KCDT Metro Transit So. Dearborn -

CDM Smith

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SITS.8.6

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April 6, 2012

Mr. Paul Miller
King County Department of Transportation
Transit Division, Design and Construction Services M/S SC
11911 E. Marginal Way South, Building B
Tukwila, Washington 98168-2597

Subject: Transmittal – Laboratory Data
Groundwater Sampling
Work Order No. 17, Contract E00141E
8th and Dearborn
Seattle, Washington

Dear Paul:

This letter transmits the results of CDM Smith Inc.'s (CDM Smith) September 2011, December 2011, and March 2012 groundwater monitoring rounds conducted for the King County Department of Transportation at the 8th and Dearborn (also known as South Dearborn) site as shown on **Figure 1**. Groundwater monitoring wells W-1A and W-3A were sampled in September and December 2011; and in March 2012. Their locations are shown on **Figure 2**. The sampling was conducted in accordance with our September 12, 2011 proposal and work plan.

The purpose of the monitoring was to obtain three rounds of groundwater level and chemistry data for the site as a basis for evaluating groundwater conditions since the last monitoring event conducted in May 2011.

Scope of Work

CDM Smith staff measured water levels, purged the wells, measured additional field parameters, and collected groundwater samples from two site wells on September 20, 2011; December 20, 2011; and March 19, 2012. The monitoring wells sampled were W-1A and W-3A as shown on **Figure 2**. A duplicate sample was collected from monitoring well W-3A during the September 2011 sampling round and labeled as MW-1. Duplicates were collected from W-1A during the December 2011 and March 2012 sampling rounds and also labeled as MW-1. The field parameters measured were pH, temperature, and specific conductance; the results of which are summarized in **Table 1**.

Table 1 Field Parameters

Well No.	Date Sampled	Depth to Water (ft)	pH	Temperature (°C)	Conductivity (µS/cm)
W-1A	9/20/2011	35.33	7.02	14.5	448
	12/20/2011	35.28	6.51	13.3	626
	3/19/2012	35.30	7.28	13.8	583
W-3A	9/20/2011	36.18	6.95	15.3	605
	12/20/2011	36.15	6.75	13.1	715
	3/19/2012	36.16	7.12	14.2	717

Groundwater samples were delivered to OnSite Environmental Inc. for laboratory analysis on September 20, 2011; December 20, 2011; and March 19, 2012. A QA/QC review was performed by a CDM Smith chemist for the analytical results reported. Both the analytical laboratory reports and the QA/QC review are attached.

Results

Analytical results received for the groundwater samples collected from monitoring wells W-1A and W-3A indicate concentrations of benzene, toluene, ethylbenzene, and xylenes were all below method reporting limits. Concentrations of total petroleum hydrocarbons (TPH) quantified as gasoline were also below method reporting limits. Concentrations of 1,2-dichloroethane (1,2-ethylene dichloride or 1,2-EDC) were measured at 3.2 parts per billion (ppb) in monitoring well W-1A, and undetected in well W-3A and the duplicate sample in September 2011. In December 2011, concentrations of 1,2-EDC were measured at 3.5 ppb and 3.8 ppb in monitoring well W-1A and the duplicate sample and undetected in well W-3A. And, in March 2012, concentrations of 1,2-EDC were measured at 3.7 ppb in both monitoring well W-1A and the duplicate sample and undetected in well W-3A. The 1,2-EDC concentrations in monitoring well W-1A are slightly higher than the level in May 2011. However, these slightly higher concentrations in wells W-1A remain below the Model Toxics Control Act (MTCA) Method A cleanup level of 5 ppb. 1,2-EDC has not been detected in W-3A since May 2011. A summary of analytical results of this and previous sampling rounds is included as **Table 2**.

We appreciate the opportunity to assist you on this project. If you have questions regarding the results, call me at (425) 519-8300.

Very truly yours,

Lance E. Peterson, LHG
Project Manager
CDM Smith Inc.

Enclosures

cc: Gary Kriedt, King County

Table 2

Summary of Chemical Analyses - Groundwater

King County/8th and Dearborn

Seattle, Washington

Well I.D.	Date Sampled	Analytical Method												
		WTPH-G												8260B
		Gasoline	Benzene			Toluene			Ethylbenzene			Xylenes			1,2-DCA
		ppb	ppb												ppb
			GC [a]	GC/MS [a]	NWTPH/ BTEX	GC [a]	GC/MS [a]	NWTPH/ BTEX	GC [a]	GC/MS [a]	NWTPH/ BTEX	GC [a]	GC/MS [a]	NWTPH/ BTEX	
W-1	07/27/92	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	410
	10/91-7/94 [b]	16,000	2,800	NA	NA	131	NA	NA	250	NA	NA	1,100	NA	NA	NA
	07/15/94	3,500	1,900	1,700	NA	17	5.3	NA	89	68	NA	27.7	6.70	NA	NA
W-1A	02/13/96	210	2.1	1.8	NA	1.6	1.2	NA	8	6.9	NA	<2	<15	NA	NA
	02/13/96 [c]	200	2	NA	NA	1.4	NA	NA	7.7	NA	NA	<2	NA	NA	NA
	02/13/96 (split)	140	<1.0	NA	NA	<1.0	NA	NA	5	NA	NA	<1.0	NA	NA	NA
	02/27/96	170	2	1.6	NA	1.4	0.64	NA	4.7	4.7	NA	1.4	<15	NA	NA
	01/14/97	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	50
	02/24/99	<100	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	24
	02/06/01	<100	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	19 J
	02/06/01 [c]	<100	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	36 J
	12/11/01	370	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	NA	NA	3.2	170
	06/02/03	ND	NA	NA	ND	NA	NA	ND	NA	NA	ND	NA	NA	ND	98
	06/02/03 [c]	100	NA	NA	ND	NA	NA	ND	NA	NA	ND	NA	NA	ND	120
	01/06/05	<100	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	45
	01/06/05 [c]	<100	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	43
	01/08/08	<100	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	14
	01/08/08 [c]	<100	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	15
→	05/03/11	<100	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	3.1
	05/03/11 [c]	<100	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	2.9
	09/20/11	<100	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	3.2
	12/20/11	<100	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	3.5
	12/20/11 [c]	<100	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	3.8
	03/19/12	<100	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	3.7
	03/19/12 [c]	<100	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	3.7

Table 2

Summary of Chemical Analyses - Groundwater

King County/8th and Dearborn

Seattle, Washington

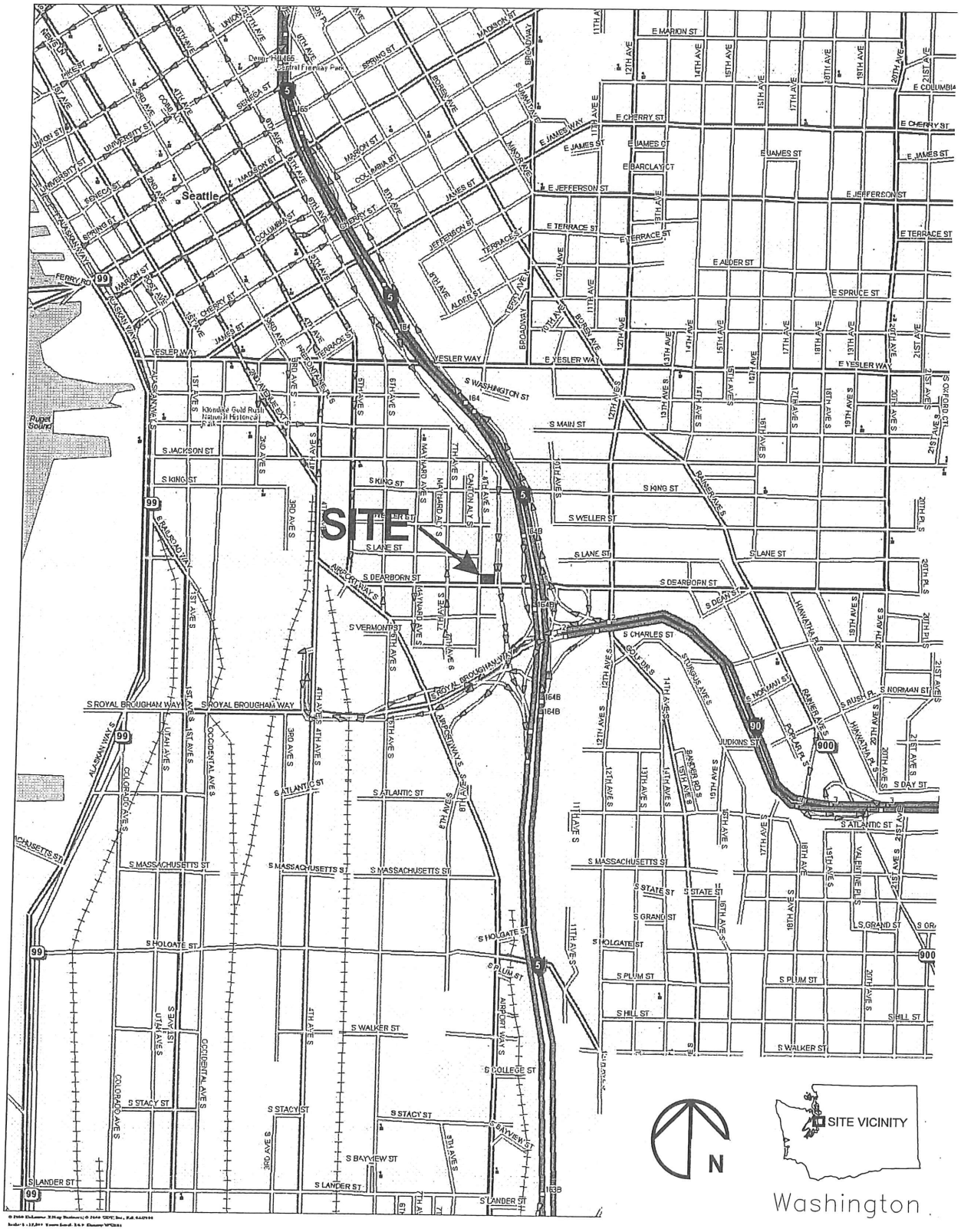
Well I.D.	Date Sampled	Analytical Method													
		WTPH-G	Benzene			Toluene			Ethylbenzene			Xylenes			8260B
		Gasoline													1,2-DCA
		ppb	ppb												ppb
			GC [a]	GC/MS [a]	NWTPH/ BTEX	GC [a]	GC/MS [a]	NWTPH/ BTEX	GC [a]	GC/MS [a]	NWTPH/ BTEX	GC [a]	GC/MS [a]	NWTPH/ BTEX	
W-3A	02/13/96	1,500	3,200	3,400	NA	<1.0	29	NA	<1.0	7	NA	428	434	NA	NA
	02/13/96 (split)	2,100	2,600	NA	NA	4	NA	NA	3	NA	NA	530	NA	NA	NA
	02/27/96	1,500	3,000	3,700	NA	2.7	2.5	NA	4.6	4	NA	382	413	NA	NA
	01/14/97	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	82
	02/24/99	<100	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	<1.0
	02/06/01	<100	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	6.0
	12/11/01	<100	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	10.0
	12/11/01 [c]	<100	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	10.0
	06/02/03	ND	NA	NA	ND	NA	NA	ND	NA	NA	ND	NA	NA	ND	4.2
	01/06/05	<100	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	<0.2
	01/08/08	<100	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	0.27
	05/03/11	<100	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	0.29
	09/20/11	<100	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	<0.20
	09/20/11 [c]	<100	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	<0.20
	12/20/11	<100	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	<0.20
	03/19/12	<100	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	<0.20
W-4	07/27/92	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	190
	10/91-7/94 [b]	50,000	2,200	NA	NA	2,300	NA	NA	380	NA	NA	6,500	NA	NA	NA
	07/15/94	36,000	2,200	2,100	NA	1,500	1,500	NA	420	410	NA	5,100	3,800	NA	NA
W-5	07/27/92	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0
W-6	07/27/92	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0
	10/91-7/94 [b]	4,965	33	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	07/15/94	470	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
W-7	06/18/92	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	60
	07/27/92	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	35

Table 2
Summary of Chemical Analyses - Groundwater
King County/8th and Dearborn
Seattle, Washington

Well I.D.	Date Sampled	Analytical Method												
		WTPH-G												8260B
		Gasoline	Benzene			Toluene			Ethylbenzene			Xylenes			1,2-DCA
		ppb	ppb												ppb
			GC [a]	GC/MS [a]	NWTPH/ BTEX	GC [a]	GC/MS [a]	NWTPH/ BTEX	GC [a]	GC/MS [a]	NWTPH/ BTEX	GC [a]	GC/MS [a]	NWTPH/ BTEX	
W-8	01/14/97	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0
	02/06/01	<100	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	<0.20
	12/11/01	<100	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	NA	NA	<1.0	<0.20
Cleanup Levels [d]		1,000	5	5	5	40	40	40	30	30	30	20	20	20	5
Cleanup Levels [e]		1,000	5	5	5	1,000	1,000	1,000	700	700	700	1,000	1,000	1,000	5

Notes:

Shading indicates most recent sampling round.
a) Method designated by Enviros.
b) Average sample analytical results collected during a four-year period.
c) Duplicate sample collected.
d) Method A suggested cleanup level for groundwater promulgated under Washington Administrative Code Chapter 173-340, Model Toxics Control act Cleanup Regulation.
e) Method A suggested cleanup level for groundwater promulgated under Washington Administrative Code Chapter 173-340, Model Toxics Control act Cleanup Regulation, revised 2/12/01.
< - analyte not detected at concentrations equal to or greater than the stated concentration.
J - estimated value.
NA - not analyzed or not applicable.
ppb - microgram per liter.
Split - split sample by PDA.
ND - Not Detected at PQL



P:\19897\31900\87894\FIGURE-1\ 04/06\12

CDM Smith

KING COUNTY
8th. AND DEARBORN
SEATTLE, WASHINGTON

Figure No. 1
Vicinity Map

P:\19897\31900\87894\ FIGURE-2 04/06/12 07:30 riehlepj
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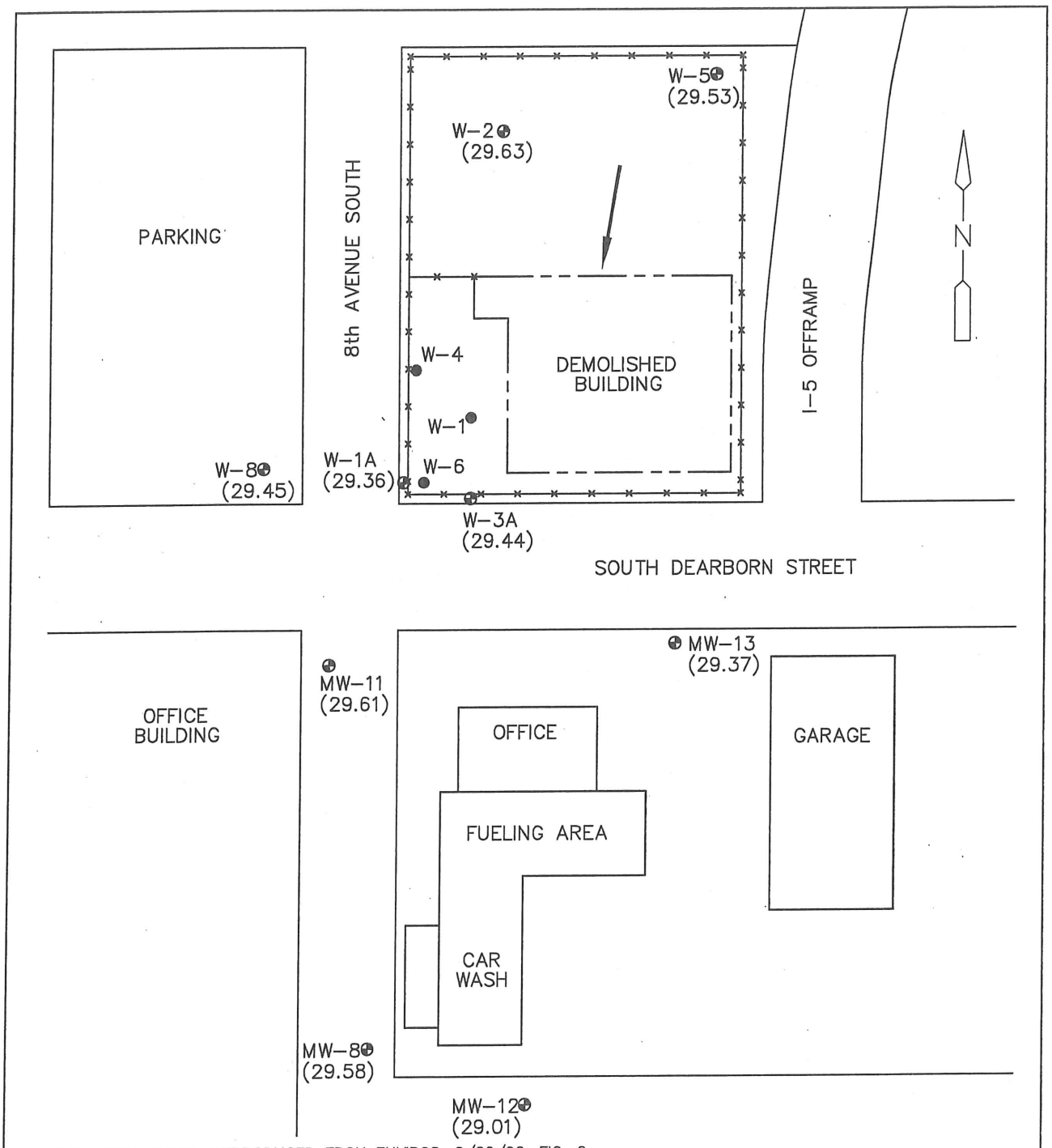

NOTE: THIS FIGURE REPRODUCED FROM ENVIROS, 2/22/96, FIG. 2

LEGEND

W-8 (29.45) — MONITORING WELL W/GROUNDWATER ELEVATIONS ON FEBRUARY 13, 1995

W-4 — DECOMMISSIONED WELL

INFERRED GROUNDWATER FLOW (APPROXIMATE)

FENCE

1" = 80'

40 0 80

CDM Smith

KING COUNTY
8tH. AND DEARBORN
SEATTLE, WASHINGTON

Figure No. 2
Site Plan

Quality Assurance Report

Project and Sample Information

Project Name:	8th and Dearborn Project Site
Project No.:	19897-87894
Lab Name:	OnSite Environmental Inc. (OnSite), Redmond, Washington
Lab Numbers:	Reference Nos. 1109-114, 1112-150, and 1203-130
Sample Nos.:	W-1A-9/11, W-3A-9/11, MW1-9/11, W-1A (collected 12/20/11), MW-1 (collected 12/20/11), W-3A (collected 12/20/11), W-1A (collected 3/19/12), MW-1 (collected 3/19/12), W-3A (collected 3/19/12),
Matrix:	Water

1.0 Quality Assurance Summary

This Quality Assurance Report (QAR) provides a summary of quality assurance (QA) findings. This review of the project data was performed using OnSite's in-house quality control limits and National Functional Guidelines for Organic Data Review (U.S. EPA, 2008).

This report includes a review of holding times; method blank, surrogate, matrix spike, and spike blank recoveries; matrix spike duplicate and spike blank duplicate data; and chain-of-custody records. Samples were analyzed for total petroleum hydrocarbons (TPH) quantitated as gasoline; benzene, ethyl benzene, toluene, and xylenes (BTEX); and 1,2-dichloroethane. All data are of known quality and are acceptable for use.

2.0 Analytical Methods

The following methods were used to analyze the samples:

Parameter	Method
TPH quantitated as gasoline and BTEX	NWTPH-Gx/BTEX (EPA 8021B)
1,2-Dichloroethane	EPA 8260B

3.0 Timeliness

NWTPH-Gx/BTEX (EPA 8021B)

The recommended holding time for NWTPH-Gx/BTEX (EPA 8021B) in preserved water samples is 14 days. All samples were analyzed within the recommended holding time. See **Table A-1** for holding times per sample.

EPA 8260B

The recommended holding time for EPA Method 8260B is 14 days in preserved water samples. All samples were analyzed within the recommended holding time. See **Table A-2** for holding times per sample.

4.0 Chain-of-Custody

Chain-of-custody forms were completed. The chain-of-custody forms were signed and dated. No issues with sample receipt conditions were indicated on the chain-of-custody form or in the Case Narrative sections of the laboratory reports. All samples listed on the chain-of-custody forms were analyzed as indicated.

5.0 Field Quality Control Samples

Following is a list of the field quality controls samples that were collected during the three sampling events:

Field Duplicate

Sample ID	Duplicate ID
W-3A-9/11 (9/20/2011)	MW-1-9/11 (9/20/2011)
W-1A (12/20/2011)	W-1 (12/20/2011)
W-1A (3/19/2012)	W-1 (3/19/2012)

Field Duplicate: Duplicate relative percent differences (RPDs) could not be calculated for the NWTPH-Gx/BTEX analyses in September 2011, December 2011, and March 2012 or the 1,2-EDC analyses in September 2011because no target analytes were detected above the reporting limits. The RPDs for 1,2-dichloroethane were 8% and 0% for the samples collected in December 2011 and March 2012, respectively, which both meet the acceptable limit of ≤ 20%. See **Table A-3** for the calculation of the RPDs for 1,2-dichloroethane in the field duplicates.

6.0 Laboratory Quality Control Samples

Method Blanks: NWTPH-Gx/BTEX : No target analytes were detected at or above OnSite's Practical Quantitation Limits (PQLs).

8260B: 1,2-Dichloroethane was not detected at or above OnSite's PQLs.

Matrix Spikes: NWTPH-Gx/BTEX: Matrix spike and matrix spike duplicate (MS/MSD) percent recoveries and RPD values were within OnSite's control limit criteria for NWTPH-Gx/BTEX.

8260B: Matrix spike analyses were not performed on samples submitted for 1,2-dichloroethane by 8260B analysis. Refer to spike blank and spike blank duplicate (SB/SBD) data for precision data.

Matrix Duplicate: NWTPH-Gx/BTEX: Matrix duplicate RPD's could not be calculated for the NWTPH-Gx/BTEX analysis because no target analytes were detected above the reporting limits. Refer to matrix spike and matrix spike duplicate (MS/MSD) data for precision information.

6.0 Laboratory Quality Control Samples (continued)

8260B: Matrix duplicate analyses were not performed on samples submitted for 1,2-dichloroethane by 8260B analysis. Refer to SB/SBD data for precision information.

Surrogates:

NWTPH-Gx/BTEX: OnSite used one surrogate-spiking compound for the NWTPH-Gx/BTEX analyses. All surrogate percent recoveries were within OnSite's control limits for NWTPH-Gx/BTEX analyses.

8260B: OnSite used three surrogate-spiking compounds for the 8260B analysis. All surrogate percent recoveries were within OnSite's control limits for 8260B analysis.

Spike Blanks:

NWTPH-Gx/BTEX: Spike blank data was not reported for the NWTPH-Gx/BTEX analysis. Refer to MS/MSD data for percent recovery and precision information.

8260B: Spike blank and spike blank duplicate (SB/SBD) percent recoveries and RPD values were within OnSite's control limits for 8260B analysis.

Signatures

Prepared by: Mary Lou Fox Date: 4/6/12

Checked by: Date: 4/6/12

Table A-1
Sample Holding Times - NWTPH-Gx/BTEX Analyses
8th and Dearborn Project Site
Seattle, Washington

Sample ID	Matrix	Date Sampled	Date Analyzed	Time Until Analysis (days)
W-1A-9/11	Water	9/20/2011	9/20/2011	0
W-3A-9/11	Water	9/20/2011	9/20/2011	0
MW1-9/11	Water	9/20/2011	9/20/2011	0
W-1A	Water	12/20/2011	12/22/2011	2
MW-1	Water	12/20/2011	12/22/2011	2
W-3A	Water	12/20/2011	12/22/2011	2
W-1A	Water	3/19/2012	3/20/2012	1
W-3A	Water	3/19/2012	3/20/2012	1
MW-1	Water	3/19/2012	3/20/2012	1

Notes:
Recommended holding time for NWTPH-Gx/BTEX (EPA 8021B) analyses in preserved water is 14 days to analysis.

Table A-2
Sample Holding Times - 8260B Analyses
8th and Dearborn Project Site
Seattle, Washington

Sample ID	Matrix	Date Sampled	Date Analyzed	Time Until Analysis (days)
W-1A-9/11	Water	9/20/2011	9/22/2011	2
W-3A-9/11	Water	9/20/2011	9/22/2011	2
MW1-9/11	Water	9/20/2011	9/22/2011	2
W-1A	Water	12/20/2011	12/22/2011	2
MW-1	Water	12/20/2011	12/22/2011	2
W-3A	Water	12/20/2011	12/22/2011	2
W-1A	Water	3/19/2012	3/20/2012	1
W-3A	Water	3/19/2012	3/20/2012	1
MW-1	Water	3/19/2012	3/20/2012	1

Notes:
Recommended holding time for 8260B analyses in preserved water is 14 days to analysis.

Table A-3
Calculation of Relative Percent Difference for Field Duplicates
8th and Dearborn Project Site
Seattle, Washington

Analyte (ug/kg)	Date Sampled	Sample ID W-1A	Duplicate ID MW-1	RPD (%)
1,2-Dichloroethane	12/20/2011	3.5	3.8	8%
1,2-Dichloroethane	3/19/2012	3.7	3.7	0%

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

September 26, 2011

Lance Peterson
CDM
14432 SE Eastgate Way, Suite 100
Bellevue, WA 98007-6493

Re: Analytical Data for Project 19897-78100
Laboratory Reference No. 1109-114

Dear Lance:

Enclosed are the analytical results and associated quality control data for samples submitted on September 20, 2011.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 26, 2011
Samples Submitted: September 20, 2011
Laboratory Reference: 1109-114
Project: 19897-78100

Case Narrative

Samples were collected on September 20, 2011 and received by the laboratory on September 20, 2011. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 26, 2011
Samples Submitted: September 20, 2011
Laboratory Reference: 1109-114
Project: 19897-78100

NWTPH-Gx/BTEX

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**W-1A-9/11**					
Laboratory ID:	09-114-01					
Benzene	**ND**	1.0	EPA 8021	9-20-11	9-20-11	
Toluene	**ND**	1.0	EPA 8021	9-20-11	9-20-11	
Ethyl Benzene	**ND**	1.0	EPA 8021	9-20-11	9-20-11	
m,p-Xylene	**ND**	1.0	EPA 8021	9-20-11	9-20-11	
o-Xylene	**ND**	1.0	EPA 8021	9-20-11	9-20-11	
Gasoline	**ND**	100	NWTPH-Gx	9-20-11	9-20-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*86*	*73-121*				
Client ID:	**W-3A-9/11**					
Laboratory ID:	09-114-02					
Benzene	**ND**	1.0	EPA 8021	9-20-11	9-20-11	
Toluene	**ND**	1.0	EPA 8021	9-20-11	9-20-11	
Ethyl Benzene	**ND**	1.0	EPA 8021	9-20-11	9-20-11	
m,p-Xylene	**ND**	1.0	EPA 8021	9-20-11	9-20-11	
o-Xylene	**ND**	1.0	EPA 8021	9-20-11	9-20-11	
Gasoline	**ND**	100	NWTPH-Gx	9-20-11	9-20-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*96*	*73-121*				
Client ID:	**MW1-9/11**					
Laboratory ID:	09-114-03					
Benzene	**ND**	1.0	EPA 8021	9-20-11	9-20-11	
Toluene	**ND**	1.0	EPA 8021	9-20-11	9-20-11	
Ethyl Benzene	**ND**	1.0	EPA 8021	9-20-11	9-20-11	
m,p-Xylene	**ND**	1.0	EPA 8021	9-20-11	9-20-11	
o-Xylene	**ND**	1.0	EPA 8021	9-20-11	9-20-11	
Gasoline	**ND**	100	NWTPH-Gx	9-20-11	9-20-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*93*	*73-121*				

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 26, 2011
Samples Submitted: September 20, 2011
Laboratory Reference: 1109-114
Project: 19897-78100

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0920W1					
Benzene	**ND**	1.0	EPA 8021	9-20-11	9-20-11	
Toluene	**ND**	1.0	EPA 8021	9-20-11	9-20-11	
Ethyl Benzene	**ND**	1.0	EPA 8021	9-20-11	9-20-11	
m,p-Xylene	**ND**	1.0	EPA 8021	9-20-11	9-20-11	
o-Xylene	**ND**	1.0	EPA 8021	9-20-11	9-20-11	
Gasoline	**ND**	100	NWTPH-Gx	9-20-11	9-20-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*95*	*73-121*				

Matrix: Water
Units: ug/L (ppb)

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	09-114-01										
	ORIG	DUP									
Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Toluene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Ethyl Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
m,p-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
o-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*86*	*93*	*73-121*			
MATRIX SPIKES											
Laboratory ID:	09-114-01										
	MS	MSD	MS	MSD		MS	MSD				
Benzene	**51.1**	**52.0**	50.0	50.0	ND	**102**	**104**	82-120	2	8	
Toluene	**50.1**	**51.3**	50.0	50.0	ND	**100**	**103**	84-119	2	8	
Ethyl Benzene	**48.5**	**49.6**	50.0	50.0	ND	**97**	**99**	84-122	2	9	
m,p-Xylene	**47.7**	**49.0**	50.0	50.0	ND	**95**	**98**	85-121	3	9	
o-Xylene	**47.5**	**48.6**	50.0	50.0	ND	**95**	**97**	84-121	2	9	
Surrogate:											
Fluorobenzene						*93*	*95*	*73-121*			

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Date of Report: September 26, 2011
Samples Submitted: September 20, 2011
Laboratory Reference: 1109-114
Project: 19897-78100

VOLATILES by EPA 8260B

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**W-1A-9/11**					
Laboratory ID:	09-114-01					
1,2-Dichloroethane	3.2	0.20	EPA 8260	9-22-11	9-22-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*85*	*68-120*				
Toluene-d8	*84*	*73-120*				
4-Bromofluorobenzene	*80*	*65-120*				

Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	**W-3A-9/11**					
Laboratory ID:	09-114-02					
1,2-Dichloroethane	ND	0.20	EPA 8260	9-22-11	9-22-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*86*	*68-120*				
Toluene-d8	*82*	*73-120*				
4-Bromofluorobenzene	*80*	*65-120*				

Client ID:	**MW1-9/11**					
Laboratory ID:	09-114-03					
1,2-Dichloroethane	ND	0.20	EPA 8260	9-22-11	9-22-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*86*	*68-120*				
Toluene-d8	*84*	*73-120*				
4-Bromofluorobenzene	*79*	*65-120*				

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 26, 2011
Samples Submitted: September 20, 2011
Laboratory Reference: 1109-114
Project: 19897-78100

VOLATILES by EPA 8260B
QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0922W1					
1,2-Dichloroethane	ND	0.20	EPA 8260	9-22-11	9-22-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*81*	*68-120*				
Toluene-d8	*79*	*73-120*				
4-Bromofluorobenzene	*76*	*65-120*				

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0922W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**9.18**	**9.15**	10.0	10.0	92	92	70-130	0	11	
Benzene	**9.00**	**9.25**	10.0	10.0	90	93	75-123	3	8	
Trichloroethene	**10.0**	**9.91**	10.0	10.0	100	99	80-113	1	9	
Toluene	**9.43**	**9.53**	10.0	10.0	94	95	80-113	1	8	
Chlorobenzene	**10.2**	**10.1**	10.0	10.0	102	101	80-111	1	8	
Surrogate:										
Dibromofluoromethane					*82*	*86*	*68-120*			
Toluene-d8					*82*	*83*	*73-120*			
4-Bromofluorobenzene					*80*	*82*	*65-120*			

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Chain of Custody

Page 1 of 1

OnSite Environmental Inc.
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: CDM
Project Number: 19897-78100
Project Name: South Dearborn
Project Manager: Lance Peterson
Sampled by: Pam Moerlein

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 09-114

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	Halogenated Volatiles 8260B	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081A	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA / MTCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664	1,4 DOA						% Moisture
1	W-1A-9/11	9/20/11	0915	H2O			X														X						
2	W-3A-9/11	9/20/11	1000	↓			X														X						
3	MW1-9/11	9/20/11	1100	↓			X														X						

	Signature	Company	Date	Time
Relinquished		CDM	9/21/11	1200
Received		ONSITE ENV	9/20/11	1400
Relinquished				
Received				
Relinquished				
Received				

Comments/Special Instructions

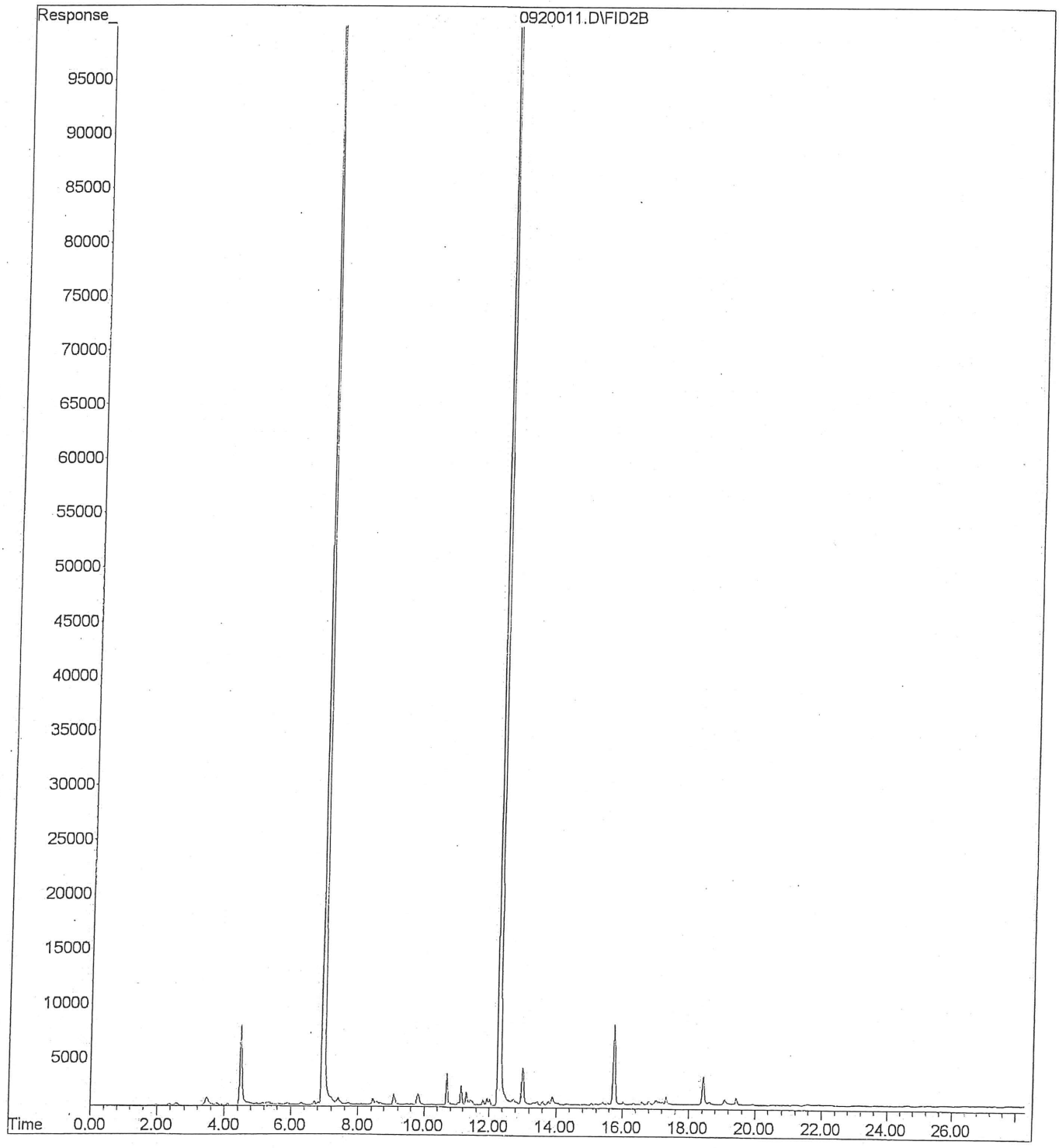
Reviewed/Date

Reviewed/Date

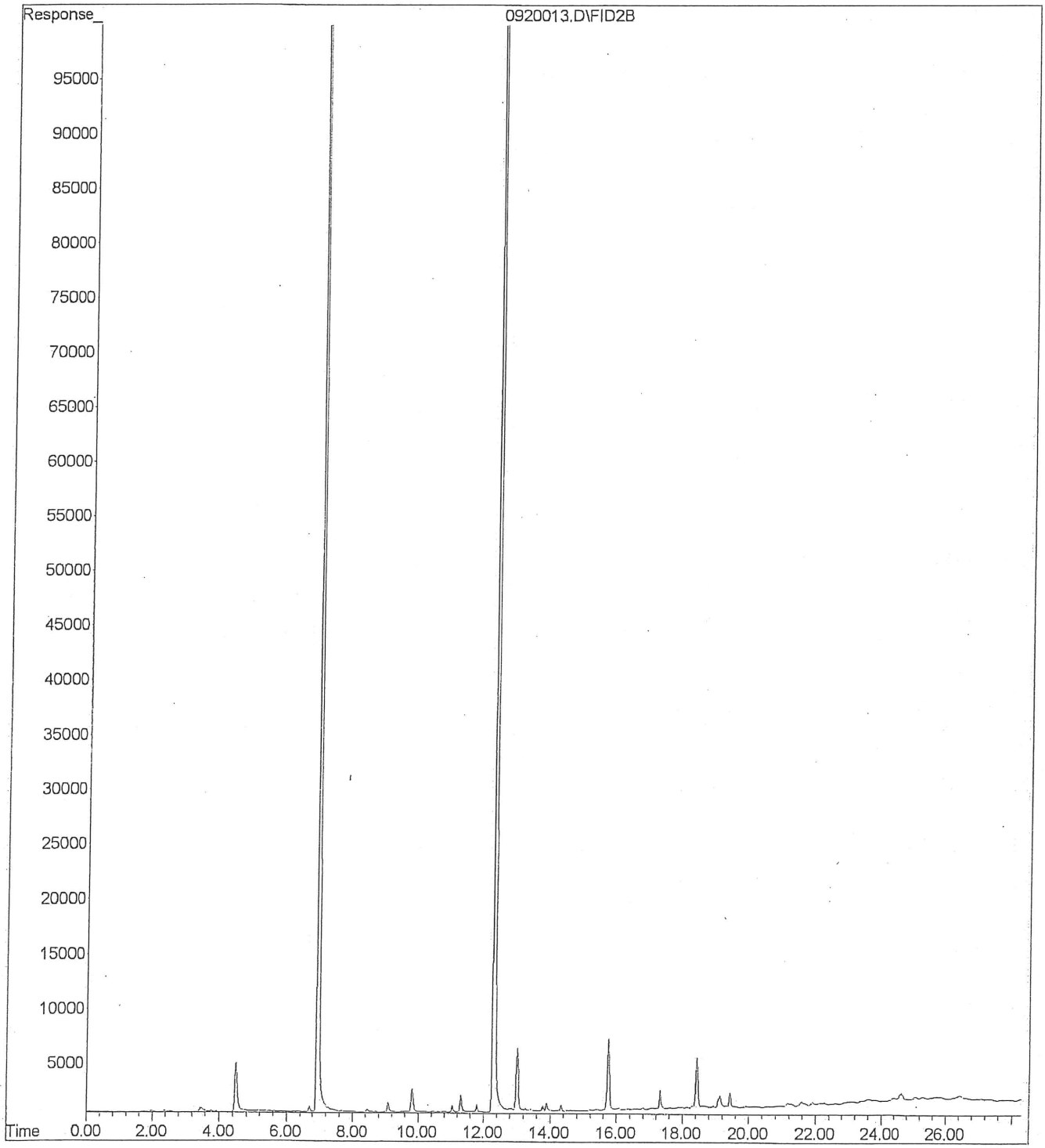
Chromatograms with final report ☐

Data Package: Level III ☐ Level IV ☐ Electronic Data Deliverables (EDDs) ☐ _____

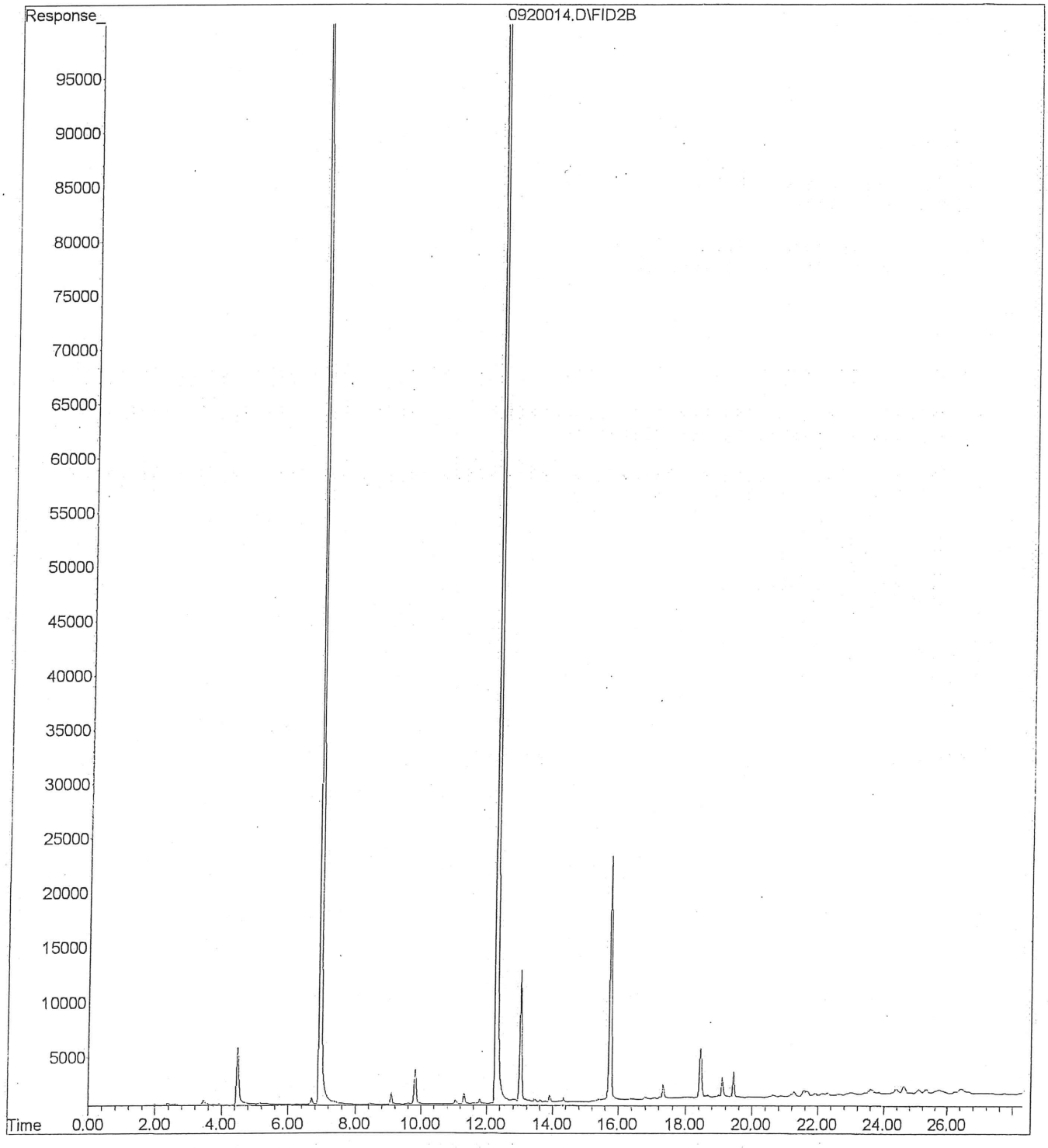
File : X:\BTEX\DARYL\DATA\D110920\0920011.D
Operator :
Acquired : 20 Sep 2011 18:50 using AcqMethod 110630B.M
Instrument : Daryl
Sample Name: 09-114-01a
Misc Info : V2-25-18
Vial Number: 11



File : X:\BTEX\DARYL\DATA\D110920\0920013.D
Operator :
Acquired : 20 Sep 2011 19:59 using AcqMethod 110630B.M
Instrument : Daryl
Sample Name: 09-114-02a
Misc Info : V2-25-18
Vial Number: 13



File : X:\BTEX\DARYL\DATA\D110920\0920014.D
Operator :
Acquired : 20 Sep 2011 20:33 using AcqMethod 110630B.M
Instrument : Daryl
Sample Name: 09-114-03a
Misc Info : V2-25-18
Vial Number: 14



OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

December 29, 2011

Lance Peterson
CDM
14432 SE Eastgate Way, Suite 100
Bellevue, WA 98007-6493

Re: Analytical Data for Project 19897-87894
Laboratory Reference No. 1112-150

Dear Lance:

Enclosed are the analytical results and associated quality control data for samples submitted on December 20, 2011.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: December 29, 2011
Samples Submitted: December 20, 2011
Laboratory Reference: 1112-150
Project: 19897-87894

Case Narrative

Samples were collected on December 20, 2011 and received by the laboratory on December 20, 2011. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: December 29, 2011
Samples Submitted: December 20, 2011
Laboratory Reference: 1112-150
Project: 19897-87894

NWTPH-Gx/BTEX

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**W-1A**					
Laboratory ID:	12-150-01					
Benzene	**ND**	1.0	EPA 8021	12-22-11	12-22-11	
Toluene	**ND**	1.0	EPA 8021	12-22-11	12-22-11	
Ethyl Benzene	**ND**	1.0	EPA 8021	12-22-11	12-22-11	
m,p-Xylene	**ND**	1.0	EPA 8021	12-22-11	12-22-11	
o-Xylene	**ND**	1.0	EPA 8021	12-22-11	12-22-11	
Gasoline	**ND**	100	NWTPH-Gx	12-22-11	12-22-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*94*	*73-121*				
Client ID:	**MW-1**					
Laboratory ID:	12-150-02					
Benzene	**ND**	1.0	EPA 8021	12-22-11	12-22-11	
Toluene	**ND**	1.0	EPA 8021	12-22-11	12-22-11	
Ethyl Benzene	**ND**	1.0	EPA 8021	12-22-11	12-22-11	
m,p-Xylene	**ND**	1.0	EPA 8021	12-22-11	12-22-11	
o-Xylene	**ND**	1.0	EPA 8021	12-22-11	12-22-11	
Gasoline	**ND**	100	NWTPH-Gx	12-22-11	12-22-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*94*	*73-121*				
Client ID:	**W-3A**					
Laboratory ID:	12-150-03					
Benzene	**ND**	1.0	EPA 8021	12-22-11	12-22-11	
Toluene	**ND**	1.0	EPA 8021	12-22-11	12-22-11	
Ethyl Benzene	**ND**	1.0	EPA 8021	12-22-11	12-22-11	
m,p-Xylene	**ND**	1.0	EPA 8021	12-22-11	12-22-11	
o-Xylene	**ND**	1.0	EPA 8021	12-22-11	12-22-11	
Gasoline	**ND**	100	NWTPH-Gx	12-22-11	12-22-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*94*	*73-121*				

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: December 29, 2011
Samples Submitted: December 20, 2011
Laboratory Reference: 1112-150
Project: 19897-87894

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1222W2					
Benzene	**ND**	1.0	EPA 8021	12-22-11	12-22-11	
Toluene	**ND**	1.0	EPA 8021	12-22-11	12-22-11	
Ethyl Benzene	**ND**	1.0	EPA 8021	12-22-11	12-22-11	
m,p-Xylene	**ND**	1.0	EPA 8021	12-22-11	12-22-11	
o-Xylene	**ND**	1.0	EPA 8021	12-22-11	12-22-11	
Gasoline	**ND**	100	NWTPH-Gx	12-22-11	12-22-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*93*	*73-121*				
Laboratory ID:	MB1223W1					
Benzene	**ND**	1.0	EPA 8021	12-23-11	12-23-11	
Toluene	**ND**	1.0	EPA 8021	12-23-11	12-23-11	
Ethyl Benzene	**ND**	1.0	EPA 8021	12-23-11	12-23-11	
m,p-Xylene	**ND**	1.0	EPA 8021	12-23-11	12-23-11	
o-Xylene	**ND**	1.0	EPA 8021	12-23-11	12-23-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*92*	*73-121*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	12-150-01										
	ORIG	DUP									
Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Toluene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Ethyl Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
m,p-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
o-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*94*	*94*	*73-121*			
MATRIX SPIKES											
Laboratory ID:	12-083-05										
	MS	MSD	MS	MSD		MS	MSD				
Benzene	**46.6**	**46.9**	50.0	50.0	ND	**93**	**94**	82-120	1	8	
Toluene	**46.3**	**47.3**	50.0	50.0	ND	**93**	**95**	84-119	2	8	
Ethyl Benzene	**46.3**	**47.4**	50.0	50.0	ND	**93**	**95**	84-122	2	9	
m,p-Xylene	**45.1**	**47.5**	50.0	50.0	ND	**90**	**95**	85-121	5	9	
o-Xylene	**45.8**	**46.8**	50.0	50.0	ND	**92**	**94**	84-121	2	9	
Surrogate:											
Fluorobenzene						*95*	*94*	*73-121*			

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: December 29, 2011
Samples Submitted: December 20, 2011
Laboratory Reference: 1112-150
Project: 19897-87894

VOLATILES by EPA 8260B

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**W-1A**					
Laboratory ID:	12-150-01					
1,2-Dichloroethane	3.5	0.20	EPA 8260	12-22-11	12-22-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*83*	*68-120*				
Toluene-d8	*82*	*73-120*				
4-Bromofluorobenzene	*81*	*65-120*				

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: December 29, 2011
Samples Submitted: December 20, 2011
Laboratory Reference: 1112-150
Project: 19897-87894

VOLATILES by EPA 8260B

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	12-150-02					
1,2-Dichloroethane	3.8	0.20	EPA 8260	12-22-11	12-22-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*84*	*68-120*				
Toluene-d8	*85*	*73-120*				
4-Bromofluorobenzene	*84*	*65-120*				

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: December 29, 2011
Samples Submitted: December 20, 2011
Laboratory Reference: 1112-150
Project: 19897-87894

VOLATILES by EPA 8260B

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**W-3A**					
Laboratory ID:	12-150-03					
1,2-Dichloroethane	ND	0.20	EPA 8260	12-22-11	12-22-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*86*	*68-120*				
Toluene-d8	*88*	*73-120*				
4-Bromofluorobenzene	*88*	*65-120*				

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: December 29, 2011
Samples Submitted: December 20, 2011
Laboratory Reference: 1112-150
Project: 19897-87894

VOLATILES by EPA 8260B
QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1222W1					
1,2-Dichloroethane	ND	0.20	EPA 8260	12-22-11	12-22-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*80*	*68-120*				
Toluene-d8	*84*	*73-120*				
4-Bromofluorobenzene	*83*	*65-120*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	12-150-02										
	MS	MSD	MS	MSD		MS	MSD				
1,1-Dichloroethene	**11.2**	**11.2**	10.0	10.0	ND	112	112	70-130	0	12	
Benzene	**10.1**	**10.4**	10.0	10.0	ND	101	104	75-123	3	11	
Trichloroethene	**9.58**	**9.45**	10.0	10.0	ND	96	95	80-117	1	14	
Toluene	**9.90**	**9.64**	10.0	10.0	ND	99	96	80-115	3	12	
Chlorobenzene	**10.1**	**10.2**	10.0	10.0	ND	101	102	80-117	1	13	
Surrogate:											
Dibromofluoromethane						*80*	*82*	*68-120*			
Toluene-d8						*82*	*82*	*73-120*			
4-Bromofluorobenzene						*82*	*84*	*65-120*			

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Chain of Custody

Page 1 of 1

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: CDM
Project Number: 19897-87894
Project Name: King County - 8th & Dearborn
Project Manager: Lance Peterson
Sampled by: Mark Jusayan

Turnaround Request (in working days)

(Check One)

☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 12-150

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	No. of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	Halogenated Volatiles 8260B	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081A	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664	1, 2 DCA				% Moisture
1	MW-1A	12/20/11	0933	H_2O	5		X															X				
2	MW-1	12/20/11	0935	H_2O	5		X															X				
3	MW-3A	12/20/11	1112	H_2O	5		X															X				

	Signature	Company	Date	Time
Relinquished		CDM	12/20/11	1310
Received		OSE	12/20/11	1310
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

King County
Contract E00141E

Chromatograms with final report ☐

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

March 21, 2012

Lance Peterson
CDM Smith, Inc.
14432 SE Eastgate Way, Suite 100
Bellevue, WA 98007-6493

Re: Analytical Data for Project 19897-87894
Laboratory Reference No. 1203-130

Dear Lance:

Enclosed are the analytical results and associated quality control data for samples submitted on March 19, 2012.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 21, 2012
Samples Submitted: March 19, 2012
Laboratory Reference: 1203-130
Project: 19897-87894

Case Narrative

Samples were collected on March 19, 2012 and received by the laboratory on March 19, 2012. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 21, 2012
Samples Submitted: March 19, 2012
Laboratory Reference: 1203-130
Project: 19897-87894

NWTPH-Gx/BTEX

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**W-1A**					
Laboratory ID:	03-130-01					
Benzene	**ND**	1.0	EPA 8021	3-20-12	3-20-12	
Toluene	**ND**	1.0	EPA 8021	3-20-12	3-20-12	
Ethyl Benzene	**ND**	1.0	EPA 8021	3-20-12	3-20-12	
m,p-Xylene	**ND**	1.0	EPA 8021	3-20-12	3-20-12	
o-Xylene	**ND**	1.0	EPA 8021	3-20-12	3-20-12	
Gasoline	**ND**	100	NWTPH-Gx	3-20-12	3-20-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*86*	*73-121*				
Client ID:	**W-3A**					
Laboratory ID:	03-130-02					
Benzene	**ND**	1.0	EPA 8021	3-20-12	3-20-12	
Toluene	**ND**	1.0	EPA 8021	3-20-12	3-20-12	
Ethyl Benzene	**ND**	1.0	EPA 8021	3-20-12	3-20-12	
m,p-Xylene	**ND**	1.0	EPA 8021	3-20-12	3-20-12	
o-Xylene	**ND**	1.0	EPA 8021	3-20-12	3-20-12	
Gasoline	**ND**	100	NWTPH-Gx	3-20-12	3-20-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*87*	*73-121*				
Client ID:	**MW-1**					
Laboratory ID:	03-130-03					
Benzene	**ND**	1.0	EPA 8021	3-20-12	3-20-12	
Toluene	**ND**	1.0	EPA 8021	3-20-12	3-20-12	
Ethyl Benzene	**ND**	1.0	EPA 8021	3-20-12	3-20-12	
m,p-Xylene	**ND**	1.0	EPA 8021	3-20-12	3-20-12	
o-Xylene	**ND**	1.0	EPA 8021	3-20-12	3-20-12	
Gasoline	**ND**	100	NWTPH-Gx	3-20-12	3-20-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*86*	*73-121*				

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 21, 2012
Samples Submitted: March 19, 2012
Laboratory Reference: 1203-130
Project: 19897-87894

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0320W1					
Benzene	**ND**	1.0	EPA 8021	3-20-12	3-20-12	
Toluene	**ND**	1.0	EPA 8021	3-20-12	3-20-12	
Ethyl Benzene	**ND**	1.0	EPA 8021	3-20-12	3-20-12	
m,p-Xylene	**ND**	1.0	EPA 8021	3-20-12	3-20-12	
o-Xylene	**ND**	1.0	EPA 8021	3-20-12	3-20-12	
Gasoline	**ND**	100	NWTPH-Gx	3-20-12	3-20-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*85*	*73-121*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	03-130-01										
	ORIG	DUP									
Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Toluene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Ethyl Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
m,p-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
o-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*86*	*85*	*73-121*			
MATRIX SPIKES											
Laboratory ID:	03-130-01										
	MS	MSD	MS	MSD		MS	MSD				
Benzene	**51.3**	**51.6**	50.0	50.0	ND	**103**	**103**	82-120	1	8	
Toluene	**53.4**	**53.1**	50.0	50.0	ND	**107**	**106**	84-119	1	8	
Ethyl Benzene	**54.2**	**53.3**	50.0	50.0	ND	**108**	**107**	84-122	2	9	
m,p-Xylene	**53.1**	**51.9**	50.0	50.0	ND	**106**	**104**	85-121	2	9	
o-Xylene	**51.7**	**49.5**	50.0	50.0	ND	**103**	**99**	84-121	4	9	
Surrogate:											
Fluorobenzene						*99*	*99*	*73-121*			

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 21, 2012
Samples Submitted: March 19, 2012
Laboratory Reference: 1203-130
Project: 19897-87894

HALOGENATED VOLATILES EPA 8260B

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**W-1A**					
Laboratory ID:	03-130-01					
1,2-Dichloroethane	3.7	0.20	EPA 8260	3-20-12	3-20-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*96*	*68-120*				
Toluene-d8	*90*	*73-120*				
4-Bromofluorobenzene	*84*	*65-120*				

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 21, 2012
Samples Submitted: March 19, 2012
Laboratory Reference: 1203-130
Project: 19897-87894

HALOGENATED VOLATILES EPA 8260B

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**W-3A**					
Laboratory ID:	03-130-02					
1,2-Dichloroethane	ND	0.20	EPA 8260	3-20-12	3-20-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*97*	*68-120*				
Toluene-d8	*90*	*73-120*				
4-Bromofluorobenzene	*85*	*65-120*				

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 21, 2012
Samples Submitted: March 19, 2012
Laboratory Reference: 1203-130
Project: 19897-87894

HALOGENATED VOLATILES EPA 8260B

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	03-130-03					
1,2-Dichloroethane	3.7	0.20	EPA 8260	3-20-12	3-20-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*103*	*68-120*				
Toluene-d8	*97*	*73-120*				
4-Bromofluorobenzene	*92*	*65-120*				

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 21, 2012
Samples Submitted: March 19, 2012
Laboratory Reference: 1203-130
Project: 19897-87894

HALOGENATED VOLATILES EPA 8260B
METHOD BLANK QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0320W1					
1,2-Dichloroethane	ND	0.20	EPA 8260	3-20-12	3-20-12	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*104*	*68-120*				
Toluene-d8	*97*	*73-120*				
4-Bromofluorobenzene	*91*	*65-120*				

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 21, 2012
Samples Submitted: March 19, 2012
Laboratory Reference: 1203-130
Project: 19897-87894

HALOGENATED VOLATILES EPA 8260B
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0320W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**10.7**	**11.0**	10.0	10.0	107	110	70-130	3	11	
Benzene	**10.8**	**11.1**	10.0	10.0	108	111	75-123	3	8	
Trichloroethene	**10.7**	**10.8**	10.0	10.0	107	108	80-113	1	9	
Toluene	**10.7**	**11.1**	10.0	10.0	107	111	80-113	4	8	
Chlorobenzene	**10.6**	**11.1**	10.0	10.0	106	111	80-115	5	8	
Surrogate:										
Dibromofluoromethane					*97*	*100*	*68-120*			
Toluene-d8					*96*	*96*	*73-120*			
4-Bromofluorobenzene					*89*	*90*	*65-120*			

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

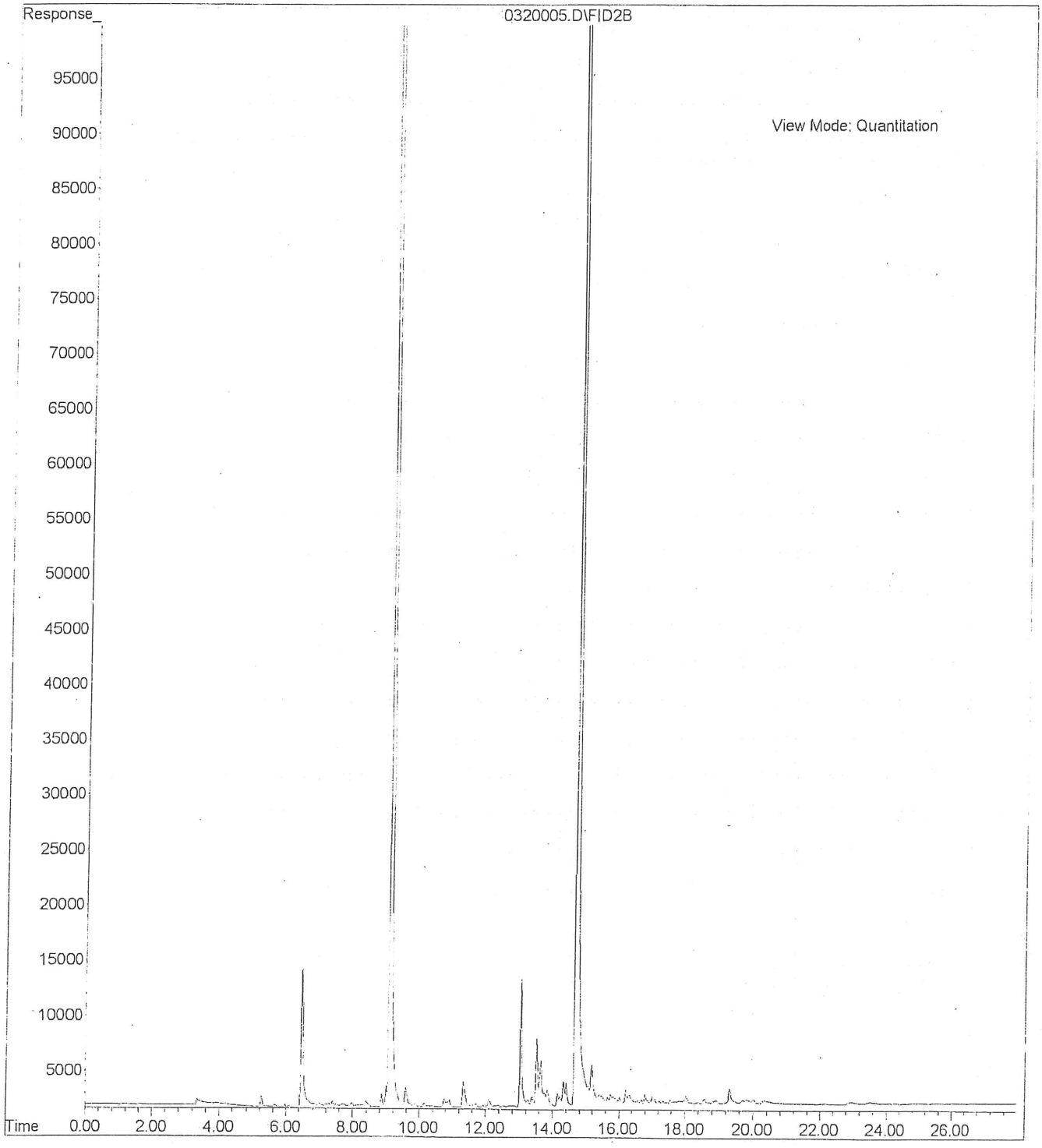
Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z -

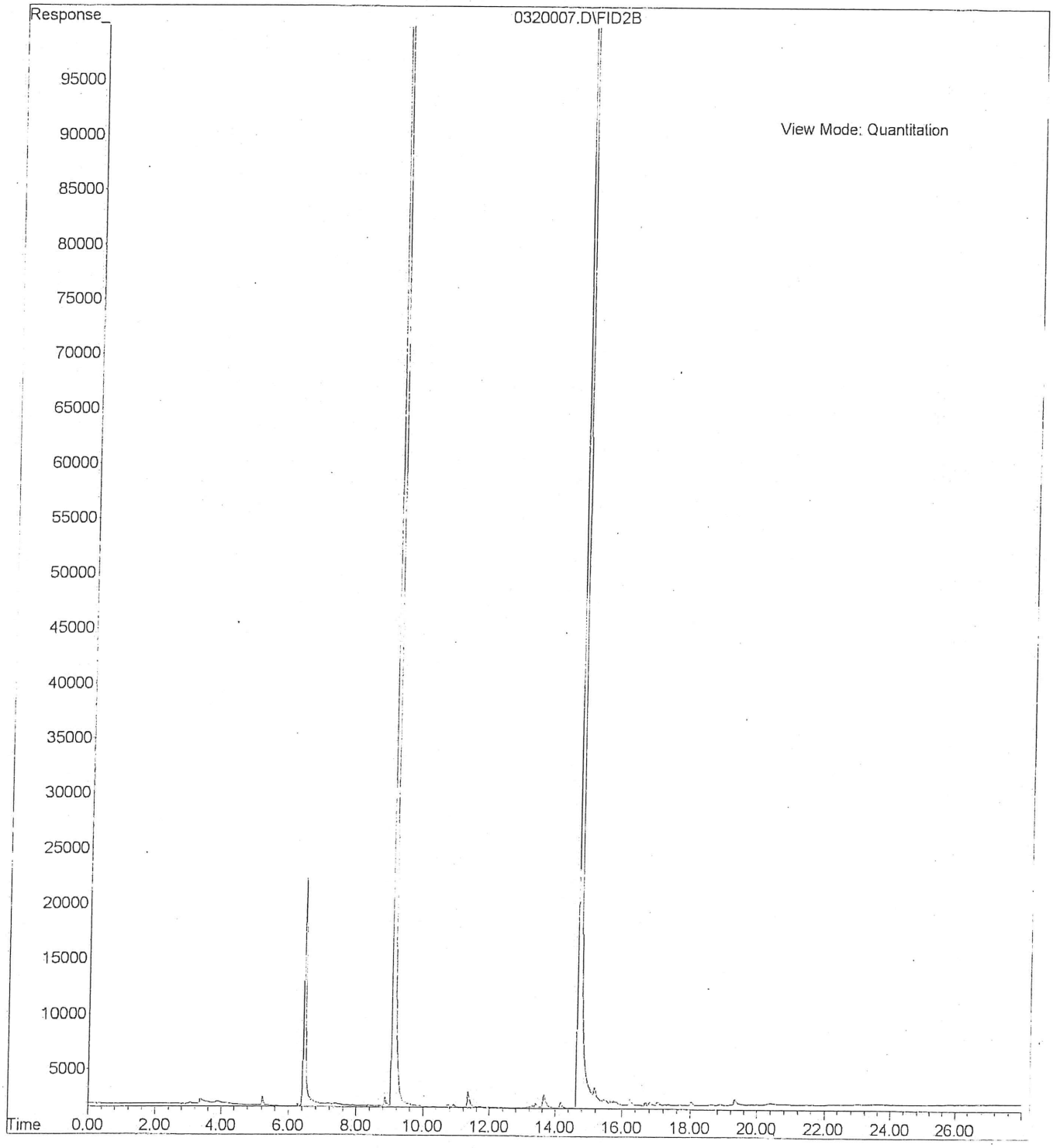
ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

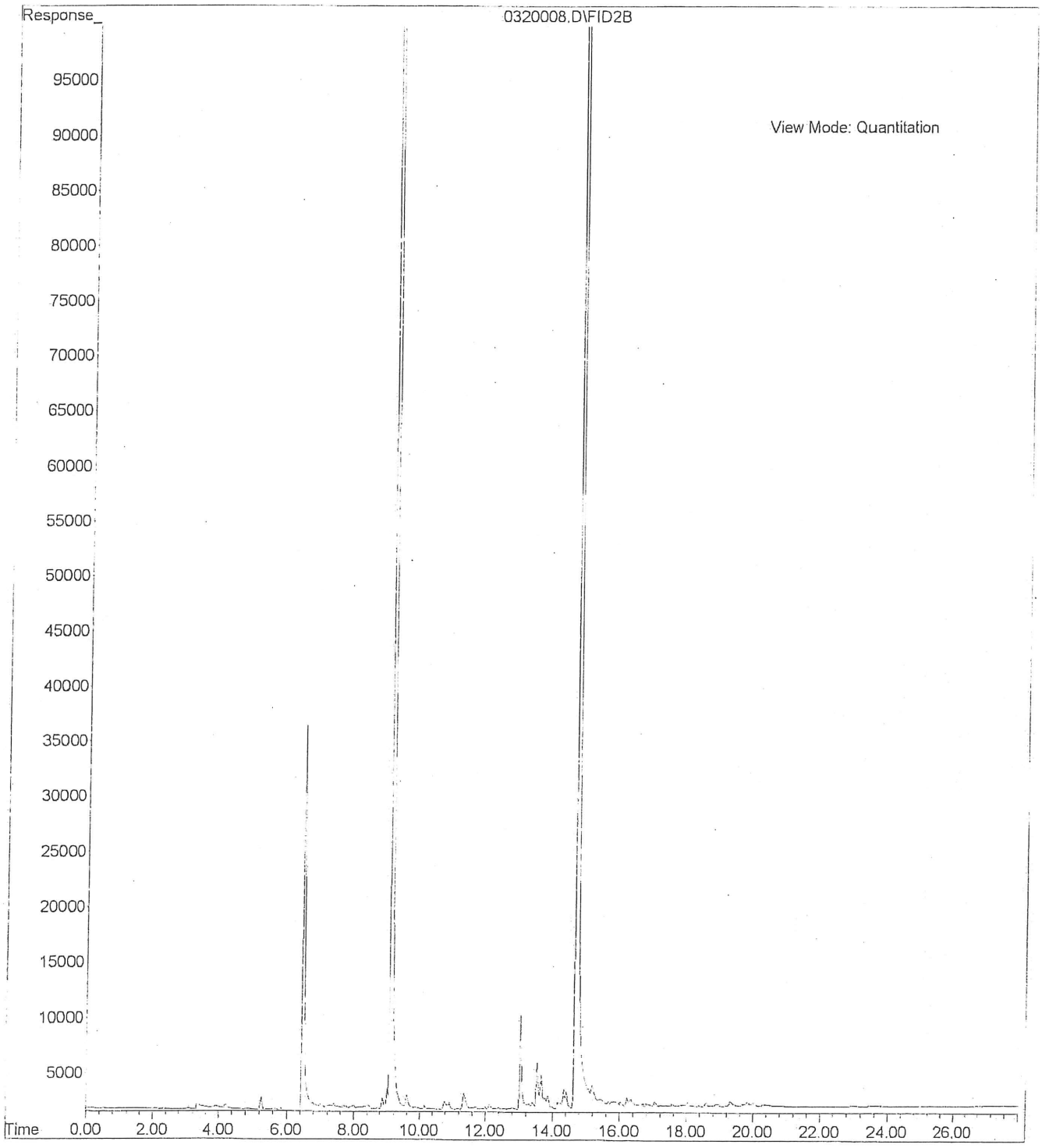
File : X:\BTEX\HOPE\DATA\H120320\0320005.D
Operator :
Acquired : 20 Mar 2012 13:14 using AcqMethod 120120.M
Instrument : HOPE
Sample Name: 03-130-01b
Misc Info : V2-27-25
Vial Number: 5



File : X:\BTEX\HOPE\DATA\H120320\0320007.D
Operator :
Acquired : 20 Mar 2012 14:23 using AcqMethod 120120.M
Instrument : HOPE
Sample Name: 03-130-02b
Misc Info : V2-27-25
Vial Number: 7



File : X:\BTEX\HOPE\DATA\H120320\0320008.D
Operator :
Acquired : 20 Mar 2012 14:57 using AcqMethod 120120.M
Instrument : HOPE
Sample Name: 03-130-03b
Misc Info : V2-27-25
Vial Number: 8



Chain of Custody

Page 1 of 1

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: CDM Smith
Project Number: 19897-87894
Project Name: South Dearborn
Project Manager: Lance Peterson
Sampled by: August Weed

Turnaround Request (in working days)

(Check One)

- ☐ Same Day
- ☐ 1 Day
- ☐ 2 Days
- ☐ 3 Days
- ☒ Standard (7 Days) (TPH analysis 5 Days)
- ☐ _____ (other)

Laboratory Number: 03-130

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	No. of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	Halogenated Volatiles 8260B 1,2 DCA	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081A	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664	% Moisture
1	W-1A	3/19/12	1030	W	5		X				X											
2	W-3A	3/19/12	1105	W	5		X				X											
3	MW-1	3/19/12	1035	W	5		X				X											

	Signature	Company	Date	Time
Relinquished	August Weed	CDM Smith	3/19/12	1404
Received		CDM Smith	3/19/12	1404
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

HVOC analysis for:
1,2 DCA
King Co. Contract:
E00141E

Chromatograms with final report ☒