	**2-Propanone**	**33**	**ug/kg**	**J**
	80626	2-Propenoic acid, 2-methyl-, m ethyl este	8 3	ug/kg	U
	106434	4-Chlorotoluene	4 2	ug/kg	U
	107131	Acrylonitrile	20 8	ug/kg	U
	107051	Allyl Chloride	4 2	ug/kg	U
	71432	Benzene	4.2	ug/kg	U
	98828	Benzene, (1-methylethyl)-	20 8	ug/kg	U
	95636	Benzene, 1,2,4-trimethyl-	4.2	ug/kg	U
	95501	Benzene, 1,2-dichloro-	4 2	ug/kg	U
	95476	Benzene, 1,2-dimethyl-	4 2	ug/kg	U
	108678	Benzene, 1,3,5-trimethyl-	4.2	ug/kg	U
	541731	Benzene, 1,3-dichloro-	4 2	ug/kg	U
	106467	Benzene, 1,4-dichloro-	4.2	ug/kg	U
	99876	Benzene, 1-methyl-4-(1-methyle thyl)-	4 2	ug/kg	U
	108907	Benzene, chloro-	4 2	ug/kg	U

			Result	Units	Qlfr
Analytes	100425	Benzene, ethenyl-	4 2	ug/kg	U
	103651	Benzene, propyl-	4 2	ug/kg	U
	98066	Benzene, tert-butyl-	4 2	ug/kg	U
	108861	Bromobenzene	4.2	ug/kg	U
	74975	Bromochloromethane	4 2	ug/kg	U
	75274	Bromodichloromethane	4 2	ug/kg	U
	75252	Bromoform	8 3	ug/kg	U
	74839	Bromomethane	20.8	ug/kg	U
	75150	Carbon disulfide	8 3	ug/kg	U
	56235	Carbon Tetrachloride	4 2	ug/kg	U
	107142	Chloroacetonitrile	20 8	ug/kg	U
	156592	cis-1,2-Dichloroethene	4 2	ug/kg	U
	10061015	cis-1,3-Dichloropropene	4 4	ug/kg	U
	124481	Dibromochloromethane	4 2	ug/kg	U
	74953	Dibromomethane	4 2	ug/kg	U
	60297	Diethyl ether	4.2	ug/kg	U
	79345	Ethane, 1,1,2,2-tetrachloro-	4.2	ug/kg	U
	106934	Ethane, 1,2-dibromo-	4 2	ug/kg	U
	156605	Ethene, 1,2-dichloro-, (E)-	4 2	ug/kg	U
	79016	Ethene, trichloro-	4 2	ug/kg	U
	75003	Ethyl Chloride	8 3	ug/kg	U
	100414	Ethylbenzene	4.2	ug/kg	U
	97632	Ethylmethacrylate	4 2	ug/kg	U
	75694	Freon 11	4.2	ug/kg	U
	76131	Freon 113	4 2	ug/kg	U
	75718	Freon 12	4 2	ug/kg	U
	109999	Furan, tetrahydro-	20 8	ug/kg	U
	87683	Hexachlorobutadiene	8 3	ug/kg	U
	67721	Hexachloroethane	4 2	ug/kg	U
	126987	Methacrylonitrile	20.8	ug/kg	U
	74873	Methane, chloro-	4 2	ug/kg	U
	67663	Methane, trichloro-	4 2	ug/kg	U
	96333	Methyl acrylate	20.8	ug/kg	U
	74884	Methyl Iodide	4 2	ug/kg	U
	75092	**Methylene Chloride**	**7.4**	**ug/kg**	**J**
	*1330207	MP-Xylene	8 3	ug/kg	U
	104518	n-Butylbenzene	4 2	ug/kg	U
	91203	Naphthalene	4 2	ug/kg	U
	76017	Pentachloroethane	4.2	ug/kg	U
	1634044	Propane, 2-methoxy-2-methyl-	4 2	ug/kg	U
	135988	sec-Butylbenzene	4 2	ug/kg	U
	127184	Tetrachloroethene	4 2	ug/kg	U
	108883	Toluene	4 2	ug/kg	U
	10061026	Trans-1,3-Dichloropropene	7 8	ug/kg	U
	110576	trans-1,4-Dichloro-2-butene	20 8	ug/kg	U
	75014	Vinyl Chloride	4 2	ug/kg	U
	2199691	1,2-Dichlorobenzene-d4	100	%Rec	

			Result	Units	Qlfr
Analytes	17060070	1,2-Dichloroethane-d4	107	%Rec	
	540363	Benzene, 1,4-difluoro-	101	%Rec	
	460004	p-Bromofluorobenzene	95 8	%Rec	
	2037265	Toluene-d8	101	%Rec	