ARC™
Document Solutions

Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502-6577

Re: ARC Document Solutions (Formerly City Blue Print)
RWQCB Case#01-0210
1700 Jefferson St
Oakland CA, 94612

ARC has directed Applied Water Resources Corporation (AWR) to provide, on our behalf, professional environmental consulting services to the best of their ability. To the best of my knowledge, the information in this report is accurate and all local Agency and/or Regional Water Quality Control Board regulations and guidelines have been followed.

This report was prepared by AWR and ARC has relied on their advice and assistance. I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

Sincerely,

Matt Westbrock - Asst. Corp. Controller
Authorized Representative

Attachment: Report

June 30, 2017

Mr. Mark Detterman
Alameda County Department of Environmental Health-LOP
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

RE: Courtyard Sample Results - Transmittal of Data
1700 Jefferson Street, Oakland, California
RWQCB Case# 01-0210

Dear Mr. Detterman:

This letter transmits the laboratory analytical reports and boring logs resulting from the implementation of the *Work Plan Addendum, 1700 Jefferson Street, Oakland, California* (AWR, February 24, 2017), which addends the previously approved *Conceptual Site Model and Work Plan* (ERS, January 2013) and Work Plan Addendum (AWR, December 2015). Based on the information provided herein, by July 6, 2017 we will submit a Work Plan to further investigate risks to indoor air quality within the apartment building at 581 18th Street, Oakland, CA.

Summary of the Scope Of Work Generating the Data Presented Herein

The *Work Plan Addendum, 1700 Jefferson Street, Oakland, California* (AWR, February 24, 2017) describes the scope of work that was implemented in March 2017. The purpose of the recent Work Plan Addendum was to investigate the environmental conditions underlying the courtyard at 581 18th Street, Oakland, California.

In summary, borings were advanced at six locations to collect soil vapor and ground water. The following samples were collected:

WP Addendum Location	Sample ID	Grab Sample or Well Sample	Media Sampled	
			Ground Water	Soil Vapor
D1	SV15	Well		X
	MW-7	Well	X	
D2	SS2	Well		X
	SV16	Well		X
	D2	grab	X	
D3	SS3	Well		X
	SV17	Well		X
	D3	grab	X	X
D4	SS4	Well		X
	MW-8	Well	X	
D5	D5	grab		X
	MW-9	Well	X	
D6	SV18	Well		X
	MW-10	Well	X	

Tables 1, 2, and 3 summarize the analytical data. Figures 1 through 4 post concentrations of TPHg and benzene at the sampling locations within the courtyard. Appendix A contains the monitor well logs. Appendix B contains the field sampling data sheets. Appendix C contains the laboratory analytical reports.

The following briefly summarizes the field effort, which was performed under the supervision of a California licensed professional geologist. All drilling was performed by a licensed drilling contractor using a handheld solid flighted auger kit with a roto-hammer drill. A comprehensive technical report that interprets the data transmitted herein will be prepared and submitted following the completion of additional investigations.

Soil Observations

Due to site access constraints, manually operated solid stem augering was utilized to advance the boreholes. This equipment precludes the collection of good quality representative soil samples for laboratory analysis. However, observations of the soil cuttings during drilling revealed no obvious contamination in the vadose zone.

Sub-Slab Soil Vapor Samples

Sub slab soil vapor samples (SS2, SS3, SS4) were collected from three VaporPin™ devices installed within a 5/8-inch diameter hole drilled through the concrete slab using a rotary hammer drill. The sub-slab soil vapor sample was analyzed for VOCs by EPA Method TO-15 and naphthalene by EPA TO-17. These sub-slab points are secured in place for future sampling events.

We note that finer grained geologic materials separate the sub-slab from the underlying sandy water-bearing and capillary fringe zone. These finer grained materials likely attenuates the upward migration of vapors from the ground water, which would explain the relatively lower concentrations of chemicals measured in the sub slab vapor samples in comparison with the concentrations measured in soil vapor samples collected from the capillary fringe.

Capillary Fringe Soil Vapor Samples

Soil vapor samples were collected from just above the capillary fringe from one temporary location (D5) and four soil vapor wells (SV15 to SV18). All samples were collected from a small screen attached to ¼" tubing within sand pack installed within a 2" boring. The vapor point depth for each well or grab sample is shown on Table 2. Soil vapor samples were collected after 48 hours with summa canisters within a helium shroud in accordance with DTSC's Soil Gas Advisory (July 2015). Soil vapor was analyzed for VOCs by EPA Method TO-15, naphthalene by EPA TO-17, and for fixed gases by ASTM D1946 and results are presented in Tables 2 and 3 and Figures 3 and 4.

Upon completion of all sampling, the temporary soil vapor point at D5 was removed in accordance with Alameda County requirements and the remaining four soil vapor wells were sealed and secured within a traffic-rated monitoring well box to allow for the collection of additional samples in the future.

Ground Water

Four monitor wells (MW-7 to MW-10) were installed in the courtyard. Each ¾" diameter well was installed within a 2" diameter boring and consists a 5 foot long pre-packed screen surrounded by #2/12 Monterey

sand filter pack, with blank PVC to ground surface, 6 to 12 inches hydrated bentonite seal on top of the sand filter pack, and neat cement grout added to ground surface. The wells are secured with a permanent well box and were fully developed prior to sampling. Two grab ground water samples (D2, D3) were collected from ¾" diameter PVC well casing temporarily installed into the open 2" diameter borehole.

All ground water samples were collected using dedicated tubing and a peristaltic pump. The ground water samples were analyzed for TPHg, BTEX, and MTBE by EPA Method 8015/8020. Analytical results are presented in Table 1 and on Figures 1 and 2.

Please call me at 510-671-2085 to discussion your questions and comments.

Regards,

Applied Water Resources

Steven Michelson, PG
Principal Geologist

Distribution List

Matthew Westbrook
ARC Document Solutions
1981 N. Broadway, Suite 385
Walnut Creek CA 94596

Attachments:
Tables
Figures
Appendix A
Appendix B
Appendix C

TABLES

Table 1
Ground Water Analytical Results
Courtyard Area, 581 18th Street, Oakland, CA

Location ID	Date Collected	Grab or Well Sample	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes, Total	MTBE
			µg/L					
Environmental Screening Levels:			220*	1.1	3,600	13	1,300	1,200
D2	03/28/2017	Grab	175,000	16,500	27,800	2,890	18,800	615
D3	03/27/2017	Grab	107,000	16,300	23,100	2,570	14,100	537
MW-7	03/31/2017	Well	89,500	11,700	15,300	1,690	9,740	349
MW-8	03/31/2017	Well	153,000	24,800	32,700	1,790	9,790	662
MW-9	03/31/2017	Well	83,500	9,200	15,000	1,550	11,100	337
MW-10	03/31/2017	Well	123,000	18,100	28,700	1,600	8,290	453

Notes:

TPHg: Total petroleum hydrocarbons as gasoline
MTBE: Methyl Tert-Butyl Ether
<: not detected above reporting limit
--: not analyzed/not applicable
*: Direct exposure for tapwater since a vapor intrusion level is not provided
µg/L: micrograms per liter

Environmental screening levels for potential risk to human health by vapor intrusion for residential properties with a sand scenario in shallow ground water (SFBay Feb 2016 Rev3)

concentration above applicable Environmental Screening Level

Concentrations above ESLs indicate that further evaluation may be needed. However, an exceedance of the ESLs does not indicate that an unacceptable risk to human health or the environmental is actually present.

Created: 5/15/2017

Table 2
Soil Vapor Analytical Results - Selected Analytes
Courtyard Samples, 581 18th Street Oakland, CA

Location ID	Approx. Sand Pack Interval (feet below courtyard)	Vapor Point Depth (feet below courtyard)	Date Collected	Grab or Well Sample	Benzene	Toluene	Ethylbenzene	M&P-Xylene	O-Xylene	Naphthalene	Helium	Oxygen	Carbon Monoxide	Carbon Dioxide	Methane
					µg/m3						%				
Environmental Screening Levels:					48	560	160,000	52,000	52,000	41	--	--	--	--	--
SS2	Subslab	Subslab	04/05/17	Well	1,030	511	3,740	2,320	641	<20	--	--	--	--	--
					155	110	961	589	138	--	--	--	--	--	--
SS3	Subslab	Subslab	04/05/17	Well	8.94	12.7	70.5	38.1	9.22	<2	--	--	--	--	--
SS4	Subslab	Subslab	04/05/17	Well	9.48	5.46	33.9	20.5	5.47	<2	<0.01	13.9	<2	<0.6	<0.4
D5	5.5 - 7.8	7.5	03/31/17	Grab	210	37	283	99.7	15.1	<2	0.663	4.69	<2	3.93	<0.4
SV15	5.5 - 8	7.25	04/05/17	Well	<5.11	16	68.4	37.1	11.2	<2	--	--	--	--	--
SV16	5 - 8.8	8.25	04/05/17	Well	995,000	322,000	2,730,000	1,170,000	371,000	170	9.1	<2	<2	9.04	<0.4
SV17	5 -9	7.5	04/03/17	Well	217,000	210,000	617,000	504,000	123,000	210	--	--	--	--	--
					279,000	277,000	713,000	651,000	162,000	--	<0.01	<2	<2	8.37	<0.4
SV18	5.7 - 7.8	7.75	04/05/17	Well	5,780	1,930	10,300	7,150	<1,730	<20	<0.01	<2	<2	3.35	<0.4

Notes:
--: not analyzed; not applicable
µg/m3: micrograms per cubic meter
Environmental Screening Levels for Vapor Instrusion: Residential Human Health Risk Levels (SFBay February 2016 Rev. 3)
concentration above applicable ESL
Concentrations above ESLs indicate that further evaluation may be needed. However, an exceedance of the ESLs does not indicate that an unacceptable risk to human health or the environmental is actually present.

Created: 5/15/2017

Table 3
Soil Vapor Analytical Results - other VOCs
Courtyard Samples, 581 18th Street Oakland, CA

Location ID	Approx. Sand Pack Interval (feet below courtyard)	Vapor Point Depth (feet below courtyard)	Date Collected	Grab or Well Sample	Acetone	Carbon Disulfide	Chloromethane	Cyclohexane	1,4-Dioxane	Ethanol	4-Ethyltoluene	Heptane	Hexane	Isopropylbenzene	2-Butanone (MEK)	2-Propanol	Propene	Tetrachloroethene	Tetrahydrofuran	Trichloroethene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	2,2,4-Trimethylpentane
					ug/m3																		
Environmental Screening Levels:					15,000,000	--	47,000	--	180	--	--	--	--	--	2,600,000	--	--	240	--	240	--	--	--
SS2	Subslab	Subslab	04/05/17	Well	951	180	<33	2,910	<57.7	932	604	2,870	8,560	<78.7	<295	<246	<55.1	<109	<47.2	<85.7	508	180	1,970
					26.6	<1.24	<0.826	96.4	<1.44	153	103	304	613	5.03	<7.37	11.1	<1.38	<2.72	18.6	<2.14	91.4	27.2	52.3
SS3	Subslab	Subslab	04/05/17	Well	275	<1.24	3.56	24.6	39.5	345	12.9	54.7	100	<1.97	26.6	71.1	3.18	8.87	13.8	2.86	12.8	4.53	7.03
SS4	Subslab	Subslab	04/05/17	Well	16.3	<1.24	0.931	33.6	<1.44	84.9	4.34	39.9	81.9	<1.97	<7.37	7.29	2.21	<2.72	9.72	<2.14	4.38	<1.96	21.6
D5	5.5 - 7.8	7.5	03/31/17	Grab	19	8.38	<0.826	3,420	<1.44	59.5	15.2	2,150	4,100	6.51	<7.37	<6.15	2.4	4.21	<1.18	<2.14	15.4	9.33	766
SV15	5.5 - 8	7.25	04/05/17	Well	<23.8	39.7	<3.3	290	<5.77	<9.5	17	856	1,830	<7.87	<29.5	<24.6	<5.51	<10.9	<4.72	<8.57	17.8	<7.85	2,480
SV16	5 - 8.8	8.25	04/05/17	Well	<5,940	<1,240	<826	3,260,000	<1,440	<2,380	202,000	2,600,000	8,920,000	17,800	<7,370	<6,150	<1,380	<2,720	<1,180	<2,140	146,000	55,900	2,320,000
SV17	5 -9	7.5	04/03/17	Well	<11,900	<2,490	<1,650	1,580,000	<2,880	<4,750	170,000	1,940,000	4,470,000	17,400	<14,700	<12,300	<2,760	<5,430	<2,360	<4,290	138,000	57,700	535,000
					<5,940	<1,240	<826	2,060,000	<1,440	<2,380	228,000	2,560,000	5,750,000	24,000	<7,370	<6,150	<1,380	<2,720	<1,180	<2,140	201,000	78,700	716,000
SV18	5.7 - 7.8	7.75	04/05/17	Well	<5,940	<1,240	<826	245,000	<1,440	<2,380	3,610	99,000	530,000	<1,970	<7,370	<6,150	<1,380	<2,720	<1,180	<2,140	3,680	<1,960	81,200

Notes:

--: not analyzed; not applicable

µg/m3: micrograms per cubic meter

Environmental Screening Levels for Vapor Instrusion: Human Health Risk Levels (SFBay February 2016 Rev. 3)

concentration above applicable ESL

Concentrations above ESLs indicate that further evaluation may be needed. However, an exceedance of the ESLs does not indicate that an unacceptable risk to human health or the environmental is actually present.

FIGURES

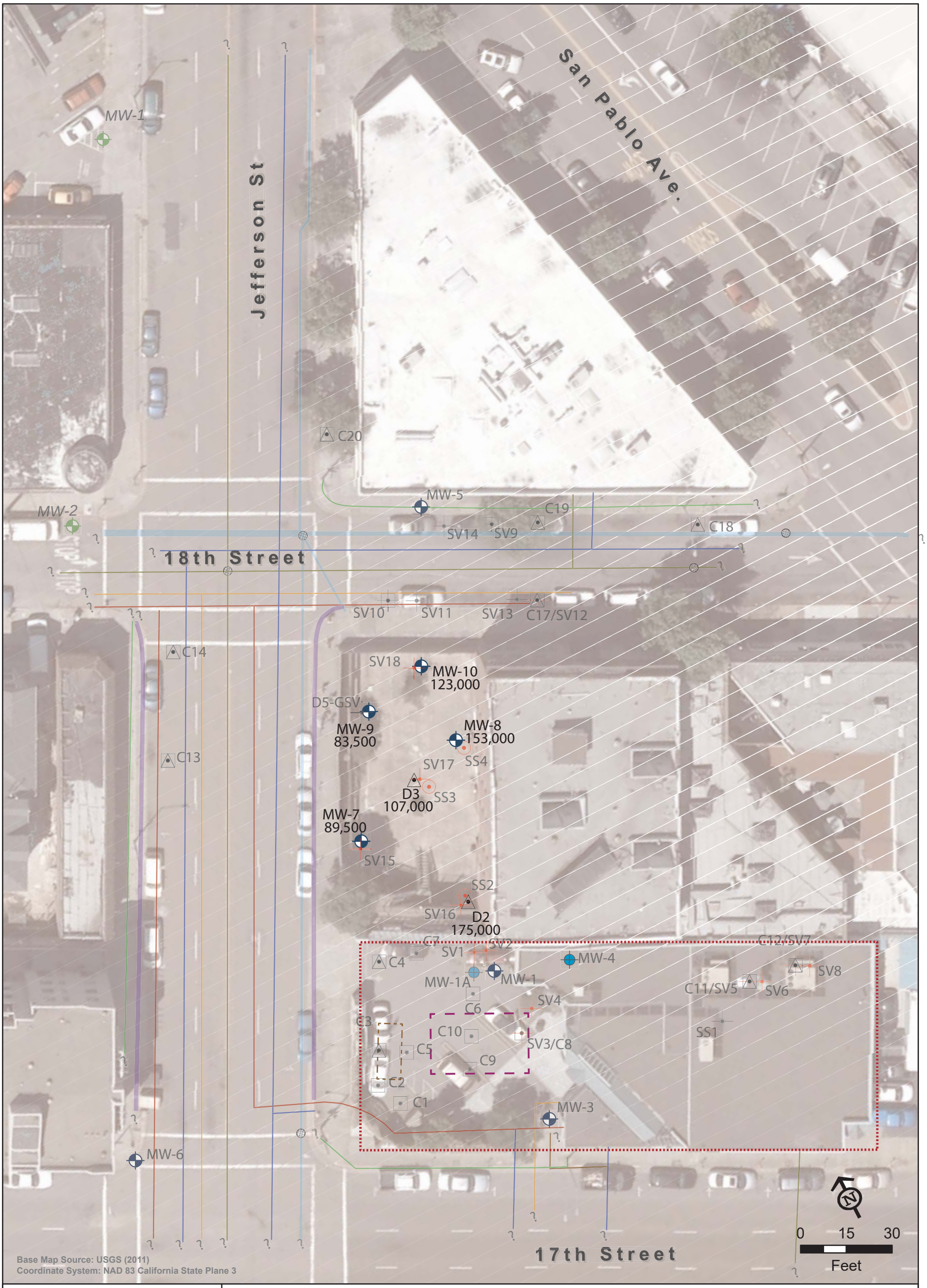


Figure 1

TPHg Concentrations in Ground Water

1700 Jefferson Street, Oakland, CA

APPLIED WATER RESOURCES

TPHg Concentration in Ground Water (µg/L)

Soil Vapor - Temporary
Soil Vapor - Permenant
Subslab Soil Vapor
Monitor Well
Monitor Well - 612 18th St
Extraction Well
Grab Groundwater
Grab Soil
Tank Removal Excavation Area (approx)
Property Boundary
Former Dispenser Island (approx)
Manhole

Utilities
Sanitary Sewer
Water
Gas
Electrical
AT&T
Street Lighting
Storm Drain
Old Storm Drain (Filled)

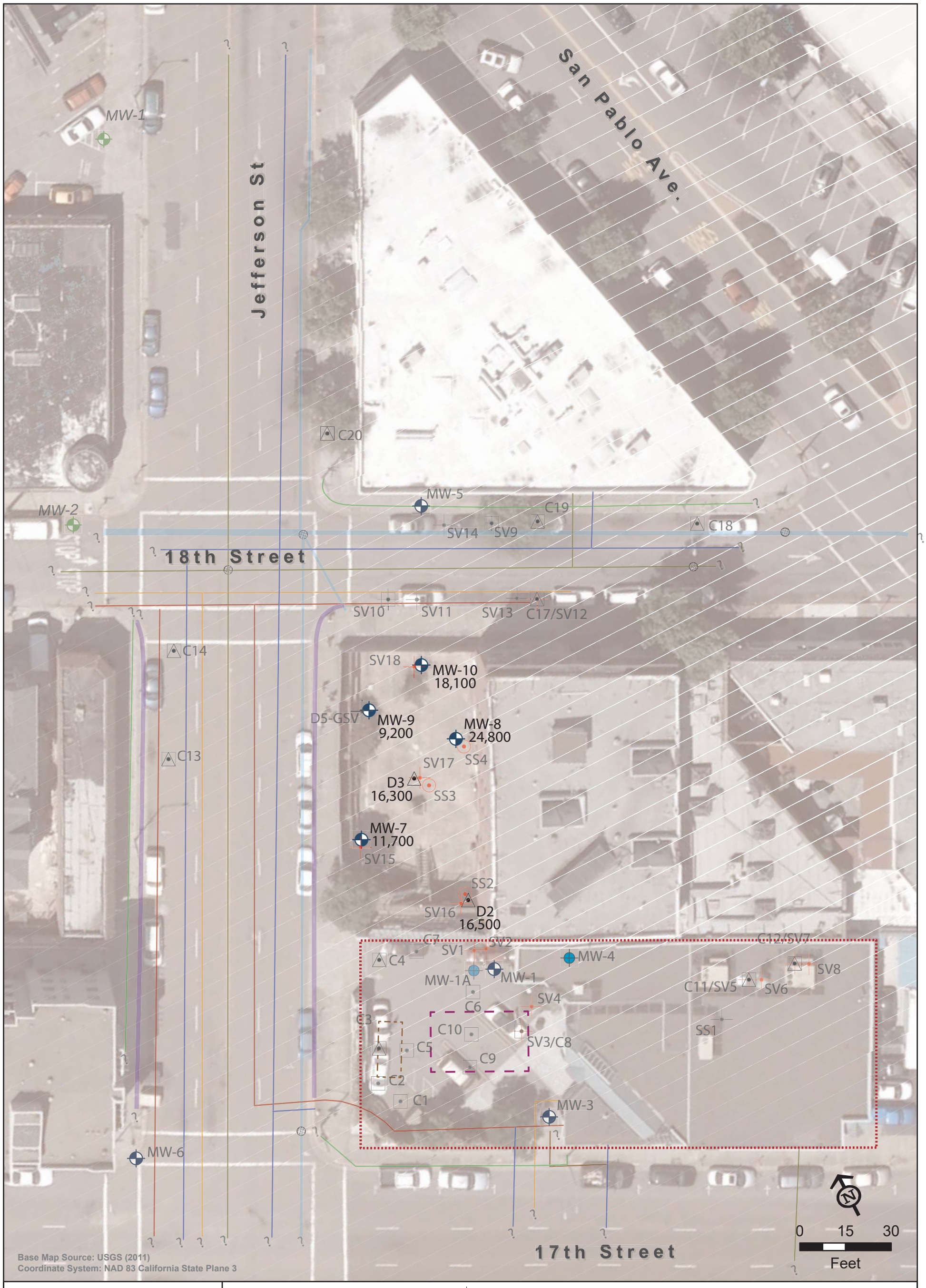


Figure 2

Benzene Concentrations in Ground Water

1700 Jefferson Street, Oakland, CA

APPLIED WATER RESOURCES

##/## Benzene Concentration in Ground Water (µg/L)

Soil Vapor - Temporary
Soil Vapor - Permenant
Subslab Soil Vapor
Monitor Well
Monitor Well - 612 18th St
Extraction Well

Grab Groundwater
Grab Soil
Tank Removal Excavation Area (approx)
Property Boundary
Former Dispenser Island (approx)
Manhole

Utilities
Sanitary Sewer
Water
Gas
Electrical
AT&T
Street Lighting
Storm Drain
Old Storm Drain (Filled)

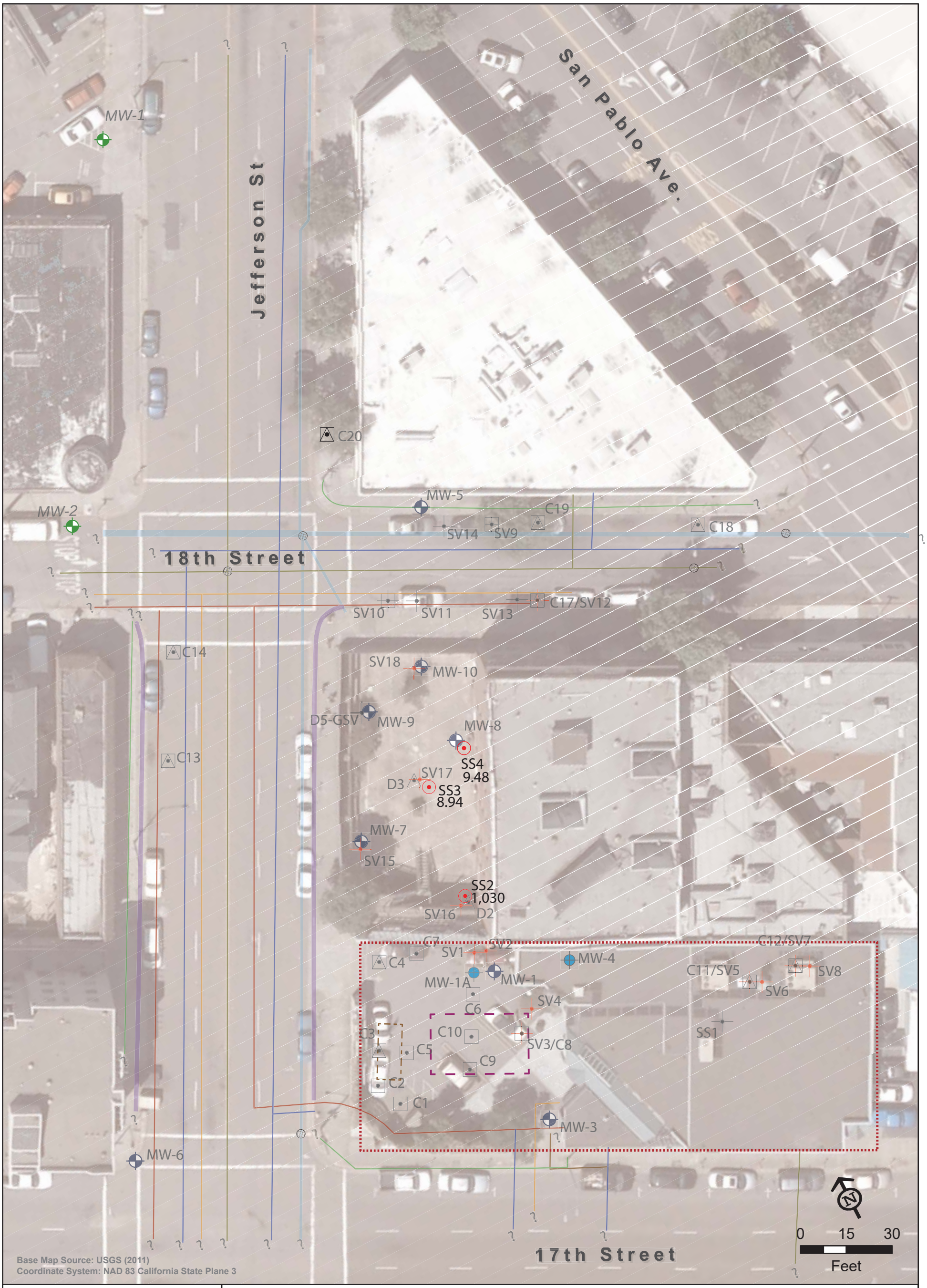


Figure 3

Benzene Concentrations in Subslab Soil Vapor

1700 Jefferson Street, Oakland, CA

APPLIED WATER RESOURCES

Benzene Concentration in Soil Vapor (µg/m³)

- Soil Vapor - Temporary
- Soil Vapor - Permenant
- Subslab Soil Vapor
- Monitor Well
- Monitor Well - 612 18th St
- Extraction Well
- Grab Groundwater
- Grab Soil
- Tank Removal Excavation Area (approx)
- Property Boundary
- Former Dispenser Island (approx)
- Manhole

Utilities

- Sanitary Sewer
- Water
- Gas
- Electrical
- AT&T
- Street Lighting
- Storm Drain
- Old Storm Drain (Filled)

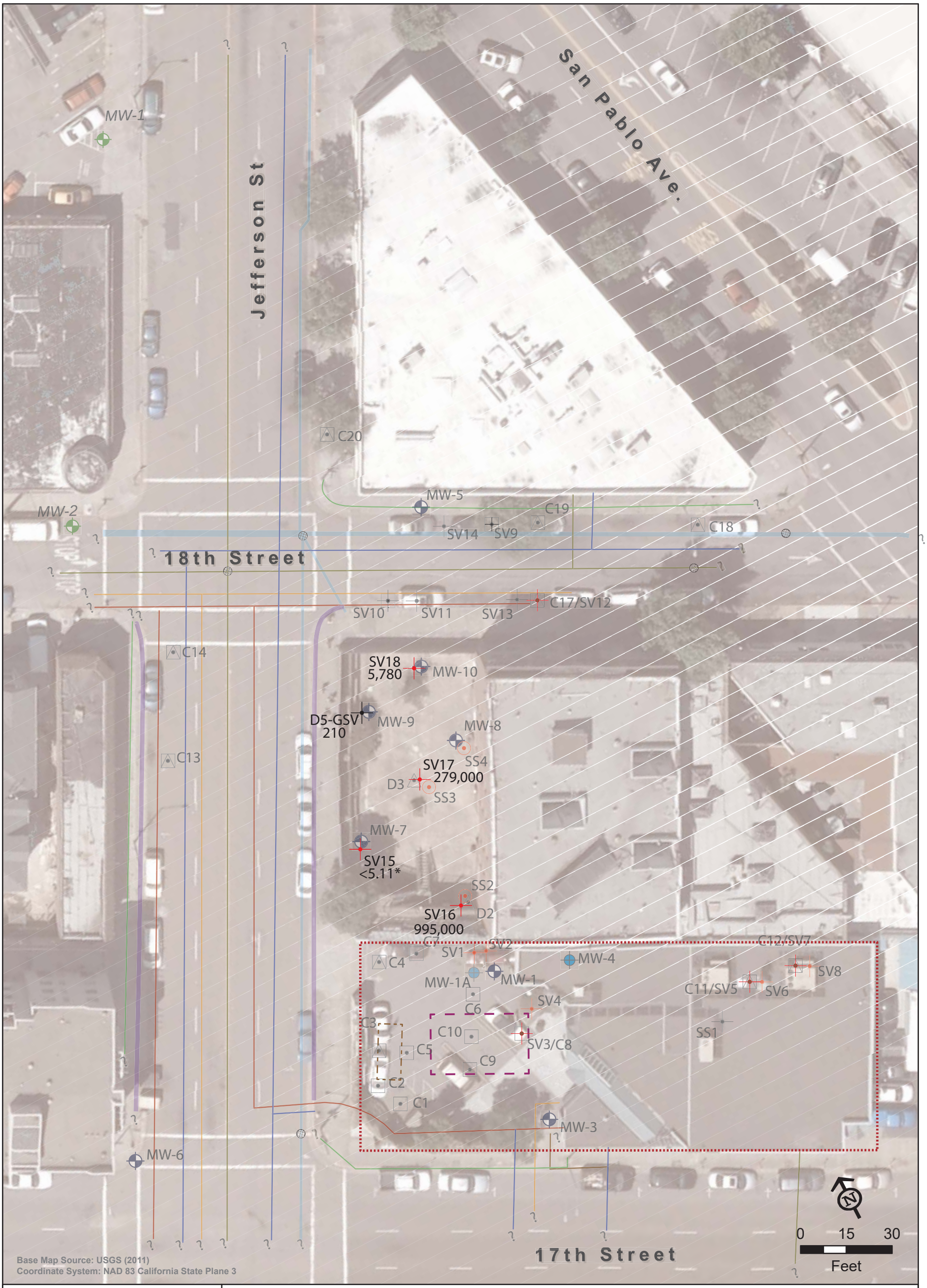


Figure 4

Benzene Concentrations in Soil Vapor within 4' of the Capillary Fringe Zone

1700 Jefferson Street, Oakland, CA

APPLIED WATER RESOURCES

##
Benzene Concentration in Soil Vapor within 4' of the Capillary Fringe Zone (µg/m³)

- Soil Vapor - Temporary
- Soil Vapor - Permenant
- Subslab Soil Vapor
- Monitor Well
- Monitor Well - 612 18th St
- Extraction Well
- Grab Groundwater
- Grab Soil
- Tank Removal Excavation Area (approx)
- Property Boundary
- Former Dispenser Island (approx)
- Manhole

Utilities

- Sanitary Sewer
- Water
- Gas
- Electrical
- AT&T
- Street Lighting
- Storm Drain
- Old Storm Drain (Filled)

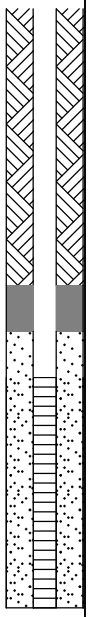
APPENDIX A
Monitor Well Logs

APPLIED WATER RESOURCES CORP.
2363 Mariner Square Drive
Suite 245
Alameda, CA 94501

Boring Log: MW-7

Date: 3/27/2017 **Logged By:** Yola Bayram	Well Specifications
Location: 1700 Jefferson Street Oakland, CA	Elevation
Client: ARC Document Solutions	**TOC:** ~13 **GSE:**
Drilling Co.: WRC	Depth to Water
Drilling Method: 2" HSA **Driller:** Beto	**Initial:** 23.38 ft. **Static:** ft.
Well Sand Filter: #2/12 **Well Seal:** Hydrated Bentonite	**Total Boring Depth:** 26 ft.
Grout Materials and Method: Neat cement/Tremie	**Lat.:** **Long:**
Completion: Well Box	**PVC Diameter:** 0.75
Groundwater Sampling Method: Peristaltic Pump	**Screen Interval:** 21-26 ft.
Soil Sampling Method: N/A	**Screen Slot Size:** 0.01

Depth, bgs (ft)	OVM (ppm)	Soil Sample	Saturated Zone	USCS	Graphic Log	Material Description	Remarks/Well Diagram
5						Sunken courtyard	
10							
						Concrete	
15	0					Silty sand (SM) yellowish-brown, moderate plasticity, fg sand, well rounded, 25-35% silt, moist	
	15			SM			
	54					Silt content decreasing with depth: 15-25%	
20						Sand with trace silt (SP-SM), gley, fg sand, rounded, 5% silt, TPH odor, moist to wet.	
	210		▽	SP-SM			
25	369						
						Total Depth: 26 ft.	

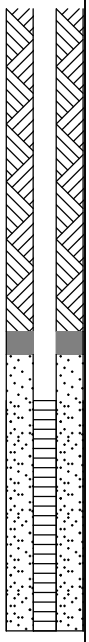


APPLIED WATER RESOURCES CORP.
2363 Mariner Square Drive
Suite 245
Alameda, CA 94501

Boring Log: MW-8

Date: 3/28/2017 **Logged By:** Yola Bayram	**Well Specifications**
Location: 1700 Jefferson Street Oakland, CA	Elevation
Client: ARC Document Solutions	**TOC:** ~13 **GSE:**
Drilling Co.: WRC	Depth to Water
Drilling Method: 2" HSA **Driller:** Beto	**Initial:** 23.37 ft. **Static:** ft.
Well Sand Filter: #2/12 **Well Seal:** Hydrated Bentonite	**Total Boring Depth:** 26.5 ft.
Grout Materials and Method: Neat cement/Tremie	**Lat.:** **Long:**
Completion: Well Box	**PVC Diameter:** 0.75
Groundwater Sampling Method: Peristaltic Pump	**Screen Interval:** 21.5-26.5 ft.
Soil Sampling Method: N/A	**Screen Slot Size:** 0.01

Depth, bgs (ft)	OVM (ppm)	Soil Sample	Saturated Zone	USCS	Graphic Log	Material Description	Remarks/Well Diagram
5						Sunken courtyard	
10							
						Concrete	
15	0					Silty sand (SM) yellowish-brown, moderate plasticity, fg sand, well rounded, 25-35% silt, moist	
	11.9			SM			
						Silt content decreasing with depth: 15-25%	
20	58						
	110					Sand with trace silt (SP-SM), gley, fg sand, rounded, 5% silt, TPH odor, moist to wet.	
			▽	SP-SM			
	239						
25							
						Total Depth: 26.5 ft.	



APPLIED WATER RESOURCES CORP.
2363 Mariner Square Drive
Suite 245
Alameda, CA 94501

Boring Log: MW-9

Date: 3/27/2017	**Logged By:** Yola Bayram
Location: 1700 Jefferson Street Oakland, CA	
Client: ARC Document Solutions	
Drilling Co.: WRC	
Drilling Method: 2" HSA	**Driller:** Beto
Well Sand Filter: #2/12	**Well Seal:** Hydrated Bentonite
Grout Materials and Method: Neat cement/Tremie	
Completion: Well Box	
Groundwater Sampling Method: Peristaltic Pump	
Soil Sampling Method: N/A	

Well Specifications

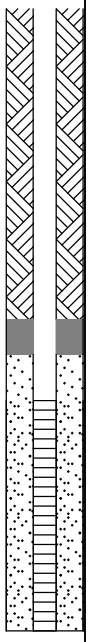
Elevation
TOC: ~13 **GSE:**

Depth to Water
Initial: 23.34 ft. **Static:** ft.

Total Boring Depth: 26.5 ft.
Lat.: **Long:**
PVC Diameter: 0.75
Screen Interval: 21.5-26.5 ft.
Screen Slot Size: 0.01

Depth, bgs (ft)	OVM (ppm)	Soil Sample	Saturated Zone	USCS	Graphic Log	Material Description
5						Sunken courtyard
10						
						Concrete
15	0			SM		Silty sand (SM) yellowish-brown, moderate plasticity, fg sand, well rounded, 25-35% silt, moist
	21.8					Silt content decreasing with depth: 15-25%
20	67					
	105		▽	SP-SM		Sand with trace silt (SP-SM), gley, fg sand, rounded, 5% silt, TPH odor, moist to wet.
	312					
25						Total Depth: 26.5 ft.

Remarks/Well Diagram

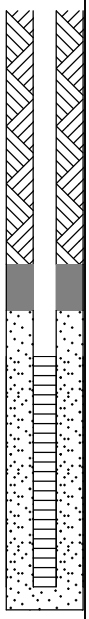


APPLIED WATER RESOURCES CORP.
2363 Mariner Square Drive
Suite 245
Alameda, CA 94501

Boring Log: MW-10

Date: 3/27/2017 **Logged By:** Yola Bayram	Well Specifications
Location: 1700 Jefferson Street Oakland, CA	Elevation
Client: ARC Document Solutions	**TOC:** ~13 **GSE:**
Drilling Co.: WRC	Depth to Water
Drilling Method: 2" HSA **Driller:** Beto	**Initial:** 22.91 ft. **Static:** ft.
Well Sand Filter: #2/12 **Well Seal:** Hydrated Bentonite	**Total Boring Depth:** 25.5 ft.
Grout Materials and Method: Neat cement/Tremie	**Lat.:** **Long:**
Completion: Well Box	**PVC Diameter:** 0.75
Groundwater Sampling Method: Peristaltic Pump	**Screen Interval:** 20.5-25.5 ft.
Soil Sampling Method: N/A	**Screen Slot Size:** 0.01

Depth, bgs (ft)	OVM (ppm)	Soil Sample	Saturated Zone	USCS	Graphic Log	Material Description	Remarks/Well Diagram
5						Sunken courtyard	
10							
						Concrete	
15	2			SM		Silty sand (SM) yellowish-brown, moderate plasticity, fg sand, well rounded, 25-35% silt, moist	
	55					Silt content decreasing with depth: 15-25%	
20	105					Sand with trace silt (SP-SM), gley, fg sand, rounded, 5% silt, TPH odor, moist to wet.	
	215		▽	SP-SM			
	415						
25						Total Depth: 25.5 ft.	



APPENDIX B
Field Sampling Sheets

Monitor Well Data Sheet

Site Name: 1700 JEFFERSON	Well/Sample ID: MW-7
Location: 591 19TH ST	Initial Depth to Water (DTW): 9.80
Client: ARC	Total Well Depth (TD): 12.93
Sampler: CTC	Well Diameter: 3/4"
Date: 3/31/17	1 Casing Volume: 0.07 GAL
Purge Method:	Purge Rate:
Sample Method:	Sampling Rate:
2" well x 1 foot = 0.6 liters	4" well x 1 foot = 2.4L

Time	pH	SC	DO	Temp	ORP	DTW	Volume	Observations
	SU	µmhoms/cm	mg/l	°C	mV	feet bgs	liters	
1438	6.70	1332	0.63	16.35	-34.5	-		
1440	6.84	1320	0.68	16.36	-44.2	-		
1442	6.84	1283	0.99	16.25	-45.9	-		
1444	6.83	1252	1.05	16.24	-46.2	-		
1446	6.82	1247	1.01	16.23	-45.0	-		

Did Well Dewater?		Start Purge Time:		DTW prior to sample:
Total Liters Purged:		Stop Purge Time:		Start Sample Time:
Total Sample Volume:		Odor:		Sheen:
Instrument ID(s):				Last Calibrated:

Notes:

Monitor Well Data Sheet

Site Name: 1700 JEFFERSON	Well/Sample ID: MW-9
Location: 581 18TH ST, OAKLAND	Initial Depth to Water (DTW): 9.48
Client: ARC	Total Well Depth (TD): 13.14
Sampler: CTC	Well Diameter: 3/4"
Date: 3/31	1 Casing Volume: 0.0838 GAL
Purge Method: PERRI	Purge Rate:
Sample Method: PERRI	Sampling Rate:
2" well x 1 foot = 0.6 liters	4" well x 1 foot = 2.4L

Time	pH	SC	DO	Temp	ORP	DTW	Volume	Observations
	SU	µmhoms/cm	mg/l	°C	mV	feet bgs	liters	
1356	6.90	1205	0.37	17.01	28.7	-		
1358	6.90	1192	0.33	17.04	26.1	-		
1400	6.90	1183	0.35	17.08	24.7	-		
1402	6.90	1180	0.34	17.13	23.9			

Did Well Dewater?		Start Purge Time:		DTW prior to sample:
Total Liters Purged:		Stop Purge Time:		Start Sample Time: 1405
Total Sample Volume:		Odor:		Sheen:
Instrument ID(s):				Last Calibrated:

Notes:

Monitor Well Data Sheet

Site Name: 1700 JEFFERSON	Well/Sample ID: MW-10
Location: 581 19TH ST	Initial Depth to Water (DTW): 9.05
Client: ARC	Total Well Depth (TD):
Sampler: CTC	Well Diameter: 3/4"
Date: 3/31/17	1 Casing Volume: 0.0778 gal
Purge Method: PERI	Purge Rate:
Sample Method: PERI	Sampling Rate:
2" well x 1 foot = 0.6 liters	4" well x 1 foot = 2.4L

Time	pH	SC	DO	Temp	ORP	DTW	Volume	Observations
	SU	µmhoms/cm	mg/l	°C	mV	feet bgs	liters	
1315	6.83	808	1.06	16.85	43.4	-		
1317	6.81	800	0.60	17.00	36.3	-		
1319	6.80	792	0.46	17.10	36.2	-		
1321	6.81	789	0.43	17.10	35.8	-		

Did Well Dewater?	NO	Start Purge Time:	1310	DTW prior to sample:
Total Liters Purged:		Stop Purge Time:	1321	Start Sample Time: 1325
Total Sample Volume:		Odor:	SLIGHT	Sheen: NO
Instrument ID(s):				Last Calibrated:

Notes:

Monitor Well Data Sheet

Site Name: 1700 Jefferson	Well/Sample ID: MW-9
Location: 581 19th St	Initial Depth to Water (DTW): 9.14
Client: ARC	Total Well Depth (TD): 12.91
Sampler: CTC	Well Diameter: 3/4"
Date: 3/31/17	1 Casing Volume: 0.1 gal
Purge Method: perri	Purge Rate:
Sample Method: perri	Sampling Rate:
2" well x 1 foot = 0.6 liters	4" well x 1 foot = 2.4L

Time	pH	SC	DO	Temp	ORP	DTW	Volume	Observations
	SU	µmhoms/cm	mg/l	°C	mV	feet bgs	liters	
~~1130~~	~~6.86~~			~~15.93~~	~~16.~~	~~-~~		
1133	6.86	856	1.53	15.92	-5.9	-		
1135	6.86	850	0.96	15.99	-12.2	-		
1137	6.86	845	0.81	16.01	-12.9	-		
1139	6.85	843	0.72	16.03	-10.9	-		
1141	6.85	838	0.68	16.04	-15.7	-		
1143	6.84	836	0.61	16.05	-13.8	-		
1145	6.83	833	0.56	16.07	-14.4	-		

Did Well Dewater?	NO	Start Purge Time:	1130	DTW prior to sample: -
Total Liters Purged:	~1 gal	Stop Purge Time:	1145	Start Sample Time: 1147
Total Sample Volume:	120mL	Odor:	YES	Sheen: NO
Instrument ID(s):				Last Calibrated:

Notes:

Sorbent Tube Field Worksheet

Project Name: 1700 Jefferson	Date 3/31/17, 4/3/17, 4/5/17
Location: 581 18th St, Oakland	Client ARC
Sampler: CTC	Weather

Sample ID	Tube ID#	Date	Time	Volume pulled	Notes
D5-GSV-1L	G0147701	3/31/17	1205	1L	
D5-GSV-100mL	G0149115	〃	1215	100mL	
SV17-1L	G0148403	4/3/17	1049	1L	
SV17-100mL	G0149985	〃	1054	100mL	
SS3-1L	G0148983	4/5/17	0925	1L	
SS3-100mL	G0149968	〃	0934	100mL	
SV18-1L	G0147726	〃	1039	1L	
SV18-100mL	G0148175	〃	1044	100mL	
SV15-1L	G0148171	〃	1148	1L	
SV15-100mL	G0149907	〃	1151	100mL	
SS4-1L	G0148140	〃	1252	1L	
SS4-100mL	G0148106	〃	1255	100mL	
		〃			

Sorbent Tube Field Worksheet

Project Name: 1700 Jefferson	Date 4/5/17
Location: 581 18th St, Oakland	Client ARC
Sampler: CTC	Weather Overcast

Sample ID	Tube ID#	Date	Time	Volume pulled	Notes
SV16-1L	G0147771	4/5/17	1435	1L	
SV16-100mL	G0147795	"	1440	100mL	
SS2-1L	G0149983	"	1545	1L	
SS2-100mL	G0148189	"	1550	100mL	

SOIL GAS FIELD WORKSHEET

Project Name: 1700 Jefferson	Date: 3/31/17 & 4/3/17 & 4/5/17
Location: 591 19th St, Oakland, CA	Client: ARC (same)
Sampler: CTC	Weather: clear/mod. windy

Sampler Signature: [signature]

		Sample ID							
		DS-05V (3/31)		SV17 (4/3/17)		SV17-DUP (4/3/17)		SS3 (4/5/17)	
Sample Info	Train ID#	7036		6017		6017		6097	
	Sample Can ID#	~~1478/05241~~ 5240/1478		7351/1935		6541/1939		5503/1068	
	Borehole Case Volume	0.4275 L		0.57 L		0.57 L		~~0.095 L~~ 0.095 L	
Shut In Test	Vacuum Start ("Hg)	-25	Time 0946	-26	Time 0932	—	Time —	-25	Time ~~0850~~ HH2 0850
	Vacuum Finish ("Hg)	-25	Time 0951	-26	Time 0937	—	Time —	-25	Time ~~0855~~ HH7 0855
Sample Purge	Purge Can Vacuum Start ("Hg)	-30	Time 1009	-23	Time 0941	—	Time —	—	Time —
	Purge Can Vacuum Finish ("Hg)	~~0~~ -24	Time 1018	-16	Time 0950	—	Time —	—	Time —
	Downhole Vacuum Pressure ("Hg)*	0		0		0		0	
	Purge Rate (ml/min)	~120		~155		—		purged w/ hand pump	
	Purge Volume (liters)	1.2 L / ~6.5"		~1.4 L		—			
Helium Measurements	Downhole Measurements	He: 0.00 O2:	Time 1000	He: 0.00 O2:	Time 0939	He: O2: —	Time —	He: 0.00 O2:	Time 0908
	Helium Shroud Measurements % Helium	23.2	Time 1159	~~20.0~~ 22.8	Time ~~0950~~ 0938	20.1	Time 1004	21.4	Time 0908
		25.0	Time ~~10~~ 1005	20.6	Time 0950	21.3	Time 1006	20.1	Time 0915
		20.1	Time 1019	18.9	Time 0959	20.2	Time 1013	21.2	Time 0917
Sample Collection	Vacuum Start ("Hg)	-30	Time 1018	-22	Time 0950	-30	Time 1004	-17	Time 0912
	Vacuum Finish ("Hg)	-04	Time 1023	-04	Time 0959	-04	Time 1013	-03	Time 0918
	Sample Rate (ml/min)	0						0	

* normal rate

Notes: for SV17, can 7351 started w/ low vacuum pressure & filled more quickly than previous sample cans, so an additional sample was collected.

*If downhole vacuum pressure > 7.35"Hg, open and close valve on sample can during sampling so that soil vacuum pressure remains below 7.35"Hg

Casing Volume of 2" Sandpack or Dry Bentonite (L/foot)	0.19	Tube volume 1/4" (liters per foot)	0.004

SAMPLE CANS: # / # + paper tag

SOIL GAS FIELD WORKSHEET

ame: 1700 Jefferson	Date: 4/5/17
n: 581 18TH ST OAKLAND	Client: ARC
er: CTC	Weather: ~~CLEAR~~ OVERCAST

pler Signature: Cheryl Carey

		Sample ID							
		SV18		SV15		SS4		SV16	
Sample Info	Train ID#	6406		~~6273/931~~ 6036		7037		6037	
	Sample Can ID#	6273/931		6103/554		5486/2011		7339/176	
	Borehole Case Volume	0.412L		0.475 L		.095L		0.57 L	
Shut In Test	Vacuum Start ("Hg)	-24	Time 0957	-21	Time 1112	-24	Time 1220	-26	Time 1357
	Vacuum Finish ("Hg)	-24	Time 1003	-21	Time 1117	-24	Time 1226	-26	Time 1402
Sample Purge	Purge Can Vacuum Start ("Hg)	-16	Time 1019	-10	Time 1120	—	Time —	-6	Time 1406
	Purge Can Vacuum Finish ("Hg)	-11	Time 1029	-6	Time 1130	—	Time —	-1	Time 1421
	Downhole Vacuum Pressure ("Hg)*	0		0		0		0	
	Purge Rate (ml/min)	~100		~100		PURGED WITH		~60	
	Purge Volume (liters)	~1L		~1L		HAND PUMP		~1L	
Helium Measurements	Downhole Measurements	Hole He: 0.0 O2: Bag: 23.1	Time 1015	Hole He: 0.0 O2: Bag He 25.0	Time 1125	Hole He: 0 O2: Bag He 19.6	Time 1239	Hole He: 0 O2: Bag He 20.1	Time 1409
	Helium Shroud Measurements % Helium	21.0	Time 1027	20.6	Time 1139	17.5	Time 1245	21.8	Time 1421
		21.9	Time 1030	20.6	Time 1134	20.0	Time 1248	20.4	Time 1426
		18.7	Time 1032	22.6	Time 1136	17.6	Time 1250	21.6	Time 1428
Sample Collection	Vacuum Start ("Hg)	-30	Time 1027	-29	Time 1131	-30	Time 1245	-30	Time 1421
	Vacuum Finish ("Hg)	~~-3~~ -03	Time 1032	-03	Time 1136	-4	Time 1250	-3	Time 1428
	Sample Rate (ml/min)								

Notes: can ID #: Green tag / paper tag

low speed on He analyzer: 0.6L/min.

*If downhole vacuum pressure > 7.35"Hg, open and close valve on sample can during sampling so that soil vacuum pressure remains below 7.35"Hg

Casing Volume of 2" Sandpack or Dry Bentonite (L/foot)	0.19	Tube volume 1/4" (liters per foot)	0.004

SOIL GAS FIELD WORKSHEET

Project Name: 1700 Jefferson	Date: 4/5/17
Location: 591 19th St Oakland, CA	Client: ARC
Sampler: CTC	Weather: overcast

		Sampler Signature:	Sample ID							
			SS 2		SS2-DUP					
Sample Info	Train ID#		0401		← same					
	Sample Can ID#		6524 / 792		6554/1865					
	Borehole Case Volume		.095L							
Shut In Test	Vacuum Start ("Hg)		-24	Time 1503	—	Time —		Time		Time
	Vacuum Finish ("Hg)		-24	Time 1508	—	Time —		Time		Time
Sample Purge	Purge Can Vacuum Start ("Hg)		—	Time —	—	Time —		Time		Time
	Purge Can Vacuum Finish ("Hg)		—	Time	—	Time —		Time		Time
	Downhole Vacuum Pressure ("Hg)*		0 PURGE		0					
	Purge Rate (ml/min)		By Hand		—					
	Purge Volume (liters)		—		—					
Helium Measurements	Downhole Measurements		He: 0 ~~O2~~ He: 21.1	Time 1510	He: 0 O2: 22.3	Time 1527	He: O2:	Time	He: O2:	Time
	Helium Shroud Measurements % Helium		5 bag 25.1	Time 1512	26.2	Time 1530		Time		Time
			26.3	Time 1515	26.0	Time 1532		Time		Time
			27.1	Time 1517	25.0	Time 1535		Time		Time
Sample Collection	Vacuum Start ("Hg)		-16	Time 1512	-30	Time 1530		Time		Time
	Vacuum Finish ("Hg)		-03	Time 1517	-3	Time 1535		Time		Time
	Sample Rate (ml/min)									

Notes:

*If downhole vacuum pressure > 7.35"Hg, open and close valve on sample can during sampling so that soil vacuum pressure remains below 7.35"Hg

Casing Volume of 2" Sandpack or Dry Bentonite (L/foot)	0.19	Tube volume 1/4" (liters per foot)	0.004

Well Development Sheet

Date:	Project No.	Site:	Location:	Initials:
3/31/17		1700 JEFFERSON	581 18th St, OAKLAND	CC

Purge Method:	Purge Rate (gpm):	Purge Starting Time:	Purge Ending Time:	Type of Surge Block:
PERRI				

Well ID	Diameter (in)	Initial Depth to Bottom (ft)	Final Depth to Bottom (ft)	Initial Depth to Water	Casing Volume (gal)	Purged Volume (gal)	Initial Turbidity/ color	Final Turbidity/ color	Swabbed (y/n):
MW 9	+3/4"	12.91	12.91	9.07	0.1014	~1.5	tan	clear/ light tan	Y
MW 10	3/4"	12.40	12.40	9.00	0.0779	~1	tan	clear	Y
MW 8	3/4"	13.14	13.14	9.49	0.0939	~1.5	~~dark~~ tan	clear	Y
MW 7	3/4"	12.93	12.93	9.44	0.0799	~1	dark grey	clear	Y

Casing Volume = Static Water Column x Conversion Factor

~~~5 GA~~

Conversion Factor: ¾" well = 0.0229 gal/ft, 2-in well = 0.163 gal/ft, 4-in well = 0.653 gal/ft,
6-in well = 1.469 gal/ft

Total purged volume from all wells (gals): ~5 GAL

Notes: All wells are 3/4" with 5ft. screen
~~~

APPENDIX C
Laboratory Analytical Reports

McCampbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1704298 **Amended:** 04/17/2017

Report Created for: Applied Water Resources

2363 Mariner Square Drive, Ste. 245
Alameda, CA 94501

Project Contact: Yola Bayram
Project P.O.:
Project Name: 1700 Jefferson

Project Received: 04/07/2017

Analytical Report reviewed & approved for release on 04/14/2017 by:

Angela Rydelius,
Laboratory Manager

The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.

1534 Willow Pass Rd. Pittsburg, CA 94565 ♦ TEL: (877) 252-9262 ♦ FAX: (925) 252-9269 ♦ www.mccampbell.com
CA ELAP 1644 ♦ NELAP 4033ORELAP

McCampbell Analytical, Inc.
"When Quality Counts"
1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Glossary of Terms & Qualifier Definitions

Client: Applied Water Resources
Project: 1700 Jefferson
WorkOrder: 1704298

Glossary Abbreviation

%D	Serial Dilution Percent Difference
95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test (Serial Dilution)
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
ST	Sorbent Tube
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)

Analytical Qualifiers

S	surrogate spike recovery outside accepted recovery limits
j1	see attached narrative

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Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
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Case Narrative

Client: Applied Water Resources
Project: 1700 Jefferson

Work Order: 1704298
April 17, 2017

4/11/17 TO-17 VOC Analysis GC-37

1704298-004A (SV17-100mL)
1704298-008A (SV18-100mL)
1704298-011A (SS4-1L)
1704298-014A (SV16-100mL)
1704298-016A (SS2-100mL)

TO17 method requires an internal calibration in order to normalize mass spec fluctuations. Due to high organic content interfering with the internal standard peaks, results were quantified using an external calibration. All calibration verification and QC standards were processed using the same external calibration and were passing the methods recovery criteria.

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1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client:	Applied Water Resources	**WorkOrder:**	1704298
Date Received:	4/7/17 14:50	**Extraction Method:**	TO17
Date Prepared:	4/11/17-4/13/17	**Analytical Method:**	TO17
Project:	1700 Jefferson	**Unit:**	µg/m³

Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
D5-GSV-1L	1704298-001A	Air	03/31/2017 12:05	GC37	137316

Analytes	Result	RL	DF	Sample Volume	Date Analyzed
Naphthalene	ND	2.0	1	1 L	04/13/2017 14:59

Surrogates	REC (%)	Limits	
4-BFB	101	70-130	04/13/2017 14:59

Analyst(s): KBO

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SV17-100mL	1704298-004A	Air	04/03/2017 10:54	GC37	137195

Analytes	Result	RL	DF	Date Analyzed
Naphthalene	**210**	20	10	04/11/2017 18:08

Surrogates	REC (%)	Limits	
4-BFB	105	70-130	04/11/2017 18:08

Analyst(s): GM

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SS3-1L	1704298-005A	Air	04/05/2017 09:25	GC37	137316

Analytes	Result	RL	DF	Sample Volume	Date Analyzed
Naphthalene	ND	2.0	1	1 L	04/13/2017 16:34

Surrogates	REC (%)	Limits	
4-BFB	103	70-130	04/13/2017 16:34

Analyst(s): KBO

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SV18-100mL	1704298-008A	Air	04/05/2017 10:44	GC37	137195

Analytes	Result	RL	DF	Date Analyzed
Naphthalene	ND	20	10	04/11/2017 21:16

Surrogates	REC (%)	Limits	
4-BFB	83	70-130	04/11/2017 21:16

Analyst(s): GM

(Cont.)

Angela Rydelius, Lab Manager

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1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
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Analytical Report

Client: Applied Water Resources
Date Received: 4/7/17 14:50
Date Prepared: 4/11/17-4/13/17
Project: 1700 Jefferson

WorkOrder: 1704298
Extraction Method: TO17
Analytical Method: TO17
Unit: µg/m³

Volatile Organic Compounds in µg/m³

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SV15-1L	1704298-009A	Air	04/05/2017 11:48	GC37	137316

Analytes	Result	RL	DF	Sample Volume	Date Analyzed
Naphthalene	ND	2.0	1	1 L	04/13/2017 18:08

Surrogates	REC (%)	Limits	
4-BFB	115	70-130	04/13/2017 18:08

Analyst(s): KBO

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SS4-1L	1704298-011A	Air	04/05/2017 12:52	GC37	137195

Analytes	Result	RL	DF	Sample Volume	Date Analyzed
Naphthalene	ND	2.0	1	1 L	04/12/2017 05:00

Surrogates	REC (%)	Limits	
4-BFB	71	70-130	04/12/2017 05:00

Analyst(s): KBO

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SV16-100mL	1704298-014A	Air	04/05/2017 14:40	GC37	137195

Analytes	Result	RL	DF	Date Analyzed
Naphthalene	**170**	20	10	04/12/2017 01:53

Surrogates	REC (%)	Qualifiers	Limits	
4-BFB	60	S	70-130	04/12/2017 01:53

Analyst(s): GM

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SS2-100mL	1704298-016A	Air	04/05/2017 15:50	GC37	137195

Analytes	Result	RL	DF	Date Analyzed
Naphthalene	ND	20	10	04/12/2017 03:26

Surrogates	REC (%)	Qualifiers	Limits	
4-BFB	59	S	70-130	04/12/2017 03:26

Analyst(s): GM

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
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1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Quality Control Report

Client:	Applied Water Resources	**WorkOrder:**	1704298
Date Prepared:	4/11/17	**BatchID:**	137195
Date Analyzed:	4/11/17	**Extraction Method:**	TO17
Instrument:	GC37	**Analytical Method:**	TO17
Matrix:	Sorbent Tube	**Unit:**	µg/m³
Project:	1700 Jefferson	**Sample ID:**	MB/LCS-137195

QC Summary Report for TO17

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Naphthalene	ND	54.6	2.0	50	-	109	60-140
Surrogate Recovery							
1,2-DCA-d4	92.58	99.9		100	93	100	70-130

(Cont.)

QA/QC Officer

McCampbell Analytical, Inc.
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1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Quality Control Report

Client:	Applied Water Resources	**WorkOrder:**	1704298
Date Prepared:	4/13/17	**BatchID:**	137316
Date Analyzed:	4/13/17	**Extraction Method:**	TO17
Instrument:	GC37	**Analytical Method:**	TO17
Matrix:	Sorbent Tube	**Unit:**	µg/m³
Project:	1700 Jefferson	**Sample ID:**	MB/LCS-137316

QC Summary Report for TO17

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Naphthalene	ND	48.9	2.0	50	-	98	60-140
Surrogate Recovery							
1,2-DCA-d4	99.41	108		100	99	109	70-130

QA/QC Officer

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1704298 **ClientCode: AWR**

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Report to:
Yola Bayram
Applied Water Resources
2363 Mariner Square Drive, Ste. 245
Alameda, CA 94501
FAX:
Email: ybayram@awrcorp.net
cc/3rd Party: ccary@awrcorp.net;
PO:
ProjectNo: 1700 Jefferson

Bill to:
Candace Curtis
Applied Water Resources
2363 Mariner Square Drive, Ste. 245
Alameda, CA 24501
ccurtis@awrcorp.net

Requested TAT: 5 days;
Date Received: **04/07/2017**
Date Logged: **04/07/2017**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1704298-001	D5-GSV-1L	Air	3/31/2017 12:05	☐	A	A										
1704298-003	SV17-1L	Air	4/3/2017 10:49	☑		A										
1704298-004	SV17-100mL	Air	4/3/2017 10:54	☐		A										
1704298-005	SS3-1L	Air	4/5/2017 09:25	☐		A										
1704298-007	SV18-1L	Air	4/5/2017 10:39	☑		A										
1704298-008	SV18-100mL	Air	4/5/2017 10:44	☐		A										
1704298-009	SV15-1L	Air	4/5/2017 11:48	☐		A										
1704298-011	SS4-1L	Air	4/5/2017 12:52	☐		A										
1704298-013	SV16-1L	Air	4/5/2017 14:35	☑		A										
1704298-014	SV16-100mL	Air	4/5/2017 14:40	☐		A										
1704298-015	SS2-1L	Air	4/5/2017 15:45	☑		A										
1704298-016	SS2-100mL	Air	4/5/2017 15:50	☐		A										

Test Legend:

1	PREDF REPORT	2	TO17VOC_ST(UGM3)	3		4	
5		6		7		8	
9		10		11		12	

Prepared by: Maria Venegas

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.

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1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

WORK ORDER SUMMARY

Client Name: APPLIED WATER RESOURCES **Project:** 1700 Jefferson **Work Order:** 1704298
Client Contact: Yola Bayram **QC Level:** LEVEL 2
Contact's Email: ybayram@awrcorp.net **Comments:** **Date Logged:** 4/7/2017

☐ WaterTrax ☐ WriteOn ☑ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1704298-001A	D5-GSV-1L	Air	TO17 (VOCs) (µg/m³) <Naphthalene>	1	Sorbent Tube	☐	3/31/2017 12:05	5 days		☐	
1704298-002A	D5-GSV-100mL	Air		1	Sorbent Tube	☐	3/31/2017 12:15			☑	
1704298-003A	SV17-1L	Air	TO17 (VOCs) (µg/m³) <Naphthalene>	1	Sorbent Tube	☐	4/3/2017 10:49	5 days		☑	
1704298-004A	SV17-100mL	Air	TO17 (VOCs) (µg/m³) <Naphthalene, Xylenes, Total>	1	Sorbent Tube	☐	4/3/2017 10:54	5 days		☐	
1704298-005A	SS3-1L	Air	TO17 (VOCs) (µg/m³) <Naphthalene>	1	Sorbent Tube	☐	4/5/2017 9:25	5 days		☐	
1704298-006A	SS3-100mL	Air		1	Sorbent Tube	☐	4/5/2017 9:34			☑	
1704298-007A	SV18-1L	Air	TO17 (VOCs) (µg/m³) <Naphthalene>	1	Sorbent Tube	☐	4/5/2017 10:39	5 days		☑	
1704298-008A	SV18-100mL	Air	TO17 (VOCs) (µg/m³) <Naphthalene, Xylenes, Total>	1	Sorbent Tube	☐	4/5/2017 10:44	5 days		☐	
1704298-009A	SV15-1L	Air	TO17 (VOCs) (µg/m³) <Naphthalene>	1	Sorbent Tube	☐	4/5/2017 11:48	5 days		☐	
1704298-010A	SV15-100mL	Air		1	Sorbent Tube	☐	4/5/2017 11:51			☑	
1704298-011A	SS4-1L	Air	TO17 (VOCs) (µg/m³) <Naphthalene>	1	Sorbent Tube	☐	4/5/2017 12:52	5 days		☐	
1704298-012A	SS4-100mL	Air		1	Sorbent Tube	☐	4/5/2017 12:55			☑	
1704298-013A	SV16-1L	Air	TO17 (VOCs) (µg/m³) <Naphthalene>	1	Sorbent Tube	☐	4/5/2017 14:35	5 days		☑	
1704298-014A	SV16-100mL	Air	TO17 (VOCs) (µg/m³) <Naphthalene, Xylenes, Total>	1	Sorbent Tube	☐	4/5/2017 14:40	5 days		☐	
1704298-015A	SS2-1L	Air	TO17 (VOCs) (µg/m³) <Naphthalene>	1	Sorbent Tube	☐	4/5/2017 15:45	5 days		☑	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.

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WORK ORDER SUMMARY

Client Name: APPLIED WATER RESOURCES
Client Contact: Yola Bayram
Contact's Email: ybayram@awrcorp.net

Project: 1700 Jefferson
Comments:

Work Order: 1704298
QC Level: LEVEL 2
Date Logged: 4/7/2017

☐ WaterTrax ☐ WriteOn ☑ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1704298-016A	SS2-100mL	Air	TO17 (VOCs) (µg/m³) <Naphthalene, Xylenes, Total>	1	Sorbent Tube	☐	4/5/2017 15:50	5 days		☐	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.

General COC

MAI Work Order # 1704298

McCAMPBELL ANALYTICAL, INC.

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www.mccampbell.com main@mccampbell.com

CHAIN OF CUSTODY RECORD

Turn Around Time: 1 Day Rush | 2 Day Rush | 3 Day Rush | STD X | Quote #
J-Flag / MDL | ESL | Cleanup Approved | Bottle Order #
Delivery Format: GeoTracker EDF | X PDF | X EDD | Write On (DW) | EQuIS

Report To: YOLA BAYRAM Bill To: CANDACE CURTIS
Company: APPLIED WATER RESOURCES
Email: YBAYRAM@AWRCORP.NET
Alt Email: CCARY@AWRCORP.NET Tele: 510-671-2088
Project Name/#: 1700 JEFFERSON
Project Location: 581 18TH ST. PO #
Sampler Signature: [signature]

Analysis Requested

SAMPLE ID Location / Field Point	Sampling Date	Sampling Time	#Containers	Matrix	Preservative	TO-17		HOLD
D5-GSV-1L	3/31	1205	1	A		X		
D5-GSV-100mL	3/31	1215	|	A				X
SV17-1L	4/3	1049	|	|		X		
SV17-100mL	4/3	1054	|	|				X
SS3-1L	4/5	0925	|	|		X		
SS3-100mL	|	0934	|	|				X
SV18-1L	|	1039	|	|		X		
SV18-100mL	|	1044	|	|				X
SV15-1L	|	1148	|	|		X		
SV15-100mL	|	1151	|	|				X

MAI clients MUST disclose any dangerous chemicals known to be present in their submitted samples in concentrations that may cause immediate harm or serious future health endangerment as a result of brief, gloved, open air, sample handling by MAI staff. Non-disclosure incurs an immediate $250 surcharge and the client is subject to full legal liability for harm suffered. Thank you for your understanding and for allowing us to work safely.

* If metals are requested for water samples and the water type (Matrix) is not specified on the chain of custody, MAI will default to metals by E200.8.

Please provide an adequate volume of sample. If the volume is not sufficient for a MS/MSD a LCS/LCSD will be prepared in its place and noted in the report.

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
			[signature]	4-7-17	0950
[signature]	4-7-17	1450	[signature]	4/7/17	1450

Comments / Instructions: SAMPLES ANTICIPATED TO BE VERY DIRTY

Matrix Code: DW=Drinking Water, GW=Ground Water, WW=Waste Water, SW=Seawater, S=Soil, SL=Sludge, A=Air, WP=Wipe, O=Other

Preservative Code: 1=4°C 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=ZnOAc/NaOH 7=None

Temp 1.3 °C Initials [illegible]

Page 1 of 2

General COC

MAI Work Order # _____

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www.mccampbell.com main@mccampbell.com

CHAIN OF CUSTODY RECORD

Turn Around Time: 1 Day Rush [ ] 2 Day Rush [ ] 3 Day Rush [ ] STD [X] Quote # [ ]
J-Flag / MDL [ ] ESL [ ] Cleanup Approved [ ] Bottle Order # [ ]
Delivery Format: GeoTracker EDF [X] PDF [X] EDD [ ] Write On (DW) [ ] EQuIS [ ]

Report To: YOLA BAYRAM Bill To: CANDACE CURTIS
Company: APPLIED WATER RESOURCES
Email: YBAYRAM@AWRCORP.NET
Alt Email: CCARY@AWRCORP.NET Tele: (510)-671-2088
Project Name/#: 1700 JEFFERSON
Project Location: 581 18TH ST PO #
Sampler Signature: Cheryl Cary

SAMPLE ID Location / Field Point	Sampling Date	Sampling Time	#Containers	Matrix	Preservative	Analysis Requested: TO-17		HOLD
SS4 - 1L	4/5	1258	1	A		X		
SS4 - 100mL	"	1255	"	"				X
SV16 - 1L	"	1435	"	"		X		
SV16 - 100 mL	"	1440	"	"				X
SS2 - 1L	"	1545	"	"		X		
SS2 - 100 mL	"	1550	"	"				X

MAI clients MUST disclose any dangerous chemicals known to be present in their submitted samples in concentrations that may cause immediate harm or serious future health endangerment as a result of brief, gloved, open air, sample handling by MAI staff. Non-disclosure incurs an immediate $250 surcharge and the client is subject to full legal liability for harm suffered. Thank you for your understanding and for allowing us to work safely.

* If metals are requested for water samples and the water type (Matrix) is not specified on the chain of custody, MAI will default to metals by E200.8.

Please provide an adequate volume of sample. If the volume is not sufficient for a MS/MSD a LCS/LCSD will be prepared in its place and noted in the report.

Comments / Instructions

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
				4-7-17	0930
	4-7-17	1450		4/7/17	1450

Matrix Code: DW=Drinking Water, GW=Ground Water, WW=Waste Water, SW=Seawater, S=Soil, SL=Sludge, A=Air, WP=Wipe, O=Other
Preservative Code: 1=4°C 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=ZnOAc/NaOH 7=None

Temp _____ °C Initials _____

Page 2 of 2

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Sample Receipt Checklist

Client Name:	**Applied Water Resources**	Date and Time Received	**4/7/2017 14:50**
Project Name:	**1700 Jefferson**	Date Logged:	**4/7/2017**
		Received by:	Jena Alfaro
WorkOrder №:	**1704298** Matrix: Air	Logged by:	Maria Venegas
Carrier:	Bernie Cummins (MAI Courier)		

Chain of Custody (COC) Information

Chain of custody present?	Yes ☑	No ☐
Chain of custody signed when relinquished and received?	Yes ☑	No ☐
Chain of custody agrees with sample labels?	Yes ☑	No ☐
Sample IDs noted by Client on COC?	Yes ☑	No ☐
Date and Time of collection noted by Client on COC?	Yes ☑	No ☐
Sampler's name noted on COC?	Yes ☑	No ☐

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	NA ☑
Shipping container/cooler in good condition?	Yes ☑	No ☐	
Samples in proper containers/bottles?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	NA ☐
Sample/Temp Blank temperature	Temp: 1.3°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☐	No ☐	NA ☑
Sample labels checked for correct preservation?	Yes ☑	No ☐	
pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	
	(Ice Type: WET ICE)		

UCMR3 Samples:

Total Chlorine tested and acceptable upon receipt for EPA 522?	Yes ☐	No ☐	NA ☑
Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539?	Yes ☐	No ☐	NA ☑

Comments:

ANALYTICAL REPORT

May 03, 2017

Applied Water Resources - Alameda, CA

Sample Delivery Group:	L899344
Samples Received:	03/30/2017
Project Number:	1700
Description:	1700 Jefferson

Report To:

Yola Bayram
2363 Mariner Square Dr
Suite 245
Alameda, CA 94501

Entire Report Reviewed By:

Brian Ford

Technical Service Representative

TABLE OF CONTENTS

D2 L899344-01 GW

Collected by	Collected date/time	Received date/time
Yola Bayram	03/28/17 12:20	03/30/17 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015	WG966458	100	04/05/17 13:55	04/05/17 13:55	ACG
Volatile Organic Compounds (GC) by Method 8021B	WG966454	100	04/27/17 14:31	04/27/17 14:31	GLN
Volatile Organic Compounds (GC) by Method 8021B	WG966454	1000	04/27/17 15:58	04/27/17 15:58	ACG

D3-GGW L899344-02 GW

Collected by	Collected date/time	Received date/time
Yola Bayram	03/27/17 14:00	03/30/17 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015	WG966458	20	04/05/17 14:16	04/05/17 14:16	ACG
Volatile Organic Compounds (GC) by Method 8021B	WG966454	100	04/27/17 14:53	04/27/17 14:53	GLN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Brian Ford
Technical Service Representative

Project Narrative

L899344-01/-02, BTEXMTBE by 8021: Reported out of hold due to lab error.

Volatile Organic Compounds (GC) by Method 8015/8021B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	16500	Q	50.0	100	04/27/2017 14:31	WG966454
TPHG C5 - C12	175000		10000	100	04/05/2017 13:55	WG966458
Toluene	27800	Q	1000	1000	04/27/2017 15:58	WG966454
Ethylbenzene	2890	Q	50.0	100	04/27/2017 14:31	WG966454
Total Xylene	18800	Q	150	100	04/27/2017 14:31	WG966454
Methyl tert-butyl ether	615	Q	100	100	04/27/2017 14:31	WG966454
(S) a,a,a-Trifluorotoluene(FID)	*92.8*		*77.0-122*		*04/05/2017 13:55*	WG966458
(S) a,a,a-Trifluorotoluene(PID)	*92.1*		*80.0-121*		*04/27/2017 15:58*	WG966454
(S) a,a,a-Trifluorotoluene(PID)	*107*		*80.0-121*		*04/27/2017 14:31*	WG966454

Volatile Organic Compounds (GC) by Method 8015/8021B

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Benzene	16300	Q	50.0	100	04/27/2017 14:53	WG966454
TPHG C5 - C12	107000		2000	20	04/05/2017 14:16	WG966458
Toluene	23100	Q	100	100	04/27/2017 14:53	WG966454
Ethylbenzene	2570	Q	50.0	100	04/27/2017 14:53	WG966454
Total Xylene	14100	Q	150	100	04/27/2017 14:53	WG966454
Methyl tert-butyl ether	537	Q	100	100	04/27/2017 14:53	WG966454
(S) a,a,a-Trifluorotoluene(FID)	*69.8*	J2	*77.0-122*		*04/05/2017 14:16*	WG966458
(S) a,a,a-Trifluorotoluene(PID)	*109*		*80.0-121*		*04/27/2017 14:53*	WG966454

Method Blank (MB)

(MB) R3208715-3 04/05/17 13:31

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
TPHG C5 - C12	U		30.4	100
(S) a,a,a-Trifluorotoluene(FID)	*102*			*77.0-122*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3208715-1 04/05/17 10:51 • (LCSD) R3208715-2 04/05/17 12:07

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPHG C5 - C12	5500	5770	6480	105	118	71.0-130			11.6	20
(S) a,a,a-Trifluorotoluene(FID)				*106*	*104*	*77.0-122*				

L899220-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L899220-01 04/05/17 14:37 • (MS) R3208715-4 04/05/17 14:58 • (MSD) R3208715-5 04/05/17 15:19

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPHG C5 - C12	5500	U	5810	6470	106	118	1	18.0-158			10.8	20
(S) a,a,a-Trifluorotoluene(FID)					*103*	*104*		*77.0-122*				

Method Blank (MB)

(MB) R3208656-3 04/04/17 12:01

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Benzene	U		0.190	0.500
Toluene	U		0.412	1.00
Ethylbenzene	U		0.160	0.500
Total Xylene	U		0.510	1.50
Methyl tert-butyl ether	U		0.340	1.00
(S) a,a,a-Trifluorotoluene(PID)	*101*			*80.0-121*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3208656-1 04/04/17 10:54 • (LCSD) R3208656-2 04/04/17 11:17

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Benzene	50.0	48.1	41.3	96.3	82.6	71.0-121			15.4	20
Toluene	50.0	48.1	41.1	96.2	82.2	72.0-120			15.7	20
Ethylbenzene	50.0	49.5	42.5	99.0	84.9	75.0-122			15.3	20
Total Xylene	150	146	126	97.1	83.9	74.0-124			14.7	20
Methyl tert-butyl ether	50.0	50.3	44.7	101	89.4	63.0-126			11.8	21
(S) a,a,a-Trifluorotoluene(PID)				*101*	*100*	*80.0-121*				

L899614-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L899614-07 04/04/17 21:10 • (MS) R3208656-4 04/04/17 15:59 • (MSD) R3208656-5 04/04/17 16:22

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Benzene	50.0	U	47.7	46.4	95.4	92.8	1	29.0-146			2.74	20
Toluene	50.0	U	47.2	45.8	94.3	91.5	1	35.0-140			2.99	20
Ethylbenzene	50.0	U	48.7	47.4	97.4	94.8	1	39.0-143			2.66	20
Total Xylene	150	U	144	140	95.7	93.3	1	42.0-142			2.47	20
Methyl tert-butyl ether	50.0		51.9	50.4	104	101	1	41.0-138			3.00	20
(S) a,a,a-Trifluorotoluene(PID)					*101*	*100*		*80.0-121*				

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.

Qualifier	Description
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
Q	Sample was prepared and/or analyzed past recommended holding time. Concentrations should be considered minimum values.

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE.**
***** Not all certifications held by the laboratory are applicable to the results reported in the attached report.

State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Conneticut	PH-0197	North Carolina [1]	DW21704
Florida	E87487	North Carolina [2]	41
Georgia	NELAP	North Dakota	R-140
Georgia [1]	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky [1]	90010	South Dakota	n/a
Kentucky [2]	16	Tennessee [1 4]	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

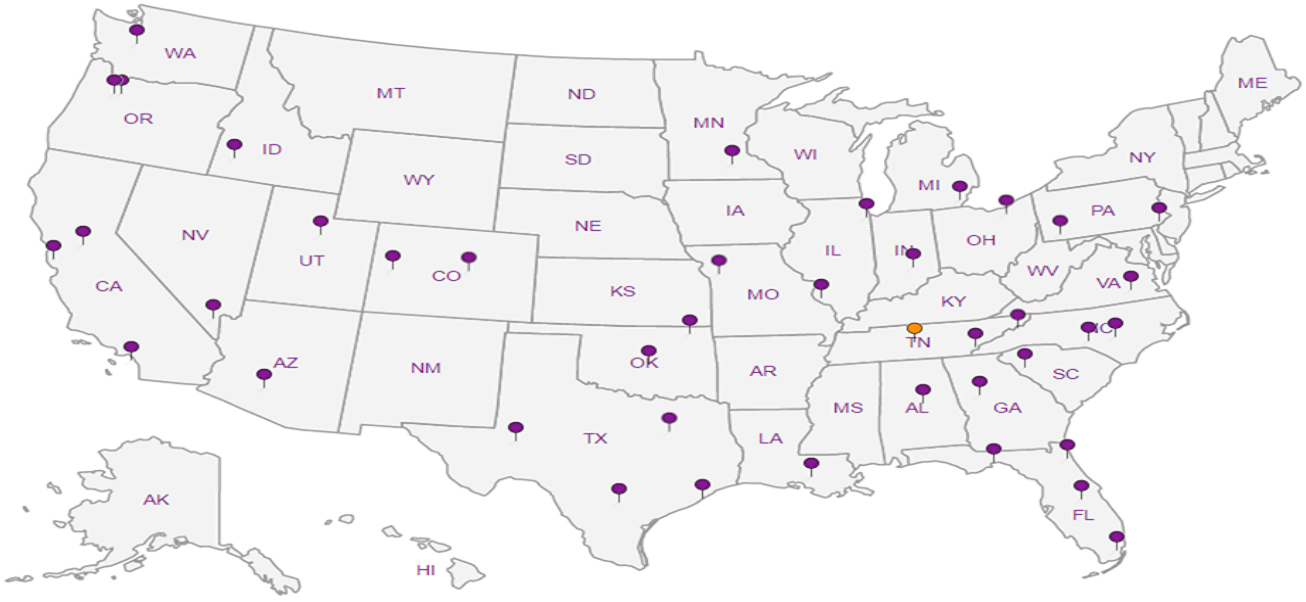
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [n/a] Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**



Billing Information:

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

ESC LAB SCIENCES

YOUR LAB OF CHOICE

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

Report to: Yola Bayra

Email To: ybayram@awrcorp.net

Project Description: 1700 Jefferson

City/State Collected: Oakland, CA

Phone: 510671208
Fax:

Client Project #: 1700

Lab Project #

Collected by (print): Yola Bayram

Site/Facility ID #

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)
___ Same Day X Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Immediately Packed on Ice N ___ Y X

L# L899344

K053

Acctnum:
Template:
Prelogin:
TSR:
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	TPHg and Btex by 8015/8020									Remarks	Sample # (lab only)
~~D2~~ D2	Grab	GW		3/28/2017	1220	3	X										-01
~~D3-GGW~~ D3-GGW	Grab	GW		3/27/2017	1400	3	X										
	Grab																

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other ________

Remarks:

pH ______ Temp ______

Flow ______ Other ______

Samples returned via:
__ UPS __ FedEx __ Courier __ ______

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: ✓NP __Y __N
COC Signed/Accurate: ✓Y __N
Bottles arrive intact: ✓Y __N
Correct bottles used: ✓Y __N
Sufficient volume sent: ✓Y __N
IF Applicable
VOA Zero Headspace: ✓Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / (No) HCL / MeOH TBR	
[signature]	3/29/17	1140	[signature]		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 3.9 NM °C / Bottles Received: 6VP	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) [signature]	Date: 3-30-17 / Time: 0900	Hold: / Condition: NCF / (OK)

ANALYTICAL REPORT

April 10, 2017

Applied Water Resources - Alameda, CA

Sample Delivery Group:	L899761
Samples Received:	04/01/2017
Project Number:	1700
Description:	1700 Jefferson

Report To: Yola Bayram
2363 Mariner Square Dr
Suite 245
Alameda, CA 94501

Entire Report Reviewed By: Brian Ford

Brian Ford
Technical Service Representative

TABLE OF CONTENTS

MW-7 L899761-01 GW

Collected by: Cheryl Cary
Collected date/time: 03/31/17 14:48
Received date/time: 04/01/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015	WG967904	10	04/08/17 19:50	04/08/17 19:50	JAH
Volatile Organic Compounds (GC) by Method 8021	WG967904	10	04/08/17 19:50	04/08/17 19:50	JAH
Volatile Organic Compounds (GC) by Method 8021	WG967904	200	04/10/17 00:54	04/10/17 00:54	DWR

MW-8 L899761-02 GW

Collected by: Cheryl Cary
Collected date/time: 03/31/17 14:05
Received date/time: 04/01/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015	WG967904	25	04/08/17 20:12	04/08/17 20:12	JAH
Volatile Organic Compounds (GC) by Method 8021	WG967904	25	04/08/17 20:12	04/08/17 20:12	JAH
Volatile Organic Compounds (GC) by Method 8021	WG967904	500	04/10/17 01:17	04/10/17 01:17	DWR

MW-9 L899761-03 GW

Collected by: Cheryl Cary
Collected date/time: 03/31/17 11:47
Received date/time: 04/01/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015	WG967904	10	04/08/17 20:35	04/08/17 20:35	JAH
Volatile Organic Compounds (GC) by Method 8021	WG967904	10	04/08/17 20:35	04/08/17 20:35	JAH
Volatile Organic Compounds (GC) by Method 8021	WG967904	100	04/10/17 01:39	04/10/17 01:39	DWR

MW-10 L899761-04 GW

Collected by: Cheryl Cary
Collected date/time: 03/31/17 13:25
Received date/time: 04/01/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method 8015	WG967904	20	04/08/17 20:57	04/08/17 20:57	JAH
Volatile Organic Compounds (GC) by Method 8021	WG967904	20	04/08/17 20:57	04/08/17 20:57	JAH
Volatile Organic Compounds (GC) by Method 8021	WG967904	500	04/10/17 02:01	04/10/17 02:01	DWR

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Brian Ford
Technical Service Representative

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	11700		100	200	04/10/2017 00:54	WG967904
TPHG C5 - C12	89500		1000	10	04/08/2017 19:50	WG967904
Toluene	15300		200	200	04/10/2017 00:54	WG967904
Ethylbenzene	1690		5.00	10	04/08/2017 19:50	WG967904
Total Xylene	9740		300	200	04/10/2017 00:54	WG967904
Methyl tert-butyl ether	349		10.0	10	04/08/2017 19:50	WG967904
(S) a,a,a-Trifluorotoluene(FID)	*96.9*		*77.0-122*		*04/08/2017 19:50*	WG967904
(S) a,a,a-Trifluorotoluene(PID)	*93.2*		*80.0-121*		*04/08/2017 19:50*	WG967904
(S) a,a,a-Trifluorotoluene(PID)	*102*		*80.0-121*		*04/10/2017 00:54*	WG967904

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	24800		250	500	04/10/2017 01:17	WG967904
TPHG C5 - C12	153000		2500	25	04/08/2017 20:12	WG967904
Toluene	32700		500	500	04/10/2017 01:17	WG967904
Ethylbenzene	1790		12.5	25	04/08/2017 20:12	WG967904
Total Xylene	9790		37.5	25	04/08/2017 20:12	WG967904
Methyl tert-butyl ether	662		25.0	25	04/08/2017 20:12	WG967904
(S) a,a,a-Trifluorotoluene(FID)	*92.7*		*77.0-122*		*04/08/2017 20:12*	WG967904
(S) a,a,a-Trifluorotoluene(PID)	*91.0*		*80.0-121*		*04/08/2017 20:12*	WG967904
(S) a,a,a-Trifluorotoluene(PID)	*102*		*80.0-121*		*04/10/2017 01:17*	WG967904

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	9200		50.0	100	04/10/2017 01:39	WG967904
TPHG C5 - C12	83500		1000	10	04/08/2017 20:35	WG967904
Toluene	15000		100	100	04/10/2017 01:39	WG967904
Ethylbenzene	1550		5.00	10	04/08/2017 20:35	WG967904
Total Xylene	11100		150	100	04/10/2017 01:39	WG967904
Methyl tert-butyl ether	337		10.0	10	04/08/2017 20:35	WG967904
(S) a,a,a-Trifluorotoluene(FID)	*94.0*		*77.0-122*		*04/08/2017 20:35*	WG967904
(S) a,a,a-Trifluorotoluene(PID)	*83.6*		*80.0-121*		*04/08/2017 20:35*	WG967904
(S) a,a,a-Trifluorotoluene(PID)	*99.5*		*80.0-121*		*04/10/2017 01:39*	WG967904

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Benzene	18100		250	500	04/10/2017 02:01	WG967904
TPHG C5 - C12	123000		2000	20	04/08/2017 20:57	WG967904
Toluene	28700		500	500	04/10/2017 02:01	WG967904
Ethylbenzene	1600		10.0	20	04/08/2017 20:57	WG967904
Total Xylene	8290		30.0	20	04/08/2017 20:57	WG967904
Methyl tert-butyl ether	453		20.0	20	04/08/2017 20:57	WG967904
(S) a,a,a-Trifluorotoluene(FID)	*91.6*		*77.0-122*		*04/08/2017 20:57*	WG967904
(S) a,a,a-Trifluorotoluene(PID)	*84.8*		*80.0-121*		*04/08/2017 20:57*	WG967904
(S) a,a,a-Trifluorotoluene(PID)	*102*		*80.0-121*		*04/10/2017 02:01*	WG967904

Method Blank (MB)

(MB) R3209388-5 04/08/17 12:40

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Benzene	U		0.190	0.500
Toluene	U		0.412	1.00
Ethylbenzene	U		0.160	0.500
Total Xylene	U		0.510	1.50
Methyl tert-butyl ether	U		0.340	1.00
TPHG C5 - C12	U		30.4	100
(S) a,a,a-Trifluorotoluene(FID)	*98.7*			*77.0-122*
(S) a,a,a-Trifluorotoluene(PID)	*106*			*80.0-121*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3209388-1 04/08/17 10:50 • (LCSD) R3209388-2 04/08/17 11:12

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Benzene	50.0	49.2	49.7	98.3	99.4	71.0-121			1.08	20
Toluene	50.0	51.5	50.4	103	101	72.0-120			2.19	20
Ethylbenzene	50.0	52.9	51.8	106	104	75.0-122			2.04	20
Total Xylene	150	162	158	108	105	74.0-124			2.57	20
Methyl tert-butyl ether	50.0	44.9	47.5	89.9	95.1	63.0-126			5.62	21
(S) a,a,a-Trifluorotoluene(FID)				*98.1*	*97.8*	*77.0-122*				
(S) a,a,a-Trifluorotoluene(PID)				*103*	*102*	*80.0-121*				

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3209388-3 04/08/17 11:35 • (LCSD) R3209388-4 04/08/17 11:57

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
TPHG C5 - C12	5500	5600	5750	102	105	71.0-130			2.71	20
(S) a,a,a-Trifluorotoluene(FID)				*102*	*102*	*77.0-122*				
(S) a,a,a-Trifluorotoluene(PID)				*112*	*112*	*80.0-121*				

L899799-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L899799-01 04/08/17 17:14 • (MS) R3209388-6 04/08/17 17:37 • (MSD) R3209388-7 04/08/17 17:58

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Benzene	50.0	0.333	36.5	38.1	72.4	75.6	1	29.0-146			4.31	20
Toluene	50.0	U	39.0	40.5	77.9	80.9	1	35.0-140			3.75	20
Ethylbenzene	50.0	U	44.1	45.7	88.2	91.4	1	39.0-143			3.51	20

L899799-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L899799-01 04/08/17 17:14 • (MS) R3209388-6 04/08/17 17:37 • (MSD) R3209388-7 04/08/17 17:58

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Total Xylene	150	U	133	138	88.9	92.0	1	42.0-142			3.46	20
Methyl tert-butyl ether	50.0	U	45.9	47.8	91.8	95.7	1	41.0-138			4.13	20
(S) a,a,a-Trifluorotoluene(FID)					*98.7*	*98.7*		*77.0-122*				
(S) a,a,a-Trifluorotoluene(PID)					*103*	*103*		*80.0-121*				

L899799-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L899799-01 04/08/17 17:14 • (MS) R3209388-8 04/08/17 18:20 • (MSD) R3209388-9 04/08/17 18:43

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPHG C5 - C12	5500	61.5	3290	3340	58.7	59.6	1	18.0-158			1.51	20
(S) a,a,a-Trifluorotoluene(FID)					*98.5*	*98.9*		*77.0-122*				
(S) a,a,a-Trifluorotoluene(PID)					*107*	*107*		*80.0-121*				

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.

Qualifier	Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE.**
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Conneticut	PH-0197	North Carolina [1]	DW21704
Florida	E87487	North Carolina [2]	41
Georgia	NELAP	North Dakota	R-140
Georgia [1]	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky [1]	90010	South Dakota	n/a
Kentucky [2]	16	Tennessee [1 4]	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

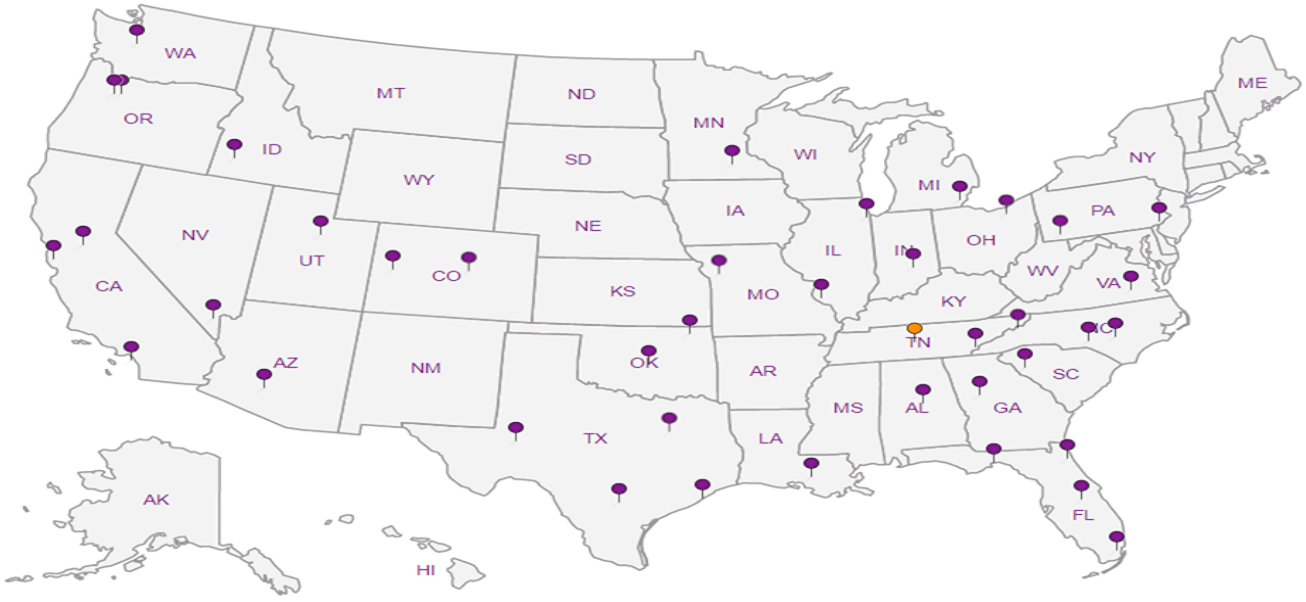
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [n/a] Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**



Billing Information:

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

ESC LABORATORY SCIENCES

YOUR LAB OF CHOICE

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

Report to: YOLA BAYRAM	Email To: YBAYRAM@AWRCORP.NET	
Project Description: 1700 JEFFERSON	City/State Collected: OAKLAND, CA	
Phone: Fax: 510-671-2088	Client Project # 1700	Lab Project #
Collected by (print): CHERYL CARY	Site/Facility ID #	P.O. #
Collected by (signature):	Rush? (Lab MUST Be Notified) ___ Same Day ___ Five Day ___ Next Day ___ 5 Day (Rad Only) ___ Two Day ___ 10 Day (Rad Only) ___ Three Day	Quote #
Immediately Packed on Ice N ___ Y X	Date Results Needed	

L # 849761

G124

Acctnum:
Template:
Prelogin:
TSR:
PB:

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Pres Chk	TPH g, BTEX, MTBE 8015/8020	Remarks	Sample # (lab only)
MW-7		GW		3/31	1448	3	X	X		01
MW-8		GW		3/31	1405	3	X	X		02
MW-9		GW		3/31	1147	3	X	X		03
MW-10		GW		3/31	1325	3	X	X		04

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking #

Sample Receipt Checklist

COC Seal Present/Intact:	NP	Y N
COC Signed/Accurate:		Y N
Bottles arrive intact:		Y N
Correct bottles used:		Y N
Sufficient volume sent:		Y N
If Applicable		
VOA Zero Headspace:		Y N
Preservation Correct/Checked:		Y N

Relinquished by: (Signature) Cheryl Cary	Date: 3/31	Time: 1552	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 2.1 °C Bottles Received: 12-VP
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 4/1/17 Time: 845

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

ANALYTICAL REPORT

April 22, 2017

Applied Water Resources - Alameda, CA

Sample Delivery Group:	L901466
Samples Received:	04/08/2017
Project Number:	1700
Description:	1700 Jefferson

Report To: Yola Bayram
2363 Mariner Square Dr
Suite 245
Alameda, CA 94501

Entire Report Reviewed By: Brian Ford

Brian Ford
Technical Service Representative

TABLE OF CONTENTS

D5-GSV L901466-01 Air

Collected by: Cheryl Cary
Collected date/time: 03/31/17 10:23
Received date/time: 04/08/17 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG969000	2	04/10/17 16:13	04/10/17 16:13	MBF
Volatile Organic Compounds (MS) by Method TO-15	WG969307	25	04/11/17 14:00	04/11/17 14:00	MBF
Volatile Organic Compounds (MS) by Method TO-15	WG969714	200	04/12/17 11:42	04/12/17 11:42	MBF

SV17 L901466-02 Air

Collected by: Cheryl Cary
Collected date/time: 04/03/17 09:59
Received date/time: 04/08/17 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG969000	4000	04/10/17 17:01	04/10/17 17:01	MBF
Volatile Organic Compounds (MS) by Method TO-15	WG969307	40000	04/11/17 17:04	04/11/17 17:04	MBF

SV17-DUP L901466-03 Air

Collected by: Cheryl Cary
Collected date/time: 04/05/17 10:13
Received date/time: 04/08/17 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG969000	2000	04/10/17 17:47	04/10/17 17:47	MBF
Volatile Organic Compounds (MS) by Method TO-15	WG969307	40000	04/11/17 17:50	04/11/17 17:50	MBF

SS3 L901466-04 Air

Collected by: Cheryl Cary
Collected date/time: 04/05/17 09:18
Received date/time: 04/08/17 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG969000	2	04/10/17 18:35	04/10/17 18:35	MBF

SV18 L901466-05 Air

Collected by: Cheryl Cary
Collected date/time: 04/05/17 10:32
Received date/time: 04/08/17 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG969000	2000	04/10/17 19:21	04/10/17 19:21	MBF
Volatile Organic Compounds (MS) by Method TO-15	WG969307	20000	04/11/17 18:35	04/11/17 18:35	MBF

SV15 L901466-06 Air

Collected by: Cheryl Cary
Collected date/time: 04/05/17 11:36
Received date/time: 04/08/17 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG969000	8	04/10/17 20:07	04/10/17 20:07	MBF
Volatile Organic Compounds (MS) by Method TO-15	WG969307	25	04/11/17 14:47	04/11/17 14:47	MBF

SS4 L901466-07 Air

Collected by: Cheryl Cary
Collected date/time: 04/05/17 12:50
Received date/time: 04/08/17 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG969307	2	04/11/17 13:13	04/11/17 13:13	MBF

SV16 L901466-08 Air

Collected by: Cheryl Cary | Collected date/time: 04/05/17 14:28 | Received date/time: 04/08/17 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG969000	2000	04/10/17 21:38	04/10/17 21:38	MBF
Volatile Organic Compounds (MS) by Method TO-15	WG969307	50000	04/11/17 19:20	04/11/17 19:20	MBF
Volatile Organic Compounds (MS) by Method TO-15	WG969714	100000	04/12/17 12:23	04/12/17 12:23	MBF

SS2 L901466-09 Air

Collected by: Cheryl Cary | Collected date/time: 04/05/17 15:17 | Received date/time: 04/08/17 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG969000	80	04/10/17 22:24	04/10/17 22:24	MBF

SS2-DUP L901466-10 Air

Collected by: Cheryl Cary | Collected date/time: 04/05/17 15:55 | Received date/time: 04/08/17 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG969000	2	04/10/17 23:11	04/10/17 23:11	MBF
Volatile Organic Compounds (MS) by Method TO-15	WG969307	25	04/11/17 15:34	04/11/17 15:34	MBF

D5-GSV L901466-11 Air

Collected by: Cheryl Cary | Collected date/time: 03/31/17 10:23 | Received date/time: 04/08/17 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method ASTM 1946	WG971034	10	04/17/17 12:08	04/17/17 12:08	MJ

SV17-DUP L901466-13 Air

Collected by: Cheryl Cary | Collected date/time: 04/05/17 10:13 | Received date/time: 04/08/17 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method ASTM 1946	WG971034	1	04/17/17 09:07	04/17/17 09:07	MJ

SV18 L901466-15 Air

Collected by: Cheryl Cary | Collected date/time: 04/05/17 10:32 | Received date/time: 04/08/17 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method ASTM 1946	WG971034	1	04/17/17 09:20	04/17/17 09:20	MJ

SS4 L901466-17 Air

Collected by: Cheryl Cary | Collected date/time: 04/05/17 12:50 | Received date/time: 04/08/17 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method ASTM 1946	WG971034	1	04/17/17 09:47	04/17/17 09:47	MJ

SV16 L901466-18 Air

Collected by: Cheryl Cary | Collected date/time: 04/05/17 14:28 | Received date/time: 04/08/17 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method ASTM 1946	WG971034	100	04/17/17 14:46	04/17/17 14:46	MJ

D5-GSV L901466-21 Air

Collected by: Cheryl Cary
Collected date/time: 03/31/17 10:23
Received date/time: 04/08/17 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Organic Compounds (GC) by Method D1946	WG971256	1	04/18/17 11:55	04/18/17 11:55	MJ

SV17-DUP L901466-23 Air

Collected by: Cheryl Cary
Collected date/time: 04/05/17 10:13
Received date/time: 04/08/17 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Organic Compounds (GC) by Method D1946	WG971256	1	04/18/17 12:09	04/18/17 12:09	MJ
Organic Compounds (GC) by Method D1946	WG972396	5	04/20/17 15:25	04/20/17 15:25	MJ

SV18 L901466-25 Air

Collected by: Cheryl Cary
Collected date/time: 04/05/17 10:32
Received date/time: 04/08/17 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Organic Compounds (GC) by Method D1946	WG971256	1	04/18/17 12:21	04/18/17 12:21	MJ

SS4 L901466-27 Air

Collected by: Cheryl Cary
Collected date/time: 04/05/17 12:50
Received date/time: 04/08/17 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Organic Compounds (GC) by Method D1946	WG971256	1	04/18/17 13:02	04/18/17 13:02	MJ

SV16 L901466-28 Air

Collected by: Cheryl Cary
Collected date/time: 04/05/17 14:28
Received date/time: 04/08/17 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Organic Compounds (GC) by Method D1946	WG971256	1	04/18/17 13:15	04/18/17 13:15	MJ
Organic Compounds (GC) by Method D1946	WG972396	5	04/20/17 15:39	04/20/17 15:39	MJ

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Brian Ford
Technical Service Representative

Project Narrative

SV17, SS3, SV15, SS2, SS2-DUP; O2, He: No sample volume remaining for analysis.

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	2.50	5.94	7.98	19.0		2	WG969000
Allyl chloride	107-05-1	76.53	0.400	1.25	ND	ND		2	WG969000
Benzene	71-43-2	78.10	0.400	1.28	65.7	210		2	WG969000
Benzyl Chloride	100-44-7	127	0.400	2.08	ND	ND		2	WG969000
Bromodichloromethane	75-27-4	164	0.400	2.68	ND	ND		2	WG969000
Bromoform	75-25-2	253	1.20	12.4	ND	ND		2	WG969000
Bromomethane	74-83-9	94.90	0.400	1.55	ND	ND		2	WG969000
1,3-Butadiene	106-99-0	54.10	4.00	8.85	ND	ND		2	WG969000
Carbon disulfide	75-15-0	76.10	0.400	1.24	2.69	8.38		2	WG969000
Carbon tetrachloride	56-23-5	154	0.400	2.52	ND	ND		2	WG969000
Chlorobenzene	108-90-7	113	0.400	1.85	ND	ND		2	WG969000
Chloroethane	75-00-3	64.50	0.400	1.06	ND	ND		2	WG969000
Chloroform	67-66-3	119	0.400	1.95	ND	ND		2	WG969000
Chloromethane	74-87-3	50.50	0.400	0.826	ND	ND		2	WG969000
2-Chlorotoluene	95-49-8	126	0.400	2.06	ND	ND		2	WG969000
Cyclohexane	110-82-7	84.20	5.00	17.2	994	3420		25	WG969307
Dibromochloromethane	124-48-1	208	0.400	3.40	ND	ND		2	WG969000
1,2-Dibromoethane	106-93-4	188	0.400	3.08	ND	ND		2	WG969000
1,2-Dichlorobenzene	95-50-1	147	0.400	2.40	ND	ND		2	WG969000
1,3-Dichlorobenzene	541-73-1	147	0.400	2.40	ND	ND		2	WG969000
1,4-Dichlorobenzene	106-46-7	147	0.400	2.40	ND	ND		2	WG969000
1,2-Dichloroethane	107-06-2	99	0.400	1.62	ND	ND		2	WG969000
1,1-Dichloroethane	75-34-3	98	0.400	1.60	ND	ND		2	WG969000
1,1-Dichloroethene	75-35-4	96.90	0.400	1.59	ND	ND		2	WG969000
cis-1,2-Dichloroethene	156-59-2	96.90	0.400	1.59	ND	ND		2	WG969000
trans-1,2-Dichloroethene	156-60-5	96.90	0.400	1.59	ND	ND		2	WG969000
1,2-Dichloropropane	78-87-5	113	0.400	1.85	ND	ND		2	WG969000
cis-1,3-Dichloropropene	10061-01-5	111	0.400	1.82	ND	ND		2	WG969000
trans-1,3-Dichloropropene	10061-02-6	111	0.400	1.82	ND	ND		2	WG969000
1,4-Dioxane	123-91-1	88.10	0.400	1.44	ND	ND		2	WG969000
Ethanol	64-17-5	46.10	1.26	2.38	31.6	59.5		2	WG969000
Ethylbenzene	100-41-4	106	0.400	1.73	8.54	37.0		2	WG969000
4-Ethyltoluene	622-96-8	120	0.400	1.96	3.09	15.2		2	WG969000
Trichlorofluoromethane	75-69-4	137.40	0.400	2.25	ND	ND		2	WG969000
Dichlorodifluoromethane	75-71-8	120.92	0.400	1.98	ND	ND		2	WG969000
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.400	3.07	ND	ND		2	WG969000
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.400	2.80	ND	ND		2	WG969000
Heptane	142-82-5	100	5.00	20.4	525	2150		25	WG969307
Hexachloro-1,3-butadiene	87-68-3	261	1.26	13.5	ND	ND		2	WG969000
n-Hexane	110-54-3	86.20	40.0	141	1160	4100		200	WG969714
Isopropylbenzene	98-82-8	120.20	0.400	1.97	1.32	6.51		2	WG969000
Methylene Chloride	75-09-2	84.90	0.400	1.39	ND	ND		2	WG969000
Methyl Butyl Ketone	591-78-6	100	2.50	10.2	ND	ND		2	WG969000
2-Butanone (MEK)	78-93-3	72.10	2.50	7.37	ND	ND		2	WG969000
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	2.50	10.2	ND	ND		2	WG969000
Methyl methacrylate	80-62-6	100.12	0.400	1.64	ND	ND		2	WG969000
MTBE	1634-04-4	88.10	0.400	1.44	ND	ND		2	WG969000
Naphthalene	91-20-3	128	1.26	6.60	ND	ND		2	WG969000
2-Propanol	67-63-0	60.10	2.50	6.15	ND	ND		2	WG969000
Propene	115-07-1	42.10	0.800	1.38	1.40	2.40		2	WG969000
Styrene	100-42-5	104	0.400	1.70	ND	ND		2	WG969000
1,1,2,2-Tetrachloroethane	79-34-5	168	0.400	2.75	ND	ND		2	WG969000
Tetrachloroethylene	127-18-4	166	0.400	2.72	0.620	4.21		2	WG969000
Tetrahydrofuran	109-99-9	72.10	0.400	1.18	ND	ND		2	WG969000
Toluene	108-88-3	92.10	0.400	1.51	75.2	283		2	WG969000
1,2,4-Trichlorobenzene	120-82-1	181	1.26	9.33	ND	ND		2	WG969000

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	0.400	2.18	ND	ND		2	WG969000
1,1,2-Trichloroethane	79-00-5	133	0.400	2.18	ND	ND		2	WG969000
Trichloroethylene	79-01-6	131	0.400	2.14	ND	ND		2	WG969000
1,2,4-Trimethylbenzene	95-63-6	120	0.400	1.96	3.14	15.4		2	WG969000
1,3,5-Trimethylbenzene	108-67-8	120	0.400	1.96	1.90	9.33		2	WG969000
2,2,4-Trimethylpentane	540-84-1	114.22	5.00	23.4	164	766		25	WG969307
Vinyl chloride	75-01-4	62.50	0.400	1.02	ND	ND		2	WG969000
Vinyl Bromide	593-60-2	106.95	0.400	1.75	ND	ND		2	WG969000
Vinyl acetate	108-05-4	86.10	0.400	1.41	ND	ND		2	WG969000
m&p-Xylene	1330-20-7	106	0.800	3.47	23.0	99.7		2	WG969000
o-Xylene	95-47-6	106	0.400	1.73	3.48	15.1		2	WG969000
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*101*				WG969714
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*107*				WG969307
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*115*				WG969000

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	5000	11900	ND	ND		4000	WG969000
Allyl chloride	107-05-1	76.53	800	2500	ND	ND		4000	WG969000
Benzene	71-43-2	78.10	800	2560	67900	217000		4000	WG969000
Benzyl Chloride	100-44-7	127	800	4160	ND	ND		4000	WG969000
Bromodichloromethane	75-27-4	164	800	5370	ND	ND		4000	WG969000
Bromoform	75-25-2	253	2400	24800	ND	ND		4000	WG969000
Bromomethane	74-83-9	94.90	800	3110	ND	ND		4000	WG969000
1,3-Butadiene	106-99-0	54.10	8000	17700	ND	ND		4000	WG969000
Carbon disulfide	75-15-0	76.10	800	2490	ND	ND		4000	WG969000
Carbon tetrachloride	56-23-5	154	800	5040	ND	ND		4000	WG969000
Chlorobenzene	108-90-7	113	800	3700	ND	ND		4000	WG969000
Chloroethane	75-00-3	64.50	800	2110	ND	ND		4000	WG969000
Chloroform	67-66-3	119	800	3890	ND	ND		4000	WG969000
Chloromethane	74-87-3	50.50	800	1650	ND	ND		4000	WG969000
2-Chlorotoluene	95-49-8	126	800	4120	ND	ND		4000	WG969000
Cyclohexane	110-82-7	84.20	8000	27600	459000	1580000		40000	WG969307
Dibromochloromethane	124-48-1	208	800	6810	ND	ND		4000	WG969000
1,2-Dibromoethane	106-93-4	188	800	6150	ND	ND		4000	WG969000
1,2-Dichlorobenzene	95-50-1	147	800	4810	ND	ND		4000	WG969000
1,3-Dichlorobenzene	541-73-1	147	800	4810	ND	ND		4000	WG969000
1,4-Dichlorobenzene	106-46-7	147	800	4810	ND	ND		4000	WG969000
1,2-Dichloroethane	107-06-2	99	800	3240	ND	ND		4000	WG969000
1,1-Dichloroethane	75-34-3	98	800	3210	ND	ND		4000	WG969000
1,1-Dichloroethene	75-35-4	96.90	800	3170	ND	ND		4000	WG969000
cis-1,2-Dichloroethene	156-59-2	96.90	800	3170	ND	ND		4000	WG969000
trans-1,2-Dichloroethene	156-60-5	96.90	800	3170	ND	ND		4000	WG969000
1,2-Dichloropropane	78-87-5	113	800	3700	ND	ND		4000	WG969000
cis-1,3-Dichloropropene	10061-01-5	111	800	3630	ND	ND		4000	WG969000
trans-1,3-Dichloropropene	10061-02-6	111	800	3630	ND	ND		4000	WG969000
1,4-Dioxane	123-91-1	88.10	800	2880	ND	ND		4000	WG969000
Ethanol	64-17-5	46.10	2520	4750	ND	ND		4000	WG969000
Ethylbenzene	100-41-4	106	800	3470	48500	210000		4000	WG969000
4-Ethyltoluene	622-96-8	120	800	3930	34600	170000		4000	WG969000
Trichlorofluoromethane	75-69-4	137.40	800	4500	ND	ND		4000	WG969000
Dichlorodifluoromethane	75-71-8	120.92	800	3960	ND	ND		4000	WG969000
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	800	6130	ND	ND		4000	WG969000
1,2-Dichlorotetrafluoroethane	76-14-2	171	800	5600	ND	ND		4000	WG969000
Heptane	142-82-5	100	8000	32700	474000	1940000		40000	WG969307
Hexachloro-1,3-butadiene	87-68-3	261	2520	26900	ND	ND		4000	WG969000
n-Hexane	110-54-3	86.20	8000	28200	1270000	4470000		40000	WG969307
Isopropylbenzene	98-82-8	120.20	800	3930	3530	17400		4000	WG969000
Methylene Chloride	75-09-2	84.90	800	2780	ND	ND		4000	WG969000
Methyl Butyl Ketone	591-78-6	100	5000	20400	ND	ND		4000	WG969000
2-Butanone (MEK)	78-93-3	72.10	5000	14700	ND	ND		4000	WG969000
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	5000	20500	ND	ND		4000	WG969000
Methyl methacrylate	80-62-6	100.12	800	3280	ND	ND		4000	WG969000
MTBE	1634-04-4	88.10	800	2880	ND	ND		4000	WG969000
Naphthalene	91-20-3	128	2520	13200	ND	ND		4000	WG969000
2-Propanol	67-63-0	60.10	5000	12300	ND	ND		4000	WG969000
Propene	115-07-1	42.10	1600	2760	ND	ND		4000	WG969000
Styrene	100-42-5	104	800	3400	ND	ND		4000	WG969000
1,1,2,2-Tetrachloroethane	79-34-5	168	800	5500	ND	ND		4000	WG969000
Tetrachloroethylene	127-18-4	166	800	5430	ND	ND		4000	WG969000
Tetrahydrofuran	109-99-9	72.10	800	2360	ND	ND		4000	WG969000
Toluene	108-88-3	92.10	800	3010	164000	617000		4000	WG969000
1,2,4-Trichlorobenzene	120-82-1	181	2520	18700	ND	ND		4000	WG969000

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	800	4350	ND	ND		4000	WG969000
1,1,2-Trichloroethane	79-00-5	133	800	4350	ND	ND		4000	WG969000
Trichloroethylene	79-01-6	131	800	4290	ND	ND		4000	WG969000
1,2,4-Trimethylbenzene	95-63-6	120	800	3930	28200	138000		4000	WG969000
1,3,5-Trimethylbenzene	108-67-8	120	800	3930	11800	57700		4000	WG969000
2,2,4-Trimethylpentane	540-84-1	114.22	800	3740	115000	535000		4000	WG969000
Vinyl chloride	75-01-4	62.50	800	2040	ND	ND		4000	WG969000
Vinyl Bromide	593-60-2	106.95	800	3500	ND	ND		4000	WG969000
Vinyl acetate	108-05-4	86.10	800	2820	ND	ND		4000	WG969000
m&p-Xylene	1330-20-7	106	1600	6940	116000	504000		4000	WG969000
o-Xylene	95-47-6	106	800	3470	28300	123000		4000	WG969000
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*107*				WG969307
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*117*				WG969000

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	2500	5940	ND	ND		2000	WG969000
Allyl chloride	107-05-1	76.53	400	1250	ND	ND		2000	WG969000
Benzene	71-43-2	78.10	400	1280	87500	279000		2000	WG969000
Benzyl Chloride	100-44-7	127	400	2080	ND	ND		2000	WG969000
Bromodichloromethane	75-27-4	164	400	2680	ND	ND		2000	WG969000
Bromoform	75-25-2	253	1200	12400	ND	ND		2000	WG969000
Bromomethane	74-83-9	94.90	400	1550	ND	ND		2000	WG969000
1,3-Butadiene	106-99-0	54.10	4000	8850	ND	ND		2000	WG969000
Carbon disulfide	75-15-0	76.10	400	1240	ND	ND		2000	WG969000
Carbon tetrachloride	56-23-5	154	400	2520	ND	ND		2000	WG969000
Chlorobenzene	108-90-7	113	400	1850	ND	ND		2000	WG969000
Chloroethane	75-00-3	64.50	400	1060	ND	ND		2000	WG969000
Chloroform	67-66-3	119	400	1950	ND	ND		2000	WG969000
Chloromethane	74-87-3	50.50	400	826	ND	ND		2000	WG969000
2-Chlorotoluene	95-49-8	126	400	2060	ND	ND		2000	WG969000
Cyclohexane	110-82-7	84.20	8000	27600	597000	2060000		40000	WG969307
Dibromochloromethane	124-48-1	208	400	3400	ND	ND		2000	WG969000
1,2-Dibromoethane	106-93-4	188	400	3080	ND	ND		2000	WG969000
1,2-Dichlorobenzene	95-50-1	147	400	2400	ND	ND		2000	WG969000
1,3-Dichlorobenzene	541-73-1	147	400	2400	ND	ND		2000	WG969000
1,4-Dichlorobenzene	106-46-7	147	400	2400	ND	ND		2000	WG969000
1,2-Dichloroethane	107-06-2	99	400	1620	ND	ND		2000	WG969000
1,1-Dichloroethane	75-34-3	98	400	1600	ND	ND		2000	WG969000
1,1-Dichloroethene	75-35-4	96.90	400	1590	ND	ND		2000	WG969000
cis-1,2-Dichloroethene	156-59-2	96.90	400	1590	ND	ND		2000	WG969000
trans-1,2-Dichloroethene	156-60-5	96.90	400	1590	ND	ND		2000	WG969000
1,2-Dichloropropane	78-87-5	113	400	1850	ND	ND		2000	WG969000
cis-1,3-Dichloropropene	10061-01-5	111	400	1820	ND	ND		2000	WG969000
trans-1,3-Dichloropropene	10061-02-6	111	400	1820	ND	ND		2000	WG969000
1,4-Dioxane	123-91-1	88.10	400	1440	ND	ND		2000	WG969000
Ethanol	64-17-5	46.10	1260	2380	ND	ND		2000	WG969000
Ethylbenzene	100-41-4	106	400	1730	63800	277000		2000	WG969000
4-Ethyltoluene	622-96-8	120	400	1960	46500	228000		2000	WG969000
Trichlorofluoromethane	75-69-4	137.40	400	2250	ND	ND		2000	WG969000
Dichlorodifluoromethane	75-71-8	120.92	400	1980	ND	ND		2000	WG969000
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	400	3070	ND	ND		2000	WG969000
1,2-Dichlorotetrafluoroethane	76-14-2	171	400	2800	ND	ND		2000	WG969000
Heptane	142-82-5	100	8000	32700	626000	2560000		40000	WG969307
Hexachloro-1,3-butadiene	87-68-3	261	1260	13500	ND	ND		2000	WG969000
n-Hexane	110-54-3	86.20	8000	28200	1630000	5750000		40000	WG969307
Isopropylbenzene	98-82-8	120.20	400	1970	4880	24000		2000	WG969000
Methylene Chloride	75-09-2	84.90	400	1390	ND	ND		2000	WG969000
Methyl Butyl Ketone	591-78-6	100	2500	10200	ND	ND		2000	WG969000
2-Butanone (MEK)	78-93-3	72.10	2500	7370	ND	ND		2000	WG969000
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	2500	10200	ND	ND		2000	WG969000
Methyl methacrylate	80-62-6	100.12	400	1640	ND	ND		2000	WG969000
MTBE	1634-04-4	88.10	400	1440	ND	ND		2000	WG969000
Naphthalene	91-20-3	128	1260	6600	ND	ND		2000	WG969000
2-Propanol	67-63-0	60.10	2500	6150	ND	ND		2000	WG969000
Propene	115-07-1	42.10	800	1380	ND	ND		2000	WG969000
Styrene	100-42-5	104	400	1700	ND	ND		2000	WG969000
1,1,2,2-Tetrachloroethane	79-34-5	168	400	2750	ND	ND		2000	WG969000
Tetrachloroethylene	127-18-4	166	400	2720	ND	ND		2000	WG969000
Tetrahydrofuran	109-99-9	72.10	400	1180	ND	ND		2000	WG969000
Toluene	108-88-3	92.10	8000	30100	189000	713000		40000	WG969307
1,2,4-Trichlorobenzene	120-82-1	181	1260	9330	ND	ND		2000	WG969000

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	400	2180	ND	ND		2000	WG969000
1,1,2-Trichloroethane	79-00-5	133	400	2180	ND	ND		2000	WG969000
Trichloroethylene	79-01-6	131	400	2140	ND	ND		2000	WG969000
1,2,4-Trimethylbenzene	95-63-6	120	400	1960	40900	201000		2000	WG969000
1,3,5-Trimethylbenzene	108-67-8	120	400	1960	16000	78700		2000	WG969000
2,2,4-Trimethylpentane	540-84-1	114.22	8000	37400	153000	716000		40000	WG969307
Vinyl chloride	75-01-4	62.50	400	1020	ND	ND		2000	WG969000
Vinyl Bromide	593-60-2	106.95	400	1750	ND	ND		2000	WG969000
Vinyl acetate	108-05-4	86.10	400	1410	ND	ND		2000	WG969000
m&p-Xylene	1330-20-7	106	800	3470	150000	651000		2000	WG969000
o-Xylene	95-47-6	106	400	1730	37300	162000		2000	WG969000
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*107*				WG969307
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*120*				WG969000

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	2.50	5.94	116	275	E	2	WG969000
Allyl chloride	107-05-1	76.53	0.400	1.25	ND	ND		2	WG969000
Benzene	71-43-2	78.10	0.400	1.28	2.80	8.94		2	WG969000
Benzyl Chloride	100-44-7	127	0.400	2.08	ND	ND		2	WG969000
Bromodichloromethane	75-27-4	164	0.400	2.68	ND	ND		2	WG969000
Bromoform	75-25-2	253	1.20	12.4	ND	ND		2	WG969000
Bromomethane	74-83-9	94.90	0.400	1.55	ND	ND		2	WG969000
1,3-Butadiene	106-99-0	54.10	4.00	8.85	ND	ND		2	WG969000
Carbon disulfide	75-15-0	76.10	0.400	1.24	ND	ND		2	WG969000
Carbon tetrachloride	56-23-5	154	0.400	2.52	ND	ND		2	WG969000
Chlorobenzene	108-90-7	113	0.400	1.85	ND	ND		2	WG969000
Chloroethane	75-00-3	64.50	0.400	1.06	ND	ND		2	WG969000
Chloroform	67-66-3	119	0.400	1.95	ND	ND		2	WG969000
Chloromethane	74-87-3	50.50	0.400	0.826	1.72	3.56		2	WG969000
2-Chlorotoluene	95-49-8	126	0.400	2.06	ND	ND		2	WG969000
Cyclohexane	110-82-7	84.20	0.400	1.38	7.15	24.6		2	WG969000
Dibromochloromethane	124-48-1	208	0.400	3.40	ND	ND		2	WG969000
1,2-Dibromoethane	106-93-4	188	0.400	3.08	ND	ND		2	WG969000
1,2-Dichlorobenzene	95-50-1	147	0.400	2.40	ND	ND		2	WG969000
1,3-Dichlorobenzene	541-73-1	147	0.400	2.40	ND	ND		2	WG969000
1,4-Dichlorobenzene	106-46-7	147	0.400	2.40	ND	ND		2	WG969000
1,2-Dichloroethane	107-06-2	99	0.400	1.62	ND	ND		2	WG969000
1,1-Dichloroethane	75-34-3	98	0.400	1.60	ND	ND		2	WG969000
1,1-Dichloroethene	75-35-4	96.90	0.400	1.59	ND	ND		2	WG969000
cis-1,2-Dichloroethene	156-59-2	96.90	0.400	1.59	ND	ND		2	WG969000
trans-1,2-Dichloroethene	156-60-5	96.90	0.400	1.59	ND	ND		2	WG969000
1,2-Dichloropropane	78-87-5	113	0.400	1.85	ND	ND		2	WG969000
cis-1,3-Dichloropropene	10061-01-5	111	0.400	1.82	ND	ND		2	WG969000
trans-1,3-Dichloropropene	10061-02-6	111	0.400	1.82	ND	ND		2	WG969000
1,4-Dioxane	123-91-1	88.10	0.400	1.44	11.0	39.5		2	WG969000
Ethanol	64-17-5	46.10	1.26	2.38	183	345	E	2	WG969000
Ethylbenzene	100-41-4	106	0.400	1.73	2.92	12.7		2	WG969000
4-Ethyltoluene	622-96-8	120	0.400	1.96	2.64	12.9		2	WG969000
Trichlorofluoromethane	75-69-4	137.40	0.400	2.25	ND	ND		2	WG969000
Dichlorodifluoromethane	75-71-8	120.92	0.400	1.98	ND	ND		2	WG969000
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.400	3.07	ND	ND		2	WG969000
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.400	2.80	ND	ND		2	WG969000
Heptane	142-82-5	100	0.400	1.64	13.4	54.7		2	WG969000
Hexachloro-1,3-butadiene	87-68-3	261	1.26	13.5	ND	ND		2	WG969000
n-Hexane	110-54-3	86.20	0.400	1.41	28.4	100		2	WG969000
Isopropylbenzene	98-82-8	120.20	0.400	1.97	ND	ND		2	WG969000
Methylene Chloride	75-09-2	84.90	0.400	1.39	ND	ND		2	WG969000
Methyl Butyl Ketone	591-78-6	100	2.50	10.2	ND	ND		2	WG969000
2-Butanone (MEK)	78-93-3	72.10	2.50	7.37	9.02	26.6		2	WG969000
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	2.50	10.2	ND	ND		2	WG969000
Methyl methacrylate	80-62-6	100.12	0.400	1.64	ND	ND		2	WG969000
MTBE	1634-04-4	88.10	0.400	1.44	ND	ND		2	WG969000
Naphthalene	91-20-3	128	1.26	6.60	ND	ND		2	WG969000
2-Propanol	67-63-0	60.10	2.50	6.15	28.9	71.1		2	WG969000
Propene	115-07-1	42.10	0.800	1.38	1.85	3.18		2	WG969000
Styrene	100-42-5	104	0.400	1.70	ND	ND		2	WG969000
1,1,2,2-Tetrachloroethane	79-34-5	168	0.400	2.75	ND	ND		2	WG969000
Tetrachloroethylene	127-18-4	166	0.400	2.72	1.31	8.87		2	WG969000
Tetrahydrofuran	109-99-9	72.10	0.400	1.18	4.69	13.8		2	WG969000
Toluene	108-88-3	92.10	0.400	1.51	18.7	70.5		2	WG969000
1,2,4-Trichlorobenzene	120-82-1	181	1.26	9.33	ND	ND		2	WG969000

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	0.400	2.18	ND	ND		2	WG969000
1,1,2-Trichloroethane	79-00-5	133	0.400	2.18	ND	ND		2	WG969000
Trichloroethylene	79-01-6	131	0.400	2.14	0.533	2.86		2	WG969000
1,2,4-Trimethylbenzene	95-63-6	120	0.400	1.96	2.61	12.8		2	WG969000
1,3,5-Trimethylbenzene	108-67-8	120	0.400	1.96	0.923	4.53		2	WG969000
2,2,4-Trimethylpentane	540-84-1	114.22	0.400	1.87	1.51	7.03		2	WG969000
Vinyl chloride	75-01-4	62.50	0.400	1.02	ND	ND		2	WG969000
Vinyl Bromide	593-60-2	106.95	0.400	1.75	ND	ND		2	WG969000
Vinyl acetate	108-05-4	86.10	0.400	1.41	ND	ND		2	WG969000
m&p-Xylene	1330-20-7	106	0.800	3.47	8.80	38.1		2	WG969000
o-Xylene	95-47-6	106	0.400	1.73	2.13	9.22		2	WG969000
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*101*				WG969000

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	2500	5940	ND	ND		2000	WG969000
Allyl chloride	107-05-1	76.53	400	1250	ND	ND		2000	WG969000
Benzene	71-43-2	78.10	400	1280	1810	5780		2000	WG969000
Benzyl Chloride	100-44-7	127	400	2080	ND	ND		2000	WG969000
Bromodichloromethane	75-27-4	164	400	2680	ND	ND		2000	WG969000
Bromoform	75-25-2	253	1200	12400	ND	ND		2000	WG969000
Bromomethane	74-83-9	94.90	400	1550	ND	ND		2000	WG969000
1,3-Butadiene	106-99-0	54.10	4000	8850	ND	ND		2000	WG969000
Carbon disulfide	75-15-0	76.10	400	1240	ND	ND		2000	WG969000
Carbon tetrachloride	56-23-5	154	400	2520	ND	ND		2000	WG969000
Chlorobenzene	108-90-7	113	400	1850	ND	ND		2000	WG969000
Chloroethane	75-00-3	64.50	400	1060	ND	ND		2000	WG969000
Chloroform	67-66-3	119	400	1950	ND	ND		2000	WG969000
Chloromethane	74-87-3	50.50	400	826	ND	ND		2000	WG969000
2-Chlorotoluene	95-49-8	126	400	2060	ND	ND		2000	WG969000
Cyclohexane	110-82-7	84.20	400	1380	71200	245000		2000	WG969000
Dibromochloromethane	124-48-1	208	400	3400	ND	ND		2000	WG969000
1,2-Dibromoethane	106-93-4	188	400	3080	ND	ND		2000	WG969000
1,2-Dichlorobenzene	95-50-1	147	400	2400	ND	ND		2000	WG969000
1,3-Dichlorobenzene	541-73-1	147	400	2400	ND	ND		2000	WG969000
1,4-Dichlorobenzene	106-46-7	147	400	2400	ND	ND		2000	WG969000
1,2-Dichloroethane	107-06-2	99	400	1620	ND	ND		2000	WG969000
1,1-Dichloroethane	75-34-3	98	400	1600	ND	ND		2000	WG969000
1,1-Dichloroethene	75-35-4	96.90	400	1590	ND	ND		2000	WG969000
cis-1,2-Dichloroethene	156-59-2	96.90	400	1590	ND	ND		2000	WG969000
trans-1,2-Dichloroethene	156-60-5	96.90	400	1590	ND	ND		2000	WG969000
1,2-Dichloropropane	78-87-5	113	400	1850	ND	ND		2000	WG969000
cis-1,3-Dichloropropene	10061-01-5	111	400	1820	ND	ND		2000	WG969000
trans-1,3-Dichloropropene	10061-02-6	111	400	1820	ND	ND		2000	WG969000
1,4-Dioxane	123-91-1	88.10	400	1440	ND	ND		2000	WG969000
Ethanol	64-17-5	46.10	1260	2380	ND	ND		2000	WG969000
Ethylbenzene	100-41-4	106	400	1730	446	1930		2000	WG969000
4-Ethyltoluene	622-96-8	120	400	1960	735	3610		2000	WG969000
Trichlorofluoromethane	75-69-4	137.40	400	2250	ND	ND		2000	WG969000
Dichlorodifluoromethane	75-71-8	120.92	400	1980	ND	ND		2000	WG969000
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	400	3070	ND	ND		2000	WG969000
1,2-Dichlorotetrafluoroethane	76-14-2	171	400	2800	ND	ND		2000	WG969000
Heptane	142-82-5	100	400	1640	24200	99000		2000	WG969000
Hexachloro-1,3-butadiene	87-68-3	261	1260	13500	ND	ND		2000	WG969000
n-Hexane	110-54-3	86.20	4000	14100	150000	530000		20000	WG969307
Isopropylbenzene	98-82-8	120.20	400	1970	ND	ND		2000	WG969000
Methylene Chloride	75-09-2	84.90	400	1390	ND	ND		2000	WG969000
Methyl Butyl Ketone	591-78-6	100	2500	10200	ND	ND		2000	WG969000
2-Butanone (MEK)	78-93-3	72.10	2500	7370	ND	ND		2000	WG969000
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	2500	10200	ND	ND		2000	WG969000
Methyl methacrylate	80-62-6	100.12	400	1640	ND	ND		2000	WG969000
MTBE	1634-04-4	88.10	400	1440	ND	ND		2000	WG969000
Naphthalene	91-20-3	128	1260	6600	ND	ND		2000	WG969000
2-Propanol	67-63-0	60.10	2500	6150	ND	ND		2000	WG969000
Propene	115-07-1	42.10	800	1380	ND	ND		2000	WG969000
Styrene	100-42-5	104	400	1700	ND	ND		2000	WG969000
1,1,2,2-Tetrachloroethane	79-34-5	168	400	2750	ND	ND		2000	WG969000
Tetrachloroethylene	127-18-4	166	400	2720	ND	ND		2000	WG969000
Tetrahydrofuran	109-99-9	72.10	400	1180	ND	ND		2000	WG969000
Toluene	108-88-3	92.10	400	1510	2740	10300		2000	WG969000
1,2,4-Trichlorobenzene	120-82-1	181	1260	9330	ND	ND		2000	WG969000

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	400	2180	ND	ND		2000	WG969000
1,1,2-Trichloroethane	79-00-5	133	400	2180	ND	ND		2000	WG969000
Trichloroethylene	79-01-6	131	400	2140	ND	ND		2000	WG969000
1,2,4-Trimethylbenzene	95-63-6	120	400	1960	750	3680		2000	WG969000
1,3,5-Trimethylbenzene	108-67-8	120	400	1960	ND	ND		2000	WG969000
2,2,4-Trimethylpentane	540-84-1	114.22	400	1870	17400	81200		2000	WG969000
Vinyl chloride	75-01-4	62.50	400	1020	ND	ND		2000	WG969000
Vinyl Bromide	593-60-2	106.95	400	1750	ND	ND		2000	WG969000
Vinyl acetate	108-05-4	86.10	400	1410	ND	ND		2000	WG969000
m&p-Xylene	1330-20-7	106	800	3470	1650	7150		2000	WG969000
o-Xylene	95-47-6	106	400	1730	ND	ND		2000	WG969000
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*106*				WG969307
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*114*				WG969000

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	10.0	23.8	ND	ND		8	WG969000
Allyl chloride	107-05-1	76.53	1.60	5.01	ND	ND		8	WG969000
Benzene	71-43-2	78.10	1.60	5.11	ND	ND		8	WG969000
Benzyl Chloride	100-44-7	127	1.60	8.31	ND	ND		8	WG969000
Bromodichloromethane	75-27-4	164	1.60	10.7	ND	ND		8	WG969000
Bromoform	75-25-2	253	4.80	49.7	ND	ND		8	WG969000
Bromomethane	74-83-9	94.90	1.60	6.21	ND	ND		8	WG969000
1,3-Butadiene	106-99-0	54.10	16.0	35.4	ND	ND		8	WG969000
Carbon disulfide	75-15-0	76.10	1.60	4.98	12.8	39.7		8	WG969000
Carbon tetrachloride	56-23-5	154	1.60	10.1	ND	ND		8	WG969000
Chlorobenzene	108-90-7	113	1.60	7.39	ND	ND		8	WG969000
Chloroethane	75-00-3	64.50	1.60	4.22	ND	ND		8	WG969000
Chloroform	67-66-3	119	1.60	7.79	ND	ND		8	WG969000
Chloromethane	74-87-3	50.50	1.60	3.30	ND	ND		8	WG969000
2-Chlorotoluene	95-49-8	126	1.60	8.25	ND	ND		8	WG969000
Cyclohexane	110-82-7	84.20	1.60	5.51	84.3	290		8	WG969000
Dibromochloromethane	124-48-1	208	1.60	13.6	ND	ND		8	WG969000
1,2-Dibromoethane	106-93-4	188	1.60	12.3	ND	ND		8	WG969000
1,2-Dichlorobenzene	95-50-1	147	1.60	9.62	ND	ND		8	WG969000
1,3-Dichlorobenzene	541-73-1	147	1.60	9.62	ND	ND		8	WG969000
1,4-Dichlorobenzene	106-46-7	147	1.60	9.62	ND	ND		8	WG969000
1,2-Dichloroethane	107-06-2	99	1.60	6.48	ND	ND		8	WG969000
1,1-Dichloroethane	75-34-3	98	1.60	6.41	ND	ND		8	WG969000
1,1-Dichloroethene	75-35-4	96.90	1.60	6.34	ND	ND		8	WG969000
cis-1,2-Dichloroethene	156-59-2	96.90	1.60	6.34	ND	ND		8	WG969000
trans-1,2-Dichloroethene	156-60-5	96.90	1.60	6.34	ND	ND		8	WG969000
1,2-Dichloropropane	78-87-5	113	1.60	7.39	ND	ND		8	WG969000
cis-1,3-Dichloropropene	10061-01-5	111	1.60	7.26	ND	ND		8	WG969000
trans-1,3-Dichloropropene	10061-02-6	111	1.60	7.26	ND	ND		8	WG969000
1,4-Dioxane	123-91-1	88.10	1.60	5.77	ND	ND		8	WG969000
Ethanol	64-17-5	46.10	5.04	9.50	ND	ND		8	WG969000
Ethylbenzene	100-41-4	106	1.60	6.94	3.68	16.0		8	WG969000
4-Ethyltoluene	622-96-8	120	1.60	7.85	3.47	17.0		8	WG969000
Trichlorofluoromethane	75-69-4	137.40	1.60	8.99	ND	ND		8	WG969000
Dichlorodifluoromethane	75-71-8	120.92	1.60	7.91	ND	ND		8	WG969000
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	1.60	12.3	ND	ND		8	WG969000
1,2-Dichlorotetrafluoroethane	76-14-2	171	1.60	11.2	ND	ND		8	WG969000
Heptane	142-82-5	100	1.60	6.54	209	856		8	WG969000
Hexachloro-1,3-butadiene	87-68-3	261	5.04	53.8	ND	ND		8	WG969000
n-Hexane	110-54-3	86.20	5.00	17.6	519	1830		25	WG969307
Isopropylbenzene	98-82-8	120.20	1.60	7.87	ND	ND		8	WG969000
Methylene Chloride	75-09-2	84.90	1.60	5.56	ND	ND		8	WG969000
Methyl Butyl Ketone	591-78-6	100	10.0	40.9	ND	ND		8	WG969000
2-Butanone (MEK)	78-93-3	72.10	10.0	29.5	ND	ND		8	WG969000
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	10.0	40.9	ND	ND		8	WG969000
Methyl methacrylate	80-62-6	100.12	1.60	6.55	ND	ND		8	WG969000
MTBE	1634-04-4	88.10	1.60	5.77	ND	ND		8	WG969000
Naphthalene	91-20-3	128	5.04	26.4	ND	ND		8	WG969000
2-Propanol	67-63-0	60.10	10.0	24.6	ND	ND		8	WG969000
Propene	115-07-1	42.10	3.20	5.51	ND	ND		8	WG969000
Styrene	100-42-5	104	1.60	6.81	ND	ND		8	WG969000
1,1,2,2-Tetrachloroethane	79-34-5	168	1.60	11.0	ND	ND		8	WG969000
Tetrachloroethylene	127-18-4	166	1.60	10.9	ND	ND		8	WG969000
Tetrahydrofuran	109-99-9	72.10	1.60	4.72	ND	ND		8	WG969000
Toluene	108-88-3	92.10	1.60	6.03	18.2	68.4		8	WG969000
1,2,4-Trichlorobenzene	120-82-1	181	5.04	37.3	ND	ND		8	WG969000

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	1.60	8.70	ND	ND		8	WG969000
1,1,2-Trichloroethane	79-00-5	133	1.60	8.70	ND	ND		8	WG969000
Trichloroethylene	79-01-6	131	1.60	8.57	ND	ND		8	WG969000
1,2,4-Trimethylbenzene	95-63-6	120	1.60	7.85	3.62	17.8		8	WG969000
1,3,5-Trimethylbenzene	108-67-8	120	1.60	7.85	ND	ND		8	WG969000
2,2,4-Trimethylpentane	540-84-1	114.22	5.00	23.4	532	2480		25	WG969307
Vinyl chloride	75-01-4	62.50	1.60	4.09	ND	ND		8	WG969000
Vinyl Bromide	593-60-2	106.95	1.60	7.00	ND	ND		8	WG969000
Vinyl acetate	108-05-4	86.10	1.60	5.63	ND	ND		8	WG969000
m&p-Xylene	1330-20-7	106	3.20	13.9	8.56	37.1		8	WG969000
o-Xylene	95-47-6	106	1.60	6.94	2.59	11.2		8	WG969000
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*100*				WG969000
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*108*				WG969307

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	2.50	5.94	6.84	16.3		2	WG969307
Allyl chloride	107-05-1	76.53	0.400	1.25	ND	ND		2	WG969307
Benzene	71-43-2	78.10	0.400	1.28	2.97	9.48		2	WG969307
Benzyl Chloride	100-44-7	127	0.400	2.08	ND	ND		2	WG969307
Bromodichloromethane	75-27-4	164	0.400	2.68	ND	ND		2	WG969307
Bromoform	75-25-2	253	1.20	12.4	ND	ND		2	WG969307
Bromomethane	74-83-9	94.90	0.400	1.55	ND	ND		2	WG969307
1,3-Butadiene	106-99-0	54.10	4.00	8.85	ND	ND		2	WG969307
Carbon disulfide	75-15-0	76.10	0.400	1.24	ND	ND		2	WG969307
Carbon tetrachloride	56-23-5	154	0.400	2.52	ND	ND		2	WG969307
Chlorobenzene	108-90-7	113	0.400	1.85	ND	ND		2	WG969307
Chloroethane	75-00-3	64.50	0.400	1.06	ND	ND		2	WG969307
Chloroform	67-66-3	119	0.400	1.95	ND	ND		2	WG969307
Chloromethane	74-87-3	50.50	0.400	0.826	0.451	0.931		2	WG969307
2-Chlorotoluene	95-49-8	126	0.400	2.06	ND	ND		2	WG969307
Cyclohexane	110-82-7	84.20	0.400	1.38	9.76	33.6		2	WG969307
Dibromochloromethane	124-48-1	208	0.400	3.40	ND	ND		2	WG969307
1,2-Dibromoethane	106-93-4	188	0.400	3.08	ND	ND		2	WG969307
1,2-Dichlorobenzene	95-50-1	147	0.400	2.40	ND	ND		2	WG969307
1,3-Dichlorobenzene	541-73-1	147	0.400	2.40	ND	ND		2	WG969307
1,4-Dichlorobenzene	106-46-7	147	0.400	2.40	ND	ND		2	WG969307
1,2-Dichloroethane	107-06-2	99	0.400	1.62	ND	ND		2	WG969307
1,1-Dichloroethane	75-34-3	98	0.400	1.60	ND	ND		2	WG969307
1,1-Dichloroethene	75-35-4	96.90	0.400	1.59	ND	ND		2	WG969307
cis-1,2-Dichloroethene	156-59-2	96.90	0.400	1.59	ND	ND		2	WG969307
trans-1,2-Dichloroethene	156-60-5	96.90	0.400	1.59	ND	ND		2	WG969307
1,2-Dichloropropane	78-87-5	113	0.400	1.85	ND	ND		2	WG969307
cis-1,3-Dichloropropene	10061-01-5	111	0.400	1.82	ND	ND		2	WG969307
trans-1,3-Dichloropropene	10061-02-6	111	0.400	1.82	ND	ND		2	WG969307
1,4-Dioxane	123-91-1	88.10	0.400	1.44	ND	ND		2	WG969307
Ethanol	64-17-5	46.10	1.26	2.38	45.0	84.9		2	WG969307
Ethylbenzene	100-41-4	106	0.400	1.73	1.26	5.46		2	WG969307
4-Ethyltoluene	622-96-8	120	0.400	1.96	0.885	4.34		2	WG969307
Trichlorofluoromethane	75-69-4	137.40	0.400	2.25	ND	ND		2	WG969307
Dichlorodifluoromethane	75-71-8	120.92	0.400	1.98	ND	ND		2	WG969307
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.400	3.07	ND	ND		2	WG969307
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.400	2.80	ND	ND		2	WG969307
Heptane	142-82-5	100	0.400	1.64	9.76	39.9		2	WG969307
Hexachloro-1,3-butadiene	87-68-3	261	1.26	13.5	ND	ND		2	WG969307
n-Hexane	110-54-3	86.20	0.400	1.41	23.2	81.9		2	WG969307
Isopropylbenzene	98-82-8	120.20	0.400	1.97	ND	ND		2	WG969307
Methylene Chloride	75-09-2	84.90	0.400	1.39	ND	ND		2	WG969307
Methyl Butyl Ketone	591-78-6	100	2.50	10.2	ND	ND		2	WG969307
2-Butanone (MEK)	78-93-3	72.10	2.50	7.37	ND	ND		2	WG969307
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	2.50	10.2	ND	ND		2	WG969307
Methyl methacrylate	80-62-6	100.12	0.400	1.64	ND	ND		2	WG969307
MTBE	1634-04-4	88.10	0.400	1.44	ND	ND		2	WG969307
Naphthalene	91-20-3	128	1.26	6.60	ND	ND		2	WG969307
2-Propanol	67-63-0	60.10	2.50	6.15	2.96	7.29		2	WG969307
Propene	115-07-1	42.10	0.800	1.38	1.28	2.21		2	WG969307
Styrene	100-42-5	104	0.400	1.70	ND	ND		2	WG969307
1,1,2,2-Tetrachloroethane	79-34-5	168	0.400	2.75	ND	ND		2	WG969307
Tetrachloroethylene	127-18-4	166	0.400	2.72	ND	ND		2	WG969307
Tetrahydrofuran	109-99-9	72.10	0.400	1.18	3.30	9.72		2	WG969307
Toluene	108-88-3	92.10	0.400	1.51	9.01	33.9		2	WG969307
1,2,4-Trichlorobenzene	120-82-1	181	1.26	9.33	ND	ND		2	WG969307

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	0.400	2.18	ND	ND		2	WG969307
1,1,2-Trichloroethane	79-00-5	133	0.400	2.18	ND	ND		2	WG969307
Trichloroethylene	79-01-6	131	0.400	2.14	ND	ND		2	WG969307
1,2,4-Trimethylbenzene	95-63-6	120	0.400	1.96	0.892	4.38		2	WG969307
1,3,5-Trimethylbenzene	108-67-8	120	0.400	1.96	ND	ND		2	WG969307
2,2,4-Trimethylpentane	540-84-1	114.22	0.400	1.87	4.62	21.6		2	WG969307
Vinyl chloride	75-01-4	62.50	0.400	1.02	ND	ND		2	WG969307
Vinyl Bromide	593-60-2	106.95	0.400	1.75	ND	ND		2	WG969307
Vinyl acetate	108-05-4	86.10	0.400	1.41	ND	ND		2	WG969307
m&p-Xylene	1330-20-7	106	0.800	3.47	4.72	20.5		2	WG969307
o-Xylene	95-47-6	106	0.400	1.73	1.26	5.47		2	WG969307
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*93.2*				WG969307

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	2500	5940	ND	ND		2000	WG969000
Allyl chloride	107-05-1	76.53	400	1250	ND	ND		2000	WG969000
Benzene	71-43-2	78.10	10000	31900	312000	995000		50000	WG969307
Benzyl Chloride	100-44-7	127	400	2080	ND	ND		2000	WG969000
Bromodichloromethane	75-27-4	164	400	2680	ND	ND		2000	WG969000
Bromoform	75-25-2	253	1200	12400	ND	ND		2000	WG969000
Bromomethane	74-83-9	94.90	400	1550	ND	ND		2000	WG969000
1,3-Butadiene	106-99-0	54.10	4000	8850	ND	ND		2000	WG969000
Carbon disulfide	75-15-0	76.10	400	1240	ND	ND		2000	WG969000
Carbon tetrachloride	56-23-5	154	400	2520	ND	ND		2000	WG969000
Chlorobenzene	108-90-7	113	400	1850	ND	ND		2000	WG969000
Chloroethane	75-00-3	64.50	400	1060	ND	ND		2000	WG969000
Chloroform	67-66-3	119	400	1950	ND	ND		2000	WG969000
Chloromethane	74-87-3	50.50	400	826	ND	ND		2000	WG969000
2-Chlorotoluene	95-49-8	126	400	2060	ND	ND		2000	WG969000
Cyclohexane	110-82-7	84.20	10000	34400	947000	3260000		50000	WG969307
Dibromochloromethane	124-48-1	208	400	3400	ND	ND		2000	WG969000
1,2-Dibromoethane	106-93-4	188	400	3080	ND	ND		2000	WG969000
1,2-Dichlorobenzene	95-50-1	147	400	2400	ND	ND		2000	WG969000
1,3-Dichlorobenzene	541-73-1	147	400	2400	ND	ND		2000	WG969000
1,4-Dichlorobenzene	106-46-7	147	400	2400	ND	ND		2000	WG969000
1,2-Dichloroethane	107-06-2	99	400	1620	ND	ND		2000	WG969000
1,1-Dichloroethane	75-34-3	98	400	1600	ND	ND		2000	WG969000
1,1-Dichloroethene	75-35-4	96.90	400	1590	ND	ND		2000	WG969000
cis-1,2-Dichloroethene	156-59-2	96.90	400	1590	ND	ND		2000	WG969000
trans-1,2-Dichloroethene	156-60-5	96.90	400	1590	ND	ND		2000	WG969000
1,2-Dichloropropane	78-87-5	113	400	1850	ND	ND		2000	WG969000
cis-1,3-Dichloropropene	10061-01-5	111	400	1820	ND	ND		2000	WG969000
trans-1,3-Dichloropropene	10061-02-6	111	400	1820	ND	ND		2000	WG969000
1,4-Dioxane	123-91-1	88.10	400	1440	ND	ND		2000	WG969000
Ethanol	64-17-5	46.10	1260	2380	ND	ND		2000	WG969000
Ethylbenzene	100-41-4	106	400	1730	74300	322000		2000	WG969000
4-Ethyltoluene	622-96-8	120	400	1960	41300	202000		2000	WG969000
Trichlorofluoromethane	75-69-4	137.40	400	2250	ND	ND		2000	WG969000
Dichlorodifluoromethane	75-71-8	120.92	400	1980	ND	ND		2000	WG969000
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	400	3070	ND	ND		2000	WG969000
1,2-Dichlorotetrafluoroethane	76-14-2	171	400	2800	ND	ND		2000	WG969000
Heptane	142-82-5	100	10000	40900	636000	2600000		50000	WG969307
Hexachloro-1,3-butadiene	87-68-3	261	1260	13500	ND	ND		2000	WG969000
n-Hexane	110-54-3	86.20	20000	70500	2530000	8920000		100000	WG969714
Isopropylbenzene	98-82-8	120.20	400	1970	3620	17800		2000	WG969000
Methylene Chloride	75-09-2	84.90	400	1390	ND	ND		2000	WG969000
Methyl Butyl Ketone	591-78-6	100	2500	10200	ND	ND		2000	WG969000
2-Butanone (MEK)	78-93-3	72.10	2500	7370	ND	ND		2000	WG969000
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	2500	10200	ND	ND		2000	WG969000
Methyl methacrylate	80-62-6	100.12	400	1640	ND	ND		2000	WG969000
MTBE	1634-04-4	88.10	400	1440	ND	ND		2000	WG969000
Naphthalene	91-20-3	128	1260	6600	ND	ND		2000	WG969000
2-Propanol	67-63-0	60.10	2500	6150	ND	ND		2000	WG969000
Propene	115-07-1	42.10	800	1380	ND	ND		2000	WG969000
Styrene	100-42-5	104	400	1700	ND	ND		2000	WG969000
1,1,2,2-Tetrachloroethane	79-34-5	168	400	2750	ND	ND		2000	WG969000
Tetrachloroethylene	127-18-4	166	400	2720	ND	ND		2000	WG969000
Tetrahydrofuran	109-99-9	72.10	400	1180	ND	ND		2000	WG969000
Toluene	108-88-3	92.10	10000	37700	724000	2730000		50000	WG969307
1,2,4-Trichlorobenzene	120-82-1	181	1260	9330	ND	ND		2000	WG969000

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	400	2180	ND	ND		2000	WG969000
1,1,2-Trichloroethane	79-00-5	133	400	2180	ND	ND		2000	WG969000
Trichloroethylene	79-01-6	131	400	2140	ND	ND		2000	WG969000
1,2,4-Trimethylbenzene	95-63-6	120	400	1960	29700	146000		2000	WG969000
1,3,5-Trimethylbenzene	108-67-8	120	400	1960	11400	55900		2000	WG969000
2,2,4-Trimethylpentane	540-84-1	114.22	10000	46700	498000	2320000		50000	WG969307
Vinyl chloride	75-01-4	62.50	400	1020	ND	ND		2000	WG969000
Vinyl Bromide	593-60-2	106.95	400	1750	ND	ND		2000	WG969000
Vinyl acetate	108-05-4	86.10	400	1410	ND	ND		2000	WG969000
m&p-Xylene	1330-20-7	106	20000	86700	270000	1170000		50000	WG969307
o-Xylene	95-47-6	106	400	1730	85500	371000		2000	WG969000
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*101*				WG969714
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*107*				WG969307
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*121*				WG969000

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	100	238	400	951		80	WG969000
Allyl chloride	107-05-1	76.53	16.0	50.1	ND	ND		80	WG969000
Benzene	71-43-2	78.10	16.0	51.1	324	1030		80	WG969000
Benzyl Chloride	100-44-7	127	16.0	83.1	ND	ND		80	WG969000
Bromodichloromethane	75-27-4	164	16.0	107	ND	ND		80	WG969000
Bromoform	75-25-2	253	48.0	497	ND	ND		80	WG969000
Bromomethane	74-83-9	94.90	16.0	62.1	ND	ND		80	WG969000
1,3-Butadiene	106-99-0	54.10	160	354	ND	ND		80	WG969000
Carbon disulfide	75-15-0	76.10	16.0	49.8	57.9	180		80	WG969000
Carbon tetrachloride	56-23-5	154	16.0	101	ND	ND		80	WG969000
Chlorobenzene	108-90-7	113	16.0	73.9	ND	ND		80	WG969000
Chloroethane	75-00-3	64.50	16.0	42.2	ND	ND		80	WG969000
Chloroform	67-66-3	119	16.0	77.9	ND	ND		80	WG969000
Chloromethane	74-87-3	50.50	16.0	33.0	ND	ND		80	WG969000
2-Chlorotoluene	95-49-8	126	16.0	82.5	ND	ND		80	WG969000
Cyclohexane	110-82-7	84.20	16.0	55.1	846	2910		80	WG969000
Dibromochloromethane	124-48-1	208	16.0	136	ND	ND		80	WG969000
1,2-Dibromoethane	106-93-4	188	16.0	123	ND	ND		80	WG969000
1,2-Dichlorobenzene	95-50-1	147	16.0	96.2	ND	ND		80	WG969000
1,3-Dichlorobenzene	541-73-1	147	16.0	96.2	ND	ND		80	WG969000
1,4-Dichlorobenzene	106-46-7	147	16.0	96.2	ND	ND		80	WG969000
1,2-Dichloroethane	107-06-2	99	16.0	64.8	ND	ND		80	WG969000
1,1-Dichloroethane	75-34-3	98	16.0	64.1	ND	ND		80	WG969000
1,1-Dichloroethene	75-35-4	96.90	16.0	63.4	ND	ND		80	WG969000
cis-1,2-Dichloroethene	156-59-2	96.90	16.0	63.4	ND	ND		80	WG969000
trans-1,2-Dichloroethene	156-60-5	96.90	16.0	63.4	ND	ND		80	WG969000
1,2-Dichloropropane	78-87-5	113	16.0	73.9	ND	ND		80	WG969000
cis-1,3-Dichloropropene	10061-01-5	111	16.0	72.6	ND	ND		80	WG969000
trans-1,3-Dichloropropene	10061-02-6	111	16.0	72.6	ND	ND		80	WG969000
1,4-Dioxane	123-91-1	88.10	16.0	57.7	ND	ND		80	WG969000
Ethanol	64-17-5	46.10	50.4	95.0	495	932		80	WG969000
Ethylbenzene	100-41-4	106	16.0	69.4	118	511		80	WG969000
4-Ethyltoluene	622-96-8	120	16.0	78.5	123	604		80	WG969000
Trichlorofluoromethane	75-69-4	137.40	16.0	89.9	ND	ND		80	WG969000
Dichlorodifluoromethane	75-71-8	120.92	16.0	79.1	ND	ND		80	WG969000
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	16.0	123	ND	ND		80	WG969000
1,2-Dichlorotetrafluoroethane	76-14-2	171	16.0	112	ND	ND		80	WG969000
Heptane	142-82-5	100	16.0	65.4	701	2870		80	WG969000
Hexachloro-1,3-butadiene	87-68-3	261	50.4	538	ND	ND		80	WG969000
n-Hexane	110-54-3	86.20	16.0	56.4	2430	8560		80	WG969000
Isopropylbenzene	98-82-8	120.20	16.0	78.7	ND	ND		80	WG969000
Methylene Chloride	75-09-2	84.90	16.0	55.6	ND	ND		80	WG969000
Methyl Butyl Ketone	591-78-6	100	100	409	ND	ND		80	WG969000
2-Butanone (MEK)	78-93-3	72.10	100	295	ND	ND		80	WG969000
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	100	409	ND	ND		80	WG969000
Methyl methacrylate	80-62-6	100.12	16.0	65.5	ND	ND		80	WG969000
MTBE	1634-04-4	88.10	16.0	57.7	ND	ND		80	WG969000
Naphthalene	91-20-3	128	50.4	264	ND	ND		80	WG969000
2-Propanol	67-63-0	60.10	100	246	ND	ND		80	WG969000
Propene	115-07-1	42.10	32.0	55.1	ND	ND		80	WG969000
Styrene	100-42-5	104	16.0	68.1	ND	ND		80	WG969000
1,1,2,2-Tetrachloroethane	79-34-5	168	16.0	110	ND	ND		80	WG969000
Tetrachloroethylene	127-18-4	166	16.0	109	ND	ND		80	WG969000
Tetrahydrofuran	109-99-9	72.10	16.0	47.2	ND	ND		80	WG969000
Toluene	108-88-3	92.10	16.0	60.3	993	3740		80	WG969000
1,2,4-Trichlorobenzene	120-82-1	181	50.4	373	ND	ND		80	WG969000

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	16.0	87.0	ND	ND		80	WG969000
1,1,2-Trichloroethane	79-00-5	133	16.0	87.0	ND	ND		80	WG969000
Trichloroethylene	79-01-6	131	16.0	85.7	ND	ND		80	WG969000
1,2,4-Trimethylbenzene	95-63-6	120	16.0	78.5	104	508		80	WG969000
1,3,5-Trimethylbenzene	108-67-8	120	16.0	78.5	36.7	180		80	WG969000
2,2,4-Trimethylpentane	540-84-1	114.22	16.0	74.7	422	1970		80	WG969000
Vinyl chloride	75-01-4	62.50	16.0	40.9	ND	ND		80	WG969000
Vinyl Bromide	593-60-2	106.95	16.0	70.0	ND	ND		80	WG969000
Vinyl acetate	108-05-4	86.10	16.0	56.3	ND	ND		80	WG969000
m&p-Xylene	1330-20-7	106	32.0	139	535	2320		80	WG969000
o-Xylene	95-47-6	106	16.0	69.4	148	641		80	WG969000
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*107*				WG969000

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	2.50	5.94	11.2	26.6		2	WG969000
Allyl chloride	107-05-1	76.53	0.400	1.25	ND	ND		2	WG969000
Benzene	71-43-2	78.10	0.400	1.28	48.5	155		2	WG969000
Benzyl Chloride	100-44-7	127	0.400	2.08	ND	ND		2	WG969000
Bromodichloromethane	75-27-4	164	0.400	2.68	ND	ND		2	WG969000
Bromoform	75-25-2	253	1.20	12.4	ND	ND		2	WG969000
Bromomethane	74-83-9	94.90	0.400	1.55	ND	ND		2	WG969000
1,3-Butadiene	106-99-0	54.10	4.00	8.85	ND	ND		2	WG969000
Carbon disulfide	75-15-0	76.10	0.400	1.24	ND	ND		2	WG969000
Carbon tetrachloride	56-23-5	154	0.400	2.52	ND	ND		2	WG969000
Chlorobenzene	108-90-7	113	0.400	1.85	ND	ND		2	WG969000
Chloroethane	75-00-3	64.50	0.400	1.06	ND	ND		2	WG969000
Chloroform	67-66-3	119	0.400	1.95	ND	ND		2	WG969000
Chloromethane	74-87-3	50.50	0.400	0.826	ND	ND		2	WG969000
2-Chlorotoluene	95-49-8	126	0.400	2.06	ND	ND		2	WG969000
Cyclohexane	110-82-7	84.20	0.400	1.38	28.0	96.4		2	WG969000
Dibromochloromethane	124-48-1	208	0.400	3.40	ND	ND		2	WG969000
1,2-Dibromoethane	106-93-4	188	0.400	3.08	ND	ND		2	WG969000
1,2-Dichlorobenzene	95-50-1	147	0.400	2.40	ND	ND		2	WG969000
1,3-Dichlorobenzene	541-73-1	147	0.400	2.40	ND	ND		2	WG969000
1,4-Dichlorobenzene	106-46-7	147	0.400	2.40	ND	ND		2	WG969000
1,2-Dichloroethane	107-06-2	99	0.400	1.62	ND	ND		2	WG969000
1,1-Dichloroethane	75-34-3	98	0.400	1.60	ND	ND		2	WG969000
1,1-Dichloroethene	75-35-4	96.90	0.400	1.59	ND	ND		2	WG969000
cis-1,2-Dichloroethene	156-59-2	96.90	0.400	1.59	ND	ND		2	WG969000
trans-1,2-Dichloroethene	156-60-5	96.90	0.400	1.59	ND	ND		2	WG969000
1,2-Dichloropropane	78-87-5	113	0.400	1.85	ND	ND		2	WG969000
cis-1,3-Dichloropropene	10061-01-5	111	0.400	1.82	ND	ND		2	WG969000
trans-1,3-Dichloropropene	10061-02-6	111	0.400	1.82	ND	ND		2	WG969000
1,4-Dioxane	123-91-1	88.10	0.400	1.44	ND	ND		2	WG969000
Ethanol	64-17-5	46.10	1.26	2.38	81.1	153		2	WG969000
Ethylbenzene	100-41-4	106	0.400	1.73	25.4	110		2	WG969000
4-Ethyltoluene	622-96-8	120	0.400	1.96	20.9	103		2	WG969000
Trichlorofluoromethane	75-69-4	137.40	0.400	2.25	ND	ND		2	WG969000
Dichlorodifluoromethane	75-71-8	120.92	0.400	1.98	ND	ND		2	WG969000
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.400	3.07	ND	ND		2	WG969000
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.400	2.80	ND	ND		2	WG969000
Heptane	142-82-5	100	0.400	1.64	74.4	304		2	WG969000
Hexachloro-1,3-butadiene	87-68-3	261	1.26	13.5	ND	ND		2	WG969000
n-Hexane	110-54-3	86.20	5.00	17.6	174	613		25	WG969307
Isopropylbenzene	98-82-8	120.20	0.400	1.97	1.02	5.03		2	WG969000
Methylene Chloride	75-09-2	84.90	0.400	1.39	ND	ND		2	WG969000
Methyl Butyl Ketone	591-78-6	100	2.50	10.2	ND	ND		2	WG969000
2-Butanone (MEK)	78-93-3	72.10	2.50	7.37	ND	ND		2	WG969000
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	2.50	10.2	ND	ND		2	WG969000
Methyl methacrylate	80-62-6	100.12	0.400	1.64	ND	ND		2	WG969000
MTBE	1634-04-4	88.10	0.400	1.44	ND	ND		2	WG969000
Naphthalene	91-20-3	128	1.26	6.60	ND	ND		2	WG969000
2-Propanol	67-63-0	60.10	2.50	6.15	4.53	11.1		2	WG969000
Propene	115-07-1	42.10	0.800	1.38	ND	ND		2	WG969000
Styrene	100-42-5	104	0.400	1.70	ND	ND		2	WG969000
1,1,2,2-Tetrachloroethane	79-34-5	168	0.400	2.75	ND	ND		2	WG969000
Tetrachloroethylene	127-18-4	166	0.400	2.72	ND	ND		2	WG969000
Tetrahydrofuran	109-99-9	72.10	0.400	1.18	6.32	18.6		2	WG969000
Toluene	108-88-3	92.10	5.00	18.8	255	961		25	WG969307
1,2,4-Trichlorobenzene	120-82-1	181	1.26	9.33	ND	ND		2	WG969000

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	0.400	2.18	ND	ND		2	WG969000
1,1,2-Trichloroethane	79-00-5	133	0.400	2.18	ND	ND		2	WG969000
Trichloroethylene	79-01-6	131	0.400	2.14	ND	ND		2	WG969000
1,2,4-Trimethylbenzene	95-63-6	120	0.400	1.96	18.6	91.4		2	WG969000
1,3,5-Trimethylbenzene	108-67-8	120	0.400	1.96	5.55	27.2		2	WG969000
2,2,4-Trimethylpentane	540-84-1	114.22	0.400	1.87	11.2	52.3		2	WG969000
Vinyl chloride	75-01-4	62.50	0.400	1.02	ND	ND		2	WG969000
Vinyl Bromide	593-60-2	106.95	0.400	1.75	ND	ND		2	WG969000
Vinyl acetate	108-05-4	86.10	0.400	1.41	ND	ND		2	WG969000
m&p-Xylene	1330-20-7	106	0.800	3.47	136	589		2	WG969000
o-Xylene	95-47-6	106	0.400	1.73	31.9	138		2	WG969000
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*100*				WG969000
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*107*				WG969307

Volatile Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL	Result	Qualifier	Dilution	Batch
			ppb	ppb			
Helium	7440-59-7		1000000	6630000		10	WG971034

Volatile Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL	Result	Qualifier	Dilution	Batch
			ppb	ppb			
Helium	7440-59-7		100000	ND		1	WG971034

Volatile Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL	Result	Qualifier	Dilution	Batch
			ppb	ppb			
Helium	7440-59-7		100000	ND		1	WG971034

Volatile Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL	Result	Qualifier	Dilution	Batch
			ppb	ppb			
Helium	7440-59-7		100000	ND		1	WG971034

Volatile Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL	Result	Qualifier	Dilution	Batch
			ppb	ppb			
Helium	7440-59-7		10000000	91000000		100	WG971034

Organic Compounds (GC) by Method D1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Oxygen	7782-44-7	32	2.00	4.69		1	WG971256
Carbon Monoxide	630-08-0	28	2.00	ND		1	WG971256
Carbon Dioxide	124-38-9	44.01	0.500	3.93		1	WG971256
Methane	74-82-8	16	0.400	ND		1	WG971256

Organic Compounds (GC) by Method D1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Oxygen	7782-44-7	32	2.00	ND		1	WG971256
Carbon Monoxide	630-08-0	28	2.00	ND		1	WG971256
Carbon Dioxide	124-38-9	44.01	2.50	8.37		5	WG972396
Methane	74-82-8	16	0.400	ND		1	WG971256

Organic Compounds (GC) by Method D1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Oxygen	7782-44-7	32	2.00	ND		1	WG971256
Carbon Monoxide	630-08-0	28	2.00	ND		1	WG971256
Carbon Dioxide	124-38-9	44.01	0.500	3.35		1	WG971256
Methane	74-82-8	16	0.400	ND		1	WG971256

Organic Compounds (GC) by Method D1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Oxygen	7782-44-7	32	2.00	13.9		1	WG971256
Carbon Monoxide	630-08-0	28	2.00	ND		1	WG971256
Carbon Dioxide	124-38-9	44.01	0.500	ND		1	WG971256
Methane	74-82-8	16	0.400	ND		1	WG971256

Organic Compounds (GC) by Method D1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Oxygen	7782-44-7	32	2.00	ND		1	WG971256
Carbon Monoxide	630-08-0	28	2.00	ND		1	WG971256
Carbon Dioxide	124-38-9	44.01	2.50	9.04		5	WG972396
Methane	74-82-8	16	0.400	ND		1	WG971256

Method Blank (MB)

(MB) R3211269-2 04/17/17 08:28

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ppb		ppb	ppb
Helium	U		30000	100000

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3211269-1 04/17/17 08:15 • (LCSD) R3211269-3 04/17/17 08:41

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ppb	ppb	ppb	%	%	%			%	%
Helium	500000	483000	451000	96.6	90.3	70.0-130			6.78	25

Method Blank (MB)

(MB) R3209776-3 04/10/17 09:42

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ppbv		ppbv	ppbv
Acetone	U		0.0569	1.25
Allyl Chloride	U		0.0546	0.200
Benzene	U		0.0460	0.200
Benzyl Chloride	U		0.0598	0.200
Bromodichloromethane	U		0.0436	0.200
Bromoform	U		0.0786	0.600
Bromomethane	U		0.0609	0.200
1,3-Butadiene	U		0.0563	2.00
Carbon disulfide	U		0.0544	0.200
Carbon tetrachloride	U		0.0585	0.200
Chlorobenzene	U		0.0601	0.200
Chloroethane	U		0.0489	0.200
Chloroform	U		0.0574	0.200
Chloromethane	U		0.0544	0.200
2-Chlorotoluene	U		0.0605	0.200
Cyclohexane	U		0.0534	0.200
Dibromochloromethane	U		0.0494	0.200
1,2-Dibromoethane	U		0.0185	0.200
1,2-Dichlorobenzene	U		0.0603	0.200
1,3-Dichlorobenzene	U		0.0597	0.200
1,4-Dichlorobenzene	U		0.0557	0.200
1,2-Dichloroethane	U		0.0616	0.200
1,1-Dichloroethane	U		0.0514	0.200
1,1-Dichloroethene	U		0.0490	0.200
cis-1,2-Dichloroethene	U		0.0389	0.200
trans-1,2-Dichloroethene	U		0.0464	0.200
1,2-Dichloropropane	U		0.0599	0.200
cis-1,3-Dichloropropene	U		0.0588	0.200
trans-1,3-Dichloropropene	U		0.0435	0.200
1,4-Dioxane	U		0.0554	0.200
Ethylbenzene	U		0.0506	0.200
4-Ethyltoluene	U		0.0666	0.200
Trichlorofluoromethane	U		0.0673	0.200
Dichlorodifluoromethane	U		0.0601	0.200
1,1,2-Trichlorotrifluoroethane	U		0.0687	0.200
1,2-Dichlorotetrafluoroethane	U		0.0458	0.200
Heptane	U		0.0626	0.200
Hexachloro-1,3-butadiene	U		0.0656	0.630
n-Hexane	U		0.0457	0.200
Isopropylbenzene	U		0.0563	0.200

Method Blank (MB)

(MB) R3209776-3 04/10/17 09:42

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Methylene Chloride	U		0.0465	0.200
Methyl Butyl Ketone	U		0.0682	1.25
2-Butanone (MEK)	U		0.0493	1.25
4-Methyl-2-pentanone (MIBK)	U		0.0650	1.25
Methyl Methacrylate	U		0.0773	0.200
MTBE	U		0.0505	0.200
Naphthalene	U		0.154	0.630
2-Propanol	U		0.0882	1.25
Propene	U		0.0932	0.400
Styrene	U		0.0465	0.200
1,1,2,2-Tetrachloroethane	U		0.0576	0.200
Tetrachloroethylene	U		0.0497	0.200
Tetrahydrofuran	U		0.0508	0.200
Toluene	U		0.0499	0.200
1,2,4-Trichlorobenzene	U		0.148	0.630
1,1,1-Trichloroethane	U		0.0665	0.200
1,1,2-Trichloroethane	U		0.0287	0.200
Trichloroethylene	U		0.0545	0.200
1,2,4-Trimethylbenzene	U		0.0483	0.200
1,3,5-Trimethylbenzene	U		0.0631	0.200
2,2,4-Trimethylpentane	U		0.0456	0.200
Vinyl chloride	U		0.0457	0.200
Vinyl Bromide	U		0.0727	0.200
Vinyl acetate	U		0.0639	0.200
m&p-Xylene	U		0.0946	0.400
o-Xylene	U		0.0633	0.200
Ethanol	U		0.0832	0.630
(S) 1,4-Bromofluorobenzene	*95.3*			*60.0-140*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3209776-1 04/10/17 08:05 • (LCSD) R3209776-2 04/10/17 08:53

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethanol	3.75	3.82	3.82	102	102	52.0-158			0.0900	25
Propene	3.75	4.13	4.16	110	111	54.0-155			0.620	25
Dichlorodifluoromethane	3.75	4.38	3.92	117	105	69.0-143			11.1	25
1,2-Dichlorotetrafluoroethane	3.75	3.92	4.02	104	107	70.0-130			2.46	25
Chloromethane	3.75	3.98	4.07	106	109	70.0-130			2.24	25

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3209776-1 04/10/17 08:05 • (LCSD) R3209776-2 04/10/17 08:53

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Vinyl chloride	3.75	4.17	4.21	111	112	70.0-130			1.07	25
1,3-Butadiene	3.75	4.60	4.53	123	121	70.0-130			1.62	25
Bromomethane	3.75	3.92	4.01	104	107	70.0-130			2.35	25
Chloroethane	3.75	4.26	4.28	114	114	70.0-130			0.280	25
Trichlorofluoromethane	3.75	3.70	3.79	98.7	101	70.0-130			2.32	25
1,1,2-Trichlorotrifluoroethane	3.75	3.74	3.83	99.7	102	70.0-130			2.36	25
1,1-Dichloroethene	3.75	3.75	3.84	100	102	70.0-130			2.39	25
1,1-Dichloroethane	3.75	3.69	3.77	98.4	100	70.0-130			2.01	25
Acetone	3.75	3.72	3.76	99.2	100	70.0-130			1.05	25
2-Propanol	3.75	3.83	3.87	102	103	66.0-150			1.10	25
Carbon disulfide	3.75	3.81	3.91	102	104	70.0-130			2.51	25
Methylene Chloride	3.75	3.31	3.34	88.4	89.1	70.0-130			0.870	25
MTBE	3.75	3.72	3.75	99.1	100	70.0-130			0.950	25
trans-1,2-Dichloroethene	3.75	3.80	3.85	101	103	70.0-130			1.44	25
n-Hexane	3.75	3.75	3.82	100	102	70.0-130			1.75	25
Vinyl acetate	3.75	3.73	3.75	99.5	99.9	70.0-130			0.420	25
Methyl Ethyl Ketone	3.75	3.89	3.90	104	104	70.0-130			0.190	25
cis-1,2-Dichloroethene	3.75	3.72	3.72	99.2	99.2	70.0-130			0.000	25
Chloroform	3.75	3.70	3.72	98.6	99.2	70.0-130			0.600	25
Cyclohexane	3.75	3.86	3.89	103	104	70.0-130			0.610	25
1,1,1-Trichloroethane	3.75	3.58	3.63	95.4	96.9	70.0-130			1.58	25
Carbon tetrachloride	3.75	3.55	3.62	94.6	96.5	70.0-130			1.96	25
Benzene	3.75	3.77	3.74	101	99.7	70.0-130			0.820	25
1,2-Dichloroethane	3.75	3.40	3.42	90.5	91.1	70.0-130			0.580	25
Heptane	3.75	3.42	3.38	91.2	90.1	70.0-130			1.14	25
Trichloroethylene	3.75	3.72	3.72	99.1	99.3	70.0-130			0.220	25
1,2-Dichloropropane	3.75	3.77	3.74	100	99.8	70.0-130			0.670	25
1,4-Dioxane	3.75	4.02	4.02	107	107	70.0-152			0.120	25
Bromodichloromethane	3.75	3.68	3.66	98.1	97.7	70.0-130			0.400	25
cis-1,3-Dichloropropene	3.75	3.85	3.81	103	102	70.0-130			1.11	25
4-Methyl-2-pentanone (MIBK)	3.75	3.62	3.58	96.5	95.5	70.0-142			1.03	25
Toluene	3.75	3.84	3.83	102	102	70.0-130			0.260	25
trans-1,3-Dichloropropene	3.75	3.80	3.77	101	101	70.0-130			0.870	25
1,1,2-Trichloroethane	3.75	3.88	3.80	103	101	70.0-130			2.03	25
Tetrachloroethylene	3.75	3.58	3.55	95.4	94.6	70.0-130			0.750	25
Methyl Butyl Ketone	3.75	3.80	3.75	101	99.9	70.0-150			1.34	25
Dibromochloromethane	3.75	3.73	3.72	99.3	99.1	70.0-130			0.220	25
1,2-Dibromoethane	3.75	3.82	3.81	102	101	70.0-130			0.380	25
Chlorobenzene	3.75	3.66	3.61	97.6	96.3	70.0-130			1.34	25
Ethylbenzene	3.75	3.70	3.68	98.7	98.1	70.0-130			0.620	25

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3209776-1 04/10/17 08:05 • (LCSD) R3209776-2 04/10/17 08:53

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
m&p-Xylene	7.50	7.14	7.08	95.2	94.4	70.0-130			0.820	25
o-Xylene	3.75	3.58	3.54	95.5	94.4	70.0-130			1.17	25
Styrene	3.75	3.80	3.79	101	101	70.0-130			0.210	25
Bromoform	3.75	3.70	3.70	98.6	98.8	70.0-130			0.230	25
1,1,2,2-Tetrachloroethane	3.75	3.68	3.63	98.1	96.9	70.0-130			1.15	25
4-Ethyltoluene	3.75	3.52	3.53	93.9	94.0	70.0-130			0.110	25
1,3,5-Trimethylbenzene	3.75	3.59	3.57	95.8	95.1	70.0-130			0.810	25
1,2,4-Trimethylbenzene	3.75	3.68	3.62	98.2	96.5	70.0-130			1.84	25
1,3-Dichlorobenzene	3.75	3.55	3.54	94.7	94.3	70.0-130			0.380	25
1,4-Dichlorobenzene	3.75	3.50	3.50	93.2	93.4	70.0-130			0.210	25
Benzyl Chloride	3.75	3.86	3.87	103	103	70.0-144			0.100	25
1,2-Dichlorobenzene	3.75	3.45	3.39	91.9	90.5	70.0-130			1.48	25
1,2,4-Trichlorobenzene	3.75	3.90	3.98	104	106	70.0-155			2.02	25
Hexachloro-1,3-butadiene	3.75	3.49	3.49	93.1	93.0	70.0-145			0.110	25
Naphthalene	3.75	4.58	4.66	122	124	70.0-155			1.83	25
Allyl Chloride	3.75	3.78	3.77	101	100	70.0-130			0.470	25
2-Chlorotoluene	3.75	3.64	3.59	97.0	95.6	70.0-130			1.43	25
Methyl Methacrylate	3.75	3.85	3.84	103	102	70.0-130			0.400	25
Tetrahydrofuran	3.75	3.46	3.46	92.2	92.2	70.0-140			0.0900	25
2,2,4-Trimethylpentane	3.75	3.70	3.74	98.6	99.6	70.0-130			1.00	25
Vinyl Bromide	3.75	3.74	3.88	99.6	103	70.0-130			3.67	25
Isopropylbenzene	3.75	3.44	3.40	91.7	90.7	70.0-130			1.10	25
(S) 1,4-Bromofluorobenzene				*102*	*102*	*60.0-140*				

Method Blank (MB)

(MB) R3210087-3 04/11/17 09:22

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Acetone	U		0.0569	1.25
Allyl Chloride	U		0.0546	0.200
Benzene	U		0.0460	0.200
Benzyl Chloride	U		0.0598	0.200
Bromodichloromethane	U		0.0436	0.200
Bromoform	U		0.0786	0.600
Bromomethane	U		0.0609	0.200
1,3-Butadiene	U		0.0563	2.00
Carbon disulfide	U		0.0544	0.200
Carbon tetrachloride	U		0.0585	0.200
Chlorobenzene	U		0.0601	0.200
Chloroethane	U		0.0489	0.200
Chloroform	U		0.0574	0.200
Chloromethane	U		0.0544	0.200
2-Chlorotoluene	U		0.0605	0.200
Cyclohexane	U		0.0534	0.200
Dibromochloromethane	U		0.0494	0.200
1,2-Dibromoethane	U		0.0185	0.200
1,2-Dichlorobenzene	U		0.0603	0.200
1,3-Dichlorobenzene	U		0.0597	0.200
1,4-Dichlorobenzene	U		0.0557	0.200
1,2-Dichloroethane	U		0.0616	0.200
1,1-Dichloroethane	U		0.0514	0.200
1,1-Dichloroethene	U		0.0490	0.200
cis-1,2-Dichloroethene	U		0.0389	0.200
trans-1,2-Dichloroethene	U		0.0464	0.200
1,2-Dichloropropane	U		0.0599	0.200
cis-1,3-Dichloropropene	U		0.0588	0.200
trans-1,3-Dichloropropene	U		0.0435	0.200
1,4-Dioxane	U		0.0554	0.200
Ethylbenzene	U		0.0506	0.200
4-Ethyltoluene	U		0.0666	0.200
Trichlorofluoromethane	U		0.0673	0.200
Dichlorodifluoromethane	U		0.0601	0.200
1,1,2-Trichlorotrifluoroethane	U		0.0687	0.200
1,2-Dichlorotetrafluoroethane	U		0.0458	0.200
Heptane	U		0.0626	0.200
Hexachloro-1,3-butadiene	U		0.0656	0.630
n-Hexane	U		0.0457	0.200
Isopropylbenzene	U		0.0563	0.200

Method Blank (MB)

(MB) R3210087-3 04/11/17 09:22

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Methylene Chloride	U		0.0465	0.200
Methyl Butyl Ketone	U		0.0682	1.25
2-Butanone (MEK)	U		0.0493	1.25
4-Methyl-2-pentanone (MIBK)	U		0.0650	1.25
Methyl Methacrylate	U		0.0773	0.200
MTBE	U		0.0505	0.200
Naphthalene	U		0.154	0.630
2-Propanol	U		0.0882	1.25
Propene	U		0.0932	0.400
Styrene	U		0.0465	0.200
1,1,2,2-Tetrachloroethane	U		0.0576	0.200
Tetrachloroethylene	U		0.0497	0.200
Tetrahydrofuran	U		0.0508	0.200
Toluene	U		0.0499	0.200
1,2,4-Trichlorobenzene	U		0.148	0.630
1,1,1-Trichloroethane	U		0.0665	0.200
1,1,2-Trichloroethane	U		0.0287	0.200
Trichloroethylene	U		0.0545	0.200
1,2,4-Trimethylbenzene	U		0.0483	0.200
1,3,5-Trimethylbenzene	U		0.0631	0.200
2,2,4-Trimethylpentane	U		0.0456	0.200
Vinyl chloride	U		0.0457	0.200
Vinyl Bromide	U		0.0727	0.200
Vinyl acetate	U		0.0639	0.200
m&p-Xylene	U		0.0946	0.400
o-Xylene	U		0.0633	0.200
Ethanol	U		0.0832	0.630
(S) 1,4-Bromofluorobenzene	*93.7*			*60.0-140*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3210087-1 04/11/17 07:45 • (LCSD) R3210087-2 04/11/17 08:33

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethanol	3.75	3.66	3.70	97.5	98.7	52.0-158			1.14	25
Propene	3.75	4.08	4.04	109	108	54.0-155			0.780	25
Dichlorodifluoromethane	3.75	3.89	3.95	104	105	69.0-143			1.39	25
1,2-Dichlorotetrafluoroethane	3.75	4.03	4.06	107	108	70.0-130			0.800	25
Chloromethane	3.75	4.02	4.00	107	107	70.0-130			0.530	25

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3210087-1 04/11/17 07:45 • (LCSD) R3210087-2 04/11/17 08:33

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Vinyl chloride	3.75	4.17	4.26	111	114	70.0-130			2.01	25
1,3-Butadiene	3.75	4.51	4.52	120	121	70.0-130			0.360	25
Bromomethane	3.75	3.98	4.08	106	109	70.0-130			2.50	25
Chloroethane	3.75	4.25	4.29	113	114	70.0-130			0.810	25
Trichlorofluoromethane	3.75	3.75	3.85	100	103	70.0-130			2.72	25
1,1,2-Trichlorotrifluoroethane	3.75	3.77	3.92	100	105	70.0-130			4.00	25
1,1-Dichloroethene	3.75	3.75	3.84	99.9	102	70.0-130			2.52	25
1,1-Dichloroethane	3.75	3.69	3.77	98.3	101	70.0-130			2.34	25
Acetone	3.75	3.59	3.63	95.7	96.9	70.0-130			1.26	25
2-Propanol	3.75	3.68	3.76	98.1	100	66.0-150			2.14	25
Carbon disulfide	3.75	3.84	4.02	102	107	70.0-130			4.64	25
Methylene Chloride	3.75	3.19	3.30	85.2	88.1	70.0-130			3.43	25
MTBE	3.75	3.66	3.78	97.7	101	70.0-130			3.24	25
trans-1,2-Dichloroethene	3.75	3.83	4.02	102	107	70.0-130			4.81	25
n-Hexane	3.75	3.71	3.78	98.9	101	70.0-130			1.95	25
Vinyl acetate	3.75	3.58	3.67	95.6	97.8	70.0-130			2.29	25
Methyl Ethyl Ketone	3.75	3.81	3.86	102	103	70.0-130			1.47	25
cis-1,2-Dichloroethene	3.75	3.63	3.71	96.9	99.1	70.0-130			2.23	25
Chloroform	3.75	3.68	3.77	98.2	101	70.0-130			2.30	25
Cyclohexane	3.75	3.93	3.92	105	105	70.0-130			0.0900	25
1,1,1-Trichloroethane	3.75	3.57	3.63	95.2	96.7	70.0-130			1.62	25
Carbon tetrachloride	3.75	3.60	3.65	96.0	97.3	70.0-130			1.37	25
Benzene	3.75	3.73	3.80	99.5	101	70.0-130			1.88	25
1,2-Dichloroethane	3.75	3.31	3.44	88.3	91.7	70.0-130			3.77	25
Heptane	3.75	3.28	3.35	87.4	89.4	70.0-130			2.24	25
Trichloroethylene	3.75	3.78	3.80	101	101	70.0-130			0.520	25
1,2-Dichloropropane	3.75	3.71	3.71	98.9	98.8	70.0-130			0.140	25
1,4-Dioxane	3.75	3.99	3.87	106	103	70.0-152			3.12	25
Bromodichloromethane	3.75	3.66	3.70	97.5	98.6	70.0-130			1.07	25
cis-1,3-Dichloropropene	3.75	3.81	3.81	102	102	70.0-130			0.0700	25
4-Methyl-2-pentanone (MIBK)	3.75	3.47	3.52	92.4	94.0	70.0-142			1.66	25
Toluene	3.75	3.87	3.88	103	103	70.0-130			0.320	25
trans-1,3-Dichloropropene	3.75	3.76	3.74	100	99.8	70.0-130			0.350	25
1,1,2-Trichloroethane	3.75	3.81	3.82	102	102	70.0-130			0.110	25
Tetrachloroethylene	3.75	3.78	3.67	101	97.7	70.0-130			3.00	25
Methyl Butyl Ketone	3.75	3.62	3.55	96.5	94.6	70.0-150			2.01	25
Dibromochloromethane	3.75	3.75	3.76	99.9	100	70.0-130			0.390	25
1,2-Dibromoethane	3.75	3.82	3.79	102	101	70.0-130			0.670	25
Chlorobenzene	3.75	3.66	3.63	97.7	96.7	70.0-130			1.04	25
Ethylbenzene	3.75	3.79	3.76	101	100	70.0-130			0.580	25

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3210087-1 04/11/17 07:45 • (LCSD) R3210087-2 04/11/17 08:33

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
m&p-Xylene	7.50	7.27	7.33	96.9	97.7	70.0-130			0.810	25
o-Xylene	3.75	3.64	3.59	97.1	95.6	70.0-130			1.49	25
Styrene	3.75	3.93	3.90	105	104	70.0-130			0.670	25
Bromoform	3.75	3.83	3.84	102	102	70.0-130			0.260	25
1,1,2,2-Tetrachloroethane	3.75	3.66	3.71	97.6	99.0	70.0-130			1.47	25
4-Ethyltoluene	3.75	3.56	3.59	95.0	95.8	70.0-130			0.880	25
1,3,5-Trimethylbenzene	3.75	3.62	3.68	96.5	98.0	70.0-130			1.49	25
1,2,4-Trimethylbenzene	3.75	3.66	3.73	97.7	99.4	70.0-130			1.70	25
1,3-Dichlorobenzene	3.75	3.68	3.61	98.3	96.2	70.0-130			2.15	25
1,4-Dichlorobenzene	3.75	3.63	3.59	96.7	95.6	70.0-130			1.11	25
Benzyl Chloride	3.75	3.86	3.82	103	102	70.0-144			0.920	25
1,2-Dichlorobenzene	3.75	3.49	3.44	93.2	91.8	70.0-130			1.44	25
1,2,4-Trichlorobenzene	3.75	3.94	3.98	105	106	70.0-155			0.980	25
Hexachloro-1,3-butadiene	3.75	3.41	3.49	90.9	93.1	70.0-145			2.36	25
Naphthalene	3.75	4.53	4.59	121	122	70.0-155			1.24	25
Allyl Chloride	3.75	3.65	3.70	97.3	98.7	70.0-130			1.43	25
2-Chlorotoluene	3.75	3.65	3.69	97.4	98.3	70.0-130			0.910	25
Methyl Methacrylate	3.75	3.79	3.86	101	103	70.0-130			1.75	25
Tetrahydrofuran	3.75	3.30	3.37	88.0	89.8	70.0-140			2.08	25
2,2,4-Trimethylpentane	3.75	3.63	3.69	96.7	98.5	70.0-130			1.82	25
Vinyl Bromide	3.75	3.80	3.92	101	105	70.0-130			3.26	25
Isopropylbenzene	3.75	3.49	3.50	93.0	93.4	70.0-130			0.370	25
(S) 1,4-Bromofluorobenzene				*102*	*101*	*60.0-140*				

Method Blank (MB)

(MB) R3210416-3 04/12/17 09:01

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
n-Hexane	U		0.0457	0.200
(S) 1,4-Bromofluorobenzene	*99.2*			*60.0-140*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3210416-1 04/12/17 07:33 • (LCSD) R3210416-2 04/12/17 08:17

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
n-Hexane	3.75	4.16	4.12	111	110	70.0-130			1.14	25
(S) 1,4-Bromofluorobenzene				*102*	*102*	*60.0-140*				

Method Blank (MB)

(MB) R3211594-3 04/18/17 08:54

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Oxygen	U		0.225	2.00
Carbon Monoxide	U		0.665	2.00
Carbon Dioxide	U		0.121	0.500
Methane	U		0.0584	0.400

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3211594-1 04/18/17 08:26 • (LCSD) R3211594-2 04/18/17 08:41

Analyte	Spike Amount %	LCS Result %	LCSD Result %	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Oxygen	3.50	3.56	3.56	102	102	70.0-130			0.150	20
Carbon Monoxide	3.50	3.15	3.36	90.0	95.9	70.0-130			6.26	20
Carbon Dioxide	3.50	3.16	3.25	90.2	93.0	70.0-130			2.98	20
Methane	2.80	2.48	2.51	88.5	89.5	70.0-130			1.12	20

Method Blank (MB)

(MB) R3212311-3 04/20/17 15:12

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Carbon Dioxide	U		0.121	0.500

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3212311-1 04/20/17 14:45 • (LCSD) R3212311-2 04/20/17 14:58

Analyte	Spike Amount %	LCS Result %	LCSD Result %	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Carbon Dioxide	3.50	3.31	3.04	94.5	86.9	70.0-130			8.36	20

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.

Qualifier	Description
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE.**
***** Not all certifications held by the laboratory are applicable to the results reported in the attached report.

State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Conneticut	PH-0197	North Carolina [1]	DW21704
Florida	E87487	North Carolina [2]	41
Georgia	NELAP	North Dakota	R-140
Georgia [1]	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky [1]	90010	South Dakota	n/a
Kentucky [2]	16	Tennessee [1 4]	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

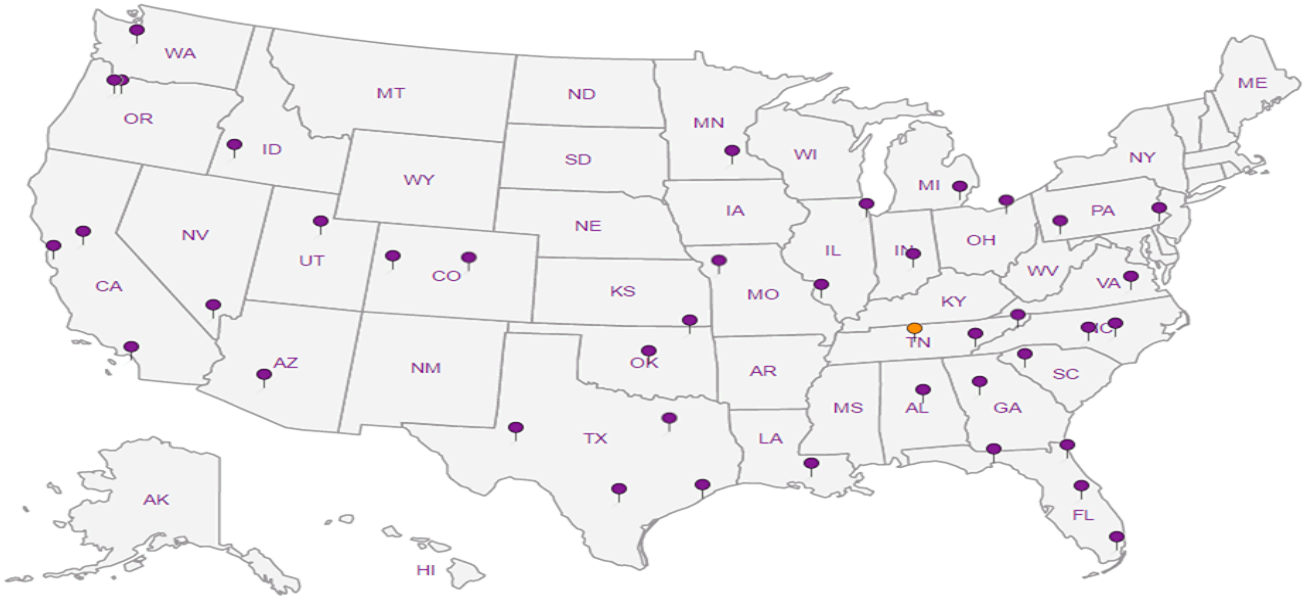
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [n/a] Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**



ESC LABS
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 90146
F168

Report to: YOLA BAYRAM
Email To: YBAYRAM@AMRCORP.NET
Project Description: 1700 JEFFERSON
City/State Collected: OAKLAND, CA
Phone:
Fax: 510-671-2088
Client Project # 1700
Lab Project #
Collected by (print): CHERYL CARY
Site/Facility ID #
P.O. #
Collected by (signature):
Immediately Packed on Ice N X Y
Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day
Quote #
Date Results Needed
Acctnum:
Template:
Prelogin:
TSR:
PB:
Shipped Via:

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	TO-15	Pres Chk	Remarks	Sample # (lab only)
DS-GSV		AIR		3/31	1023		X			01
SV17				4/3	0959		X			02
SV17-DUP				4/3	1013		X			03
SS3				4/5	0918		X			04
SV18					1032		X			05
SV15					1136		X			06
SS4					1250		X			07
SV16					1428		X			08
SS2					1517		X			09
SS2-DUP					1535		X			10

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: SAMPLES ANTICIPATED TO BE VERY DIRTY

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____
Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes (No) HCL / MeoH TBR
	4/7/17			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: Amb °C Bottles Received: 10
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 4/8/17 Time: 9:00

If preservation required by Login: Date/Time
Hold:
Condition: NCF / OK