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July 28, 2017

SEMIANNUAL GROUNDWATER MONITORING AND SAMPLING REPORT, FIRST SEMESTER 2017

Property Identification:
3635 13th Avenue
Oakland, California 94606

AEI Project No. 338841
ACHCSA Case No. RO0000159

Prepared for:
Mr. Kia Sumner
1069 Oak Hills Road
Lafayette, California 94549

Prepared by:
AEI Consultants
3880 South Bascom Avenue, Suite 109
San Jose, California 95124
(408) 559-7600

July 28, 2017

Ms. Karel Detterman
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

Subject: Transmittal, Semiannual Groundwater Monitoring and Sampling Report, First Semester 2017
3635 13th Avenue, Oakland, California 94610
Toxics Case No. RO0000159

Dear Ms. Detterman:

Enclosed is the *Semiannual Groundwater Monitoring and Sampling Report, First Semester 2017* prepared at your request for activities at the subject site.

I declare under penalty of perjury, that the information and/or recommendations contained in the attached report for the above-referenced site are true and correct to the best of my knowledge.

If you have any questions or need additional information, please do not hesitate to contact Mr. Trent Weise of AEI Consultants at (925) 746-6000.

Sincerely,

Mr. Kia Sumner

Enclosures

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SIGNATURES
This document was prepared by, or under the direction, of the undersigned:

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1. INTRODUCTION

On behalf of Mr. Kia Sumner, AEI Consultants (AEI) has prepared this Semiannual Groundwater Monitoring and Sampling Report for the First Semester 2017 to document the monitoring event performed at 3635 Thirteenth Avenue in Oakland, California ("the Site"). Site assessment is being conducted in cooperation with the Alameda County Department of Environmental Health (ACDEH). The sampling activities and results are discussed in detail below.

2. BACKGROUND

The Site is located on the western corner of Excelsior and Thirteenth Avenues in an urban and primarily residential area of the City of Oakland. The Site is currently vacant pending the planned construction of a single-family home. Figure 1 presents the Site location and vicinity. The Site was formerly occupied by a gasoline service station, which ceased operation in 1992. In December 1992, one 250-gallon waste oil underground storage tank (UST), one 500-gallon gasoline UST, and one 1,000-gallon gasoline UST were removed from the Site. Investigation and remediation activities have been performed at the Site to address petroleum hydrocarbons released from the former USTs at the Site.

Seven groundwater monitoring wells have been installed at the Site, MW-1 through MW-7. Monitoring wells MW-1, MW-2, and MW-3 were installed in March 1994. In April 2007, four additional groundwater monitoring wells, MW-4 through MW-7, were installed. Table 1 presents a summary of groundwater monitoring well construction details. Periodic groundwater monitoring has been performed with the groundwater monitoring wells since their installation. Figure 2 presents the Site plan, including the monitoring well locations.

3. STATUS REPORT

This section provides a status report of activities conducted during the first semiannual monitoring event and activities proposed for the second semiannual event.

3.1 Activities Conducted

Activities performed during the first semester of 2017 included:

- Submitted *Work Plan, Additional Site Investigation* ("the Work Plan") to ACDEH and GeoTracker on January 30, 2017. The Work Plan was accepted by ACDEH on January 31, 2017.
- Performed the first semiannual groundwater monitoring on May 30, 2017.
- Collected an additional round of soil vapor samples described in the Work Plan on May 30, 2017.

3.2 Activities Proposed

Activities proposed for the second semester of 2017 include:

- Submit Encroachment Permit to the City of Oakland necessary for the additional soil investigation on 13th Avenue.
- Notify ACDEH of the proposed work and schedule.
- Perform additional soil investigation described in the Work Plan.
- Perform semi-annual groundwater monitoring in November 2017.
- Prepare a Corrective Action Plan presenting a remedial program if necessary to meet the requirements of the California State Water Resources Control Board's *Low-Threat Underground Storage Tank Case Closure Policy* and continuing to work towards case closure.

4. MONITORING ACTIVITIES

AEI performed the first semester groundwater sampling event on May 30, 2017, including measuring depth to water and collecting groundwater samples from each of the seven groundwater monitoring wells at the Site as described below.

On May 30, 2017, groundwater elevations were measured in each of the monitoring wells at the Site. The well caps were removed and the wells were allowed to equilibrate with the atmosphere. The depth to water was then measured in each well to ± 0.01 foot using an electronic depth to water meter. Table 2 presents the depth to water measurements collected and the calculated groundwater elevations.

Once depth to water measurements were recorded, groundwater samples were collected from each of the seven groundwater monitoring wells, MW-1 through MW-7. The wells were first purged using disposal bailers to a total volume of approximately three-well volumes. During well purging, groundwater parameters of temperature, pH, specific conductivity, dissolved oxygen (DO), and oxidation-reduction potential (ORP) were measured at approximately five-minute intervals. The wells were purged until either three-well volumes were achieved or significant well dewatering occurred. Visual estimates of turbidity were noted while purging the wells. Once three-well volumes were purged or significant well dewatering was achieved, groundwater samples were collected from each well using a disposal bailer. Samples for volatile analytes were collected into 40 milliliter (mL) hydrochloric acid (HCl) preserved volatile organic analysis (VOA) vials, with zero headspace (no air bubbles). Groundwater samples collected were entered onto the chain-of-custody record and placed in an ice chilled cooler pending transportation to the laboratory. Copies of the field forms for the groundwater monitoring event are included in Appendix A.

The collected groundwater samples were transported under proper chain-of-custody protocol to McCampbell Analytical, Inc. of Pittsburg, California (Department of Health Services Certification #1644) for analyses. Each groundwater sample collected was analyzed for methyl-tertiary butyl ether (MTBE), benzene, toluene, ethylbenzene, and total xylenes (collectively "BTEX compounds") for and total petroleum hydrocarbons as gasoline (TPH-g) using US EPA Testing Method 8260B, total petroleum hydrocarbons as diesel (TPH-d) and motor oil (TPH-mo) using US EPA Testing Method 8015M, with silica gel cleanup.

Purged groundwater generated during the sampling event is stored onsite in a sealed, labeled, department of transportation (DOT) approved 55-gallon drum. The drum is scheduled to be disposed in August 2017 as a non-hazardous waste by Advanced Environmental Services of Baker City, Oregon.

5. SUMMARY OF RESULTS

This section provides a summary of the results of the groundwater monitoring performed during the first semester monitoring event.

5.1 Groundwater Level Elevations

Groundwater elevations measured during the event were generally consistent with previous monitoring events. Groundwater elevation data is summarized in Table 2. Groundwater elevation contours are shown on Figure 3. Groundwater elevations are generally consistent with previous monitoring events, with groundwater flow direction generally towards the south-southwest.

5.2 Groundwater Sample Results

Table 3 presents a summary of compounds detected in groundwater samples collected and analyzed during the first semester groundwater monitoring event for 2017. Table 4 presents a summary of current and historical results for select compounds. Petroleum hydrocarbons continue to be detected in five of the seven groundwater monitoring wells. Consistent with previous groundwater monitoring events, no petroleum hydrocarbons were detected in MW-1 and MW-3. The concentrations of petroleum hydrocarbons detected were generally consistent with historical observations and can be summarized as follows:

- TPH-g and TPH-d were observed in five of the seven groundwater samples collected and analyzed, observed at maximum concentrations of 2,900 micrograms per liter (µg/L) and 1,600 µg/L, respectively.
- Methyl tyert butyl ether (MTBE) was detected in five of the seven groundwater samples collected and analyzed, observed at concentrations ranging from 17 µg/L to 140 µg/L.
- Benzene was detected in five of the seven groundwater samples collected and analyzed, observed at concentrations ranging from 33 µg/L to 1,700 µg/L.

Figures 5 and 6 present groundwater concentrations and isoconcentration contours for TPHg and benzene, respectively. In general, the extent of TPHg and benzene in groundwater is stable or decreasing. Laboratory analytical reports and chain of custody documentation are included in Appendix B.

6. REFERENCES

The regulatory record for this Site can be found on the State of California GeoTracker Website at https://geotracker.waterboards.ca.gov/esi/view_submittals.asp?global_id=T0600100274

TABLES

AEI Consultants

Table 1

Summary of Well Construction Details

3635 13th Avenue, Oakland, California

Well ID	Date Installed	Casing Elevation (feet NAVD 88)	Nominal Diameter (inch)	Total Depth (feet bgs)	Screen Interval (feet bgs)	Sand Pack Interval (feet bgs)	Bentonite Seal Interval (feet bgs)	Cement Grout Interval (feet bgs)	Casing Material
MW-1	03/24/94	197.33	2	25	12 - 25	11 - 25	10 - 11	0.5 - 10	SCH40 PVC
MW-2	03/24/94	199.01	2	36	16 - 36	15 - 36	14 - 15	0.5 - 14	SCH40 PVC
MW-3	03/24/94	201.57	2	36.5	15.5 - 36	14 - 36.5	13.5 - 14.5	0.5 - 13.5	SCH40 PVC
MW-4	09/07/07	200.29	2	22	17 - 22	16 - 22	15 - 16	0.5 - 15	SCH40 PVC
MW-5	09/07/07	198.61	2	22	17 - 22	16 - 22	15 - 16	0.5 - 15	SCH40 PVC
MW-6	09/07/07	200.29	2	22	17 - 22	16 - 22	15 - 16	0.5 - 15	SCH40 PVC
MW-7	11/03/08	197.67	2	22	17 - 22	16 - 22	15 - 16	1 - 15	SCH40 PVC

Notes/Abbreviations

bgs = below ground surface

SCH40 PVC = schedule 40 polyvinyl chloride

NM = Not Measured

NAVD 88 = North American Vertical Datum of 1988

*Monitoring Well elevation for MW-1 through MW-7 was resurveyed on 1/25/2017

Table 2

Summary of Groundwater Elevation Measurements

3635 13th Avenue, Oakland, California

Well ID	Date	Well TOC Elevation (feet NAVD 88)	Depth to Water (feet BTOC)	Groundwater Elevation (feet msl)
MW-1	11/22/94	194.75	10.92	183.83
	02/23/95		10.58	184.17
	05/24/95		10.94	183.81
	08/18/95		14.52	180.23
	02/07/96		4.43	190.32
	09/06/96		13.60	181.15
	06/19/97		13.07	181.68
	01/24/02		9.53	185.22
	07/15/03		12.85	181.90
	10/10/03		14.58	180.17
	04/06/04		10.92	183.83
	07/09/04		14.34	180.41
	10/08/04		15.30	179.45
	04/02/07		12.19	182.56
	07/02/07		13.28	181.47
	10/03/07		17.05	177.70
	01/09/08	197.28	6.74	190.54
	04/04/08		13.16	184.12
	07/07/08		15.84	181.44
	10/16/08		17.54	179.74
	1/29/2013 [1]		11.36	185.92
	12/16/13		19.04	178.24
	04/17/14		10.11	187.17
	11/04/14		19.27	178.01
	05/29/15		16.07	181.21
	11/20/15		NM	NM
	05/24/16		13.79	183.49
	12/05/16	197.33	14.30	183.03
	05/30/17		**12.89**	**184.44**
MW-2	11/22/94	196.44	12.54	183.90
	02/23/95		12.35	184.09
	05/24/95		12.11	184.33
	08/18/95		16.25	180.19
	02/07/96		9.34	187.10
	09/06/96		15.22	181.22
	06/19/97		13.33	183.11
	01/24/02		9.72	186.72
	07/15/03		12.42	184.02
	10/10/03		13.79	182.65
	04/06/04		10.55	185.89
	07/09/04		13.78	182.66
	10/08/04		14.78	181.66
	04/02/07		11.32	185.12
	07/02/07		13.18	183.26
	10/03/07		16.71	179.73
	01/09/08	198.93	8.48	190.45
	04/04/08		12.60	186.33

Table 2

Summary of Groundwater Elevation Measurements

3635 13th Avenue, Oakland, California

Well ID	Date	Well TOC Elevation (feet NAVD 88)	Depth to Water (feet BTOC)	Groundwater Elevation (feet msl)
MW-2	07/07/08		15.49	183.44
	10/16/08		17.22	181.71
	1/29/2013 [1]		12.89	186.04
	12/16/13		18.72	180.21
	04/17/14		10.30	188.63
	11/04/14		18.65	180.28
	05/29/15		15.57	183.36
	11/20/15		NM	NM
	05/24/16		13.32	185.61
	12/05/16	199.01	13.54	185.47
	05/30/17		**12.40**	**186.61**
MW-3	11/22/94	198.93	11.53	187.40
	02/23/95		11.89	187.04
	05/24/95		12.71	186.22
	08/18/95		16.14	182.79
	02/07/96		6.22	192.71
	09/06/96		13.51	185.42
	06/19/97		12.46	186.47
	01/24/02		10.08	188.85
	07/15/03		12.45	186.48
	10/10/03		14.00	184.93
	04/06/04		10.78	188.15
	07/09/04		14.14	184.79
	10/08/04		14.99	183.94
	04/02/07		11.87	187.06
	07/02/07		14.45	184.48
	10/03/07		17.10	181.83
	01/09/08	201.46	9.42	192.04
	04/04/08		15.16	186.30
	07/07/08		15.63	185.83
	10/16/08		17.53	183.93
	1/29/2013 [1]		12.15	189.31
	12/16/13		19.20	182.26
	04/17/14		12.56	188.90
	11/04/14		19.17	182.29
	05/29/15		16.33	185.13
	11/20/15		NM	NM
	05/24/16		13.98	187.48
	12/05/16	201.57	13.03	188.54
	05/30/17		**12.48**	**189.09**
MW-4	10/03/07	200.23	17.21	183.02
	01/09/08		9.20	191.03
	04/04/08		13.63	186.60
	07/07/08		16.18	184.05
	10/16/08		17.81	182.42
	1/29/2013 [1]		11.66	188.57
	12/16/13		20.44	179.79
	04/17/14		10.97	189.26
	11/04/14		20.78	179.45

Table 2

Summary of Groundwater Elevation Measurements

3635 13th Avenue, Oakland, California

Well ID	Date	Well TOC Elevation (feet NAVD 88)	Depth to Water (feet BTOC)	Groundwater Elevation (feet msl)
MW-4	05/29/15		16.53	183.70
	11/20/15		NM	NM
	05/24/16		15.30	184.93
	12/05/16	200.29	17.25	183.04
	05/30/17		**13.55**	**186.74**
MW-5	10/03/07	198.52	17.44	181.08
	01/09/08		10.01	188.51
	04/04/08		11.78	186.74
	07/07/08		15.53	182.99
	10/16/08		17.89	180.63
	1/29/2013 [1]		13.21	185.31
	12/16/13		18.65	179.87
	04/17/14		16.32	182.20
	11/04/14		19.53	178.99
	05/29/15		16.37	182.15
	11/20/15		NM	NM
	05/24/16		13.91	184.61
	12/05/16	198.61	14.48	184.13
	05/30/17		**12.84**	**185.77**
MW-6	10/03/07	200.20	18.46	181.74
	01/09/08		11.93	188.27
	04/04/08		15.69	184.51
	07/07/08		14.84	185.36
	10/16/08		18.95	181.25
	1/29/2013 [1]		17.62	182.58
	12/16/13		19.60	180.60
	04/17/14		17.38	182.82
	11/04/14		18.73	181.47
	05/29/15		15.26	184.94
	11/20/15		NM	NM
	05/24/16		13.36	186.84
	12/05/16	200.29	13.21	187.08
	05/30/17		**12.56**	**187.73**
MW-7	1/29/2013 [1]	NM	19.07	NM
	12/16/13		19.49	NM
	04/17/14		10.54	NM
	11/04/14		20.32	NM
	05/29/15		15.71	NM
	11/20/15		NM	NM
	05/24/16		18.09	NM
	12/05/16	197.67	15.05	182.62
	05/30/17		**12.48**	**185.19**

Notes/Abbreviations

ft msl = feet above mean sea level

BTOC = Below top of well casing

NM = Not Measured

NAVD 88 = North American Vertical Datum of 1988

Table 3
Summary of Compounds Detected - May 2017
3635 13th Avenue, Oakland, California

Sample Location	Date	Analyte	Result	Units
MW-1	05/30/17	No analytes detected		
MW-2	05/30/17	Benzene	360	µg/L
		t-Butyl alcohol	37	µg/L
		n-Butyl benzene	13	µg/L
		sec-Butyl benzene	5.2	µg/L
		Ethylbenzene	130	µg/L
		Isopropylbenzene	17	µg/L
		MTBE	29	µg/L
		Naphthalene	35	µg/L
		n-Propyl benzene	31	µg/L
		Toluene	17	µg/L
		1,2,4-Trimethylbenzene	34	µg/L
		1,3,5-Trimethylbenzene	6.0	µg/L
		Xylenes	54	µg/L
		TPH-g	2,300	µg/L
		TPH-d	1,100	µg/L
MW-3	05/30/17	No analytes detected		
MW-4	05/30/17	Benzene	530	µg/L
		Ethylbenzene	380	µg/L
		MTBE	32	µg/L
		Naphthalene	190	µg/L
		Toluene	60	µg/L
		Xylenes	200	µg/L
		TPH-g	2,900	µg/L
		TPH-d	1,600	µg/L
MW-5	05/30/17	Benzene	210	µg/L
		t-Butyl alcohol	81	µg/L
		Ethylbenzene	9.2	µg/L
		MTBE	17	µg/L
		Xylenes	6.3	µg/L
		TPH-g	320	µg/L
		TPH-d	52	µg/L
MW-6	05/30/17	Benzene	33	µg/L
		t-Butyl alcohol	65	µg/L
		Isopropylbenzene	4.8	µg/L
		MTBE	140	µg/L
		Naphthalene	2.7	µg/L
		n-Propyl benzene	5.0	µg/L
		TPH-g	370	µg/L
		TPH-d	140	µg/L
MW-7	05/30/17	Benzene	1,700	µg/L
		t-Butyl alcohol	460	µg/L
		Ethylbenzene	96	µg/L
		TPH-g	2,200	µg/L
		TPH-d	320	µg/L

Abbreviations:

µg/L = micrograms per liter

TPH-g = Total Petroleum Hydrocarbons as gasoline

TPH-d = Total Petroleum Hydrocarbons as diesel

MTBE = Methyl tertiary butyl ether

Table 4

Summary of Groundwater Analytical Results

3635 13th Avenue, Oakland, California

Sample ID	Date Sampled	TPH-g (µg/L)	TPH-d (µg/L)	MTBE (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)
MW - 1	11/22/94	210	<50	-	<0.5	<0.5	<0.5	2.3
	02/23/95	140	<50	-	<0.5	<0.5	0.6	1.5
	05/24/95	<50	<50	-	<0.5	<0.5	<0.5	<0.5
	08/18/95	2800	<50	-	25	6.2	22	30
	02/07/96	<50	<50	-	<0.5	<0.5	<0.5	<0.5
	09/06/96	<50	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	06/19/97	630	400	15	25	9.7	100	14
	01/24/02	60	<50	<5.0	3.3	2.8	2.0	6.0
	07/15/03	87	<50	<5.0	15	4.9	3.3	9.2
	10/10/03	81	110	<5.0	<0.5	0.62	0.57	0.5
	04/06/04	<50	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	07/09/04	130	80	<35	<0.5	<0.5	2.8	0.78
	10/08/04	260	120	24	3.0	2.9	8.3	10
	04/02/07	<50	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	07/02/07	150	79	<25	<0.5	1.0	<0.5	<0.5
	10/03/07	<50	<50	5.8	<0.5	<0.5	<0.5	<0.5
	01/09/08	<50	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	04/04/08	130	-	<10	<0.5	1.2	22	0.93
	07/07/08	<50	<50	11	<0.5	<0.5	<0.5	<0.5
	10/16/08	70	<50	6.3	<0.5	<0.5	<0.5	<0.5
	1/29/2013 [1]	<50	<50	<5.0	3.6	<0.5	<0.5	<0.5
	12/16/13	110	-	46	<0.5	1.2	0.7	<0.5
	04/17/14	<50	-	<0.5	<0.5	<0.5	<0.5	<0.5
	11/04/14	97	-	1.1	21	<0.5	3.2	2.3
	05/29/15	<50	-	<0.5	<0.5	<0.5	1.1	<0.5
	11/20/15	120	<50	0.62	<0.50	<0.50	<0.50	<0.50
	05/24/16	180	68	5.8	<0.50	<0.50	12	2.7
	11/30/16	<50	<50	3.6	<0.50	<0.50	1.6	<0.50
	05/30/17	**<50**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**
MW - 2	11/22/94	11,000	<50	-	35	21	7	50
	02/23/95	4,000	<50	-	<0.5	<0.5	3	6
	05/24/95	8,600	<50	-	95	37	37	70
	08/18/95	7,200	<50	-	43	21	21	71
	02/07/96	11,000	<50	-	17	9	9	25
	09/06/96	15,000	1,900	ND	4,300	920	460	1,600
	06/19/97	26,000	2,900	<200	5,300	1,500	910	3,200
	01/24/02	34,000	5,300	<200	3,100	1,100	1,100	2,900
	07/15/03	18,000	6,600	<1000	2,300	310	690	1,600
	10/10/03	19,000	1,800	<500	2,700	460	850	1,800
	04/06/04	6,900	1,300	<200	1,100	100	380	780
	07/09/04	17,000	4,400	<450	2,800	240	710	1,300
	10/08/04	6,900	890	<150	1,500	240	340	670
	04/02/07	21,000	4,300	<450	2,000	300	1,000	1,700
	07/02/07	5,100	750	<180	260	21	320	370
	10/03/07	8,600	1,500	<300	1,700	140	520	790
	01/09/08	38,000	48,000	<400	3,000	380	1,200	1,900
	04/04/08	5,100	-	<130	1,000	72	120	330
	07/07/08	5,600	920	<130	930	52	250	320
	10/16/08	12,000	770	<250	1,400	110	400	470
	1/29/2013 [1]	6,600	1,100	<250	540	110	430	460
	12/16/13	3,600	-	20	160	20	120	129
	04/17/14	4,800	-	26	500	16	270	97
	11/04/14	2,100	-	25	150	27	120	84
	05/29/15	38,000	-	24	1,300	150	530	316
	11/20/15	780	290	12	17	2.8	28	22
	05/24/16	590	360	19	120	5.7	18	8.9
	11/30/16	2,400	3,900	10	270	12	140	57
	05/30/17	**2,300**	**1,100**	**29**	**360**	**17**	**130**	**54**

Table 4

Summary of Groundwater Analytical Results

3635 13th Avenue, Oakland, California

Sample ID	Date Sampled	TPH-g (µg/L)	TPH-d (µg/L)	MTBE (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)
MW - 3	11/22/94	200	<50	-	<0.5	<0.5	<0.5	2
	02/23/95	1500	<50	-	6.6	6.4	4.2	13
	05/24/95	710	<50	-	2.5	3.2	3.1	16
	08/18/95	310	<50	-	3.1	2.1	2.2	11
	02/07/96	400	<50	-	1.4	2.5	2.2	7
	09/06/96	<50	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	06/19/97	<50	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	01/24/02	58	<50	<5.0	4	2.7	2.3	6.7
	07/15/03	<50	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	10/10/03	350	75	<5.0	14	16	23	60
	04/06/04	<50	<50	<5.0	<0.5	1.7	<0.5	1.7
	07/09/04	260	<50	<5.0	12	13	14	36
	10/08/04	450	76	<5.0	21	22	30	86
	04/02/07	<50	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	07/02/07	<50	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	10/03/07	<50	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	01/09/08	<50	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	04/04/08	<50	-	<5.0	<0.5	<0.5	<0.5	<0.5
	07/07/08	<50	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	10/16/08	<50	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	1/29/2013 [1]	63	<50	<5.0	7.8	<0.5	3.1	2.1
	12/16/13	<50	-	<5.0	<0.5	<0.5	<0.5	<0.5
	04/17/14	<50	-	<5.0	<0.5	<0.5	<0.5	<0.5
	11/04/14	<50	-	<5.0	<0.5	<0.5	<0.5	<0.5
	05/29/15	<50	-	<5.0	<0.5	<0.5	<0.5	<0.5
	11/20/15	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
	05/24/16	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
	11/30/16	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
	05/30/17	**<50**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**
MW - 4	10/03/07	11,000	2,000	<1,500	1,100	87	<17	1,300
	01/09/08	17,000	2,600	<900	1,300	120	580	790
	04/04/08	17,000	-	<1,500	1,600	200	500	1,300
	07/07/08	18,000	3,100	<1,200	1,400	190	930	1,200
	10/16/08	25,000	2,000	<1,500	1,200	110	490	890
	1/29/2013 [1]	18,000	3,200	<700	1,500	170	1,100	1,100
	12/16/13	4,200	-	43	370	26	130	100
	04/17/14	7,300	-	45	550	55	540	305
	11/04/14	4,800	-	33	220	21	190	66
	05/29/15	12,000	-	49	600	78	740	337
	11/20/15	740	120	17	45	<2.5	17	6.2
	05/24/16	870	410	56	<5.0	<5.0	<5.0	47
	11/30/16	2,100	810	57	280	13	73	20
	05/30/17	**2,900**	**1,600**	**32**	**530**	**60**	**380**	**200**
MW - 5	10/03/07	8,800	680	<250	2,800	74	100	190
	01/09/08	7,400	580	<350	2,000	5.6	93	29
	04/04/08	43,000	-	<500	12,000	2,800	670	2,500
	07/07/08	20,000	1,000	<500	6,800	190	280	380
	10/16/08	13,000	490	<250	3,500	10	93	30
	1/29/2013 [1]	5,300	470	<130	1,300	11	170	14
	12/16/13	1,300	-	86	240	<2.5	5.7	<2.5
	04/17/14	2,100	-	91	400	<2.5	30	<2.5
	11/04/14	470	-	59	1.1	<0.5	0.9	<0.5
	05/29/15	2,200	-	39	480	<3.1	48	<3.1
	11/20/15	200	<50	74	<1.2	<1.2	<1.2	<1.2
	05/24/16	4,200	210	42	1,500	65	150	440
	11/30/16	99	<50	34	12	<0.50	<0.50	<0.50
	05/30/17	**320**	**52**	**17**	**210**	**<0.50**	**9.2**	**6.3**

Table 4

Summary of Groundwater Analytical Results

3635 13th Avenue, Oakland, California

Sample ID	Date Sampled	TPH-g (µg/L)	TPH-d (µg/L)	MTBE (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)
MW - 6	10/03/07	11,000	1,400	<1,200	1,400	64	74	320
	01/09/08	8,400	1,300	<400	790	17	210	51
	04/04/08	6,100	-	<500	630	52	430	130
	07/07/08	6,200	1,200	<300	500	11	250	53
	10/16/08	3,700	600	180	220	4.4	93	15
	1/29/2013 [1]	2,300	440	<130	180	18	79	40
	12/16/13	1,400	-	170	100	1.9	9.0	5.0
	04/17/14	740	-	97	49	1.1	22	0.9
	11/04/14	1,300	-	140	52	1.0	3.2	1.4
	05/29/15	2,600	-	140	310	13	25	42.7
	11/20/15	690	130	92	11	<5.0	<5.0	<5.0
	05/24/16	1,200	420	80	130	16	16	30
	11/30/16	390	110	73	41	<1.2	<1.2	<1.2
	05/30/17	**370**	**140**	**140**	**33**	**<2.5**	**<2.5**	**<2.5**
MW - 7	1/29/2013 [1]	42,000	2,300	<900	14,000	140	1,100	800
	12/16/13	21,000	-	<50	7,200	<50	280	164
	04/17/14	11,000	-	23	3,900	22	290	157
	11/04/14	8,400	-	<25	4,100	<25	260	<25
	05/29/15	6,800	-	<20	2,700	<20	240	24
	11/20/15	5,600	390	<50	1,600	<50	<50	<50
	05/24/16	3,000	620	<250	4,600	<250	<250	<250
	11/30/16	5,500	870	<100	4,400	<100	170	<100
	05/30/17	**2,200**	**320**	**<25**	**1,700**	**<25**	**96**	**<25**

Notes / Abbreviations:

MTBE - Methyl tert butyl ether

TPH-d - Total petroleum hydrocarbons (TPH) as diesel

TPH-g - Total petroleum hydrocarbons (TPH) as gasoline

- = sample not analyzed by this method

< = Less than reporting limit

[1] = well additionally analyzed for TPH as motor oil and hexachrome; all below laboratory detection limits.

ug/L - micrograms per liter

Bold = Most recent sample

FIGURES

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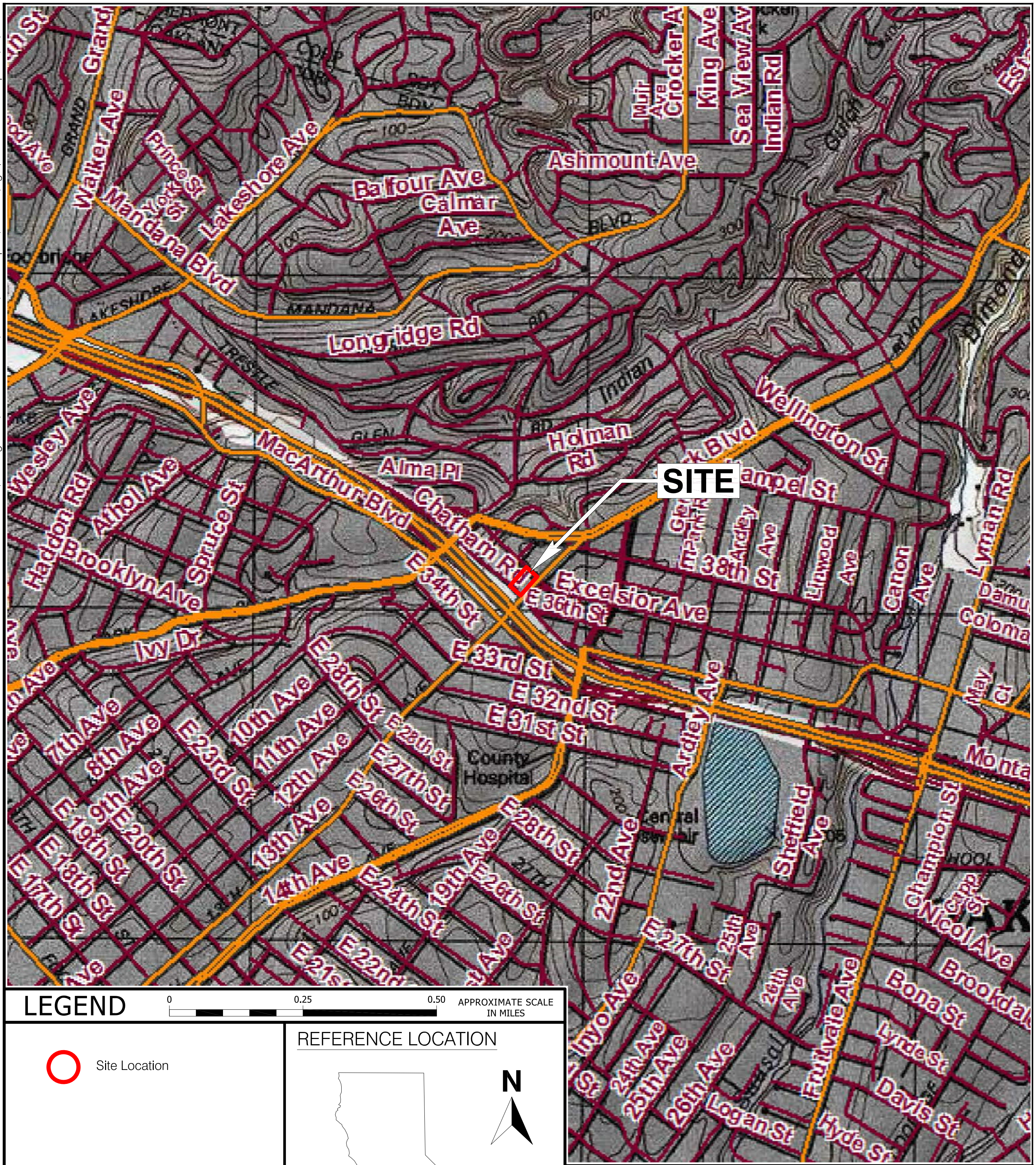
C:\Drawing Files\AEI Consultants\338841\GWM Report\2017-07\Fig 1, Site Location Map - 07/27/2017

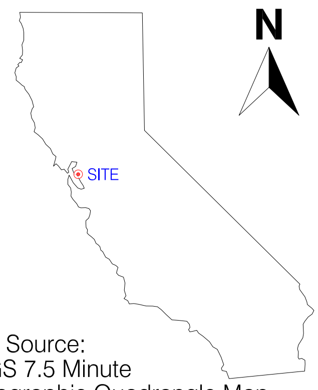


LEGEND

0 | 0.25 | 0.50 APPROXIMATE SCALE IN MILES

Site Location

REFERENCE LOCATION



Map Source:
USGS 7.5 Minute
Topographic Quadrangle Map,
Oakland East, CA - 1997

AEI Consultants

2500 Camino Diablo, Walnut Creek, California

SITE LOCATION MAP

Kia Sumner
3635 13th Avenue
Oakland, California

FIGURE 1
Project No. 338841

C:\Drawing Files\AEI Consultants\338841\GWM Report\2017-07\Fig 2, Site Map - 07/27/2017

ADJACENT
RESIDENTIAL APARTMENT

ADJACENT
RESIDENTIAL BUILDING

SIDEWALK

EXCELSIOR AVENUE

N

FORMER 250 GALLON
WASTE OIL UST

SG-2
SG-1
MW-3
MW-4
SG-9
SG-4
FORMER DISPENSER ISLAND
SG-6
SG-7
SG-5
MW-1
SG-8
FORMER 1,000 GALLON UST
MW-5
MW-6
SG-3
MW-7
MW-2

SIDEWALK

FORMER 500 GALLON UST

SB-12
SB-11

13th STREET

STOP

SB-15
SB-14
SB-13

SIDEWALK

SIDEWALK

OAKLAND FIRE DEPARTMENT
ENGINE No. 16

LEGEND

- MW-1 Monitoring Well Location
- SG-1 Soil Gas Probe Location
- SB-1 Soil Boring Location
- Proposed Building Location
- x Fence

0 15 30

APPROXIMATE SCALE
IN FEET

AEI Consultants

2500 Camino Diablo
Walnut Creek, California

SITE MAP

Kia Sumner
3635 13th Avenue
Oakland, California

FIGURE 2
Project No. 338841

C:\Drawing Files\AEI Consultants\338841\GWM Report\2017-07\Fig 3, GW Elevation Contours - May 30, 2017 - 07/27/2017

ADJACENT
RESIDENTIAL APARTMENT

ADJACENT
RESIDENTIAL BUILDING

SIDEWALK

EXCELSIOR AVENUE

FORMER 250 GALLON
WASTE OIL UST

FORMER DISPENSER ISLAND

FORMER 1,000 GALLON UST

FORMER 500 GALLON UST

SG-1
SG-2
SG-3
SG-4
SG-5
SG-6
SG-7
SG-8
SG-9

MW-1 (184.44)
MW-2 (186.61)
MW-3 (189.09)
MW-4 (186.74)
MW-5 (185.77)
MW-6 (187.73)
MW-7 (185.19)

185
186
187
188
189

0.06 ft/ft

SB-11
SB-12
SB-13
SB-14
SB-15

13th STREET

STOP

SIDEWALK

SIDEWALK

SIDEWALK

OAKLAND FIRE DEPARTMENT
ENGINE No. 16

N

LEGEND

- MW-1 — Monitoring Well Location
- SG-1 — Soil Gas Probe Location
- SB-1 — Soil Boring Location
- Proposed Building Location
- x — Fence
- Approximate Groundwater Flow Direction
- 188 — Groundwater Elevation Contour

0 15 30

APPROXIMATE SCALE
IN FEET

AEI Consultants

2500 Camino Diablo
Walnut Creek, California

GROUNDWATER ELEVATION CONTOURS MAY 30, 2017

Kia Sumner
3635 13th Avenue
Oakland, California

FIGURE 3
Project No. 338841

C:\Drawing Files\AEI Consultants\338841\GWM Report\2017-07\Fig 4, GW Sample Analytical Data - 1st Semester 2017 - 07/27/2017

ADJACENT
RESIDENTIAL APARTMENT

ADJACENT
RESIDENTIAL BUILDING

SIDEWALK

EXCELSIOR AVENUE

FORMER 250 GALLON
WASTE OIL UST

FORMER DISPENSER ISLAND

FORMER 1,000 GALLON UST

FORMER 500 GALLON UST

13th STREET

SIDEWALK

SIDEWALK

SIDEWALK

STOP

OAKLAND FIRE DEPARTMENT
ENGINE No. 16

MW-4	
TPH-g	**2,900**
TPH-d	**1,600**
MTBE	**32**
Benzene	**530**
Toluene	**60**
Ethylbenzene	**380**
Xylenes	**200**

MW-3	
TPH-g	<50
TPH-d	<50
MTBE	<0.50
Benzene	<0.50
Toluene	<0.50
Ethylbenzene	<0.50
Xylenes	<0.50

MW-1	
TPH-g	<50
TPH-d	<50
MTBE	<50
Benzene	<0.50
Toluene	<0.50
Ethylbenzene	<50
Xylenes	<0.50

MW-6	
TPH-g	**370**
TPH-d	**140**
MTBE	**140**
Benzene	**33**
Toluene	<2.5
Ethylbenzene	<2.5
Xylenes	<2.5

MW-7	
TPH-g	**2,200**
TPH-d	**320**
MTBE	<25
Benzene	**1,700**
Toluene	<25
Ethylbenzene	**96**
Xylenes	<25

MW-5	
TPH-g	**320**
TPH-d	**52**
MTBE	**17**
Benzene	**210**
Toluene	<0.50
Ethylbenzene	<0.50
Xylenes	<0.50

MW-2	
TPH-g	**2,300**
TPH-d	**1,100**
MTBE	**29**
Benzene	**360**
Toluene	**17**
Ethylbenzene	**130**
Xylenes	**54**

SG-1 SG-2 SG-3 SG-4 SG-5 SG-6 SG-7 SG-8 SG-9

MW-1 MW-2 MW-3 MW-4 MW-5 MW-6 MW-7

SB-11 SB-12 SB-13 SB-14 SB-15

N

LEGEND

- MW-1 — Monitoring Well Location
- SG-1 — Soil Gas Probe Location
- SB-1 — Soil Boring Location
- Proposed Building Location
- x — Fence

Notes:
All Concentrations in µg/L
µg/L - micrograms per liter
TPH-g - Total Petroleum Hydrocarbons as Gasoline
TPH-d - Total Petroleum Hydrocarbons as Diesel
MTBE - Methyl Tertiary Butyl Ether

0 15 30
APPROXIMATE SCALE
IN FEET

AEI Consultants
2500 Camino Diablo
Walnut Creek, California

GROUNDWATER SAMPLE ANALYTICAL DATA FIRST SEMESTER 2017

Kia Sumner
3635 13th Avenue
Oakland, California

FIGURE 4
Project No. 338841

C:\Drawing Files\AEI Consultants\338841\GWM Report\2017-07\Fig 5. TPHg Concentration In GW 1st Semester 2017 - 07/27/2017

ADJACENT
RESIDENTIAL APARTMENT

ADJACENT
RESIDENTIAL BUILDING

SIDEWALK

EXCELSIOR AVENUE

FORMER 250 GALLON
WASTE OIL UST

FORMER DISPENSER ISLAND

FORMER 1,000 GALLON UST

FORMER 500 GALLON UST

SG-1
SG-2
SG-3
SG-4
SG-5
SG-6
SG-7
SG-8
SG-9

MW-1 <50
MW-2 2,300
MW-3 <50
MW-4 2,900
MW-5 320
MW-6 370
MW-7 2,200

100
1,000

SIDEWALK

SB-11
SB-12
SB-13
SB-14
SB-15

13th STREET

SIDEWALK

SIDEWALK

LEGEND

- MW-1 — Monitoring Well Location
- SG-1 — Soil Gas Sample Location
- SB-1 — Soil Boring
- Proposed Building
- x — Fence
- -1,000- — TPH-g Isoconcentration Contour in µg/L (Dashed Where Inferred)

Notes:
All Concentrations in µg/L
µg/L - micrograms per liter
TPH-g - Total Petroleum Hydrocarbons as Gasoline

0 15 30
APPROXIMATE SCALE
IN FEET

AEI Consultants

2500 Camino Diablo
Walnut Creek, California

TPHg CONCENTRATION IN GROUNDWATER FIRST SEMESTER 2017

Kia Sumner
3635 13th Avenue
Oakland, California

FIGURE 5
Project No. 338841

C:\Drawing Files\AEI Consultants\338841\GWM Report\2017-07\Fig 6. Benzene Concentration In GW 1st Semester 2017 - 07/27/2017

ADJACENT
RESIDENTIAL APARTMENT

ADJACENT
RESIDENTIAL BUILDING

SIDEWALK

EXCELSIOR AVENUE

FORMER 250 GALLON
WASTE OIL UST

SG-2

SG-1

MW-3
<0.50

SG-4

MW-4
530

SG-9

FORMER DISPENSER ISLAND

FORMER 1,000 GALLON UST

SG-6

SG-5

SG-7

SG-8

MW-1
<0.50

100

100

MW-5
210

MW-6
41

SG-3

MW-7
1,700

MW-2
360

1,000

SIDEWALK

SB-12

SB-11

FORMER 500 GALLON UST

100

13th STREET

STOP

SB-15

SB-14

SB-13

SIDEWALK

SIDEWALK

OAKLAND FIRE DEPARTMENT
ENGINE No. 16

LEGEND

- MW-1 — Monitoring Well Location
- SG-1 — Soil Gas Probe Location
- SB-1 — Soil Boring Location
- Proposed Building Location
- x — Fence
- -1,000- — Benzene Isoconcentration Contour in µg/L (Dashed Where Inferred)

Notes:
All Concentrations in µg/L
µg/L - micrograms per liter

0 15 30
APPROXIMATE SCALE
IN FEET

AEI Consultants
2500 Camino Diablo
Walnut Creek, California

BENZENE CONCENTRATION IN GROUNDWATER FIRST SEMESTER 2017

Kia Sumner
3635 13th Avenue
Oakland, California

FIGURE 6
Project No. 338841

APPENDIX A
Field Data Sheets

AEI Consultants

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GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-1

Project Name:	Kia	Date of Sampling:	5/30/17
Job Number:	338841	Name of Sampler:	N.Bricker
Project Address:	3635 13th Avenue, Oakland		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition			
Elevation of Top of Casing (feet above msl)	197.28		
Depth of Well	24.27		
Depth to Water (from top of casing)	12.89		
Water Elevation (feet above msl)			
Well Volumes Purged	3		
Calculated Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft) 1.82	5.46		
Actual Volume Purged (gallons)	5.5		
Appearance of Purge Water			
Free Product Present?	NO	Thickness (ft):	NA

GROUNDWATER SAMPLES

Number of Samples/Container Size: 2 Amber VOAs and 4 HCl VOAs

Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (µS/cm)	DO (mg/L)	ORP (meV)	Comments
1030	Start						
1034	2	18.05	7.13	1033	4.39	144.0	cloudy
1039	4	18.09	7.15	1009	3.82	142.6	cloudy
1044	5.5	18.12	7.17	995	4.36	145.1	cloudy
1044	end Purge						

COMMENTS (i.e., sample odor, well recharge time & percent, etc.)

Sampled at 1414

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-2

Project Name:	Kia	Date of Sampling:	5/30/17
Job Number:	338841	Name of Sampler:	N.Bricker
Project Address:	3635 13th Avenue, Oakland		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	198.93		
Depth of Well	35.99		
Depth to Water (from top of casing)	12.40		
Water Elevation (feet above msl)			
Well Volumes Purged	3		
Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft) 3.77	11.32		
Actual Volume Purged (gallons)	12.0		
Appearance of Purge Water	Dark Grey opaque		
Free Product Present?	Yes	Thickness (ft):	Thin sheen ~~NA~~

GROUNDWATER SAMPLES

Number of Samples/Container Size: 2 Amber VOAs and 4 HCl VOAs

Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (µS/cm)	DO (mg/L)	ORP (meV)	Comments
1131	Start						
1143	4	19.32	7.05	828	2.95	-49.4	Grey cloudy
1155	8	19.61	6.99	1064	2.01	-56.6	↓
1206	12	19.76	7.08	1037	2.64	-25.4	
1206	End Purge						

COMMENTS (i.e., sample odor, well recharge time & percent, etc.)

Strong petrol odor
Sampled at 1230

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-3

Project Name:	Kia	Date of Sampling:	5/30/17
Job Number:	338841	Name of Sampler:	N.Bricker
Project Address:	3635 13th Avenue, Oakland		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	201.46		
Depth of Well	35.60		
Depth to Water (from top of casing)	12.48		
Water Elevation (feet above msl)			
Well Volumes Purged	3		
Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft) 3.70 (NR)	11.10		
Actual Volume Purged (gallons)			
Appearance of Purge Water	Cloudy		
Free Product Present?	NO	Thickness (ft):	NA

GROUNDWATER SAMPLES

Number of Samples/Container Size: 2 Amber VOAs and 4 HCl VOAs

Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (µS/cm)	DO (mg/L)	ORP (meV)	Comments
1252	Start						
1301	3.75	18.18	7.56	580	4.48	(NR) 58.4	
1314	7.50	18.54	7.55	586	4.48	69.5	
1328	10.25 (NR)	18.87	7.56	602	4.47	86.8	

COMMENTS (i.e., sample odor, well recharge time & percent, etc.)

Sampled at 1445

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-4

Project Name:	Kia	Date of Sampling:	5/30/19
Job Number:	338841	Name of Sampler:	N.Bricker
Project Address:	3635 13th Avenue, Oakland		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	200.23		
Depth of Well	22.22		
Depth to Water (from top of casing)	13.55		
Water Elevation (feet above msl)			
Well Volumes Purged	3		
Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft) 1.39	4.16		
Actual Volume Purged (gallons)	2		
Appearance of Purge Water	lightly cloudy		
Free Product Present?	NO	Thickness (ft):	NA

GROUNDWATER SAMPLES

Number of Samples/Container Size: 2 Amber VOAs and 4 HCl VOAs

Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (µS/cm)	DO (mg/L)	ORP (meV)	Comments
1214	Start						
1219	1.5	18.82	6.99	861	3.27	-70.7	
1224	2	19.06	7.00	904	3.77	-66.8	
Dry at 2 gallons, left 1/3 bailer							
~~Sampled at 1555~~ NB							

COMMENTS (i.e., sample odor, well recharge time & percent, etc.)

Petrol odor
Sampled at 1555

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-5

Project Name:	Kia	Date of Sampling:	5/30/19
Job Number:	338841	Name of Sampler:	N.Bricker
Project Address:	3635 13th Avenue, Oakland		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	198.52		
Depth of Well	22.00		
Depth to Water (from top of casing)	12.84		
Water Elevation (feet above msl)			
Well Volumes Purged	3		
Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft) 1.47	4.40		
Actual Volume Purged (gallons)	2.25		
Appearance of Purge Water	lightly cloudy		
Free Product Present?	NO	Thickness (ft):	NA

GROUNDWATER SAMPLES

Number of Samples/Container Size: 2 Amber VOAs and 4 HCl VOAs

Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (µS/cm)	DO (mg/L)	ORP (meV)	Comments
1113	Start						
1120	1.5	19.01	6.92	701	3.94	74.5	lightly cloudy
1123	2.25	19.22	6.88	771	4.30	65.3	↓
Dry at 1123	2.25 gallons, end purge			left w/ 1/2 bailer			

COMMENTS (i.e., sample odor, well recharge time & percent, etc.)

~~Strong petroleum hydrocarbon odors noted.~~ (NO)

Sampled at 1525

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-6

Project Name:	Kia	Date of Sampling:	5/30/17
Job Number:	338841	Name of Sampler:	N.Bricker
Project Address:	3635 13th Avenue, Oakland		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	200.20		
Depth of Well	22.27		
Depth to Water (from top of casing)	12.56		
Water Elevation (feet above msl)			
Well Volumes Purged	3		
Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft) 1.55	4.66		
Actual Volume Purged (gallons)	2.5		
Appearance of Purge Water	clear		
Free Product Present?	NO	Thickness (ft):	NA

GROUNDWATER SAMPLES

Number of Samples/Container Size: 2 Amber VOAs and 4 HCl VOAs

Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (µS/cm)	DO (mg/L)	ORP (meV)	Comments
1233	Start						
1237	1.75	19.59	6.87	1142	3.46	-14.4	
1240	2.5	19.67	6.91	1144	2.95	-14.1	
Dry at 1240	2.5 gallons, End purge		ice w/ 1/2 bailer				

COMMENTS (i.e., sample odor, well recharge time & percent, etc.)

~~Strong petroleum hydrocarbon odors noted.~~ NB

Sampled at 1540

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GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-7

Project Name:	Kia	Date of Sampling:	5/30/17
Job Number:	338841	Name of Sampler:	
Project Address:	3635 13th Avenue, Oakland		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	200.20		
Depth of Well	21.16		
Depth to Water (from top of casing)	12.48		
Water Elevation (feet above msl)			
Well Volumes Purged	3		
Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft) 1.39	4.17		
Actual Volume Purged (gallons)	3.5		
Appearance of Purge Water	cloudy		
Free Product Present?	NO	Thickness (ft):	NA

GROUNDWATER SAMPLES

Number of Samples/Container Size: 2 Amber VOAs and 4 HCl VOAs

Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (µS/cm)	DO (mg/L)	ORP (meV)	Comments
1056	Start						
1101	1.5	18.72	6.69	898	4.19	29.4	lightly cloudy
1106	3	18.91	6.64	1094	4.22	2.6	"
1110	~~4.5~~ 3.5 (NB)	19.04	6.71	1280	4.77	-11.0	"
Dry at 1110, left w/ 1/2 bailer							
1110	End Purge						

COMMENTS (i.e., sample odor, well recharge time & percent, etc.)

Strong petroleum hydrocarbon odors noted. (NB)

APPENDIX B

Laboratory Analytical Reports and Chain-of-Custody Documentation

AEI Consultants

McCampbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1705D17

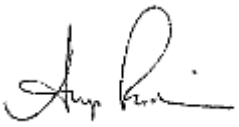
Report Created for: AEI Consultants

2500 Camino Diablo, Ste.#200
Walnut Creek, CA 94597

Project Contact: Wayne Hung
Project P.O.: 133762
Project Name: 338841; Kia; 3635 13th ave, Oakland, CA

Project Received: 05/31/2017

Analytical Report reviewed & approved for release on 06/07/2017 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.

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CA ELAP 1644 ♦ NELAP 4033ORELAP

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Glossary of Terms & Qualifier Definitions

Client: AEI Consultants
Project: 338841; Kia; 3635 13th ave, Oakland, CA
WorkOrder: 1705D17

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
ERS	External reference sample. Second source calibration verification.
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)

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Glossary of Terms & Qualifier Definitions

Client: AEI Consultants
Project: 338841; Kia; 3635 13th ave, Oakland, CA
WorkOrder: 1705D17

Analytical Qualifiers

S	Surrogate spike recovery outside accepted recovery limits
c2	Surrogate recovery outside of the control limits due to matrix interference.
e4	Gasoline range compounds are significant.

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Analytical Report

Client:	AEI Consultants	**WorkOrder:**	1705D17
Date Received:	5/31/17 16:10	**Extraction Method:**	SW5030B
Date Prepared:	6/5/17-6/7/17	**Analytical Method:**	SW8260B
Project:	338841; Kia; 3635 13th ave, Oakland, CA	**Unit:**	µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-1	1705D17-001B	Water	05/30/2017 14:14	GC16	139981

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	1	06/05/2017 16:59
tert-Amyl methyl ether (TAME)	ND	0.50	1	06/05/2017 16:59
Benzene	ND	0.50	1	06/05/2017 16:59
Bromobenzene	ND	0.50	1	06/05/2017 16:59
Bromochloromethane	ND	0.50	1	06/05/2017 16:59
Bromodichloromethane	ND	0.50	1	06/05/2017 16:59
Bromoform	ND	0.50	1	06/05/2017 16:59
Bromomethane	ND	0.50	1	06/05/2017 16:59
2-Butanone (MEK)	ND	2.0	1	06/05/2017 16:59
t-Butyl alcohol (TBA)	ND	2.0	1	06/05/2017 16:59
n-Butyl benzene	ND	0.50	1	06/05/2017 16:59
sec-Butyl benzene	ND	0.50	1	06/05/2017 16:59
tert-Butyl benzene	ND	0.50	1	06/05/2017 16:59
Carbon Disulfide	ND	0.50	1	06/05/2017 16:59
Carbon Tetrachloride	ND	0.50	1	06/05/2017 16:59
Chlorobenzene	ND	0.50	1	06/05/2017 16:59
Chloroethane	ND	0.50	1	06/05/2017 16:59
Chloroform	ND	0.50	1	06/05/2017 16:59
Chloromethane	ND	0.50	1	06/05/2017 16:59
2-Chlorotoluene	ND	0.50	1	06/05/2017 16:59
4-Chlorotoluene	ND	0.50	1	06/05/2017 16:59
Dibromochloromethane	ND	0.50	1	06/05/2017 16:59
1,2-Dibromo-3-chloropropane	ND	0.20	1	06/05/2017 16:59
1,2-Dibromoethane (EDB)	ND	0.50	1	06/05/2017 16:59
Dibromomethane	ND	0.50	1	06/05/2017 16:59
1,2-Dichlorobenzene	ND	0.50	1	06/05/2017 16:59
1,3-Dichlorobenzene	ND	0.50	1	06/05/2017 16:59
1,4-Dichlorobenzene	ND	0.50	1	06/05/2017 16:59
Dichlorodifluoromethane	ND	0.50	1	06/05/2017 16:59
1,1-Dichloroethane	ND	0.50	1	06/05/2017 16:59
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	06/05/2017 16:59
1,1-Dichloroethene	ND	0.50	1	06/05/2017 16:59
cis-1,2-Dichloroethene	ND	0.50	1	06/05/2017 16:59
trans-1,2-Dichloroethene	ND	0.50	1	06/05/2017 16:59
1,2-Dichloropropane	ND	0.50	1	06/05/2017 16:59
1,3-Dichloropropane	ND	0.50	1	06/05/2017 16:59
2,2-Dichloropropane	ND	0.50	1	06/05/2017 16:59

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Analytical Report

Client:	AEI Consultants	**WorkOrder:**	1705D17
Date Received:	5/31/17 16:10	**Extraction Method:**	SW5030B
Date Prepared:	6/5/17-6/7/17	**Analytical Method:**	SW8260B
Project:	338841; Kia; 3635 13th ave, Oakland, CA	**Unit:**	µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-1	1705D17-001B	Water	05/30/2017 14:14	GC16	139981

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.50	1	06/05/2017 16:59
cis-1,3-Dichloropropene	ND	0.50	1	06/05/2017 16:59
trans-1,3-Dichloropropene	ND	0.50	1	06/05/2017 16:59
Diisopropyl ether (DIPE)	ND	0.50	1	06/05/2017 16:59
Ethylbenzene	ND	0.50	1	06/05/2017 16:59
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	06/05/2017 16:59
Freon 113	ND	0.50	1	06/05/2017 16:59
Hexachlorobutadiene	ND	0.50	1	06/05/2017 16:59
Hexachloroethane	ND	0.50	1	06/05/2017 16:59
2-Hexanone	ND	0.50	1	06/05/2017 16:59
Isopropylbenzene	ND	0.50	1	06/05/2017 16:59
4-Isopropyl toluene	ND	0.50	1	06/05/2017 16:59
Methyl-t-butyl ether (MTBE)	ND	0.50	1	06/05/2017 16:59
Methylene chloride	ND	0.50	1	06/05/2017 16:59
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	06/05/2017 16:59
Naphthalene	ND	0.50	1	06/05/2017 16:59
n-Propyl benzene	ND	0.50	1	06/05/2017 16:59
Styrene	ND	0.50	1	06/05/2017 16:59
1,1,1,2-Tetrachloroethane	ND	0.50	1	06/05/2017 16:59
1,1,2,2-Tetrachloroethane	ND	0.50	1	06/05/2017 16:59
Tetrachloroethene	ND	0.50	1	06/05/2017 16:59
Toluene	ND	0.50	1	06/05/2017 16:59
1,2,3-Trichlorobenzene	ND	0.50	1	06/05/2017 16:59
1,2,4-Trichlorobenzene	ND	0.50	1	06/05/2017 16:59
1,1,1-Trichloroethane	ND	0.50	1	06/05/2017 16:59
1,1,2-Trichloroethane	ND	0.50	1	06/05/2017 16:59
Trichloroethene	ND	0.50	1	06/05/2017 16:59
Trichlorofluoromethane	ND	0.50	1	06/05/2017 16:59
1,2,3-Trichloropropane	ND	0.50	1	06/05/2017 16:59
1,2,4-Trimethylbenzene	ND	0.50	1	06/05/2017 16:59
1,3,5-Trimethylbenzene	ND	0.50	1	06/05/2017 16:59
Vinyl Chloride	ND	0.50	1	06/05/2017 16:59
Xylenes, Total	ND	0.50	1	06/05/2017 16:59

(Cont.)

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Analytical Report

Client:	AEI Consultants	**WorkOrder:**	1705D17
Date Received:	5/31/17 16:10	**Extraction Method:**	SW5030B
Date Prepared:	6/5/17-6/7/17	**Analytical Method:**	SW8260B
Project:	338841; Kia; 3635 13th ave, Oakland, CA	**Unit:**	µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-1	**1705D17-001B**	**Water**	**05/30/2017 14:14**	**GC16**	**139981**

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	123	70-130		06/05/2017 16:59
Toluene-d8	115	70-130		06/05/2017 16:59
4-BFB	87	70-130		06/05/2017 16:59

Analyst(s): KF

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Analytical Report

Client:	AEI Consultants	**WorkOrder:**	1705D17
Date Received:	5/31/17 16:10	**Extraction Method:**	SW5030B
Date Prepared:	6/5/17-6/7/17	**Analytical Method:**	SW8260B
Project:	338841; Kia; 3635 13th ave, Oakland, CA	**Unit:**	µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-2	1705D17-002B	Water	05/30/2017 14:30	GC16	139981

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	100	10	06/05/2017 17:43
tert-Amyl methyl ether (TAME)	ND	5.0	10	06/05/2017 17:43
Benzene	**360**	5.0	10	06/05/2017 17:43
Bromobenzene	ND	5.0	10	06/05/2017 17:43
Bromochloromethane	ND	5.0	10	06/05/2017 17:43
Bromodichloromethane	ND	5.0	10	06/05/2017 17:43
Bromoform	ND	5.0	10	06/05/2017 17:43
Bromomethane	ND	5.0	10	06/05/2017 17:43
2-Butanone (MEK)	ND	20	10	06/05/2017 17:43
t-Butyl alcohol (TBA)	**37**	20	10	06/05/2017 17:43
n-Butyl benzene	**13**	5.0	10	06/05/2017 17:43
sec-Butyl benzene	**5.2**	5.0	10	06/05/2017 17:43
tert-Butyl benzene	ND	5.0	10	06/05/2017 17:43
Carbon Disulfide	ND	5.0	10	06/05/2017 17:43
Carbon Tetrachloride	ND	5.0	10	06/05/2017 17:43
Chlorobenzene	ND	5.0	10	06/05/2017 17:43
Chloroethane	ND	5.0	10	06/05/2017 17:43
Chloroform	ND	5.0	10	06/05/2017 17:43
Chloromethane	ND	5.0	10	06/05/2017 17:43
2-Chlorotoluene	ND	5.0	10	06/05/2017 17:43
4-Chlorotoluene	ND	5.0	10	06/05/2017 17:43
Dibromochloromethane	ND	5.0	10	06/05/2017 17:43
1,2-Dibromo-3-chloropropane	ND	2.0	10	06/05/2017 17:43
1,2-Dibromoethane (EDB)	ND	5.0	10	06/05/2017 17:43
Dibromomethane	ND	5.0	10	06/05/2017 17:43
1,2-Dichlorobenzene	ND	5.0	10	06/05/2017 17:43
1,3-Dichlorobenzene	ND	5.0	10	06/05/2017 17:43
1,4-Dichlorobenzene	ND	5.0	10	06/05/2017 17:43
Dichlorodifluoromethane	ND	5.0	10	06/05/2017 17:43
1,1-Dichloroethane	ND	5.0	10	06/05/2017 17:43
1,2-Dichloroethane (1,2-DCA)	ND	5.0	10	06/05/2017 17:43
1,1-Dichloroethene	ND	5.0	10	06/05/2017 17:43
cis-1,2-Dichloroethene	ND	5.0	10	06/05/2017 17:43
trans-1,2-Dichloroethene	ND	5.0	10	06/05/2017 17:43
1,2-Dichloropropane	ND	5.0	10	06/05/2017 17:43
1,3-Dichloropropane	ND	5.0	10	06/05/2017 17:43
2,2-Dichloropropane	ND	5.0	10	06/05/2017 17:43

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Analytical Report

Client:	AEI Consultants	**WorkOrder:**	1705D17
Date Received:	5/31/17 16:10	**Extraction Method:**	SW5030B
Date Prepared:	6/5/17-6/7/17	**Analytical Method:**	SW8260B
Project:	338841; Kia; 3635 13th ave, Oakland, CA	**Unit:**	µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-2	1705D17-002B	Water	05/30/2017 14:30	GC16	139981

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	5.0	10	06/05/2017 17:43
cis-1,3-Dichloropropene	ND	5.0	10	06/05/2017 17:43
trans-1,3-Dichloropropene	ND	5.0	10	06/05/2017 17:43
Diisopropyl ether (DIPE)	ND	5.0	10	06/05/2017 17:43
Ethylbenzene	**130**	5.0	10	06/05/2017 17:43
Ethyl tert-butyl ether (ETBE)	ND	5.0	10	06/05/2017 17:43
Freon 113	ND	5.0	10	06/05/2017 17:43
Hexachlorobutadiene	ND	5.0	10	06/05/2017 17:43
Hexachloroethane	ND	5.0	10	06/05/2017 17:43
2-Hexanone	ND	5.0	10	06/05/2017 17:43
Isopropylbenzene	**17**	5.0	10	06/05/2017 17:43
4-Isopropyl toluene	ND	5.0	10	06/05/2017 17:43
Methyl-t-butyl ether (MTBE)	**29**	5.0	10	06/05/2017 17:43
Methylene chloride	ND	5.0	10	06/05/2017 17:43
4-Methyl-2-pentanone (MIBK)	ND	5.0	10	06/05/2017 17:43
Naphthalene	**35**	5.0	10	06/05/2017 17:43
n-Propyl benzene	**31**	5.0	10	06/05/2017 17:43
Styrene	ND	5.0	10	06/05/2017 17:43
1,1,1,2-Tetrachloroethane	ND	5.0	10	06/05/2017 17:43
1,1,2,2-Tetrachloroethane	ND	5.0	10	06/05/2017 17:43
Tetrachloroethene	ND	5.0	10	06/05/2017 17:43
Toluene	**17**	5.0	10	06/05/2017 17:43
1,2,3-Trichlorobenzene	ND	5.0	10	06/05/2017 17:43
1,2,4-Trichlorobenzene	ND	5.0	10	06/05/2017 17:43
1,1,1-Trichloroethane	ND	5.0	10	06/05/2017 17:43
1,1,2-Trichloroethane	ND	5.0	10	06/05/2017 17:43
Trichloroethene	ND	5.0	10	06/05/2017 17:43
Trichlorofluoromethane	ND	5.0	10	06/05/2017 17:43
1,2,3-Trichloropropane	ND	5.0	10	06/05/2017 17:43
1,2,4-Trimethylbenzene	**34**	5.0	10	06/05/2017 17:43
1,3,5-Trimethylbenzene	**6.0**	5.0	10	06/05/2017 17:43
Vinyl Chloride	ND	5.0	10	06/05/2017 17:43
Xylenes, Total	**54**	5.0	10	06/05/2017 17:43

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Analytical Report

Client:	AEI Consultants	**WorkOrder:**	1705D17
Date Received:	5/31/17 16:10	**Extraction Method:**	SW5030B
Date Prepared:	6/5/17-6/7/17	**Analytical Method:**	SW8260B
Project:	338841; Kia; 3635 13th ave, Oakland, CA	**Unit:**	µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-2	**1705D17-002B**	**Water**	**05/30/2017 14:30**	**GC16**	**139981**

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	119	70-130		06/05/2017 17:43
Toluene-d8	113	70-130		06/05/2017 17:43
4-BFB	93	70-130		06/05/2017 17:43

Analyst(s): KF

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Analytical Report

Client:	AEI Consultants	**WorkOrder:**	1705D17
Date Received:	5/31/17 16:10	**Extraction Method:**	SW5030B
Date Prepared:	6/5/17-6/7/17	**Analytical Method:**	SW8260B
Project:	338841; Kia; 3635 13th ave, Oakland, CA	**Unit:**	µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-3	1705D17-003B	Water	05/30/2017 14:45	GC16	139981

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	1	06/05/2017 23:25
tert-Amyl methyl ether (TAME)	ND	0.50	1	06/05/2017 23:25
Benzene	ND	0.50	1	06/05/2017 23:25
Bromobenzene	ND	0.50	1	06/05/2017 23:25
Bromochloromethane	ND	0.50	1	06/05/2017 23:25
Bromodichloromethane	ND	0.50	1	06/05/2017 23:25
Bromoform	ND	0.50	1	06/05/2017 23:25
Bromomethane	ND	0.50	1	06/05/2017 23:25
2-Butanone (MEK)	ND	2.0	1	06/05/2017 23:25
t-Butyl alcohol (TBA)	ND	2.0	1	06/05/2017 23:25
n-Butyl benzene	ND	0.50	1	06/05/2017 23:25
sec-Butyl benzene	ND	0.50	1	06/05/2017 23:25
tert-Butyl benzene	ND	0.50	1	06/05/2017 23:25
Carbon Disulfide	ND	0.50	1	06/05/2017 23:25
Carbon Tetrachloride	ND	0.50	1	06/05/2017 23:25
Chlorobenzene	ND	0.50	1	06/05/2017 23:25
Chloroethane	ND	0.50	1	06/05/2017 23:25
Chloroform	ND	0.50	1	06/05/2017 23:25
Chloromethane	ND	0.50	1	06/05/2017 23:25
2-Chlorotoluene	ND	0.50	1	06/05/2017 23:25
4-Chlorotoluene	ND	0.50	1	06/05/2017 23:25
Dibromochloromethane	ND	0.50	1	06/05/2017 23:25
1,2-Dibromo-3-chloropropane	ND	0.20	1	06/05/2017 23:25
1,2-Dibromoethane (EDB)	ND	0.50	1	06/05/2017 23:25
Dibromomethane	ND	0.50	1	06/05/2017 23:25
1,2-Dichlorobenzene	ND	0.50	1	06/05/2017 23:25
1,3-Dichlorobenzene	ND	0.50	1	06/05/2017 23:25
1,4-Dichlorobenzene	ND	0.50	1	06/05/2017 23:25
Dichlorodifluoromethane	ND	0.50	1	06/05/2017 23:25
1,1-Dichloroethane	ND	0.50	1	06/05/2017 23:25
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	06/05/2017 23:25
1,1-Dichloroethene	ND	0.50	1	06/05/2017 23:25
cis-1,2-Dichloroethene	ND	0.50	1	06/05/2017 23:25
trans-1,2-Dichloroethene	ND	0.50	1	06/05/2017 23:25
1,2-Dichloropropane	ND	0.50	1	06/05/2017 23:25
1,3-Dichloropropane	ND	0.50	1	06/05/2017 23:25
2,2-Dichloropropane	ND	0.50	1	06/05/2017 23:25

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Analytical Report

Client:	AEI Consultants	**WorkOrder:**	1705D17
Date Received:	5/31/17 16:10	**Extraction Method:**	SW5030B
Date Prepared:	6/5/17-6/7/17	**Analytical Method:**	SW8260B
Project:	338841; Kia; 3635 13th ave, Oakland, CA	**Unit:**	µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-3	1705D17-003B	Water	05/30/2017 14:45	GC16	139981

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.50	1	06/05/2017 23:25
cis-1,3-Dichloropropene	ND	0.50	1	06/05/2017 23:25
trans-1,3-Dichloropropene	ND	0.50	1	06/05/2017 23:25
Diisopropyl ether (DIPE)	ND	0.50	1	06/05/2017 23:25
Ethylbenzene	ND	0.50	1	06/05/2017 23:25
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	06/05/2017 23:25
Freon 113	ND	0.50	1	06/05/2017 23:25
Hexachlorobutadiene	ND	0.50	1	06/05/2017 23:25
Hexachloroethane	ND	0.50	1	06/05/2017 23:25
2-Hexanone	ND	0.50	1	06/05/2017 23:25
Isopropylbenzene	ND	0.50	1	06/05/2017 23:25
4-Isopropyl toluene	ND	0.50	1	06/05/2017 23:25
Methyl-t-butyl ether (MTBE)	ND	0.50	1	06/05/2017 23:25
Methylene chloride	ND	0.50	1	06/05/2017 23:25
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	06/05/2017 23:25
Naphthalene	ND	0.50	1	06/05/2017 23:25
n-Propyl benzene	ND	0.50	1	06/05/2017 23:25
Styrene	ND	0.50	1	06/05/2017 23:25
1,1,1,2-Tetrachloroethane	ND	0.50	1	06/05/2017 23:25
1,1,2,2-Tetrachloroethane	ND	0.50	1	06/05/2017 23:25
Tetrachloroethene	ND	0.50	1	06/05/2017 23:25
Toluene	ND	0.50	1	06/05/2017 23:25
1,2,3-Trichlorobenzene	ND	0.50	1	06/05/2017 23:25
1,2,4-Trichlorobenzene	ND	0.50	1	06/05/2017 23:25
1,1,1-Trichloroethane	ND	0.50	1	06/05/2017 23:25
1,1,2-Trichloroethane	ND	0.50	1	06/05/2017 23:25
Trichloroethene	ND	0.50	1	06/05/2017 23:25
Trichlorofluoromethane	ND	0.50	1	06/05/2017 23:25
1,2,3-Trichloropropane	ND	0.50	1	06/05/2017 23:25
1,2,4-Trimethylbenzene	ND	0.50	1	06/05/2017 23:25
1,3,5-Trimethylbenzene	ND	0.50	1	06/05/2017 23:25
Vinyl Chloride	ND	0.50	1	06/05/2017 23:25
Xylenes, Total	ND	0.50	1	06/05/2017 23:25

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Analytical Report

Client:	AEI Consultants	**WorkOrder:**	1705D17
Date Received:	5/31/17 16:10	**Extraction Method:**	SW5030B
Date Prepared:	6/5/17-6/7/17	**Analytical Method:**	SW8260B
Project:	338841; Kia; 3635 13th ave, Oakland, CA	**Unit:**	µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-3	**1705D17-003B**	**Water**	**05/30/2017 14:45**	**GC16**	**139981**

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	123	70-130		06/05/2017 23:25
Toluene-d8	114	70-130		06/05/2017 23:25
4-BFB	99	70-130		06/05/2017 23:25

Analyst(s): KF Analytical Comments: c2

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Analytical Report

Client:	AEI Consultants	**WorkOrder:**	1705D17
Date Received:	5/31/17 16:10	**Extraction Method:**	SW5030B
Date Prepared:	6/5/17-6/7/17	**Analytical Method:**	SW8260B
Project:	338841; Kia; 3635 13th ave, Oakland, CA	**Unit:**	µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-4	1705D17-004B	Water	05/30/2017 15:55	GC16	139981

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	500	50	06/06/2017 00:06
tert-Amyl methyl ether (TAME)	ND	25	50	06/06/2017 00:06
Benzene	**530**	25	50	06/06/2017 00:06
Bromobenzene	ND	25	50	06/06/2017 00:06
Bromochloromethane	ND	25	50	06/06/2017 00:06
Bromodichloromethane	ND	25	50	06/06/2017 00:06
Bromoform	ND	25	50	06/06/2017 00:06
Bromomethane	ND	25	50	06/06/2017 00:06
2-Butanone (MEK)	ND	100	50	06/06/2017 00:06
t-Butyl alcohol (TBA)	ND	100	50	06/06/2017 00:06
n-Butyl benzene	ND	25	50	06/06/2017 00:06
sec-Butyl benzene	ND	25	50	06/06/2017 00:06
tert-Butyl benzene	ND	25	50	06/06/2017 00:06
Carbon Disulfide	ND	25	50	06/06/2017 00:06
Carbon Tetrachloride	ND	25	50	06/06/2017 00:06
Chlorobenzene	ND	25	50	06/06/2017 00:06
Chloroethane	ND	25	50	06/06/2017 00:06
Chloroform	ND	25	50	06/06/2017 00:06
Chloromethane	ND	25	50	06/06/2017 00:06
2-Chlorotoluene	ND	25	50	06/06/2017 00:06
4-Chlorotoluene	ND	25	50	06/06/2017 00:06
Dibromochloromethane	ND	25	50	06/06/2017 00:06
1,2-Dibromo-3-chloropropane	ND	10	50	06/06/2017 00:06
1,2-Dibromoethane (EDB)	ND	25	50	06/06/2017 00:06
Dibromomethane	ND	25	50	06/06/2017 00:06
1,2-Dichlorobenzene	ND	25	50	06/06/2017 00:06
1,3-Dichlorobenzene	ND	25	50	06/06/2017 00:06
1,4-Dichlorobenzene	ND	25	50	06/06/2017 00:06
Dichlorodifluoromethane	ND	25	50	06/06/2017 00:06
1,1-Dichloroethane	ND	25	50	06/06/2017 00:06
1,2-Dichloroethane (1,2-DCA)	ND	25	50	06/06/2017 00:06
1,1-Dichloroethene	ND	25	50	06/06/2017 00:06
cis-1,2-Dichloroethene	ND	25	50	06/06/2017 00:06
trans-1,2-Dichloroethene	ND	25	50	06/06/2017 00:06
1,2-Dichloropropane	ND	25	50	06/06/2017 00:06
1,3-Dichloropropane	ND	25	50	06/06/2017 00:06
2,2-Dichloropropane	ND	25	50	06/06/2017 00:06

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Date Prepared:	6/5/17-6/7/17	**Analytical Method:**	SW8260B
Project:	338841; Kia; 3635 13th ave, Oakland, CA	**Unit:**	µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-4	1705D17-004B	Water	05/30/2017 15:55	GC16	139981

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	25	50	06/06/2017 00:06
cis-1,3-Dichloropropene	ND	25	50	06/06/2017 00:06
trans-1,3-Dichloropropene	ND	25	50	06/06/2017 00:06
Diisopropyl ether (DIPE)	ND	25	50	06/06/2017 00:06
Ethylbenzene	**380**	25	50	06/06/2017 00:06
Ethyl tert-butyl ether (ETBE)	ND	25	50	06/06/2017 00:06
Freon 113	ND	25	50	06/06/2017 00:06
Hexachlorobutadiene	ND	25	50	06/06/2017 00:06
Hexachloroethane	ND	25	50	06/06/2017 00:06
2-Hexanone	ND	25	50	06/06/2017 00:06
Isopropylbenzene	ND	25	50	06/06/2017 00:06
4-Isopropyl toluene	ND	25	50	06/06/2017 00:06
Methyl-t-butyl ether (MTBE)	**32**	25	50	06/06/2017 00:06
Methylene chloride	ND	25	50	06/06/2017 00:06
4-Methyl-2-pentanone (MIBK)	ND	25	50	06/06/2017 00:06
Naphthalene	**190**	25	50	06/06/2017 00:06
n-Propyl benzene	ND	25	50	06/06/2017 00:06
Styrene	ND	25	50	06/06/2017 00:06
1,1,1,2-Tetrachloroethane	ND	25	50	06/06/2017 00:06
1,1,2,2-Tetrachloroethane	ND	25	50	06/06/2017 00:06
Tetrachloroethene	ND	25	50	06/06/2017 00:06
Toluene	**60**	25	50	06/06/2017 00:06
1,2,3-Trichlorobenzene	ND	25	50	06/06/2017 00:06
1,2,4-Trichlorobenzene	ND	25	50	06/06/2017 00:06
1,1,1-Trichloroethane	ND	25	50	06/06/2017 00:06
1,1,2-Trichloroethane	ND	25	50	06/06/2017 00:06
Trichloroethene	ND	25	50	06/06/2017 00:06
Trichlorofluoromethane	ND	25	50	06/06/2017 00:06
1,2,3-Trichloropropane	ND	25	50	06/06/2017 00:06
1,2,4-Trimethylbenzene	ND	25	50	06/06/2017 00:06
1,3,5-Trimethylbenzene	ND	25	50	06/06/2017 00:06
Vinyl Chloride	ND	25	50	06/06/2017 00:06
Xylenes, Total	**200**	25	50	06/06/2017 00:06

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Analytical Report

Client:	AEI Consultants	**WorkOrder:**	1705D17
Date Received:	5/31/17 16:10	**Extraction Method:**	SW5030B
Date Prepared:	6/5/17-6/7/17	**Analytical Method:**	SW8260B
Project:	338841; Kia; 3635 13th ave, Oakland, CA	**Unit:**	µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-4	**1705D17-004B**	**Water**	**05/30/2017 15:55**	**GC16**	**139981**

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	120	70-130		06/06/2017 00:06
Toluene-d8	113	70-130		06/06/2017 00:06
4-BFB	100	70-130		06/06/2017 00:06

Analyst(s): KF

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Analytical Report

Client:	AEI Consultants	**WorkOrder:**	1705D17
Date Received:	5/31/17 16:10	**Extraction Method:**	SW5030B
Date Prepared:	6/5/17-6/7/17	**Analytical Method:**	SW8260B
Project:	338841; Kia; 3635 13th ave, Oakland, CA	**Unit:**	µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-5	1705D17-005B	Water	05/30/2017 15:25	GC18	139981

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	100	10	06/07/2017 12:45
tert-Amyl methyl ether (TAME)	ND	5.0	10	06/07/2017 12:45
Benzene	**210**	5.0	10	06/07/2017 12:45
Bromobenzene	ND	5.0	10	06/07/2017 12:45
Bromochloromethane	ND	5.0	10	06/07/2017 12:45
Bromodichloromethane	ND	5.0	10	06/07/2017 12:45
Bromoform	ND	5.0	10	06/07/2017 12:45
Bromomethane	ND	5.0	10	06/07/2017 12:45
2-Butanone (MEK)	ND	20	10	06/07/2017 12:45
t-Butyl alcohol (TBA)	**81**	20	10	06/07/2017 12:45
n-Butyl benzene	ND	5.0	10	06/07/2017 12:45
sec-Butyl benzene	ND	5.0	10	06/07/2017 12:45
tert-Butyl benzene	ND	5.0	10	06/07/2017 12:45
Carbon Disulfide	ND	5.0	10	06/07/2017 12:45
Carbon Tetrachloride	ND	5.0	10	06/07/2017 12:45
Chlorobenzene	ND	5.0	10	06/07/2017 12:45
Chloroethane	ND	5.0	10	06/07/2017 12:45
Chloroform	ND	5.0	10	06/07/2017 12:45
Chloromethane	ND	5.0	10	06/07/2017 12:45
2-Chlorotoluene	ND	5.0	10	06/07/2017 12:45
4-Chlorotoluene	ND	5.0	10	06/07/2017 12:45
Dibromochloromethane	ND	5.0	10	06/07/2017 12:45
1,2-Dibromo-3-chloropropane	ND	2.0	10	06/07/2017 12:45
1,2-Dibromoethane (EDB)	ND	5.0	10	06/07/2017 12:45
Dibromomethane	ND	5.0	10	06/07/2017 12:45
1,2-Dichlorobenzene	ND	5.0	10	06/07/2017 12:45
1,3-Dichlorobenzene	ND	5.0	10	06/07/2017 12:45
1,4-Dichlorobenzene	ND	5.0	10	06/07/2017 12:45
Dichlorodifluoromethane	ND	5.0	10	06/07/2017 12:45
1,1-Dichloroethane	ND	5.0	10	06/07/2017 12:45
1,2-Dichloroethane (1,2-DCA)	ND	5.0	10	06/07/2017 12:45
1,1-Dichloroethene	ND	5.0	10	06/07/2017 12:45
cis-1,2-Dichloroethene	ND	5.0	10	06/07/2017 12:45
trans-1,2-Dichloroethene	ND	5.0	10	06/07/2017 12:45
1,2-Dichloropropane	ND	5.0	10	06/07/2017 12:45
1,3-Dichloropropane	ND	5.0	10	06/07/2017 12:45
2,2-Dichloropropane	ND	5.0	10	06/07/2017 12:45

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Analytical Report

Client:	AEI Consultants	**WorkOrder:**	1705D17
Date Received:	5/31/17 16:10	**Extraction Method:**	SW5030B
Date Prepared:	6/5/17-6/7/17	**Analytical Method:**	SW8260B
Project:	338841; Kia; 3635 13th ave, Oakland, CA	**Unit:**	µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-5	1705D17-005B	Water	05/30/2017 15:25	GC18	139981

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	5.0	10	06/07/2017 12:45
cis-1,3-Dichloropropene	ND	5.0	10	06/07/2017 12:45
trans-1,3-Dichloropropene	ND	5.0	10	06/07/2017 12:45
Diisopropyl ether (DIPE)	ND	5.0	10	06/07/2017 12:45
Ethylbenzene	**9.2**	5.0	10	06/07/2017 12:45
Ethyl tert-butyl ether (ETBE)	ND	5.0	10	06/07/2017 12:45
Freon 113	ND	5.0	10	06/07/2017 12:45
Hexachlorobutadiene	ND	5.0	10	06/07/2017 12:45
Hexachloroethane	ND	5.0	10	06/07/2017 12:45
2-Hexanone	ND	5.0	10	06/07/2017 12:45
Isopropylbenzene	ND	5.0	10	06/07/2017 12:45
4-Isopropyl toluene	ND	5.0	10	06/07/2017 12:45
Methyl-t-butyl ether (MTBE)	**17**	5.0	10	06/07/2017 12:45
Methylene chloride	ND	5.0	10	06/07/2017 12:45
4-Methyl-2-pentanone (MIBK)	ND	5.0	10	06/07/2017 12:45
Naphthalene	ND	5.0	10	06/07/2017 12:45
n-Propyl benzene	ND	5.0	10	06/07/2017 12:45
Styrene	ND	5.0	10	06/07/2017 12:45
1,1,1,2-Tetrachloroethane	ND	5.0	10	06/07/2017 12:45
1,1,2,2-Tetrachloroethane	ND	5.0	10	06/07/2017 12:45
Tetrachloroethene	ND	5.0	10	06/07/2017 12:45
Toluene	ND	5.0	10	06/07/2017 12:45
1,2,3-Trichlorobenzene	ND	5.0	10	06/07/2017 12:45
1,2,4-Trichlorobenzene	ND	5.0	10	06/07/2017 12:45
1,1,1-Trichloroethane	ND	5.0	10	06/07/2017 12:45
1,1,2-Trichloroethane	ND	5.0	10	06/07/2017 12:45
Trichloroethene	ND	5.0	10	06/07/2017 12:45
Trichlorofluoromethane	ND	5.0	10	06/07/2017 12:45
1,2,3-Trichloropropane	ND	5.0	10	06/07/2017 12:45
1,2,4-Trimethylbenzene	ND	5.0	10	06/07/2017 12:45
1,3,5-Trimethylbenzene	ND	5.0	10	06/07/2017 12:45
Vinyl Chloride	ND	5.0	10	06/07/2017 12:45
Xylenes, Total	**6.3**	5.0	10	06/07/2017 12:45

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Analytical Report

Client:	AEI Consultants	**WorkOrder:**	1705D17
Date Received:	5/31/17 16:10	**Extraction Method:**	SW5030B
Date Prepared:	6/5/17-6/7/17	**Analytical Method:**	SW8260B
Project:	338841; Kia; 3635 13th ave, Oakland, CA	**Unit:**	µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-5	**1705D17-005B**	**Water**	**05/30/2017 15:25**	**GC18**	**139981**

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	113	70-130		06/07/2017 12:45
Toluene-d8	102	70-130		06/07/2017 12:45
4-BFB	109	70-130		06/07/2017 12:45

Analyst(s): KF

(Cont.)

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Analytical Report

Client:	AEI Consultants	**WorkOrder:**	1705D17
Date Received:	5/31/17 16:10	**Extraction Method:**	SW5030B
Date Prepared:	6/5/17-6/7/17	**Analytical Method:**	SW8260B
Project:	338841; Kia; 3635 13th ave, Oakland, CA	**Unit:**	µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-6	1705D17-006B	Water	05/30/2017 15:40	GC16	139981

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	50	5	06/06/2017 22:15
tert-Amyl methyl ether (TAME)	ND	2.5	5	06/06/2017 22:15
Benzene	**33**	2.5	5	06/06/2017 22:15
Bromobenzene	ND	2.5	5	06/06/2017 22:15
Bromochloromethane	ND	2.5	5	06/06/2017 22:15
Bromodichloromethane	ND	2.5	5	06/06/2017 22:15
Bromoform	ND	2.5	5	06/06/2017 22:15
Bromomethane	ND	2.5	5	06/06/2017 22:15
2-Butanone (MEK)	ND	10	5	06/06/2017 22:15
t-Butyl alcohol (TBA)	**65**	10	5	06/06/2017 22:15
n-Butyl benzene	ND	2.5	5	06/06/2017 22:15
sec-Butyl benzene	ND	2.5	5	06/06/2017 22:15
tert-Butyl benzene	ND	2.5	5	06/06/2017 22:15
Carbon Disulfide	ND	2.5	5	06/06/2017 22:15
Carbon Tetrachloride	ND	2.5	5	06/06/2017 22:15
Chlorobenzene	ND	2.5	5	06/06/2017 22:15
Chloroethane	ND	2.5	5	06/06/2017 22:15
Chloroform	ND	2.5	5	06/06/2017 22:15
Chloromethane	ND	2.5	5	06/06/2017 22:15
2-Chlorotoluene	ND	2.5	5	06/06/2017 22:15
4-Chlorotoluene	ND	2.5	5	06/06/2017 22:15
Dibromochloromethane	ND	2.5	5	06/06/2017 22:15
1,2-Dibromo-3-chloropropane	ND	1.0	5	06/06/2017 22:15
1,2-Dibromoethane (EDB)	ND	2.5	5	06/06/2017 22:15
Dibromomethane	ND	2.5	5	06/06/2017 22:15
1,2-Dichlorobenzene	ND	2.5	5	06/06/2017 22:15
1,3-Dichlorobenzene	ND	2.5	5	06/06/2017 22:15
1,4-Dichlorobenzene	ND	2.5	5	06/06/2017 22:15
Dichlorodifluoromethane	ND	2.5	5	06/06/2017 22:15
1,1-Dichloroethane	ND	2.5	5	06/06/2017 22:15
1,2-Dichloroethane (1,2-DCA)	ND	2.5	5	06/06/2017 22:15
1,1-Dichloroethene	ND	2.5	5	06/06/2017 22:15
cis-1,2-Dichloroethene	ND	2.5	5	06/06/2017 22:15
trans-1,2-Dichloroethene	ND	2.5	5	06/06/2017 22:15
1,2-Dichloropropane	ND	2.5	5	06/06/2017 22:15
1,3-Dichloropropane	ND	2.5	5	06/06/2017 22:15
2,2-Dichloropropane	ND	2.5	5	06/06/2017 22:15

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Analytical Report

Client:	AEI Consultants	**WorkOrder:**	1705D17
Date Received:	5/31/17 16:10	**Extraction Method:**	SW5030B
Date Prepared:	6/5/17-6/7/17	**Analytical Method:**	SW8260B
Project:	338841; Kia; 3635 13th ave, Oakland, CA	**Unit:**	µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-6	**1705D17-006B**	**Water**	**05/30/2017 15:40**	**GC16**	**139981**

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	2.5	5	06/06/2017 22:15
cis-1,3-Dichloropropene	ND	2.5	5	06/06/2017 22:15
trans-1,3-Dichloropropene	ND	2.5	5	06/06/2017 22:15
Diisopropyl ether (DIPE)	ND	2.5	5	06/06/2017 22:15
Ethylbenzene	ND	2.5	5	06/06/2017 22:15
Ethyl tert-butyl ether (ETBE)	ND	2.5	5	06/06/2017 22:15
Freon 113	ND	2.5	5	06/06/2017 22:15
Hexachlorobutadiene	ND	2.5	5	06/06/2017 22:15
Hexachloroethane	ND	2.5	5	06/06/2017 22:15
2-Hexanone	ND	2.5	5	06/06/2017 22:15
Isopropylbenzene	**4.8**	2.5	5	06/06/2017 22:15
4-Isopropyl toluene	ND	2.5	5	06/06/2017 22:15
Methyl-t-butyl ether (MTBE)	**140**	2.5	5	06/06/2017 22:15
Methylene chloride	ND	2.5	5	06/06/2017 22:15
4-Methyl-2-pentanone (MIBK)	ND	2.5	5	06/06/2017 22:15
Naphthalene	**2.7**	2.5	5	06/06/2017 22:15
n-Propyl benzene	**5.0**	2.5	5	06/06/2017 22:15
Styrene	ND	2.5	5	06/06/2017 22:15
1,1,1,2-Tetrachloroethane	ND	2.5	5	06/06/2017 22:15
1,1,2,2-Tetrachloroethane	ND	2.5	5	06/06/2017 22:15
Tetrachloroethene	ND	2.5	5	06/06/2017 22:15
Toluene	ND	2.5	5	06/06/2017 22:15
1,2,3-Trichlorobenzene	ND	2.5	5	06/06/2017 22:15
1,2,4-Trichlorobenzene	ND	2.5	5	06/06/2017 22:15
1,1,1-Trichloroethane	ND	2.5	5	06/06/2017 22:15
1,1,2-Trichloroethane	ND	2.5	5	06/06/2017 22:15
Trichloroethene	ND	2.5	5	06/06/2017 22:15
Trichlorofluoromethane	ND	2.5	5	06/06/2017 22:15
1,2,3-Trichloropropane	ND	2.5	5	06/06/2017 22:15
1,2,4-Trimethylbenzene	ND	2.5	5	06/06/2017 22:15
1,3,5-Trimethylbenzene	ND	2.5	5	06/06/2017 22:15
Vinyl Chloride	ND	2.5	5	06/06/2017 22:15
Xylenes, Total	ND	2.5	5	06/06/2017 22:15

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Analytical Report

Client:	AEI Consultants	**WorkOrder:**	1705D17
Date Received:	5/31/17 16:10	**Extraction Method:**	SW5030B
Date Prepared:	6/5/17-6/7/17	**Analytical Method:**	SW8260B
Project:	338841; Kia; 3635 13th ave, Oakland, CA	**Unit:**	µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-6	**1705D17-006B**	**Water**	**05/30/2017 15:40**	**GC16**	**139981**

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	120	70-130		06/06/2017 22:15
Toluene-d8	114	70-130		06/06/2017 22:15
4-BFB	93	70-130		06/06/2017 22:15

Analyst(s): KF

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Analytical Report

Client:	AEI Consultants	**WorkOrder:**	1705D17
Date Received:	5/31/17 16:10	**Extraction Method:**	SW5030B
Date Prepared:	6/5/17-6/7/17	**Analytical Method:**	SW8260B
Project:	338841; Kia; 3635 13th ave, Oakland, CA	**Unit:**	µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-7	1705D17-007B	Water	05/30/2017 15:05	GC16	139981

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	500	50	06/06/2017 22:56
tert-Amyl methyl ether (TAME)	ND	25	50	06/06/2017 22:56
Benzene	**1700**	25	50	06/06/2017 22:56
Bromobenzene	ND	25	50	06/06/2017 22:56
Bromochloromethane	ND	25	50	06/06/2017 22:56
Bromodichloromethane	ND	25	50	06/06/2017 22:56
Bromoform	ND	25	50	06/06/2017 22:56
Bromomethane	ND	25	50	06/06/2017 22:56
2-Butanone (MEK)	ND	100	50	06/06/2017 22:56
t-Butyl alcohol (TBA)	**460**	100	50	06/06/2017 22:56
n-Butyl benzene	ND	25	50	06/06/2017 22:56
sec-Butyl benzene	ND	25	50	06/06/2017 22:56
tert-Butyl benzene	ND	25	50	06/06/2017 22:56
Carbon Disulfide	ND	25	50	06/06/2017 22:56
Carbon Tetrachloride	ND	25	50	06/06/2017 22:56
Chlorobenzene	ND	25	50	06/06/2017 22:56
Chloroethane	ND	25	50	06/06/2017 22:56
Chloroform	ND	25	50	06/06/2017 22:56
Chloromethane	ND	25	50	06/06/2017 22:56
2-Chlorotoluene	ND	25	50	06/06/2017 22:56
4-Chlorotoluene	ND	25	50	06/06/2017 22:56
Dibromochloromethane	ND	25	50	06/06/2017 22:56
1,2-Dibromo-3-chloropropane	ND	10	50	06/06/2017 22:56
1,2-Dibromoethane (EDB)	ND	25	50	06/06/2017 22:56
Dibromomethane	ND	25	50	06/06/2017 22:56
1,2-Dichlorobenzene	ND	25	50	06/06/2017 22:56
1,3-Dichlorobenzene	ND	25	50	06/06/2017 22:56
1,4-Dichlorobenzene	ND	25	50	06/06/2017 22:56
Dichlorodifluoromethane	ND	25	50	06/06/2017 22:56
1,1-Dichloroethane	ND	25	50	06/06/2017 22:56
1,2-Dichloroethane (1,2-DCA)	ND	25	50	06/06/2017 22:56
1,1-Dichloroethene	ND	25	50	06/06/2017 22:56
cis-1,2-Dichloroethene	ND	25	50	06/06/2017 22:56
trans-1,2-Dichloroethene	ND	25	50	06/06/2017 22:56
1,2-Dichloropropane	ND	25	50	06/06/2017 22:56
1,3-Dichloropropane	ND	25	50	06/06/2017 22:56
2,2-Dichloropropane	ND	25	50	06/06/2017 22:56

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Analytical Report

Client:	AEI Consultants	**WorkOrder:**	1705D17
Date Received:	5/31/17 16:10	**Extraction Method:**	SW5030B
Date Prepared:	6/5/17-6/7/17	**Analytical Method:**	SW8260B
Project:	338841; Kia; 3635 13th ave, Oakland, CA	**Unit:**	µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-7	**1705D17-007B**	**Water**	**05/30/2017 15:05**	**GC16**	**139981**

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	25	50	06/06/2017 22:56
cis-1,3-Dichloropropene	ND	25	50	06/06/2017 22:56
trans-1,3-Dichloropropene	ND	25	50	06/06/2017 22:56
Diisopropyl ether (DIPE)	ND	25	50	06/06/2017 22:56
Ethylbenzene	**96**	25	50	06/06/2017 22:56
Ethyl tert-butyl ether (ETBE)	ND	25	50	06/06/2017 22:56
Freon 113	ND	25	50	06/06/2017 22:56
Hexachlorobutadiene	ND	25	50	06/06/2017 22:56
Hexachloroethane	ND	25	50	06/06/2017 22:56
2-Hexanone	ND	25	50	06/06/2017 22:56
Isopropylbenzene	ND	25	50	06/06/2017 22:56
4-Isopropyl toluene	ND	25	50	06/06/2017 22:56
Methyl-t-butyl ether (MTBE)	ND	25	50	06/06/2017 22:56
Methylene chloride	ND	25	50	06/06/2017 22:56
4-Methyl-2-pentanone (MIBK)	ND	25	50	06/06/2017 22:56
Naphthalene	ND	25	50	06/06/2017 22:56
n-Propyl benzene	ND	25	50	06/06/2017 22:56
Styrene	ND	25	50	06/06/2017 22:56
1,1,1,2-Tetrachloroethane	ND	25	50	06/06/2017 22:56
1,1,2,2-Tetrachloroethane	ND	25	50	06/06/2017 22:56
Tetrachloroethene	ND	25	50	06/06/2017 22:56
Toluene	ND	25	50	06/06/2017 22:56
1,2,3-Trichlorobenzene	ND	25	50	06/06/2017 22:56
1,2,4-Trichlorobenzene	ND	25	50	06/06/2017 22:56
1,1,1-Trichloroethane	ND	25	50	06/06/2017 22:56
1,1,2-Trichloroethane	ND	25	50	06/06/2017 22:56
Trichloroethene	ND	25	50	06/06/2017 22:56
Trichlorofluoromethane	ND	25	50	06/06/2017 22:56
1,2,3-Trichloropropane	ND	25	50	06/06/2017 22:56
1,2,4-Trimethylbenzene	ND	25	50	06/06/2017 22:56
1,3,5-Trimethylbenzene	ND	25	50	06/06/2017 22:56
Vinyl Chloride	ND	25	50	06/06/2017 22:56
Xylenes, Total	ND	25	50	06/06/2017 22:56

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Analytical Report

Client:	AEI Consultants	**WorkOrder:**	1705D17
Date Received:	5/31/17 16:10	**Extraction Method:**	SW5030B
Date Prepared:	6/5/17-6/7/17	**Analytical Method:**	SW8260B
Project:	338841; Kia; 3635 13th ave, Oakland, CA	**Unit:**	µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-7	**1705D17-007B**	**Water**	**05/30/2017 15:05**	**GC16**	**139981**

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	118	70-130		06/06/2017 22:56
Toluene-d8	114	70-130		06/06/2017 22:56
4-BFB	97	70-130		06/06/2017 22:56

Analyst(s): KF

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Analytical Report

Client:	AEI Consultants	**WorkOrder:**	1705D17
Date Received:	5/31/17 16:10	**Extraction Method:**	SW5030B
Date Prepared:	6/5/17-6/6/17	**Analytical Method:**	SW8260B
Project:	338841; Kia; 3635 13th ave, Oakland, CA	**Unit:**	µg/L

TPH(g)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-1	**1705D17-001B**	**Water**	**05/30/2017 14:14**	**GC16**	**139981**

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	50	1	06/05/2017 16:59

Surrogates	REC (%)	Limits	
Dibromofluoromethane	130	70-130	06/05/2017 16:59

Analyst(s): KF

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-2	**1705D17-002B**	**Water**	**05/30/2017 14:30**	**GC16**	**139981**

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	**2300**	500	10	06/05/2017 17:43

Surrogates	REC (%)	Limits	
Dibromofluoromethane	127	70-130	06/05/2017 17:43

Analyst(s): KF

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-3	**1705D17-003B**	**Water**	**05/30/2017 14:45**	**GC16**	**139981**

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	50	1	06/05/2017 23:25

Surrogates	REC (%)	Qualifiers	Limits	
Dibromofluoromethane	131	S	70-130	06/05/2017 23:25

Analyst(s): KF Analytical Comments: c2

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-4	**1705D17-004B**	**Water**	**05/30/2017 15:55**	**GC16**	**139981**

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	**2900**	2500	50	06/06/2017 00:06

Surrogates	REC (%)	Limits	
Dibromofluoromethane	128	70-130	06/06/2017 00:06

Analyst(s): KF

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Analytical Report

Client:	AEI Consultants	**WorkOrder:**	1705D17
Date Received:	5/31/17 16:10	**Extraction Method:**	SW5030B
Date Prepared:	6/5/17-6/6/17	**Analytical Method:**	SW8260B
Project:	338841; Kia; 3635 13th ave, Oakland, CA	**Unit:**	µg/L

TPH(g)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-5	**1705D17-005B**	**Water**	**05/30/2017 15:25**	**GC16**	**139981**

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	**320**	50	1	06/06/2017 00:47

Surrogates	REC (%)	Limits	
Dibromofluoromethane	127	70-130	06/06/2017 00:47

Analyst(s): KF

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-6	**1705D17-006B**	**Water**	**05/30/2017 15:40**	**GC16**	**139981**

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	**370**	50	1	06/06/2017 01:28

Surrogates	REC (%)	Limits	
Dibromofluoromethane	130	70-130	06/06/2017 01:28

Analyst(s): KF

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-7	**1705D17-007B**	**Water**	**05/30/2017 15:05**	**GC16**	**139981**

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	**2200**	500	10	06/06/2017 02:07

Surrogates	REC (%)	Limits	
Dibromofluoromethane	128	70-130	06/06/2017 02:07

Analyst(s): KF

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Analytical Report

Client:	AEI Consultants	**WorkOrder:**	1705D17
Date Received:	5/31/17 16:10	**Extraction Method:**	SW3510C/3630C
Date Prepared:	5/31/17	**Analytical Method:**	SW8015B
Project:	338841; Kia; 3635 13th ave, Oakland, CA	**Unit:**	µg/L

Total Extractable Petroleum Hydrocarbons w/ Silica Gel Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-1	**1705D17-001A**	**Water**	**05/30/2017 14:14**	**GC9b**	**139714**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	50	1	06/01/2017 20:06
TPH-Motor Oil (C18-C36)	ND	250	1	06/01/2017 20:06

Surrogates	REC (%)	Limits	
C9	95	66-138	06/01/2017 20:06

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-2	**1705D17-002A**	**Water**	**05/30/2017 14:30**	**GC9b**	**139714**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	**1100**	50	1	06/01/2017 20:45
TPH-Motor Oil (C18-C36)	ND	250	1	06/01/2017 20:45

Surrogates	REC (%)	Limits	
C9	101	66-138	06/01/2017 20:45

Analyst(s): TK Analytical Comments: e4

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-3	**1705D17-003A**	**Water**	**05/30/2017 14:45**	**GC9b**	**139714**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	50	1	06/01/2017 21:24
TPH-Motor Oil (C18-C36)	ND	250	1	06/01/2017 21:24

Surrogates	REC (%)	Limits	
C9	95	66-138	06/01/2017 21:24

Analyst(s): TK

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NELAP 4033ORELAP

Angela Rydelius, Lab Manager

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Analytical Report

Client:	AEI Consultants	**WorkOrder:**	1705D17
Date Received:	5/31/17 16:10	**Extraction Method:**	SW3510C/3630C
Date Prepared:	5/31/17	**Analytical Method:**	SW8015B
Project:	338841; Kia; 3635 13th ave, Oakland, CA	**Unit:**	µg/L

Total Extractable Petroleum Hydrocarbons w/ Silica Gel Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-4	**1705D17-004A**	**Water**	**05/30/2017 15:55**	**GC9b**	**139714**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	**1600**	50	1	06/01/2017 22:41
TPH-Motor Oil (C18-C36)	ND	250	1	06/01/2017 22:41

Surrogates	REC (%)	Limits	
C9	103	66-138	06/01/2017 22:41

Analyst(s): TK Analytical Comments: e4

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-5	**1705D17-005A**	**Water**	**05/30/2017 15:25**	**GC9b**	**139714**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	**52**	50	1	06/01/2017 23:20
TPH-Motor Oil (C18-C36)	ND	250	1	06/01/2017 23:20

Surrogates	REC (%)	Limits	
C9	96	66-138	06/01/2017 23:20

Analyst(s): TK Analytical Comments: e4

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-6	**1705D17-006A**	**Water**	**05/30/2017 15:40**	**GC9b**	**139714**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	**140**	50	1	06/01/2017 23:59
TPH-Motor Oil (C18-C36)	ND	250	1	06/01/2017 23:59

Surrogates	REC (%)	Limits	
C9	95	66-138	06/01/2017 23:59

Analyst(s): TK Analytical Comments: e4

(Cont.)

NELAP 4033ORELAP

Angela Rydelius, Lab Manager

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Analytical Report

Client:	AEI Consultants	**WorkOrder:**	1705D17
Date Received:	5/31/17 16:10	**Extraction Method:**	SW3510C/3630C
Date Prepared:	5/31/17	**Analytical Method:**	SW8015B
Project:	338841; Kia; 3635 13th ave, Oakland, CA	**Unit:**	µg/L

Total Extractable Petroleum Hydrocarbons w/ Silica Gel Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-7	**1705D17-007A**	**Water**	**05/30/2017 15:05**	**GC9b**	**139714**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	**320**	50	1	06/02/2017 00:38
TPH-Motor Oil (C18-C36)	ND	250	1	06/02/2017 00:38

Surrogates	REC (%)	Limits	
C9	96	66-138	06/02/2017 00:38

Analyst(s): TK

Analytical Comments: e4

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Quality Control Report

Client:	AEI Consultants	**WorkOrder:**	1705D17
Date Prepared:	6/5/17	**BatchID:**	139981
Date Analyzed:	6/5/17	**Extraction Method:**	SW5030B
Instrument:	GC16	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	338841; Kia; 3635 13th ave, Oakland, CA	**Sample ID:**	MB/LCS-139981 1705D17-001BMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	8.28	0.50	10	-	83	54-140
Benzene	ND	9.25	0.50	10	-	93	47-158
Bromobenzene	ND	-	0.50	-	-	-	-
Bromochloromethane	ND	-	0.50	-	-	-	-
Bromodichloromethane	ND	-	0.50	-	-	-	-
Bromoform	ND	-	0.50	-	-	-	-
Bromomethane	ND	-	0.50	-	-	-	-
2-Butanone (MEK)	ND	-	2.0	-	-	-	-
t-Butyl alcohol (TBA)	ND	24.9	2.0	40	-	62	42-140
n-Butyl benzene	ND	-	0.50	-	-	-	-
sec-Butyl benzene	ND	-	0.50	-	-	-	-
tert-Butyl benzene	ND	-	0.50	-	-	-	-
Carbon Disulfide	ND	-	0.50	-	-	-	-
Carbon Tetrachloride	ND	-	0.50	-	-	-	-
Chlorobenzene	ND	8.67	0.50	10	-	87	43-157
Chloroethane	ND	-	0.50	-	-	-	-
Chloroform	ND	-	0.50	-	-	-	-
Chloromethane	ND	-	0.50	-	-	-	-
2-Chlorotoluene	ND	-	0.50	-	-	-	-
4-Chlorotoluene	ND	-	0.50	-	-	-	-
Dibromochloromethane	ND	-	0.50	-	-	-	-
1,2-Dibromo-3-chloropropane	0.2567	-	0.20	-	-	-	-
1,2-Dibromoethane (EDB)	ND	8.00	0.50	10	-	80	44-155
Dibromomethane	ND	-	0.50	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.50	-	-	-	-
Dichlorodifluoromethane	ND	-	0.50	-	-	-	-
1,1-Dichloroethane	ND	-	0.50	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	9.16	0.50	10	-	92	66-125
1,1-Dichloroethene	ND	9.19	0.50	10	-	92	47-149
cis-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
1,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,3-Dichloropropane	ND	-	0.50	-	-	-	-
2,2-Dichloropropane	ND	-	0.50	-	-	-	-

(Cont.)

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Quality Control Report

Client:	AEI Consultants	**WorkOrder:**	1705D17
Date Prepared:	6/5/17	**BatchID:**	139981
Date Analyzed:	6/5/17	**Extraction Method:**	SW5030B
Instrument:	GC16	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	338841; Kia; 3635 13th ave, Oakland, CA	**Sample ID:**	MB/LCS-139981 1705D17-001BMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
1,1-Dichloropropene	ND	-	0.50	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
Diisopropyl ether (DIPE)	ND	9.10	0.50	10	-	91	57-136
Ethylbenzene	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	9.01	0.50	10	-	90	55-137
Freon 113	ND	-	0.50	-	-	-	-
Hexachlorobutadiene	ND	-	0.50	-	-	-	-
Hexachloroethane	ND	-	0.50	-	-	-	-
2-Hexanone	ND	-	0.50	-	-	-	-
Isopropylbenzene	ND	-	0.50	-	-	-	-
4-Isopropyl toluene	ND	-	0.50	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	8.33	0.50	10	-	83	53-139
Methylene chloride	ND	-	0.50	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.50	-	-	-	-
Naphthalene	ND	-	0.50	-	-	-	-
n-Propyl benzene	ND	-	0.50	-	-	-	-
Styrene	ND	-	0.50	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
Tetrachloroethene	ND	-	0.50	-	-	-	-
Toluene	ND	8.75	0.50	10	-	87	52-137
1,2,3-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.50	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.50	-	-	-	-
Trichloroethene	ND	8.83	0.50	10	-	88	43-157
Trichlorofluoromethane	ND	-	0.50	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.50	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.50	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.50	-	-	-	-
Vinyl Chloride	ND	-	0.50	-	-	-	-
Xylenes, Total	ND	-	0.50	-	-	-	-

(Cont.)

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Quality Control Report

Client:	AEI Consultants	**WorkOrder:**	1705D17
Date Prepared:	6/5/17	**BatchID:**	139981
Date Analyzed:	6/5/17	**Extraction Method:**	SW5030B
Instrument:	GC16	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	338841; Kia; 3635 13th ave, Oakland, CA	**Sample ID:**	MB/LCS-139981 1705D17-001BMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Surrogate Recovery							
Dibromofluoromethane	29.72	29.3		25	119	117	70-130
Toluene-d8	28.32	29.2		25	113	117	70-130
4-BFB	2.487	2.59		2.5	99	104	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	10.3	10.6	10	ND	103	106	69-139	2.88	20
Benzene	9.91	10.2	10	ND	99	102	69-141	2.68	20
t-Butyl alcohol (TBA)	39.3	39.0	40	ND	98	97	41-152	0.744	20
Chlorobenzene	8.95	9.24	10	ND	90	92	77-120	3.12	20
1,2-Dibromoethane (EDB)	9.32	9.47	10	ND	93	95	76-135	1.60	20
1,2-Dichloroethane (1,2-DCA)	10.6	10.8	10	ND	106	108	73-139	2.20	20
1,1-Dichloroethene	9.44	9.68	10	ND	94	97	59-140	2.43	20
Diisopropyl ether (DIPE)	10.5	10.8	10	ND	105	108	72-140	2.62	20
Ethyl tert-butyl ether (ETBE)	10.9	11.2	10	ND	109	112	71-140	2.89	20
Methyl-t-butyl ether (MTBE)	10.8	11.0	10	ND	107	109	73-139	2.09	20
Toluene	8.85	9.05	10	ND	88	90	71-128	2.28	20
Trichloroethene	9.21	9.38	10	ND	92	94	64-132	1.75	20
Surrogate Recovery									
Dibromofluoromethane	30.8	30.5	25		123	122	73-131	0.896	20
Toluene-d8	28.1	28.1	25		112	112	72-117	0	20
4-BFB	2.40	2.52	2.5		96	101	74-116	4.78	20

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Quality Control Report

Client:	AEI Consultants	**WorkOrder:**	1705D17
Date Prepared:	6/5/17	**BatchID:**	139981
Date Analyzed:	6/5/17	**Extraction Method:**	SW5030B
Instrument:	GC16	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	338841; Kia; 3635 13th ave, Oakland, CA	**Sample ID:**	MB/LCS/LCSD-139981 1705D17-001BMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
TPH(g) (C6-C12)	ND	50	-	-	-
Surrogate Recovery					
Dibromofluoromethane	31.77		25	127	70-130

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
TPH(g) (C6-C12)	181	186	200	91	93	70-130	2.52	20
Surrogate Recovery								
Dibromofluoromethane	31.4	31.8	25	126	127	70-130	1.29	20

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(g) (C6-C12)	N/A	N/A		N/A	N/A	N/A	-	N/A	-
Surrogate Recovery									
Dibromofluoromethane	N/A	N/A			N/A	N/A	-	N/A	-

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Quality Control Report

Client:	AEI Consultants	**WorkOrder:**	1705D17
Date Prepared:	5/31/17	**BatchID:**	139714
Date Analyzed:	5/31/17	**Extraction Method:**	SW3510C/3630C
Instrument:	GC11B	**Analytical Method:**	SW8015B
Matrix:	Water	**Unit:**	µg/L
Project:	338841; Kia; 3635 13th ave, Oakland, CA	**Sample ID:**	MB/LCS/LCSD-139714

QC Report for SW8015B w/ Silica Gel Clean-Up

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
TPH-Diesel (C10-C23)	ND	50	-	-	-
TPH-Motor Oil (C18-C36)	ND	250	-	-	-
Surrogate Recovery					
C9	621.6		625	99	79-111

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	1160	1150	1000	116	115	88-134	0.513	30
Surrogate Recovery								
C9	634	648	625	101	104	79-111	2.19	30

McCampbell Analytical, Inc.
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Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1705D17 **ClientCode: AEL**

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

Report to:
Wayne Hung
AEI Consultants
2500 Camino Diablo, Ste.#200
Walnut Creek, CA 94597
(925) 478-9698 FAX: (925) 944-2895

Email: whung@aeiconsultants.com
cc/3rd Party:
PO: 133762
ProjectNo: 338841; Kia; 3635 13th ave, Oakland, CA

Bill to:
Accounts Payable
AEI Consultants
2500 Camino Diablo, Ste. #200
Walnut Creek, CA 94597
AccountsPayable@AEIConsultants.com

Requested TAT: 5 days;

Date Received: 05/31/2017
Date Logged: 05/31/2017

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
1705D17-001	MW-1	Water	5/30/2017 14:14	☐	B	B	A	A								
1705D17-002	MW-2	Water	5/30/2017 14:30	☐	B	B		A								
1705D17-003	MW-3	Water	5/30/2017 14:45	☐	B	B		A								
1705D17-004	MW-4	Water	5/30/2017 15:55	☐	B	B		A								
1705D17-005	MW-5	Water	5/30/2017 15:25	☐	B	B		A								
1705D17-006	MW-6	Water	5/30/2017 15:40	☐	B	B		A								
1705D17-007	MW-7	Water	5/30/2017 15:05	☐	B	B		A								

Test Legend:

1	8260B_W	2	8260GAS_W	3	PREDF REPORT	4	TPH(DMO)WSG_W
5		6		7		8	
9		10		11		12	

Prepared by: Kena Ponce

The following SampIDs: 001B, 002B, 003B, 004B, 005B, 006B, 007B contain testgroup Gas8260_W.

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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WORK ORDER SUMMARY

Client Name: AEI CONSULTANTS
Client Contact: Wayne Hung
Contact's Email: whung@aeiconsultants.com

Project: 338841; Kia; 3635 13th ave, Oakland, CA
Comments:

Work Order: 1705D17
QC Level: LEVEL 2
Date Logged: 5/31/2017

☐ 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
1705D17-001A	MW-1	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	2	aVOA	☐	5/30/2017 14:14	5 days	Present	☐	
1705D17-001B	MW-1	Water	TPH(g) & 8260 by P&T GCMS	4	VOA w/ HCl	☐	5/30/2017 14:14	5 days	Present	☐	
1705D17-002A	MW-2	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	2	aVOA	☐	5/30/2017 14:30	5 days	Trace	☐	
1705D17-002B	MW-2	Water	TPH(g) & 8260 by P&T GCMS	4	VOA w/ HCl	☐	5/30/2017 14:30	5 days	Trace	☐	
1705D17-003A	MW-3	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	2	aVOA	☐	5/30/2017 14:45	5 days	Present	☐	
1705D17-003B	MW-3	Water	TPH(g) & 8260 by P&T GCMS	4	VOA w/ HCl	☐	5/30/2017 14:45	5 days	Present	☐	
1705D17-004A	MW-4	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	2	aVOA	☐	5/30/2017 15:55	5 days	Present	☐	
1705D17-004B	MW-4	Water	TPH(g) & 8260 by P&T GCMS	4	VOA w/ HCl	☐	5/30/2017 15:55	5 days	Present	☐	
1705D17-005A	MW-5	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	2	aVOA	☐	5/30/2017 15:25	5 days	Present	☐	
1705D17-005B	MW-5	Water	TPH(g) & 8260 by P&T GCMS	4	VOA w/ HCl	☐	5/30/2017 15:25	5 days	Present	☐	
1705D17-006A	MW-6	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	2	aVOA	☐	5/30/2017 15:40	5 days	Present	☐	
1705D17-006B	MW-6	Water	TPH(g) & 8260 by P&T GCMS	4	VOA w/ HCl	☐	5/30/2017 15:40	5 days	Present	☐	
1705D17-007A	MW-7	Water	SW8015B (TPH-d,mo w/ S.G. Clean-Up)	2	aVOA	☐	5/30/2017 15:05	5 days	Present	☐	
1705D17-007B	MW-7	Water	TPH(g) & 8260 by P&T GCMS	4	VOA w/ HCl	☐	5/30/2017 15:05	5 days	Present	☐	

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 # 1705017

McCAMPBELL ANALYTICAL, INC.

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CHAIN OF CUSTODY RECORD

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

Report To: Wayne Hung — Bill To: AEI
Company: AEI
Email: whung@aeiconsultants.com
Alt Email: nbricker@aeiconsultants.com — Tele: 707-484-6223
Project Name: Kia — Project #338841
Project Location: 3635 13th ave, Oakland, CA — PO # 133762
Sampler Signature:

SAMPLE ID Location / Field Point	Sampling Date	Sampling Time	#Containers	Matrix	Preservative	BTEX & TPH as Gas (8021/ 8015) MTBE	TPH as Diesel (8015) + Motor Oil Without Silica Gel	TPH as Diesel (8015) + Motor Oil With Silica Gel	Total Oil & Grease (1664 / 9071) Without Silica Gel	Total Petroleum Hydrocarbons - Oil & Grease (1664 / 9071) With Silica Gel	Total Petroleum Hydrocarbons (418.1) With Silica Gel	EPA 505/ 608 / 8081 (Cl Pesticides)	EPA 608 / 8082 PCB's ; Aroclors only	EPA 524.2 / 624 / 8260 (VOCs)	EPA 525.2 / 625 / 8270 (SVOCs)	EPA 8270 SIM / 8310 (PAHs / PNAs)	CAM 17 Metals (200.8 / 6020)*	Metals (200.8 / 6020)	Baylands Requirements	Lab to filter sample for dissolved metals analysis	VOCs, Fuel Oxygenates, and TPHg by 8260B
MW-1	5/30/17	1414	6	GW	1,2			●													●
MW-2	5/30/17	1430	6	GW	1,2			●													●
MW-3	5/30/17	1445	6	GW	1,2			●													●
MW-4	5/30/17	1555	6	GW	1,2			●													●
MW-5	5/30/17	1525	6	GW	1,2			●													●
MW-6	5/30/17	1540	6	GW	1,2			●													●
MW-7	5/30/17	1505	6	GW	1,2			●													●

Analysis Requested

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
	5/30/17	1610		5/31/17	16:10

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 0.2 °C Initials

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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

Sample Receipt Checklist

Client Name:	**AEI Consultants**	Date and Time Received	**5/31/2017 16:10**
Project Name:	**338841; Kia; 3635 13th ave, Oakland, CA**	Date Logged:	**5/31/2017**
		Received by:	Kena Ponce
WorkOrder №:	**1705D17** Matrix: Water	Logged by:	Kena Ponce
Carrier:	Client Drop-In		

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: 6.2°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: