CDM Smith

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April 29, 2014

Ms. Dawn Bascomb
New Mexico Environment Department
Petroleum Storage Tank Bureau
5500 San Antonio Drive NE
Albuquerque, NM 87109

Subject: Groundwater Monitoring Report for the Barelas Bridge Site
Located at 800 Bridge Blvd SE Albuquerque, New Mexico
CDM Smith Project No. 5000-98968.BB
NMED Facility No. 29854
Release ID No.54
Deliverable No. 3722-2
State Lead Contract No. 11-667-3000-0009

Dear Ms. Bascomb,

CDM Constructors Inc. (CDM Smith) is pleased to present this summary report to the New Mexico Environment Department (NMED) for groundwater monitoring activities at the Barelas Bridge site located at the above-referenced address. Activities described herein were performed pursuant to terms and conditions of State Lead Contract No. 11-667-3000-0009, dated September 2, 2010 and the CDM Smith work plan proposal, dated November 18, 2013.

This report includes a site status summary with recommendations, a current groundwater elevation contour map, a groundwater contaminant concentration map, cumulative water level and groundwater chemistry tables, and a copy of the final laboratory report.

Please contact CDM Smith at (505) 243-3200 with any inquiries regarding the contents of this submittal.

Sincerely,

C. Tyler Irwin, C.P.G., CHMM
Project Manager
CDM Smith Inc.

Paul A. Karas, C.P.G., CHMM
Associate
CDM Smith Inc.

cc: File

NEW MEXICO ENVIRONMENT DEPARTMENT
BARELAS BRIDGE SITE
ALBUQUERQUE, NEW MEXICO
APRIL 2014

SITE STATUS SUMMARY AND RECOMMENDATIONS

Groundwater Monitoring

Groundwater Gauging - Site groundwater monitoring wells MW-4, MW-8, MW-9, VP-2, and VP-5 were gauged on April 9, 2014 (Figure 1). The average depth to static groundwater was 8.68 ft bgs (Table 1). The direction of groundwater migration is southeast at a calculated gradient of 0.002 foot per foot, which is generally consistent with historical gauging data.

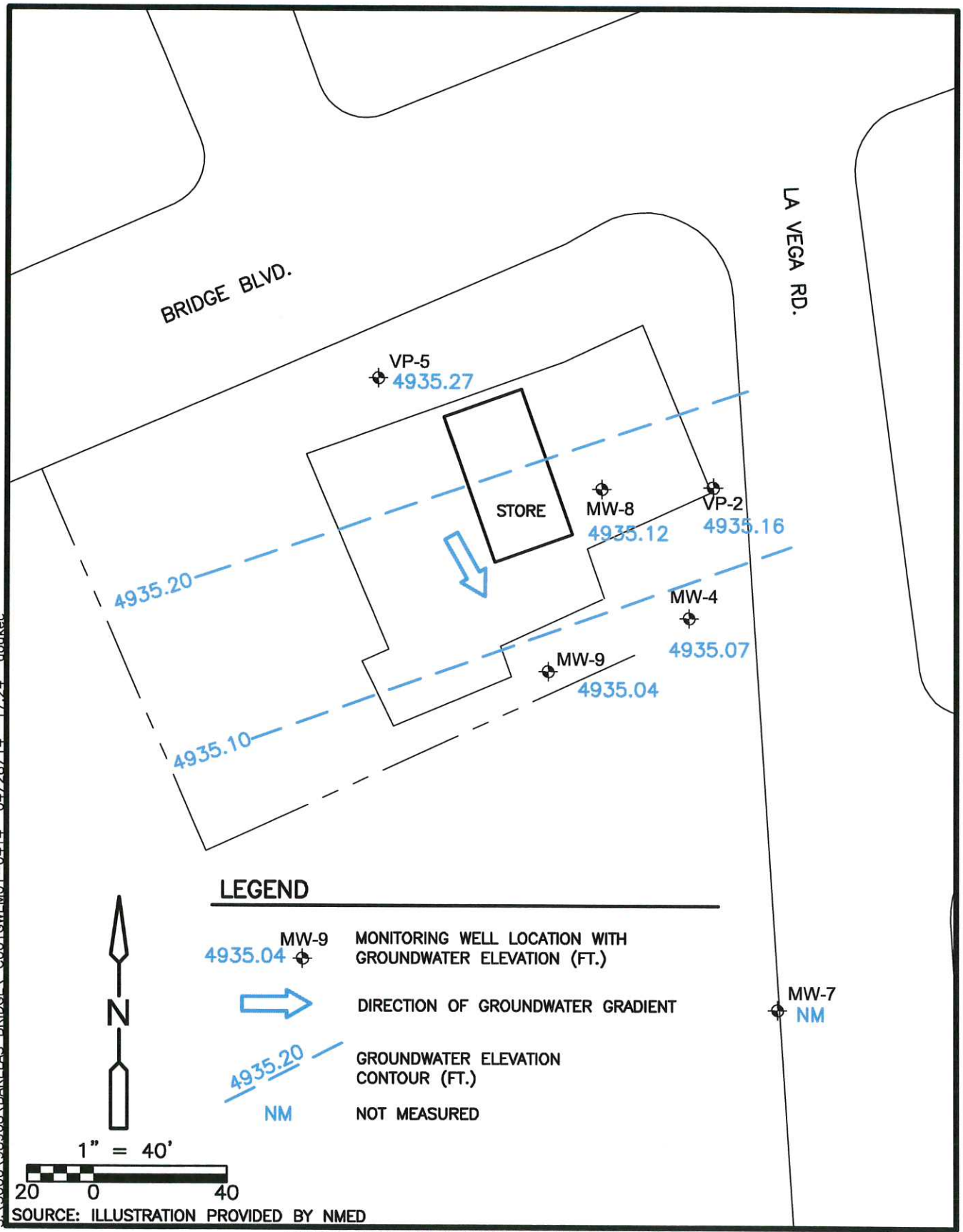
Prior to groundwater gauging, a mass of tree roots was removed from well MW-4.

Groundwater Sample Collection and analyses - Groundwater samples were collected from monitoring wells MW-4, MW-8, MW-9, VP-2, and VP-5 for analyses of benzene, toluene, ethylbenzene, total xylenes (BTEX), methyl tertiary butyl ether (MTBE), and other volatile compounds by EPA Test Method 8260 (Figure 2 and Table 2).

Benzene in groundwater of well MW-9 has decreased, but continues to exceed the applicable State standard (10 µg/L). Total naphthalenes in wells MW-8, MW-9, and VP-5 exceed the applicable State standard (30 µg/L). MTBE remains below the applicable State standard (100µg/L) in all sampled wells. The laboratory report is included as an attachment.

Recommendations

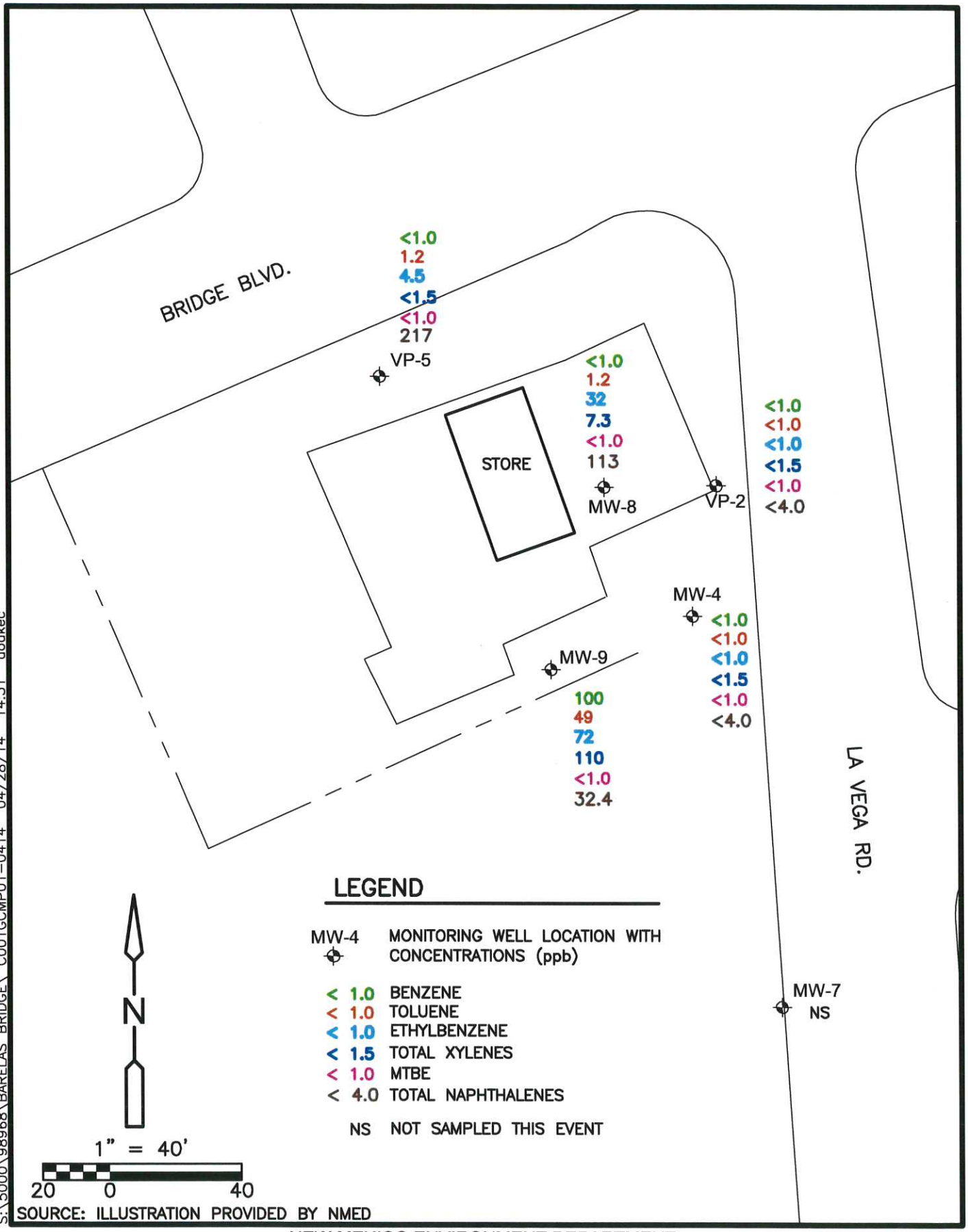
CDM Smith recommends the continuation of groundwater monitoring activities to observe improvements in groundwater quality.



CDM Smith

NEW MEXICO ENVIRONMENT DEPARTMENT
BARELAS BRIDGE SITE
800 BRIDGE BLVD. SW
ALBUQUERQUE, NEW MEXICO

Figure No. 1
Groundwater Elevation
Contour Map April 2014



SOURCE: ILLUSTRATION PROVIDED BY NMED

CDM Smith

NEW MEXICO ENVIRONMENT DEPARTMENT
BARELAS BRIDGE SITE
800 BRIDGE BLVD. SW
ALBUQUERQUE, NEW MEXICO

Figure No. 2
Groundwater Concentration Map
April 2014

NEW MEXICO ENVIRONMENT DEPARTMENT
BARELAS BRIDGE SITE
ALBUQUERQUE, NEW MEXICO
APRIL 2014

Table 1
Summary of Groundwater Elevation Data
(All data reported in feet)

Well No.	Monitoring Date	Top of Casing Elevation	Depth to Bottom	Depth to Water	Groundwater Elevation
MW-4	10/4/2006	4943.23	7.5	8.02	4935.21
	5/8/2009			7.67	4935.56
	8/13/2011			NM	NM
	4/2/2013			7.91	4935.32
	1/30/2014			8.20	4935.03
	4/9/2014			8.16	4935.07
MW-7	10/4/2006	4942.94	21.3	8.20	4934.74
	5/8/2009			7.81	4935.13
	8/13/2011			7.91	4935.03
	4/2/2013			7.99	4934.95
MW-8	10/4/2006	4944.59	12.8	9.30	4935.29
	5/8/2009			8.96	4935.63
	8/13/2011			9.12	4935.47
	4/2/2013			9.23	4935.36
	1/30/2014			9.50	4935.09
	4/9/2014			9.47	4935.12
MW-9	10/4/2006	4943.98	19.2	8.83	4935.15
	5/8/2009			8.48	4935.50
	8/13/2011			8.63	4935.35
	4/2/2013			8.71	4935.27
	1/30/2014			8.98	4935.00
	4/9/2014			8.94	4935.04
VP-2	10/4/2006	4943.73	12.5	8.43	4935.30
	5/8/2009			8.07	4935.66
	8/13/2011			7.23	4936.50
	4/2/2013			8.33	4935.40
	1/30/2014			8.61	4935.12
	4/9/2014			8.57	4935.16
VP-5	10/4/2006	4943.52	11.9	8.10	4935.42
	5/8/2009			7.78	4935.74
	8/13/2011			7.97	4935.55
	4/2/2013			8.06	4935.46
	1/30/2014			8.30	4935.22
	4/9/2014			8.25	4935.27

2006-2009 Data provided by the NMED
NM = Not measured (tree roots obstructing inner well)

NEW MEXICO ENVIRONMENT DEPARTMENT
BARELAS BRIDGE SITE
ALBUQUERQUE, NEW MEXICO
APRIL 2014

Table 2
Summary of Groundwater Chemistry Data
(Concentrations in micrograms per liter [µg/l or ppb])

Well No.	Sample Date	Benzene	Toulene	Ethylbenzene	Total Xylenes	MTBE	NAPH
MW-4	10/4/2006	<1.0	<1.0	<1.0	<3.0	<1.5	<10
	5/8/2009	<1.0	<1.0	<1.0	<1.5	<1.0	<10
	8/13/2011	<1.0	<1.0	<1.0	<1.5	<1.0	<4.0
	4/2/2013	<1.0	<1.0	<1.0	<1.5	<1.0	<4.0
	1/30/2014	<1.0	<1.0	<1.0	<1.5	<1.0	<4.0
	4/9/2014	<1.0	<1.0	<1.0	<1.5	<1.0	<4.0
MW-7	10/4/2006	<1.0	<1.0	<1.0	<3.0	<1.5	<10
	5/8/2009	<1.0	<1.0	<1.0	<1.5	<1.0	<10
	8/13/2011	<1.0	<1.0	<1.0	<1.5	<1.0	<4.0
MW-8	10/4/2006	<2.0	<2.0	34	18	<3.0	210
	5/8/2009	<1.0	<1.0	24	8.0	<1.0	92
	8/13/2011	<10	<10	32	<15	<10	72
	4/2/2013	<5.0	<5.0	31	10	<5.0	149
	1/30/2014	1.3	1.4	33	8.2	<1.0	134
	4/9/2014	<1.0	1.2	32	7.3	<1.0	113
MW-9	10/4/2006	62	44	11	42	<1.5	6.9
	5/8/2009	12	7.1	45	68	<1.0	77
	8/13/2011	750	150	270	880	12	93
	4/2/2013	320	34	<10	150	<10	<40
	1/30/2014	190	59	200	340	<2.0	67
	4/9/2014	100	49	72	110	<1.0	32.4
VP-2	10/4/2006	<1.0	<1.0	<1.0	<3.0	<1.5	<10
	5/8/2009	<1.0	<1.0	1.3	1.6	<1.0	37.3
	8/13/2011	<1.0	<1.0	2.1	2.4	<1.0	78
	4/2/2013	<2.0	<2.0	<2.0	<3.0	<2.0	34.7
	1/30/2014	<1.0	<1.0	<1.0	<1.5	<1.0	2.2
	4/9/2014	<1.0	<1.0	<1.0	<1.5	<1.0	<4.0

Table 2
Summary of Groundwater Chemistry Data
(Concentrations in micrograms per liter [µg/l or ppb])

Well No.	Sample Date	Benzene	Toulene	Ethylbenzene	Total Xylenes	MTBE	NAPH
VP-5	10/4/2006	<10	<10	21	<30	<15	430
	5/8/2009	<5.0	<5.0	7.1	<7.5	<5.0	386
	8/13/2011	1.4	1.8	12	2.4	<1.0	469
	4/2/2013	<2.0	<2.0	7.7	<3.0	<2.0	270
	1/30/2014	<1.0	1.0	3.0	<1.5	<1.0	187
	4/9/2014	<1.0	1.2	4.5	<1.5	<1.0	217
NMWQCC/NMEIB Standard		10	750	750	620	100	30

2006-2009 Data provided by the NMED

NMWQCC: New Mexico Water Quality Control Commission
NMEIB: New Mexico Environmental Improvement Board
MTBE: Methyl t-butyl ether
NAPH: Total Naphthalenes
Analysis by EPA Test Method 8260.
Shaded cells represent concentrations exceeding applicable standard for most recent event.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

April 23, 2014

C. Tyler Irwin
CDM Smith, Inc.
6000 Uptown Boulevard, NE
Suite 200
Albuquerque, NM 87110 4273
TEL: (505) 243-3200
FAX (505) 243-2700

RE: Barelas Bridge (BB) OrderNo.: 1404465

Dear C. Tyler Irwin:

Hall Environmental Analysis Laboratory received 5 sample(s) on 4/9/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CDM Smith, Inc. **Client Sample ID:** MW-4
Project: Barelas Bridge (BB) **Collection Date:** 4/9/2014 10:00:00 AM
Lab ID: 1404465-001 **Matrix:** AQUEOUS **Received Date:** 4/9/2014 2:25:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
Toluene	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
Ethylbenzene	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
Naphthalene	ND	2.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
1-Methylnaphthalene	ND	4.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
2-Methylnaphthalene	ND	4.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
Acetone	ND	10		µg/L	1	4/10/2014 10:21:23 PM	R17925
Bromobenzene	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
Bromodichloromethane	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
Bromoform	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
Bromomethane	ND	3.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
2-Butanone	ND	10		µg/L	1	4/10/2014 10:21:23 PM	R17925
Carbon disulfide	ND	10		µg/L	1	4/10/2014 10:21:23 PM	R17925
Carbon Tetrachloride	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
Chlorobenzene	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
Chloroethane	ND	2.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
Chloroform	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
Chloromethane	ND	3.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
2-Chlorotoluene	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
4-Chlorotoluene	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
cis-1,2-DCE	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
Dibromochloromethane	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
Dibromomethane	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
1,2-Dichlorobenzene	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
1,3-Dichlorobenzene	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
1,4-Dichlorobenzene	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
Dichlorodifluoromethane	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
1,1-Dichloroethane	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
1,1-Dichloroethene	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
1,2-Dichloropropane	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
1,3-Dichloropropane	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
2,2-Dichloropropane	ND	2.0		µg/L	1	4/10/2014 10:21:23 PM	R17925

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- O RSD is greater than RSDlimit
- P Sample pH greater than 2.
- R RPD outside accepted recovery limits
- RL Reporting Detection Limit
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CDM Smith, Inc. **Client Sample ID:** MW-4
Project: Barelas Bridge (BB) **Collection Date:** 4/9/2014 10:00:00 AM
Lab ID: 1404465-001 **Matrix:** AQUEOUS **Received Date:** 4/9/2014 2:25:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,1-Dichloropropene	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
Hexachlorobutadiene	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
2-Hexanone	ND	10		µg/L	1	4/10/2014 10:21:23 PM	R17925
Isopropylbenzene	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
4-Isopropyltoluene	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
4-Methyl-2-pentanone	ND	10		µg/L	1	4/10/2014 10:21:23 PM	R17925
Methylene Chloride	ND	3.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
n-Butylbenzene	ND	3.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
n-Propylbenzene	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
sec-Butylbenzene	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
Styrene	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
tert-Butylbenzene	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
trans-1,2-DCE	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
Trichlorofluoromethane	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
Vinyl chloride	ND	1.0		µg/L	1	4/10/2014 10:21:23 PM	R17925
Xylenes, Total	ND	1.5		µg/L	1	4/10/2014 10:21:23 PM	R17925
Surr: 1,2-Dichloroethane-d4	110	70-130		%REC	1	4/10/2014 10:21:23 PM	R17925
Surr: 4-Bromofluorobenzene	102	70-130		%REC	1	4/10/2014 10:21:23 PM	R17925
Surr: Dibromofluoromethane	111	70-130		%REC	1	4/10/2014 10:21:23 PM	R17925
Surr: Toluene-d8	99.8	70-130		%REC	1	4/10/2014 10:21:23 PM	R17925

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CDM Smith, Inc. **Client Sample ID:** MW-8
Project: Barelas Bridge (BB) **Collection Date:** 4/9/2014 12:00:00 PM
Lab ID: 1404465-002 **Matrix:** AQUEOUS **Received Date:** 4/9/2014 2:25:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
Toluene	1.2	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
Ethylbenzene	32	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
Naphthalene	53	2.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
1-Methylnaphthalene	22	4.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
2-Methylnaphthalene	38	4.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
Acetone	ND	10		µg/L	1	4/10/2014 10:50:06 PM	R17925
Bromobenzene	ND	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
Bromodichloromethane	ND	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
Bromoform	ND	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
Bromomethane	ND	3.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
2-Butanone	ND	10		µg/L	1	4/10/2014 10:50:06 PM	R17925
Carbon disulfide	ND	10		µg/L	1	4/10/2014 10:50:06 PM	R17925
Carbon Tetrachloride	ND	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
Chlorobenzene	ND	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
Chloroethane	ND	2.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
Chloroform	ND	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
Chloromethane	ND	3.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
2-Chlorotoluene	ND	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
4-Chlorotoluene	ND	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
cis-1,2-DCE	ND	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
Dibromochloromethane	ND	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
Dibromomethane	ND	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
1,2-Dichlorobenzene	ND	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
1,3-Dichlorobenzene	ND	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
1,4-Dichlorobenzene	ND	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
Dichlorodifluoromethane	ND	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
1,1-Dichloroethane	ND	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
1,1-Dichloroethene	ND	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
1,2-Dichloropropane	ND	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
1,3-Dichloropropane	ND	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
2,2-Dichloropropane	ND	2.0		µg/L	1	4/10/2014 10:50:06 PM	R17925

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CDM Smith, Inc. **Client Sample ID:** MW-8
Project: Barelas Bridge (BB) **Collection Date:** 4/9/2014 12:00:00 PM
Lab ID: 1404465-002 **Matrix:** AQUEOUS **Received Date:** 4/9/2014 2:25:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,1-Dichloropropene	ND	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
Hexachlorobutadiene	ND	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
2-Hexanone	ND	10		µg/L	1	4/10/2014 10:50:06 PM	R17925
Isopropylbenzene	17	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
4-Isopropyltoluene	1.2	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
4-Methyl-2-pentanone	ND	10		µg/L	1	4/10/2014 10:50:06 PM	R17925
Methylene Chloride	ND	3.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
n-Butylbenzene	6.7	3.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
n-Propylbenzene	34	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
sec-Butylbenzene	4.2	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
Styrene	ND	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
tert-Butylbenzene	ND	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
trans-1,2-DCE	ND	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
Trichlorofluoromethane	ND	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
Vinyl chloride	ND	1.0		µg/L	1	4/10/2014 10:50:06 PM	R17925
Xylenes, Total	7.3	1.5		µg/L	1	4/10/2014 10:50:06 PM	R17925
Surr: 1,2-Dichloroethane-d4	91.2	70-130		%REC	1	4/10/2014 10:50:06 PM	R17925
Surr: 4-Bromofluorobenzene	91.9	70-130		%REC	1	4/10/2014 10:50:06 PM	R17925
Surr: Dibromofluoromethane	92.9	70-130		%REC	1	4/10/2014 10:50:06 PM	R17925
Surr: Toluene-d8	95.7	70-130		%REC	1	4/10/2014 10:50:06 PM	R17925

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CDM Smith, Inc. **Client Sample ID:** MW-9
Project: Barelas Bridge (BB) **Collection Date:** 4/9/2014 10:35:00 AM
Lab ID: 1404465-003 **Matrix:** AQUEOUS **Received Date:** 4/9/2014 2:25:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Benzene	100	10		µg/L	10	4/11/2014 11:45:27 AM	R17949
Toluene	49	1.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
Ethylbenzene	72	1.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
1,2,4-Trimethylbenzene	28	1.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
1,3,5-Trimethylbenzene	10	1.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
Naphthalene	15	2.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
1-Methylnaphthalene	9.9	4.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
2-Methylnaphthalene	7.5	4.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
Acetone	12	10		µg/L	1	4/11/2014 12:45:01 AM	R17925
Bromobenzene	ND	1.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
Bromodichloromethane	ND	1.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
Bromoform	ND	1.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
Bromomethane	ND	3.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
2-Butanone	ND	10		µg/L	1	4/11/2014 12:45:01 AM	R17925
Carbon disulfide	ND	10		µg/L	1	4/11/2014 12:45:01 AM	R17925
Carbon Tetrachloride	ND	1.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
Chlorobenzene	ND	1.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
Chloroethane	ND	2.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
Chloroform	ND	1.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
Chloromethane	ND	3.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
2-Chlorotoluene	ND	1.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
4-Chlorotoluene	ND	1.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
cis-1,2-DCE	ND	1.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
Dibromochloromethane	ND	1.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
Dibromomethane	ND	1.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
1,2-Dichlorobenzene	ND	1.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
1,3-Dichlorobenzene	ND	1.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
1,4-Dichlorobenzene	ND	1.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
Dichlorodifluoromethane	ND	1.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
1,1-Dichloroethane	ND	1.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
1,1-Dichloroethene	ND	1.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
1,2-Dichloropropane	ND	1.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
1,3-Dichloropropane	ND	1.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
2,2-Dichloropropane	ND	2.0		µg/L	1	4/11/2014 12:45:01 AM	R17925

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CDM Smith, Inc. **Client Sample ID:** MW-9
Project: Barelas Bridge (BB) **Collection Date:** 4/9/2014 10:35:00 AM
Lab ID: 1404465-003 **Matrix:** AQUEOUS **Received Date:** 4/9/2014 2:25:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,1-Dichloropropene	ND	1.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
Hexachlorobutadiene	ND	1.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
2-Hexanone	ND	10		µg/L	1	4/11/2014 12:45:01 AM	R17925
Isopropylbenzene	13	1.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
4-Isopropyltoluene	ND	1.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
4-Methyl-2-pentanone	ND	10		µg/L	1	4/11/2014 12:45:01 AM	R17925
Methylene Chloride	ND	3.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
n-Butylbenzene	3.4	3.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
n-Propylbenzene	32	1.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
sec-Butylbenzene	6.4	1.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
Styrene	ND	1.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
tert-Butylbenzene	ND	1.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
trans-1,2-DCE	ND	1.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
Trichlorofluoromethane	ND	1.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
Vinyl chloride	ND	1.0		µg/L	1	4/11/2014 12:45:01 AM	R17925
Xylenes, Total	110	1.5		µg/L	1	4/11/2014 12:45:01 AM	R17925
Surr: 1,2-Dichloroethane-d4	99.9	70-130		%REC	1	4/11/2014 12:45:01 AM	R17925
Surr: 4-Bromofluorobenzene	91.8	70-130		%REC	1	4/11/2014 12:45:01 AM	R17925
Surr: Dibromofluoromethane	101	70-130		%REC	1	4/11/2014 12:45:01 AM	R17925
Surr: Toluene-d8	101	70-130		%REC	1	4/11/2014 12:45:01 AM	R17925

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CDM Smith, Inc. **Client Sample ID:** VP-2
Project: Barelas Bridge (BB) **Collection Date:** 4/9/2014 12:40:00 PM
Lab ID: 1404465-004 **Matrix:** AQUEOUS **Received Date:** 4/9/2014 2:25:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
Toluene	ND	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
Ethylbenzene	ND	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
Naphthalene	ND	2.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
1-Methylnaphthalene	ND	4.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
2-Methylnaphthalene	ND	4.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
Acetone	ND	10		µg/L	1	4/11/2014 1:42:33 AM	R17925
Bromobenzene	ND	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
Bromodichloromethane	ND	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
Bromoform	ND	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
Bromomethane	ND	3.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
2-Butanone	ND	10		µg/L	1	4/11/2014 1:42:33 AM	R17925
Carbon disulfide	ND	10		µg/L	1	4/11/2014 1:42:33 AM	R17925
Carbon Tetrachloride	ND	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
Chlorobenzene	ND	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
Chloroethane	ND	2.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
Chloroform	ND	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
Chloromethane	ND	3.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
2-Chlorotoluene	ND	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
4-Chlorotoluene	ND	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
cis-1,2-DCE	ND	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
Dibromochloromethane	ND	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
Dibromomethane	ND	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
1,2-Dichlorobenzene	ND	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
1,3-Dichlorobenzene	ND	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
1,4-Dichlorobenzene	ND	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
Dichlorodifluoromethane	ND	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
1,1-Dichloroethane	ND	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
1,1-Dichloroethene	ND	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
1,2-Dichloropropane	ND	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
1,3-Dichloropropane	ND	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
2,2-Dichloropropane	ND	2.0		µg/L	1	4/11/2014 1:42:33 AM	R17925

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CDM Smith, Inc. **Client Sample ID:** VP-2
Project: Barelas Bridge (BB) **Collection Date:** 4/9/2014 12:40:00 PM
Lab ID: 1404465-004 **Matrix:** AQUEOUS **Received Date:** 4/9/2014 2:25:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,1-Dichloropropene	ND	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
Hexachlorobutadiene	ND	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
2-Hexanone	ND	10		µg/L	1	4/11/2014 1:42:33 AM	R17925
Isopropylbenzene	2.3	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
4-Isopropyltoluene	ND	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
4-Methyl-2-pentanone	ND	10		µg/L	1	4/11/2014 1:42:33 AM	R17925
Methylene Chloride	ND	3.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
n-Butylbenzene	ND	3.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
n-Propylbenzene	1.6	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
sec-Butylbenzene	ND	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
Styrene	ND	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
tert-Butylbenzene	ND	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
trans-1,2-DCE	ND	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
Trichlorofluoromethane	ND	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
Vinyl chloride	ND	1.0		µg/L	1	4/11/2014 1:42:33 AM	R17925
Xylenes, Total	ND	1.5		µg/L	1	4/11/2014 1:42:33 AM	R17925
Surr: 1,2-Dichloroethane-d4	103	70-130		%REC	1	4/11/2014 1:42:33 AM	R17925
Surr: 4-Bromofluorobenzene	99.0	70-130		%REC	1	4/11/2014 1:42:33 AM	R17925
Surr: Dibromofluoromethane	105	70-130		%REC	1	4/11/2014 1:42:33 AM	R17925
Surr: Toluene-d8	102	70-130		%REC	1	4/11/2014 1:42:33 AM	R17925

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CDM Smith, Inc. **Client Sample ID:** VP-5
Project: Barelas Bridge (BB) **Collection Date:** 4/9/2014 11:15:00 AM
Lab ID: 1404465-005 **Matrix:** AQUEOUS **Received Date:** 4/9/2014 2:25:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
Toluene	1.2	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
Ethylbenzene	4.5	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
1,3,5-Trimethylbenzene	1.0	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
Naphthalene	21	2.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
1-Methylnaphthalene	66	4.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
2-Methylnaphthalene	130	40		µg/L	10	4/11/2014 12:14:11 PM	R17949
Acetone	ND	10		µg/L	1	4/11/2014 2:11:21 AM	R17925
Bromobenzene	ND	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
Bromodichloromethane	ND	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
Bromoform	ND	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
Bromomethane	ND	3.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
2-Butanone	ND	10		µg/L	1	4/11/2014 2:11:21 AM	R17925
Carbon disulfide	ND	10		µg/L	1	4/11/2014 2:11:21 AM	R17925
Carbon Tetrachloride	ND	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
Chlorobenzene	ND	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
Chloroethane	ND	2.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
Chloroform	ND	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
Chloromethane	ND	3.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
2-Chlorotoluene	ND	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
4-Chlorotoluene	ND	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
cis-1,2-DCE	ND	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
Dibromochloromethane	ND	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
Dibromomethane	ND	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
1,2-Dichlorobenzene	ND	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
1,3-Dichlorobenzene	ND	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
1,4-Dichlorobenzene	ND	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
Dichlorodifluoromethane	ND	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
1,1-Dichloroethane	ND	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
1,1-Dichloroethene	ND	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
1,2-Dichloropropane	ND	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
1,3-Dichloropropane	ND	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
2,2-Dichloropropane	ND	2.0		µg/L	1	4/11/2014 2:11:21 AM	R17925

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: CDM Smith, Inc. **Client Sample ID:** VP-5
Project: Barelas Bridge (BB) **Collection Date:** 4/9/2014 11:15:00 AM
Lab ID: 1404465-005 **Matrix:** AQUEOUS **Received Date:** 4/9/2014 2:25:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
1,1-Dichloropropene	ND	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
Hexachlorobutadiene	ND	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
2-Hexanone	ND	10		µg/L	1	4/11/2014 2:11:21 AM	R17925
Isopropylbenzene	33	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
4-Isopropyltoluene	1.8	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
4-Methyl-2-pentanone	ND	10		µg/L	1	4/11/2014 2:11:21 AM	R17925
Methylene Chloride	ND	3.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
n-Butylbenzene	11	3.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
n-Propylbenzene	77	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
sec-Butylbenzene	5.2	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
Styrene	ND	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
tert-Butylbenzene	ND	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
trans-1,2-DCE	ND	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
1,1,1-Trichloroethane	ND	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
1,1,2-Trichloroethane	ND	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
Trichloroethene (TCE)	ND	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
Trichlorofluoromethane	ND	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
1,2,3-Trichloropropane	ND	2.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
Vinyl chloride	ND	1.0		µg/L	1	4/11/2014 2:11:21 AM	R17925
Xylenes, Total	ND	1.5		µg/L	1	4/11/2014 2:11:21 AM	R17925
Surr: 1,2-Dichloroethane-d4	95.6	70-130		%REC	1	4/11/2014 2:11:21 AM	R17925
Surr: 4-Bromofluorobenzene	80.4	70-130		%REC	1	4/11/2014 2:11:21 AM	R17925
Surr: Dibromofluoromethane	91.2	70-130		%REC	1	4/11/2014 2:11:21 AM	R17925
Surr: Toluene-d8	96.7	70-130		%REC	1	4/11/2014 2:11:21 AM	R17925

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1404465**

23-Apr-14

Client: CDM Smith, Inc.

Project: Barelas Bridge (BB)

Sample ID **5mL-rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R17925**	RunNo: **17925**
Prep Date:	Analysis Date: **4/10/2014**	SeqNo: **517164** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1404465**

23-Apr-14

Client: CDM Smith, Inc.

Project: Barelas Bridge (BB)

Sample ID **5mL-rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R17925**	RunNo: **17925**
Prep Date:	Analysis Date: **4/10/2014**	SeqNo: **517164** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		107	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		110	70	130			
Surr: Dibromofluoromethane	11		10.00		109	70	130			
Surr: Toluene-d8	9.9		10.00		99.5	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R17925**	RunNo: **17925**
Prep Date:	Analysis Date: **4/10/2014**	SeqNo: **517558** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	105	70	130			
Toluene	18	1.0	20.00	0	89.6	80	120			
Chlorobenzene	18	1.0	20.00	0	92.0	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1404465**

23-Apr-14

Client: CDM Smith, Inc.

Project: Barelas Bridge (BB)

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**

Client ID: **LCSW** Batch ID: **R17925** RunNo: **17925**

Prep Date: Analysis Date: **4/10/2014** SeqNo: **517558** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	22	1.0	20.00	0	111	90	143			
Trichloroethene (TCE)	19	1.0	20.00	0	96.2	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		105	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		111	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	9.8		10.00		97.5	70	130			

Sample ID **5ml-rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**

Client ID: **PBW** Batch ID: **R17949** RunNo: **17949**

Prep Date: Analysis Date: **4/11/2014** SeqNo: **517888** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
2-Methylnaphthalene	ND	4.0								
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		108	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	9.9		10.00		98.5	70	130			

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**

Client ID: **LCSW** Batch ID: **R17949** RunNo: **17949**

Prep Date: Analysis Date: **4/11/2014** SeqNo: **517891** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	107	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		109	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	11		10.00		108	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: CDM Smith | Work Order Number: 1404465 | RcptNo: 1

Received by/date: _____

Logged By: Anne Thorne 4/9/2014 2:25:00 PM Anne Thorne

Completed By: Anne Thorne 4/10/2014 Anne Thorne

Reviewed By: 04/10/14

Chain of Custody

1. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
2. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
3. How was the sample delivered?	Client		

Log In

4. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
6. Sample(s) in proper container(s)?	Yes ☑	No ☐	
7. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
8. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
9. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
10. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
11. Were any sample containers received broken?	Yes ☐	No ☑	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
13. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
14. Is it clear what analyses were requested?	Yes ☑	No ☐	
15. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Not Present			

Chain-of-Custody Record

Client: COM SMITH

Mailing Address: 6000 UPTOWN BLVD NE
ABQ NM 87110

Phone #: 243-3260

email or Fax#: 243-2705

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush _____

Project Name: BARELAS BRIDGE (BB)

Project #: BARELAS BRIDGE (BB)

Project Manager: CT IRWIN

Sampler: CT IRWIN

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1404465	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)
4/9/14	1000	H_2O	MW - 4	3x40mL	HCL	-001										X		
4/9/14	1200		MW - 8			-002										X		
4/9/14	1035		MW - 9			-003										X		
4/9/14	1240		VP - 2			-004										X		
4/9/14	1115		VP - 5			-005										X		

Date	Time	Relinquished by	Received by	Date	Time
4/9/14	1425	C. Tyler Jamison			
				04/09/14	1425
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.