

APPENDIX E

**Summary of KMEP Monthly Sampling Events
Conducted During Second Semiannual 2011
in the 24-Inch Block Valve Area**

Monthly Monitoring Events

Groundwater samples were collected monthly in the 24-inch block valve area located in the southeast corner of the site by Blaine Tech on behalf of SFPP. Samples were collected from the following wells in August, September, November, and December 2011: GMW-36, GMW-O-15, GMW-O-16, GMW-O-18, GMW-O-19, and PZ-5. All wells were purged and sampled using low-flow methods prior to sample collection.

Tables in Appendix E list the wells that were gauged during the second half of 2011 monthly events and summarize the analytical results for detected compounds each month. These results are also reflected on the Figures included in this report for the semiannual sampling event.

TABLE E-1

**SUMMARY OF GROUNDWATER ELEVATIONS
MONTHLY MONITORING EVENTS**
Defense Fuel Support Point Norwalk
Norwalk, California

Well	Date	Top of Casing Elevation (feet msl)	Depth to Product (feet btoc)	Depth to Water (feet btoc)	Apparent Product Thickness (feet)	Groundwater Elevation (feet msl)
GMW-36	19-Aug-11	74.53	NM	NM	NC	NM
GMW-36	22-Sep-11	74.53	NM	NM	NC	NM
GMW-36	28-Nov-11	74.53	NM	NM	NC	NM
GMW-36	21-Dec-11	74.53	---	28.17	---	46.36
GMW-O-15	19-Aug-11	74.23	NM	NM	NC	NM
GMW-O-15	22-Sep-11	74.23	NM	NM	NC	NM
GMW-O-15	28-Nov-11	74.23	NM	NM	NC	NM
GMW-O-15	21-Dec-11	74.23	---	31.13	---	43.1
GMW-O-16	19-Aug-11	74.1	---	25.63	---	48.47
GMW-O-16	22-Sep-11	74.1	---	26.32	---	47.78
GMW-O-16	28-Nov-11	74.1	---	26.42	---	47.68
GMW-O-16	21-Dec-11	74.1	---	27.05	---	47.05
GMW-O-18	19-Aug-11	74.36	NM	NM	NC	NM
GMW-O-18	22-Sep-11	74.36	NM	NM	NC	NM
GMW-O-18	28-Nov-11	74.36	NM	NM	NC	NM
GMW-O-18	21-Dec-11	74.36	---	27.14	---	47.22
GMW-O-19	19-Aug-11	74.46	---	25.32	---	49.14
GMW-O-19	22-Sep-11	74.46	---	25.82	---	48.64
GMW-O-19	28-Nov-11	74.46	---	25.96	---	48.5
GMW-O-19	21-Dec-11	74.46	---	26.43	---	48.03
PZ-5	19-Aug-11	73.97	---	25.35	---	48.62
PZ-5	22-Sep-11	73.97	---	25.96	---	48.01
PZ-5	28-Nov-11	73.97	---	26.16	---	47.81
PZ-5	21-Dec-11	73.97	---	26.48	---	47.49

Notes

--- = not detected or not applicable.

feet btoc = feet below top of casing.

feet msl = feet above mean sea level based on the National Geodetic Vertical Datum of 1929.

NC = not calculated.

NM = not measured since extraction pump was in operation.

TABLE E-2

SUMMARY OF GROUNDWATER ANALYTICAL DATA
MONTHLY MONITORING EVENTS
 Defense Fuel Support Point Norwalk
 Norwalk, California
 Results reported in micrograms per liter (µg/L)

Sample ID	Date	TPH-g	TPH-fp	Benzene	Toluene	Ethyl- benzene	Total Xylenes ¹	1,2-DCA	MTBE	TBA	DIPE	ETBE	TAME
GMW-36	8/19/2011 ²	13000	6200	570	1100	250	1890	< 20	260	9000	< 20	< 20	< 20
GMW-36	9/22/2011 ²	5200	2200	490	240	52	470	< 5	660	7400	< 5	< 5	17
GMW-36	11/23/2011 ²	--	34000	17	< 2.5	< 2.5	13.8	< 5	110	--	--	--	--
GMW-36	12/21/2011 ²	--	560	59	55	14	65	< 0.5	2.1	--	--	--	--
GMW-O-15	8/19/2011 ²	33000	550000	820	2200	610	4400	< 50	290	9200	< 50	< 50	< 50
GMW-O-15	9/22/2011 ²	3400	1000	480	290	58	325	< 5	640	6800	< 5	< 5	10
GMW-O-15	12/21/2011 ²	--	570	110	1.5	5.7	21.3	< 2	79	--	--	--	--
GMW-O-16	19-Aug-11	< 50	< 100	< 0.5	< 0.5	< 0.5	< 1	< 0.5	1.5	< 10	< 1	< 1	< 1
GMW-O-16	22-Sep-11	< 50	< 100	< 0.5	< 0.5	< 0.5	< 1	< 0.5	2.9	< 10	< 1	< 1	< 1
GMW-O-16	28-Nov-11	--	< 100	< 0.5	< 0.5	< 0.5	< 1	< 0.5	1.3	--	--	--	--
GMW-O-16	21-Dec-11	--	< 100	< 0.5	< 0.5	< 0.5	0.5	< 0.5	1.8	--	--	--	--
GMW-O-18	8/19/2011 ²	2600	12000	17	3.9	3.2	40	< 2	85	61	< 2	< 2	< 2
GMW-O-18	9/22/2011 ²	34000	64000	700	110	690	5300	< 50	400	6100	< 50	< 50	54
GMW-O-18	11/23/2011 ²	--	150000	65	< 10	51	< 20	< 20	310	--	--	--	--
GMW-O-18	12/21/2011 ²	--	26000	< 0.5	< 0.5	< 0.5	0.53	< 0.5	70	--	--	--	--
GMW-O-19	19-Aug-11	< 50	< 100	< 0.5	< 0.5	< 0.5	< 1	< 0.5	< 0.5	< 10	< 1	< 1	< 1
GMW-O-19	22-Sep-11	< 50	< 100	< 0.5	< 0.5	< 0.5	< 1	< 0.5	< 0.5	< 10	< 1	< 1	< 1
GMW-O-19	28-Nov-11	--	< 100	< 0.5	< 0.5	< 0.5	< 1	< 0.5	< 0.5	--	--	--	--
GMW-O-19	21-Dec-11	--	< 100	< 0.5	< 0.5	< 0.5	< 1	< 0.5	< 0.5	--	--	--	--
PZ-5	19-Aug-11	2600	1200	750	9	63	45.4	< 10	150	47000	< 10	< 10	< 10
PZ-5 DUP	19-Aug-11	2600	1300	740	9	61	44.2	< 10	150	80000	< 10	< 10	< 10
PZ-5	22-Sep-11	4700	1400	1600	33	100	197	< 20	200	64000	< 20	< 20	< 20
PZ-5 DUP	22-Sep-11	4600	1600	1600	32	99	193	< 20	190	63000	< 20	< 20	< 20
PZ-5	14-Oct-11	4600	1500	1500	31	130	189	< 10	170	58000	< 10	< 10	< 10
PZ-5 DUP	14-Oct-11	4600	1500	1400	32	130	197	< 10	170	65000	< 10	< 10	< 10
PZ-5	28-Nov-11	--	1500	1700	18	150	142	< 20	220	--	--	--	--
PZ-5 DUP	28-Nov-11	--	1400	1700	19	150	143	< 20	220	--	--	--	--
PZ-5	21-Dec-11	--	2000	2200	57	160	390	< 20	190	--	--	--	--
PZ-5 DUP	21-Dec-11	--	2000	2100	54	150	370	< 20	190	--	--	--	--

Notes

- The total xylenes result is the sum of m,p-xylenes and o-xylenes when detected.
- Groundwater sample collected through a sampling port.

Abbreviations

-- = not analyzed or not applicable.

<5.0 = not detected at or above the laboratory reporting limit shown.

1,2-DCA = 1,2-dichloroethane.

DIPE = di-isopropyl ether.

ETBE = ethyl tertiary butyl ether.

MTBE = methyl tertiary butyl ether.

TAME = tertiary amyl methyl ether.

TBA = tertiary butyl alcohol.

TPH-fp = total extractable petroleum hydrocarbons quantified using a site fuel product standard.

TPH-g = total purgeable petroleum hydrocarbons quantified using a gasoline standard (C4-C13).

August 2011

WELL GAUGING DATA

Project # 110819-T22 Date 8/19/11 Client KMEP

Site KMEP @ NORWALK

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Notes
P2-5	0915	4					25.35	38.40	↓	
GMW-0-19	1000	4					25.32	39.98	↓	
GMW-0-16	1045	4					25.63	48.58	↓	
GMW-0-18	—	EXT. EQUIPMENT IN WELL					UNABLE TO GAUGE		—	
GMW-0-15	—	EXT. EQUIPMENT IN WELL					UNABLE TO GAUGE		—	
GMW-36	—	EXT. EQUIPMENT IN WELL					UNABLE TO GAUGE		—	

LOW FLOW WELL MONITORING DATA SHEET

Project #: 110819-TR2	Client: KMEP
Sampler: TR	Start Date: 8/19/11
Well I.D.: 6MW-0-15	Well Diameter: 2 3 4 6 8 <u> </u>
Total Well Depth: <u> </u>	Depth to Water: Pre: <u> </u> Post: <u> </u>
Depth to Free Product: <u> </u>	Thickness of Free Product (feet): <u> </u>
Referenced to: PVC Grade	Flow Cell Type: YSI 556

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing **Other EXT PORT**

Start Purge Time: 1139 Flow Rate: 500 mL/min Pump Depth:

Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to water
1142	21.9	7.44	2404	14	0.74	-75.8	1500	—
1145	21.9	7.44	2402	21	0.91	-77.9	3000	—
1148	21.9	7.45	2396	24	0.80	-80.3	4500	—
1151	22.0	7.45	2392	25	0.77	-84.0	6000	—
1154	22.0	7.46	2390	25	0.75	-96.2	7500	—

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: 75 L
Sampling Time: 1155	Sampling Date: 8/19/11
Sample I.D.: 6MW-0-15	Laboratory: Alpha Analytical
Analyzed for: TPHg TPHfp VOC's MTBE	Other see COC
Equipment Blank I.D.: @ <small>Time</small>	Duplicate I.D.: <u> </u>

LOW FLOW WELL MONITORING DATA SHEET

Project #: 110819-TR2	Client: KMEP
Sampler: TR	Start Date: 8/19/11
Well I.D.: GWN-0-1V	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: 48.58	Depth to Water: Pre: 25.43 Post: 25.70
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	Flow Cell Type: YSI 556

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other _____
 Start Purge Time: 1050 Flow Rate: 500 mL/MIN Pump Depth: 43'

Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to water
1053	21.9	7.46	1551	8	0.82	43.3	1500	25.48
1056	22.0	7.43	1552	11	0.69	41.2	3000	25.68
1059	22.0	7.43	1560	4	0.66	40.0	4500	25.69
1102	22.1	7.40	1560	4	0.62	39.6	6000	25.70
1105	22.1	7.40	1560	3	0.60	38.6	7500	25.70
1108	22.1	7.40	1558	3	0.62	38.3	9000	25.70

Did well dewater? Yes <u>No</u>	Amount actually evacuated: 9.0L
Sampling Time: 1109	Sampling Date: 8/19/11
Sample I.D.: GWN-0-1V	Laboratory: Alpha Analytical
Analyzed for: TPHg TPHfp VOC's MTBE	Other: see COC
Equipment Blank I.D.: @	Duplicate I.D.:

LOW FLOW WELL MONITORING DATA SHEET

Project #: 110819-TR2	Client: KMEP
Sampler: TR	Start Date: 8/19/11
Well I.D.: GMW-0-18	Well Diameter: 2 3 4 6 8 <u> </u>
Total Well Depth: <u> </u>	Depth to Water: Pre: <u> </u> Post: <u> </u>
Depth to Free Product: <u> </u>	Thickness of Free Product (feet): <u> </u>
Referenced to: PVC Grade	Flow Cell Type: YSI 556

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other EXT PUMP
 Start Purge Time: 0840 Flow Rate: 500 mL / MIN Pump Depth:

Time	Temp. (°C or °F)	pH	Cond. (mS or <u>µS</u>)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to water
0843	20.3	7.40	2884	42	4.19	210.5	1500	<u> </u>
0846	20.5	7.27	2818	33	5.03	205.3	3000	<u> </u>
0849	20.5	7.21	2784	30	4.40	189.6	4500	<u> </u>
0852	20.5	7.18	2778	28	4.28	185.9	6000	<u> </u>
0855	20.5	7.18	2775	30	4.35	182.3	7500	<u> </u>

Did well dewater? Yes <input type="radio"/> No <input checked="" type="radio"/>	Amount actually evacuated: 7.5 L
Sampling Time: 0856	Sampling Date: 8/19/11
Sample I.D.: GMW-0-18	Laboratory: Alpha Analytical
Analyzed for: TPHg TPHfp VOC's MTBE	<u>Other</u> : see COC
Equipment Blank I.D.: @ <u> </u> Time	Duplicate I.D.: <u> </u>

LOW FLOW WELL MONITORING DATA SHEET

Project #: 110819-TR2	Client: KMEP
Sampler: TR	Start Date: 8/19/11
Well I.D.: GMW-0-19	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: 39.98	Depth to Water: Pre: 25.32 Post: 25.41
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>YSI 556</u>

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other _____
 Start Purge Time: 1002 Flow Rate: 500 mL/min Pump Depth: 35'

Time	Temp. (°C or °F)	pH	Cond. (mS or <u>µS</u>)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or <u>mL</u>)	Depth to water
1005	21.5	7.33	1495	8	0.77	13.3	1500	25.41
1008	21.8	7.32	1497	4	0.70	13.0	3000	25.40
1011	22.0	7.30	1497	5	0.60	12.4	4500	25.41
1014	22.0	7.28	1500	5	0.58	12.0	6000	25.41
1017	22.1	7.28	1500	4	0.58	12.0	7500	25.41
1020	22.0	7.27	1499	4	0.57	11.9	9000	25.41

Did well dewater? Yes <u>No</u>	Amount actually evacuated: 9.0L
Sampling Time: 1021	Sampling Date: 8/19/11
Sample I.D.: GMW-0-19	Laboratory: Alpha Analytical
Analyzed for: TPHg TPHfp VOC's MTBE	Other: <u>SECCOC</u>
Equipment Blank I.D.: @ _____	Duplicate I.D.: _____

LOW FLOW WELL MONITORING DATA SHEET

Project #: 110819-TR2	Client: KMEP
Sampler: TR	Start Date: 8/19/11
Well I.D.: GW-36	Well Diameter: 2 3 4 6 8 _____
Total Well Depth: _____	Depth to Water: Pre: _____ Post: _____
Depth to Free Product: _____	Thickness of Free Product (feet): _____
Referenced to: PVC Grade	Flow Cell Type: YSI 556

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other _____
 Start Purge Time: 1213 Flow Rate: 500 ml/min Pump Depth: _____

Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to water
1216	23.8	7.65	2418	19	7.13	-70.3	1500	—
1219	24.1	7.65	2413	14	4.80	-73.8	3000	—
1222	24.2	7.66	2411	15	4.88	-78.0	4500	—
1225	24.3	7.67	2410	14	4.50	-78.8	6000	—
1228	24.3	7.67	2410	15	4.58	-79.1	7500	—

Did well dewater? Yes No <input checked="" type="radio"/>	Amount actually evacuated: 7.5 L
Sampling Time: 1229	Sampling Date: 8/19/11
Sample I.D.: GW-36	Laboratory: Alpha Analytical
Analyzed for: TPHg TPHfp VOC's MTBE	Other: see COC
Equipment Blank I.D.: EB-1 @ 1250 <small>Time</small>	Duplicate I.D.:

LOW FLOW WELL MONITORING DATA SHEET

Project #: 110819-TR2	Client: KMEP
Sampler: TR	Start Date: 8/19/11
Well I.D.: P2-5	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: 38.40	Depth to Water: Pre: 25.35 Post: 25.41
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC Grade	Flow Cell Type: YSI 536

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other _____
 Start Purge Time: 0920 Flow Rate: 250 mL/min Pump Depth: 34'

Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to water
0923	21.4	6.96	2445	12	1.03	-114.0	750	25.40
0926	21.6	6.88	2447	15	0.94	-120.4	1500	25.40
0929	21.6	6.87	2450	10	0.90	-124.8	2250	25.40
0932	21.7	6.87	2451	8	0.88	-127.0	3000	25.41
0935	21.7	6.86	2451	9	0.86	-127.7	3750	25.41
0938	21.7	6.86	2452	9	0.85	-128.1	4500	25.41

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: 4.5 L
Sampling Time: 0939	Sampling Date: 8/19/11
Sample I.D.: P2-5	Laboratory: Alpha Analytical
Analyzed for: TPHg TPHfp VOC's MTBE	Other: see LOC
Equipment Blank I.D.: @ _____	Duplicate I.D.: DUP-1 @ _____

BLAINE

TECH SERVICES, INC.

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CONDUCT ANALYSIS TO DETECT

LAB Alpha Analytical COC 1 of 1

CHAIN OF CUSTODY

CLIENT **Kinder Morgan**
 SITE **DFSP Norwalk**
15306 Norwalk Blvd, Norwalk

Billing Information:
 Kinder Morgan
 1100 Town and Country Rd.
 Orange CA 95112

Kinder Morgan Norwalk
 Report to:
 Dan Jablonski
 CH2MHILL
 1000 Wilshire Blvd 21st floor
 Los Angeles, CA 90017

SAMPLE I.D.	DATE	TIME	MATRIX AQ= Water	CONTAINERS			TPHg, TPHfp (EPA 8015M)	VOC's & Oxygenates (EPA 8260B)							ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
				#	Preservation	Type												
TR-1	8-19-11	0900	A2	2	HCl	VDA	X	X										
DJP-1				6			X	X										
EB-1		1250		6			X	X										
GMW-0-15		1155		6			X	X										
GMW-0-16		1109		6			X	X										
GMW-0-18		0956		6			X	X										
GMW-0-19		1021		6			X	X										
GMW-36		1229		6			X	X										
P2-5		0939		6			X	X										

SAMPLING COMPLETED DATE 8-19-11 TIME 1300 SAMPLING PERFORMED BY TR RESULTS NEEDED NO LATER THAN Standard

RELEASED BY TR TIME 1335 RECEIVED BY TR DATE 8/19/11 TIME 1335

RELEASED BY _____ TIME _____ RECEIVED BY _____ DATE _____ TIME _____

RELEASED BY _____ TIME _____ RECEIVED BY _____ DATE _____ TIME _____

SHIPPED VIA _____ TIME SENT _____ COOLER # _____

WELLHEAD INSPECTION CHECKLIST

Client CH2MHILL

Site Address DFSP NORWALK

Date: 8/19/11

Job Number 110819-TR 2

Technician: TR

Well ID	Well Inspected - No Corrective Action Required	Is access to the well unobstructed?	Flush Mounted wellbox	Standpipe	Guard posts	If applicable, is the well vault dry and free of debris?	Is there any physical damage to the well, well vault and cover, or protective casing?	Is a well identification tag present and legible?	Is the well easily visible?	Is there evidence of heaving or settling of the well, vault, or protective casing?	Stripped or Missing Bolts	Expansion Cap & lock in good working order	Cracked Apron	Well Not Inspected (explain below)	Corrective actions still required
P2-5	X	X	X			X		X	X						
GMW-0-19		X	X			X	X	X	X						X
GMW-0-16	X	X	X			X		X	X			X			
GMW-0-18	X	X	X			X			X						
GMW-0-15	X	X	X			X		X	X						
GMW-36		X				X		X	X						

NOTES: GMW-0-19: 1/2 TABS BROKEN, WELL SECURABLE
GMW-36: ABOVE GROUND 2X2 SQUARE VAULT



Alpha Analytical, Inc.

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ANALYTICAL REPORT

CH2M Hill
1000 Wilshire Boulevard
Los Angeles, CA 90017

Attn: Daniel Jablonski
Phone: (213) 228-8271
Fax: (714) 424-2135
Date Received : 08/20/11

Job: KMEP DFSP Norwalk

Total Petroleum Hydrocarbons - Extractable (TPH-E) EPA Method SW8015B
Total Petroleum Hydrocarbons - Purgeable (TPH-P) EPA Method SW8015B

	Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID :	DUP-1				
Lab ID :	CHH11082220-02A	TPH-E (Fuel Product)	1.3 **	0.10 mg/L	08/25/11
Date Sampled	08/19/11 00:00	Surr: Nonane	101	(49-145) %REC	08/25/11
		TPH-P (GRO)	2.6	1.0 mg/L	08/23/11
		Surr: 1,2-Dichloroethane-d4	105	(70-130) %REC	08/23/11
		Surr: Toluene-d8	105	(70-130) %REC	08/23/11
		Surr: 4-Bromofluorobenzene	100	(70-130) %REC	08/23/11
Client ID :	EB-1				
Lab ID :	CHH11082220-03A	TPH-E (Fuel Product)	ND	0.10 mg/L	08/25/11
Date Sampled	08/19/11 12:50	Surr: Nonane	69	(49-145) %REC	08/25/11
		TPH-P (GRO)	ND	0.050 mg/L	08/23/11
		Surr: 1,2-Dichloroethane-d4	112	(70-130) %REC	08/23/11
		Surr: Toluene-d8	97	(70-130) %REC	08/23/11
		Surr: 4-Bromofluorobenzene	87	(70-130) %REC	08/23/11
Client ID :	GMW-O-15				
Lab ID :	CHH11082220-04A	TPH-E (Fuel Product)	550 **	10 mg/L	08/25/11
Date Sampled	08/19/11 11:55	Surr: Nonane	0 S50	(49-145) %REC	08/25/11
		TPH-P (GRO)	33	5.0 mg/L	08/23/11
		Surr: 1,2-Dichloroethane-d4	116	(70-130) %REC	08/23/11
		Surr: Toluene-d8	96	(70-130) %REC	08/23/11
		Surr: 4-Bromofluorobenzene	85	(70-130) %REC	08/23/11
Client ID :	GMW-O-16				
Lab ID :	CHH11082220-05A	TPH-E (Fuel Product)	ND	0.10 mg/L	08/25/11
Date Sampled	08/19/11 11:09	Surr: Nonane	119	(49-145) %REC	08/25/11
		TPH-P (GRO)	ND	0.050 mg/L	08/23/11
		Surr: 1,2-Dichloroethane-d4	116	(70-130) %REC	08/23/11
		Surr: Toluene-d8	96	(70-130) %REC	08/23/11
		Surr: 4-Bromofluorobenzene	85	(70-130) %REC	08/23/11
Client ID :	GMW-O-18				
Lab ID :	CHH11082220-06A	TPH-E (Fuel Product)	12 *	0.10 mg/L	08/25/11
Date Sampled	08/19/11 08:56	Surr: Nonane	124	(49-145) %REC	08/25/11
		TPH-P (GRO)	2.6	0.20 mg/L	08/24/11
		Surr: 1,2-Dichloroethane-d4	104	(70-130) %REC	08/24/11
		Surr: Toluene-d8	101	(70-130) %REC	08/24/11
		Surr: 4-Bromofluorobenzene	104	(70-130) %REC	08/24/11
Client ID :	GMW-O-19				
Lab ID :	CHH11082220-07A	TPH-E (Fuel Product)	ND	0.10 mg/L	08/25/11
Date Sampled	08/19/11 10:21	Surr: Nonane	103	(49-145) %REC	08/25/11
		TPH-P (GRO)	ND	0.050 mg/L	08/23/11
		Surr: 1,2-Dichloroethane-d4	116	(70-130) %REC	08/23/11
		Surr: Toluene-d8	95	(70-130) %REC	08/23/11
		Surr: 4-Bromofluorobenzene	86	(70-130) %REC	08/23/11



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Client ID : **GMW-36**

Lab ID :	CHH11082220-08A	TPH-E (Fuel Product)	6.2	**	0.10 mg/L	08/25/11	08/25/11
Date Sampled	08/19/11 12:29	Surr: Nonane	0	S51	(49-145) %REC	08/25/11	08/25/11
		TPH-P (GRO)	13		2.0 mg/L	08/23/11	08/23/11
		Surr: 1,2-Dichloroethane-d4	114		(70-130) %REC	08/23/11	08/23/11
		Surr: Toluene-d8	94		(70-130) %REC	08/23/11	08/23/11
		Surr: 4-Bromofluorobenzene	83		(70-130) %REC	08/23/11	08/23/11

Client ID : **PZ-5**

Lab ID :	CHH11082220-09A	TPH-E (Fuel Product)	1.2	**	0.10 mg/L	08/25/11	08/25/11
Date Sampled	08/19/11 09:39	Surr: Nonane	101		(49-145) %REC	08/25/11	08/25/11
		TPH-P (GRO)	2.6		1.0 mg/L	08/24/11	08/24/11
		Surr: 1,2-Dichloroethane-d4	104		(70-130) %REC	08/24/11	08/24/11
		Surr: Toluene-d8	105		(70-130) %REC	08/24/11	08/24/11
		Surr: 4-Bromofluorobenzene	99		(70-130) %REC	08/24/11	08/24/11

**Note: Reported TPH-E (Fuel Product) may contain undifferentiated diesel range hydrocarbons.

*Note: Reported TPH-E (Fuel Product) is composed primarily of diesel range hydrocarbons.

Gasoline Range Organics (GRO) C4-C13

S50 = The analysis of the sample required a dilution such that the surrogate concentration was diluted below the laboratory acceptance criteria. The laboratory control sample was acceptable.

S51 = Surrogate recovery could not be determined due to the presence of co-eluting hydrocarbons.

ND = Not Detected

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8/29/11

Report Date



Alpha Analytical, Inc.

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ANALYTICAL REPORT

CH2M Hill
1000 Wilshire Boulevard
Los Angeles, CA 90017
Job: KMEP DFSP Norwalk

Attn: Daniel Jablonski
Phone: (213) 228-8271
Fax: (714) 424-2135

Alpha Analytical Number: CHH11082220-01A
Client I.D. Number: TB-1

Sampled: 08/19/11 08:00
Received: 08/20/11
Extracted: 08/23/11
Analyzed: 08/23/11

Volatile Organics by GC/MS EPA Method SW8260B

Reporting			Reporting		
Compound	Concentration	Limit	Compound	Concentration	Limit
1 Dichlorodifluoromethane	ND	1.0 µg/L	45 Chlorobenzene	ND	1.0 µg/L
2 Chloromethane	ND	2.0 µg/L	46 Ethylbenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	47 m,p-Xylene	ND	0.50 µg/L
4 Chloroethane	ND	1.0 µg/L	48 Bromoform	ND	1.0 µg/L
5 Bromomethane	ND	2.0 µg/L	49 Styrene	ND	1.0 µg/L
6 Trichlorofluoromethane	ND	10 µg/L	50 o-Xylene	ND	0.50 µg/L
7 Acetone	ND	10 µg/L	51 1,1,2,2-Tetrachloroethane	ND	1.0 µg/L
8 1,1-Dichloroethene	ND	1.0 µg/L	52 1,2,3-Trichloropropane	ND	2.0 µg/L
9 Tertiary Butyl Alcohol (TBA)	ND	10 µg/L	53 Isopropylbenzene	ND	1.0 µg/L
10 Dichloromethane	ND	5.0 µg/L	54 Bromobenzene	ND	1.0 µg/L
11 Freon-113	ND	10 µg/L	55 n-Propylbenzene	ND	1.0 µg/L
12 Carbon disulfide	ND	2.5 µg/L	56 4-Chlorotoluene	ND	1.0 µg/L
13 trans-1,2-Dichloroethene	ND	1.0 µg/L	57 2-Chlorotoluene	ND	1.0 µg/L
14 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	58 1,3,5-Trimethylbenzene	ND	1.0 µg/L
15 1,1-Dichloroethane	ND	1.0 µg/L	59 tert-Butylbenzene	ND	1.0 µg/L
16 Vinyl acetate	ND	50 µg/L	60 1,2,4-Trimethylbenzene	ND	1.0 µg/L
17 2-Butanone (MEK)	ND	10 µg/L	61 sec-Butylbenzene	ND	1.0 µg/L
18 Di-isopropyl Ether (DIPE)	ND	1.0 µg/L	62 1,3-Dichlorobenzene	ND	1.0 µg/L
19 cis-1,2-Dichloroethene	ND	1.0 µg/L	63 1,4-Dichlorobenzene	ND	1.0 µg/L
20 Bromochloromethane	ND	1.0 µg/L	64 4-Isopropyltoluene	ND	1.0 µg/L
21 Chloroform	ND	1.0 µg/L	65 1,2-Dichlorobenzene	ND	1.0 µg/L
22 Ethyl Tertiary Butyl Ether (ETBE)	ND	1.0 µg/L	66 n-Butylbenzene	ND	1.0 µg/L
23 2,2-Dichloropropane	ND	1.0 µg/L	67 1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0 µg/L
24 1,2-Dichloroethane	ND	0.50 µg/L	68 1,2,4-Trichlorobenzene	ND	2.0 µg/L
25 1,1,1-Trichloroethane	ND	1.0 µg/L	69 Naphthalene	ND	10 µg/L
26 1,1-Dichloropropene	ND	1.0 µg/L	70 1,2,3-Trichlorobenzene	ND	2.0 µg/L
27 Carbon tetrachloride	ND	1.0 µg/L	71 Surr: 1,2-Dichloroethane-d4	110	(70-130) %REC
28 Benzene	ND	0.50 µg/L	72 Surr: Toluene-d8	97	(70-130) %REC
29 Tertiary Amyl Methyl Ether (TAME)	ND	1.0 µg/L	73 Surr: 4-Bromofluorobenzene	87	(70-130) %REC
30 Dibromomethane	ND	1.0 µg/L			
31 1,2-Dichloropropane	ND	1.0 µg/L			
32 Trichloroethene	ND	1.0 µg/L			
33 Bromodichloromethane	ND	1.0 µg/L			
34 4-Methyl-2-pentanone (MIBK)	ND	10 µg/L			
35 cis-1,3-Dichloropropene	ND	0.50 µg/L			
36 trans-1,3-Dichloropropene	ND	0.50 µg/L			
37 1,1,2-Trichloroethane	ND	1.0 µg/L			
38 Toluene	ND	0.50 µg/L			
39 1,3-Dichloropropane	ND	1.0 µg/L			
40 2-Hexanone	ND	5.0 µg/L			
41 Dibromochloromethane	ND	1.0 µg/L			
42 1,2-Dibromoethane (EDB)	ND	2.0 µg/L			
43 Tetrachloroethene	ND	1.0 µg/L			
44 1,1,1,2-Tetrachloroethane	ND	1.0 µg/L			

ND = Not Detected

Roger Scholl

Randy Gardner

Walter Hinchman

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[Signature]

8/29/11

Report Date

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ANALYTICAL REPORT

CH2M Hill
1000 Wilshire Boulevard
Los Angeles, CA 90017
Job: KMEP DFSP Norwalk

Attn: Daniel Jablonski
Phone: (213) 228-8271
Fax: (714) 424-2135

Alpha Analytical Number: CHH11082220-02A
Client I.D. Number: DUP-1

Sampled: 08/19/11 00:00
Received: 08/20/11
Extracted: 08/24/11
Analyzed: 08/24/11

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	10 µg/L	45 Chlorobenzene	ND	10 µg/L
2 Chloromethane	ND	40 µg/L	46 Ethylbenzene	61	5.0 µg/L
3 Vinyl chloride	ND	10 µg/L	47 m,p-Xylene	5.2	5.0 µg/L
4 Chloroethane	ND	10 µg/L	48 Bromoform	ND	10 µg/L
5 Bromomethane	ND	40 µg/L	49 Styrene	ND	10 µg/L
6 Trichlorofluoromethane	ND	10 µg/L	50 o-Xylene	39	5.0 µg/L
7 Acetone	ND	200 µg/L	51 1,1,2,2-Tetrachloroethane	ND	10 µg/L
8 1,1-Dichloroethene	ND	10 µg/L	52 1,2,3-Trichloropropane	ND	40 µg/L
9 Tertiary Butyl Alcohol (TBA)	80,000	1,000 µg/L	53 Isopropylbenzene	ND	10 µg/L
10 Dichloromethane	ND	40 µg/L	54 Bromobenzene	ND	10 µg/L
11 Freon-113	ND	10 µg/L	55 n-Propylbenzene	ND	10 µg/L
12 Carbon disulfide	ND	50 µg/L	56 4-Chlorotoluene	ND	10 µg/L
13 trans-1,2-Dichloroethene	ND	10 µg/L	57 2-Chlorotoluene	ND	10 µg/L
14 Methyl tert-butyl ether (MTBE)	150	5.0 µg/L	58 1,3,5-Trimethylbenzene	ND	10 µg/L
15 1,1-Dichloroethane	ND	10 µg/L	59 tert-Butylbenzene	ND	10 µg/L
16 Vinyl acetate	ND	1,000 µg/L	60 1,2,4-Trimethylbenzene	15	10 µg/L
17 2-Butanone (MEK)	ND	200 µg/L	61 sec-Butylbenzene	ND	10 µg/L
18 Di-isopropyl Ether (DIPE)	ND	10 µg/L	62 1,3-Dichlorobenzene	ND	10 µg/L
19 cis-1,2-Dichloroethene	ND	10 µg/L	63 1,4-Dichlorobenzene	ND	10 µg/L
20 Bromochloromethane	ND	10 µg/L	64 4-Isopropyltoluene	ND	10 µg/L
21 Chloroform	ND	10 µg/L	65 1,2-Dichlorobenzene	ND	10 µg/L
22 Ethyl Tertiary Butyl Ether (ETBE)	ND	10 µg/L	66 n-Butylbenzene	ND	10 µg/L
23 2,2-Dichloropropane	ND	10 µg/L	67 1,2-Dibromo-3-chloropropane (DBCP)	ND	60 µg/L
24 1,2-Dichloroethane	ND	10 µg/L	68 1,2,4-Trichlorobenzene	ND	40 µg/L
25 1,1,1-Trichloroethane	ND	10 µg/L	69 Naphthalene	ND	40 µg/L
26 1,1-Dichloropropene	ND	10 µg/L	70 1,2,3-Trichlorobenzene	ND	40 µg/L
27 Carbon tetrachloride	ND	10 µg/L	71 Surr: 1,2-Dichloroethane-d4	113	(70-130) %REC
28 Benzene	740	5.0 µg/L	72 Surr: 1,2-Dichloroethane-d4	105	(70-130) %REC
29 Tertiary Amyl Methyl Ether (TAME)	ND	10 µg/L	73 Surr: Toluene-d8	105	(70-130) %REC
30 Dibromomethane	ND	10 µg/L	74 Surr: Toluene-d8	96	(70-130) %REC
31 1,2-Dichloropropane	ND	10 µg/L	75 Surr: 4-Bromofluorobenzene	84	(70-130) %REC
32 Trichloroethene	ND	10 µg/L	76 Surr: 4-Bromofluorobenzene	100	(70-130) %REC
33 Bromodichloromethane	ND	10 µg/L			
34 4-Methyl-2-pentanone (MIBK)	ND	50 µg/L			
35 cis-1,3-Dichloropropene	ND	10 µg/L			
36 trans-1,3-Dichloropropene	ND	10 µg/L			
37 1,1,2-Trichloroethane	ND	10 µg/L			
38 Toluene	9.0	5.0 µg/L			
39 1,3-Dichloropropane	ND	10 µg/L			
40 2-Hexanone	ND	100 µg/L			
41 Dibromochloromethane	ND	10 µg/L			
42 1,2-Dibromoethane (EDB)	ND	20 µg/L			
43 Tetrachloroethene	ND	10 µg/L			
44 1,1,1,2-Tetrachloroethane	ND	10 µg/L			

*This analyte was analyzed separately on 8/23/11 in order to achieve lower reporting limits for the other analytes.

Reporting Limits were increased due to high concentrations of target analytes.

ND = Not Detected

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8/29/11

Report Date

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ANALYTICAL REPORT

CH2M Hill
1000 Wilshire Boulevard
Los Angeles, CA 90017
Job: KMEP DFSP Norwalk

Attn: Daniel Jablonski
Phone: (213) 228-8271
Fax: (714) 424-2135

Alpha Analytical Number: CHH11082220-03A
Client I.D. Number: EB-1

Sampled: 08/19/11 12:50
Received: 08/20/11
Extracted: 08/23/11
Analyzed: 08/23/11

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	1.0 µg/L	45 Chlorobenzene	ND	1.0 µg/L
2 Chloromethane	ND	2.0 µg/L	46 Ethylbenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	47 m,p-Xylene	ND	0.50 µg/L
4 Chloroethane	ND	1.0 µg/L	48 Bromoform	ND	1.0 µg/L
5 Bromomethane	ND	2.0 µg/L	49 Styrene	ND	1.0 µg/L
6 Trichlorofluoromethane	ND	10 µg/L	50 o-Xylene	ND	0.50 µg/L
7 Acetone	ND	10 µg/L	51 1,1,2,2-Tetrachloroethane	ND	1.0 µg/L
8 1,1-Dichloroethene	ND	1.0 µg/L	52 1,2,3-Trichloropropane	ND	2.0 µg/L
9 Tertiary Butyl Alcohol (TBA)	ND	10 µg/L	53 Isopropylbenzene	ND	1.0 µg/L
10 Dichloromethane	ND	5.0 µg/L	54 Bromobenzene	ND	1.0 µg/L
11 Freon-113	ND	10 µg/L	55 n-Propylbenzene	ND	1.0 µg/L
12 Carbon disulfide	ND	2.5 µg/L	56 4-Chlorotoluene	ND	1.0 µg/L
13 trans-1,2-Dichloroethene	ND	1.0 µg/L	57 2-Chlorotoluene	ND	1.0 µg/L
14 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	58 1,3,5-Trimethylbenzene	ND	1.0 µg/L
15 1,1-Dichloroethane	ND	1.0 µg/L	59 tert-Butylbenzene	ND	1.0 µg/L
16 Vinyl acetate	ND	50 µg/L	60 1,2,4-Trimethylbenzene	ND	1.0 µg/L
17 2-Butanone (MEK)	ND	10 µg/L	61 sec-Butylbenzene	ND	1.0 µg/L
18 Di-isopropyl Ether (DIPE)	ND	1.0 µg/L	62 1,3-Dichlorobenzene	ND	1.0 µg/L
19 cis-1,2-Dichloroethene	ND	1.0 µg/L	63 1,4-Dichlorobenzene	ND	1.0 µg/L
20 Bromochloromethane	ND	1.0 µg/L	64 4-Isopropyltoluene	ND	1.0 µg/L
21 Chloroform	ND	1.0 µg/L	65 1,2-Dichlorobenzene	ND	1.0 µg/L
22 Ethyl Tertiary Butyl Ether (ETBE)	ND	1.0 µg/L	66 n-Butylbenzene	ND	1.0 µg/L
23 2,2-Dichloropropane	ND	1.0 µg/L	67 1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0 µg/L
24 1,2-Dichloroethane	ND	0.50 µg/L	68 1,2,4-Trichlorobenzene	ND	2.0 µg/L
25 1,1,1-Trichloroethane	ND	1.0 µg/L	69 Naphthalene	ND	10 µg/L
26 1,1-Dichloropropene	ND	1.0 µg/L	70 1,2,3-Trichlorobenzene	ND	2.0 µg/L
27 Carbon tetrachloride	ND	1.0 µg/L	71 Surr: 1,2-Dichloroethane-d4	112	(70-130) %REC
28 Benzene	ND	0.50 µg/L	72 Surr: Toluene-d8	97	(70-130) %REC
29 Tertiary Amyl Methyl Ether (TAME)	ND	1.0 µg/L	73 Surr: 4-Bromofluorobenzene	87	(70-130) %REC
30 Dibromomethane	ND	1.0 µg/L			
31 1,2-Dichloropropane	ND	1.0 µg/L			
32 Trichloroethene	ND	1.0 µg/L			
33 Bromodichloromethane	ND	1.0 µg/L			
34 4-Methyl-2-pentanone (MIBK)	ND	10 µg/L			
35 cis-1,3-Dichloropropene	ND	0.50 µg/L			
36 trans-1,3-Dichloropropene	ND	0.50 µg/L			
37 1,1,2-Trichloroethane	ND	1.0 µg/L			
38 Toluene	ND	0.50 µg/L			
39 1,3-Dichloropropane	ND	1.0 µg/L			
40 2-Hexanone	ND	5.0 µg/L			
41 Dibromochloromethane	ND	1.0 µg/L			
42 1,2-Dibromoethane (EDB)	ND	2.0 µg/L			
43 Tetrachloroethene	ND	1.0 µg/L			
44 1,1,1,2-Tetrachloroethane	ND	1.0 µg/L			

ND = Not Detected

Roger Scholl

Randy Gardner

Walter Hinchman

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PS

8/29/11

Report Date

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Alpha Analytical, Inc.

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ANALYTICAL REPORT

CH2M Hill
1000 Wilshire Boulevard
Los Angeles, CA 90017
Job: KMEP DFSP Norwalk

Attn: Daniel Jablonski
Phone: (213) 228-8271
Fax: (714) 424-2135

Alpha Analytical Number: CHH11082220-04A
Client I.D. Number: GMW-O-15

Sampled: 08/19/11 11:55
Received: 08/20/11
Extracted: 08/23/11
Analyzed: 08/23/11

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	50 µg/L	45 Chlorobenzene	ND	50 µg/L
2 Chloromethane	ND	200 µg/L	46 Ethylbenzene	810	25 µg/L
3 Vinyl chloride	ND	50 µg/L	47 m,p-Xylene	3,100	25 µg/L
4 Chloroethane	ND	50 µg/L	48 Bromoform	ND	50 µg/L
5 Bromomethane	ND	200 µg/L	49 Styrene	ND	50 µg/L
6 Trichlorofluoromethane	ND	50 µg/L	50 o-Xylene	1,300	25 µg/L
7 Acetone	ND	1,000 µg/L	51 1,1,2,2-Tetrachloroethane	ND	50 µg/L
8 1,1-Dichloroethene	ND	50 µg/L	52 1,2,3-Trichloropropane	ND	200 µg/L
9 Tertiary Butyl Alcohol (TBA)	9,200	500 µg/L	53 Isopropylbenzene	ND	50 µg/L
10 Dichloromethane	ND	200 µg/L	54 Bromobenzene	ND	50 µg/L
11 Freon-113	ND	50 µg/L	55 n-Propylbenzene	130	50 µg/L
12 Carbon disulfide	ND	250 µg/L	56 4-Chlorotoluene	ND	50 µg/L
13 trans-1,2-Dichloroethene	ND	50 µg/L	57 2-Chlorotoluene	ND	50 µg/L
14 Methyl tert-butyl ether (MTBE)	290	25 µg/L	58 1,3,5-Trimethylbenzene	410	50 µg/L
15 1,1-Dichloroethane	ND	50 µg/L	59 tert-Butylbenzene	ND	50 µg/L
16 Vinyl acetate	ND	5,000 µg/L	60 1,2,4-Trimethylbenzene	1,300	50 µg/L
17 2-Butanone (MEK)	ND	1,000 µg/L	61 sec-Butylbenzene	ND	50 µg/L
18 Di-isopropyl Ether (DIPE)	ND	50 µg/L	62 1,3-Dichlorobenzene	ND	50 µg/L
19 cis-1,2-Dichloroethene	ND	50 µg/L	63 1,4-Dichlorobenzene	ND	50 µg/L
20 Bromochloromethane	ND	50 µg/L	64 4-Isopropyltoluene	ND	50 µg/L
21 Chloroform	ND	50 µg/L	65 1,2-Dichlorobenzene	ND	50 µg/L
22 Ethyl Tertiary Butyl Ether (ETBE)	ND	50 µg/L	66 n-Butylbenzene	ND	50 µg/L
23 2,2-Dichloropropane	ND	50 µg/L	67 1,2-Dibromo-3-chloropropane (DBCP)	ND	300 µg/L
24 1,2-Dichloroethane	ND	50 µg/L	68 1,2,4-Trichlorobenzene	ND	200 µg/L
25 1,1,1-Trichloroethane	ND	50 µg/L	69 Naphthalene	420	200 µg/L
26 1,1-Dichloropropene	ND	50 µg/L	70 1,2,3-Trichlorobenzene	ND	200 µg/L
27 Carbon tetrachloride	ND	50 µg/L	71 Surr: 1,2-Dichloroethane-d4	116	(70-130) %REC
28 Benzene	820	25 µg/L	72 Surr: Toluene-d8	96	(70-130) %REC
29 Tertiary Amyl Methyl Ether (TAME)	ND	50 µg/L	73 Surr: 4-Bromofluorobenzene	85	(70-130) %REC
30 Dibromomethane	ND	50 µg/L			
31 1,2-Dichloropropane	ND	50 µg/L			
32 Trichloroethene	ND	50 µg/L			
33 Bromodichloromethane	ND	50 µg/L			
34 4-Methyl-2-pentanone (MIBK)	ND	250 µg/L			
35 cis-1,3-Dichloropropene	ND	50 µg/L			
36 trans-1,3-Dichloropropene	ND	50 µg/L			
37 1,1,2-Trichloroethane	ND	50 µg/L			
38 Toluene	2,200	25 µg/L			
39 1,3-Dichloropropane	ND	50 µg/L			
40 2-Hexanone	ND	500 µg/L			
41 Dibromochloromethane	ND	50 µg/L			
42 1,2-Dibromoethane (EDB)	ND	100 µg/L			
43 Tetrachloroethene	ND	50 µg/L			
44 1,1,1,2-Tetrachloroethane	ND	50 µg/L			

Reporting Limits were increased due to high concentrations of target analytes.

ND = Not Detected

Roger Scholl

Randy Gardner

Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer
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Alpha Analytical, Inc.

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ANALYTICAL REPORT

CH2M Hill
1000 Wilshire Boulevard
Los Angeles, CA 90017
Job: KMEP DFSP Norwalk

Attn: Daniel Jablonski
Phone: (213) 228-8271
Fax: (714) 424-2135

Alpha Analytical Number: CHH11082220-05A
Client I.D. Number: GMW-O-16

Sampled: 08/19/11 11:09
Received: 08/20/11
Extracted: 08/23/11
Analyzed: 08/23/11

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	1.0 µg/L	45 Chlorobenzene	ND	1.0 µg/L
2 Chloromethane	ND	2.0 µg/L	46 Ethylbenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	47 m,p-Xylene	ND	0.50 µg/L
4 Chloroethane	ND	1.0 µg/L	48 Bromoform	ND	1.0 µg/L
5 Bromomethane	ND	2.0 µg/L	49 Styrene	ND	1.0 µg/L
6 Trichlorofluoromethane	ND	10 µg/L	50 o-Xylene	ND	0.50 µg/L
7 Acetone	ND	10 µg/L	51 1,1,2,2-Tetrachloroethane	ND	1.0 µg/L
8 1,1-Dichloroethene	ND	1.0 µg/L	52 1,2,3-Trichloropropane	ND	2.0 µg/L
9 Tertiary Butyl Alcohol (TBA)	ND	10 µg/L	53 Isopropylbenzene	ND	1.0 µg/L
10 Dichloromethane	ND	5.0 µg/L	54 Bromobenzene	ND	1.0 µg/L
11 Freon-113	ND	10 µg/L	55 n-Propylbenzene	ND	1.0 µg/L
12 Carbon disulfide	ND	2.5 µg/L	56 4-Chlorotoluene	ND	1.0 µg/L
13 trans-1,2-Dichloroethene	ND	1.0 µg/L	57 2-Chlorotoluene	ND	1.0 µg/L
14 Methyl tert-butyl ether (MTBE)	1.5	0.50 µg/L	58 1,3,5-Trimethylbenzene	ND	1.0 µg/L
15 1,1-Dichloroethane	ND	1.0 µg/L	59 tert-Butylbenzene	ND	1.0 µg/L
16 Vinyl acetate	ND	50 µg/L	60 1,2,4-Trimethylbenzene	ND	1.0 µg/L
17 2-Butanone (MEK)	ND	10 µg/L	61 sec-Butylbenzene	ND	1.0 µg/L
18 Di-isopropyl Ether (DIPE)	ND	1.0 µg/L	62 1,3-Dichlorobenzene	ND	1.0 µg/L
19 cis-1,2-Dichloroethene	ND	1.0 µg/L	63 1,4-Dichlorobenzene	ND	1.0 µg/L
20 Bromochloromethane	ND	1.0 µg/L	64 4-Isopropyltoluene	ND	1.0 µg/L
21 Chloroform	ND	1.0 µg/L	65 1,2-Dichlorobenzene	ND	1.0 µg/L
22 Ethyl Tertiary Butyl Ether (ETBE)	ND	1.0 µg/L	66 n-Butylbenzene	ND	1.0 µg/L
23 2,2-Dichloropropane	ND	1.0 µg/L	67 1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0 µg/L
24 1,2-Dichloroethane	ND	0.50 µg/L	68 1,2,4-Trichlorobenzene	ND	2.0 µg/L
25 1,1,1-Trichloroethane	ND	1.0 µg/L	69 Naphthalene	ND	10 µg/L
26 1,1-Dichloropropene	ND	1.0 µg/L	70 1,2,3-Trichlorobenzene	ND	2.0 µg/L
27 Carbon tetrachloride	ND	1.0 µg/L	71 Surr: 1,2-Dichloroethane-d4	116	(70-130) %REC
28 Benzene	ND	0.50 µg/L	72 Surr: Toluene-d8	96	(70-130) %REC
29 Tertiary Amyl Methyl Ether (TAME)	ND	1.0 µg/L	73 Surr: 4-Bromofluorobenzene	85	(70-130) %REC
30 Dibromomethane	ND	1.0 µg/L			
31 1,2-Dichloropropane	ND	1.0 µg/L			
32 Trichloroethene	ND	1.0 µg/L			
33 Bromodichloromethane	ND	1.0 µg/L			
34 4-Methyl-2-pentanone (MIBK)	ND	10 µg/L			
35 cis-1,3-Dichloropropene	ND	0.50 µg/L			
36 trans-1,3-Dichloropropene	ND	0.50 µg/L			
37 1,1,2-Trichloroethane	ND	1.0 µg/L			
38 Toluene	ND	0.50 µg/L			
39 1,3-Dichloropropane	ND	1.0 µg/L			
40 2-Hexanone	ND	5.0 µg/L			
41 Dibromochloromethane	ND	1.0 µg/L			
42 1,2-Dibromoethane (EDB)	ND	2.0 µg/L			
43 Tetrachloroethene	ND	1.0 µg/L			
44 1,1,1,2-Tetrachloroethane	ND	1.0 µg/L			

ND = Not Detected

Roger Scholl

Randy Gardner

Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer
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JAG

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Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
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ANALYTICAL REPORT

CH2M Hill
1000 Wilshire Boulevard
Los Angeles, CA 90017
Job: KMEP DFSP Norwalk

Attn: Daniel Jablonski
Phone: (213) 228-8271
Fax: (714) 424-2135

Alpha Analytical Number: CHH11082220-06A
Client I.D. Number: GMW-O-18

Sampled: 08/19/11 08:56
Received: 08/20/11
Extracted: 08/24/11
Analyzed: 08/24/11

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	2.0 µg/L	45 Chlorobenzene	ND	2.0 µg/L
2 Chloromethane	ND	8.0 µg/L	46 Ethylbenzene	3.2	1.0 µg/L
3 Vinyl chloride	ND	2.0 µg/L	47 m,p-Xylene	24	1.0 µg/L
4 Chloroethane	ND	2.0 µg/L	48 Bromoform	ND	2.0 µg/L
5 Bromomethane	ND	8.0 µg/L	49 Styrene	ND	2.0 µg/L
6 Trichlorofluoromethane	ND	10 µg/L	50 o-Xylene	16	1.0 µg/L
7 Acetone	ND	40 µg/L	51 1,1,2,2-Tetrachloroethane	ND	2.0 µg/L
8 1,1-Dichloroethene	ND	2.0 µg/L	52 1,2,3-Trichloropropane	ND	8.0 µg/L
9 Tertiary Butyl Alcohol (TBA)	61	20 µg/L	53 Isopropylbenzene	ND	2.0 µg/L
10 Dichloromethane	ND	8.0 µg/L	54 Bromobenzene	ND	2.0 µg/L
11 Freon-113	ND	10 µg/L	55 n-Propylbenzene	ND	2.0 µg/L
12 Carbon disulfide	ND	10 µg/L	56 4-Chlorotoluene	ND	2.0 µg/L
13 trans-1,2-Dichloroethene	ND	2.0 µg/L	57 2-Chlorotoluene	ND	2.0 µg/L
14 Methyl tert-butyl ether (MTBE)	85	1.0 µg/L	58 1,3,5-Trimethylbenzene	5.8	2.0 µg/L
15 1,1-Dichloroethane	ND	2.0 µg/L	59 tert-Butylbenzene	ND	2.0 µg/L
16 Vinyl acetate	ND	200 µg/L	60 1,2,4-Trimethylbenzene	8.6	2.0 µg/L
17 2-Butanone (MEK)	ND	40 µg/L	61 sec-Butylbenzene	ND	2.0 µg/L
18 Di-isopropyl Ether (DIPE)	ND	2.0 µg/L	62 1,3-Dichlorobenzene	ND	2.0 µg/L
19 cis-1,2-Dichloroethene	ND	2.0 µg/L	63 1,4-Dichlorobenzene	ND	2.0 µg/L
20 Bromochloromethane	ND	2.0 µg/L	64 4-Isopropyltoluene	ND	2.0 µg/L
21 Chloroform	ND	2.0 µg/L	65 1,2-Dichlorobenzene	ND	2.0 µg/L
22 Ethyl Tertiary Butyl Ether (ETBE)	ND	2.0 µg/L	66 n-Butylbenzene	ND	2.0 µg/L
23 2,2-Dichloropropane	ND	2.0 µg/L	67 1,2-Dibromo-3-chloropropane (DBCP)	ND	12 µg/L
24 1,2-Dichloroethane	ND	2.0 µg/L	68 1,2,4-Trichlorobenzene	ND	8.0 µg/L
25 1,1,1-Trichloroethane	ND	2.0 µg/L	69 Naphthalene	ND	10 µg/L
26 1,1-Dichloropropene	ND	2.0 µg/L	70 1,2,3-Trichlorobenzene	ND	8.0 µg/L
27 Carbon tetrachloride	ND	2.0 µg/L	71 Surr: 1,2-Dichloroethane-d4	104	(70-130) %REC
28 Benzene	17	1.0 µg/L	72 Surr: Toluene-d8	101	(70-130) %REC
29 Tertiary Amyl Methyl Ether (TAME)	ND	2.0 µg/L	73 Surr: 4-Bromofluorobenzene	104	(70-130) %REC
30 Dibromomethane	ND	2.0 µg/L			
31 1,2-Dichloropropane	ND	2.0 µg/L			
32 Trichloroethene	ND	2.0 µg/L			
33 Bromodichloromethane	ND	2.0 µg/L			
34 4-Methyl-2-pentanone (MIBK)	ND	10 µg/L			
35 cis-1,3-Dichloropropene	ND	2.0 µg/L			
36 trans-1,3-Dichloropropene	ND	2.0 µg/L			
37 1,1,2-Trichloroethane	ND	2.0 µg/L			
38 Toluene	3.9	1.0 µg/L			
39 1,3-Dichloropropane	ND	2.0 µg/L			
40 2-Hexanone	ND	20 µg/L			
41 Dibromochloromethane	ND	2.0 µg/L			
42 1,2-Dibromoethane (EDB)	ND	4.0 µg/L			
43 Tetrachloroethene	ND	2.0 µg/L			
44 1,1,1,2-Tetrachloroethane	ND	2.0 µg/L			

Reporting Limits were increased due to high concentrations of target analytes.

ND = Not Detected

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer
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Alpha Analytical, Inc.

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ANALYTICAL REPORT

CH2M Hill
1000 Wilshire Boulevard
Los Angeles, CA 90017
Job: KMEP DFSP Norwalk

Attn: Daniel Jablonski
Phone: (213) 228-8271
Fax: (714) 424-2135

Alpha Analytical Number: CHH11082220-07A
Client I.D. Number: GMW-O-19

Sampled: 08/19/11 10:21
Received: 08/20/11
Extracted: 08/23/11
Analyzed: 08/23/11

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	1.0 µg/L	45 Chlorobenzene	ND	1.0 µg/L
2 Chloromethane	ND	2.0 µg/L	46 Ethylbenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	47 m,p-Xylene	ND	0.50 µg/L
4 Chloroethane	ND	1.0 µg/L	48 Bromoform	ND	1.0 µg/L
5 Bromomethane	ND	2.0 µg/L	49 Styrene	ND	1.0 µg/L
6 Trichlorofluoromethane	ND	10 µg/L	50 o-Xylene	ND	0.50 µg/L
7 Acetone	ND	10 µg/L	51 1,1,2,2-Tetrachloroethane	ND	1.0 µg/L
8 1,1-Dichloroethene	ND	1.0 µg/L	52 1,2,3-Trichloropropane	ND	2.0 µg/L
9 Tertiary Butyl Alcohol (TBA)	ND	10 µg/L	53 Isopropylbenzene	ND	1.0 µg/L
10 Dichloromethane	ND	5.0 µg/L	54 Bromobenzene	ND	1.0 µg/L
11 Freon-113	ND	10 µg/L	55 n-Propylbenzene	ND	1.0 µg/L
12 Carbon disulfide	ND	2.5 µg/L	56 4-Chlorotoluene	ND	1.0 µg/L
13 trans-1,2-Dichloroethene	ND	1.0 µg/L	57 2-Chlorotoluene	ND	1.0 µg/L
14 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	58 1,3,5-Trimethylbenzene	ND	1.0 µg/L
15 1,1-Dichloroethane	ND	1.0 µg/L	59 tert-Butylbenzene	ND	1.0 µg/L
16 Vinyl acetate	ND	50 µg/L	60 1,2,4-Trimethylbenzene	ND	1.0 µg/L
17 2-Butanone (MEK)	ND	10 µg/L	61 sec-Butylbenzene	ND	1.0 µg/L
18 Di-isopropyl Ether (DIPE)	ND	1.0 µg/L	62 1,3-Dichlorobenzene	ND	1.0 µg/L
19 cis-1,2-Dichloroethene	ND	1.0 µg/L	63 1,4-Dichlorobenzene	ND	1.0 µg/L
20 Bromochloromethane	ND	1.0 µg/L	64 4-Isopropyltoluene	ND	1.0 µg/L
21 Chloroform	ND	1.0 µg/L	65 1,2-Dichlorobenzene	ND	1.0 µg/L
22 Ethyl Tertiary Butyl Ether (ETBE)	ND	1.0 µg/L	66 n-Butylbenzene	ND	1.0 µg/L
23 2,2-Dichloropropane	ND	1.0 µg/L	67 1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0 µg/L
24 1,2-Dichloroethane	ND	0.50 µg/L	68 1,2,4-Trichlorobenzene	ND	2.0 µg/L
25 1,1,1-Trichloroethane	ND	1.0 µg/L	69 Naphthalene	ND	10 µg/L
26 1,1-Dichloropropene	ND	1.0 µg/L	70 1,2,3-Trichlorobenzene	ND	2.0 µg/L
27 Carbon tetrachloride	ND	1.0 µg/L	71 Surr: 1,2-Dichloroethane-d4	116	(70-130) %REC
28 Benzene	ND	0.50 µg/L	72 Surr: Toluene-d8	95	(70-130) %REC
29 Tertiary Amyl Methyl Ether (TAME)	ND	1.0 µg/L	73 Surr: 4-Bromofluorobenzene	86	(70-130) %REC
30 Dibromomethane	ND	1.0 µg/L			
31 1,2-Dichloropropane	ND	1.0 µg/L			
32 Trichloroethene	ND	1.0 µg/L			
33 Bromodichloromethane	ND	1.0 µg/L			
34 4-Methyl-2-pentanone (MIBK)	ND	10 µg/L			
35 cis-1,3-Dichloropropene	ND	0.50 µg/L			
36 trans-1,3-Dichloropropene	ND	0.50 µg/L			
37 1,1,2-Trichloroethane	ND	1.0 µg/L			
38 Toluene	ND	0.50 µg/L			
39 1,3-Dichloropropane	ND	1.0 µg/L			
40 2-Hexanone	ND	5.0 µg/L			
41 Dibromochloromethane	ND	1.0 µg/L			
42 1,2-Dibromoethane (EDB)	ND	2.0 µg/L			
43 Tetrachloroethene	ND	1.0 µg/L			
44 1,1,1,2-Tetrachloroethane	ND	1.0 µg/L			

ND = Not Detected

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer
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8/29/11

Report Date

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Alpha Analytical, Inc.

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(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ANALYTICAL REPORT

CH2M Hill
1000 Wilshire Boulevard
Los Angeles, CA 90017
Job: KMEP DFSP Norwalk

Attn: Daniel Jablonski
Phone: (213) 228-8271
Fax: (714) 424-2135

Alpha Analytical Number: CHH11082220-08A
Client I.D. Number: GMW-36

Sampled: 08/19/11 12:29
Received: 08/20/11
Extracted: 08/23/11
Analyzed: 08/23/11

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	20 µg/L	45 Chlorobenzene	ND	20 µg/L
2 Chloromethane	ND	80 µg/L	46 Ethylbenzene	250	10 µg/L
3 Vinyl chloride	ND	20 µg/L	47 m,p-Xylene	1,300	10 µg/L
4 Chloroethane	ND	20 µg/L	48 Bromoform	ND	20 µg/L
5 Bromomethane	ND	80 µg/L	49 Styrene	ND	20 µg/L
6 Trichlorofluoromethane	ND	20 µg/L	50 o-Xylene	590	10 µg/L
7 Acetone	ND	400 µg/L	51 1,1,2,2-Tetrachloroethane	ND	20 µg/L
8 1,1-Dichloroethene	ND	20 µg/L	52 1,2,3-Trichloropropane	ND	80 µg/L
9 Tertiary Butyl Alcohol (TBA)	9,000	200 µg/L	53 Isopropylbenzene	ND	20 µg/L
10 Dichloromethane	ND	80 µg/L	54 Bromobenzene	ND	20 µg/L
11 Freon-113	ND	20 µg/L	55 n-Propylbenzene	32	20 µg/L
12 Carbon disulfide	ND	100 µg/L	56 4-Chlorotoluene	ND	20 µg/L
13 trans-1,2-Dichloroethene	ND	20 µg/L	57 2-Chlorotoluene	ND	20 µg/L
14 Methyl tert-butyl ether (MTBE)	260	10 µg/L	58 1,3,5-Trimethylbenzene	130	20 µg/L
15 1,1-Dichloroethane	ND	20 µg/L	59 tert-Butylbenzene	ND	20 µg/L
16 Vinyl acetate	ND	2,000 µg/L	60 1,2,4-Trimethylbenzene	410	20 µg/L
17 2-Butanone (MEK)	ND	400 µg/L	61 sec-Butylbenzene	ND	20 µg/L
18 Di-isopropyl Ether (DIPE)	ND	20 µg/L	62 1,3-Dichlorobenzene	ND	20 µg/L
19 cis-1,2-Dichloroethene	ND	20 µg/L	63 1,4-Dichlorobenzene	ND	20 µg/L
20 Bromochloromethane	ND	20 µg/L	64 4-Isopropyltoluene	ND	20 µg/L
21 Chloroform	ND	20 µg/L	65 1,2-Dichlorobenzene	ND	20 µg/L
22 Ethyl Tertiary Butyl Ether (ETBE)	ND	20 µg/L	66 n-Butylbenzene	ND	20 µg/L
23 2,2-Dichloropropane	ND	20 µg/L	67 1,2-Dibromo-3-chloropropane (DBCP)	ND	120 µg/L
24 1,2-Dichloroethane	ND	20 µg/L	68 1,2,4-Trichlorobenzene	ND	80 µg/L
25 1,1,1-Trichloroethane	ND	20 µg/L	69 Naphthalene	170	80 µg/L
26 1,1-Dichloropropene	ND	20 µg/L	70 1,2,3-Trichlorobenzene	ND	80 µg/L
27 Carbon tetrachloride	ND	20 µg/L	71 Surr: 1,2-Dichloroethane-d4	114	(70-130) %REC
28 Benzene	570	10 µg/L	72 Surr: Toluene-d8	94	(70-130) %REC
29 Tertiary Amyl Methyl Ether (TAME)	ND	20 µg/L	73 Surr: 4-Bromofluorobenzene	83	(70-130) %REC
30 Dibromomethane	ND	20 µg/L			
31 1,2-Dichloropropane	ND	20 µg/L			
32 Trichloroethene	ND	20 µg/L			
33 Bromodichloromethane	ND	20 µg/L			
34 4-Methyl-2-pentanone (MIBK)	ND	100 µg/L			
35 cis-1,3-Dichloropropene	ND	20 µg/L			
36 trans-1,3-Dichloropropene	ND	20 µg/L			
37 1,1,2-Trichloroethane	ND	20 µg/L			
38 Toluene	1,100	10 µg/L			
39 1,3-Dichloropropane	ND	20 µg/L			
40 2-Hexanone	ND	200 µg/L			
41 Dibromochloromethane	ND	20 µg/L			
42 1,2-Dibromoethane (EDB)	ND	40 µg/L			
43 Tetrachloroethene	ND	20 µg/L			
44 1,1,1,2-Tetrachloroethane	ND	20 µg/L			

Reporting Limits were increased due to high concentrations of target analytes.

ND = Not Detected

Roger Scholl

Randy Gardner

Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer
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[Signature]

8/29/11

Report Date

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Alpha Analytical, Inc.

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ANALYTICAL REPORT

CH2M Hill
1000 Wilshire Boulevard
Los Angeles, CA 90017
Job: KMEP DFSP Norwalk

Attn: Daniel Jablonski
Phone: (213) 228-8271
Fax: (714) 424-2135

Alpha Analytical Number: CHH11082220-09A
Client I.D. Number: PZ-5

Sampled: 08/19/11 09:39
Received: 08/20/11
Extracted: 08/24/11
Analyzed: 08/24/11

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	10 µg/L	45 Chlorobenzene	ND	10 µg/L
2 Chloromethane	ND	40 µg/L	46 Ethylbenzene	63	5.0 µg/L
3 Vinyl chloride	ND	10 µg/L	47 m,p-Xylene	5.4	5.0 µg/L
4 Chloroethane	ND	10 µg/L	48 Bromoform	ND	10 µg/L
5 Bromomethane	ND	40 µg/L	49 Styrene	ND	10 µg/L
6 Trichlorofluoromethane	ND	10 µg/L	50 o-Xylene	40	5.0 µg/L
7 Acetone	ND	200 µg/L	51 1,1,2,2-Tetrachloroethane	ND	10 µg/L
8 1,1-Dichloroethene	ND	10 µg/L	52 1,2,3-Trichloropropane	ND	40 µg/L
9 Tertiary Butyl Alcohol (TBA)	47,000	1,000 µg/L	53 Isopropylbenzene	ND	10 µg/L
10 Dichloromethane	ND	40 µg/L	54 Bromobenzene	ND	10 µg/L
11 Freon-113	ND	10 µg/L	55 n-Propylbenzene	ND	10 µg/L
12 Carbon disulfide	ND	50 µg/L	56 4-Chlorotoluene	ND	10 µg/L
13 trans-1,2-Dichloroethene	ND	10 µg/L	57 2-Chlorotoluene	ND	10 µg/L
14 Methyl tert-butyl ether (MTBE)	150	5.0 µg/L	58 1,3,5-Trimethylbenzene	ND	10 µg/L
15 1,1-Dichloroethane	ND	10 µg/L	59 tert-Butylbenzene	ND	10 µg/L
16 Vinyl acetate	ND	1,000 µg/L	60 1,2,4-Trimethylbenzene	15	10 µg/L
17 2-Butanone (MEK)	ND	200 µg/L	61 sec-Butylbenzene	ND	10 µg/L
18 Di-isopropyl Ether (DIPE)	ND	10 µg/L	62 1,3-Dichlorobenzene	ND	10 µg/L
19 cis-1,2-Dichloroethene	ND	10 µg/L	63 1,4-Dichlorobenzene	ND	10 µg/L
20 Bromochloromethane	ND	10 µg/L	64 4-Isopropyltoluene	ND	10 µg/L
21 Chloroform	ND	10 µg/L	65 1,2-Dichlorobenzene	ND	10 µg/L
22 Ethyl Tertiary Butyl Ether (ETBE)	ND	10 µg/L	66 n-Butylbenzene	ND	10 µg/L
23 2,2-Dichloropropane	ND	10 µg/L	67 1,2-Dibromo-3-chloropropane (DBCP)	ND	60 µg/L
24 1,2-Dichloroethane	ND	10 µg/L	68 1,2,4-Trichlorobenzene	ND	40 µg/L
25 1,1,1-Trichloroethane	ND	10 µg/L	69 Naphthalene	ND	40 µg/L
26 1,1-Dichloropropene	ND	10 µg/L	70 1,2,3-Trichlorobenzene	ND	40 µg/L
27 Carbon tetrachloride	ND	10 µg/L	71 Surr: 1,2-Dichloroethane-d4	104	(70-130) %REC
28 Benzene	750	5.0 µg/L	72 Surr: 1,2-Dichloroethane-d4	104	(70-130) %REC
29 Tertiary Amyl Methyl Ether (TAME)	ND	10 µg/L	73 Surr: Toluene-d8	105	(70-130) %REC
30 Dibromomethane	ND	10 µg/L	74 Surr: Toluene-d8	103	(70-130) %REC
31 1,2-Dichloropropane	ND	10 µg/L	75 Surr: 4-Bromofluorobenzene	100	(70-130) %REC
32 Trichloroethene	ND	10 µg/L	76 Surr: 4-Bromofluorobenzene	99	(70-130) %REC
33 Bromodichloromethane	ND	10 µg/L			
34 4-Methyl-2-pentanone (MIBK)	ND	50 µg/L			
35 cis-1,3-Dichloropropene	ND	10 µg/L			
36 trans-1,3-Dichloropropene	ND	10 µg/L			
37 1,1,2-Trichloroethane	ND	10 µg/L			
38 Toluene	9.0	5.0 µg/L			
39 1,3-Dichloropropane	ND	10 µg/L			
40 2-Hexanone	ND	100 µg/L			
41 Dibromochloromethane	ND	10 µg/L			
42 1,2-Dibromoethane (EDB)	ND	20 µg/L			
43 Tetrachloroethene	ND	10 µg/L			
44 1,1,1,2-Tetrachloroethane	ND	10 µg/L			

*This analyte was analyzed separately in order to achieve lower reporting limits for the other analytes.

Reporting Limits were increased due to high concentrations of target analytes.

ND = Not Detected

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Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.

8/29/11

Report Date



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

VOC Sample Preservation Report

Work Order: CHH11082220

Job: KMED DFSP Norwalk

Alpha's Sample ID	Client's Sample ID	Matrix	pH
11082220-01A	TB-1	Aqueous	2
11082220-02A	DUP-1	Aqueous	5
11082220-03A	EB-1	Aqueous	2
11082220-04A	GMW-O-15	Aqueous	5
11082220-05A	GMW-O-16	Aqueous	2
11082220-06A	GMW-O-18	Aqueous	4
11082220-07A	GMW-O-19	Aqueous	2
11082220-08A	GMW-36	Aqueous	5
11082220-09A	PZ-5	Aqueous	5

8/29/11

Report Date

Page 1 of 1



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Date:
26-Aug-11

QC Summary Report

Work Order:
11082220

Method Blank

File ID: 2A08231166.D

Sample ID: MBLK-27181

Analyte

TPH-E (Fuel Product)

Surr: Nonane

Type **MBLK** Test Code: **EPA Method SW8015B/C Ext**

Batch ID: 27181

Run ID: FID_2_110825A

Analysis Date: 08/25/2011 11:46

Prep Date: 08/25/2011 09:32

Units : mg/L

Result

PQL

SpkVal

SpkRefVal

%REC

LCL(ME)

UCL(ME)

RPDRefVal

%RPD(Limit)

Qual

ND

0.1

0.15

117

49

145

Laboratory Control Spike

File ID: 2A08231165.D

Sample ID: LCS-27181

Analyte

TPH-E (DRO)

Surr: Nonane

Type **LCS** Test Code: **EPA Method SW8015B/C Ext**

Batch ID: 27181

Run ID: FID_2_110825A

Analysis Date: 08/25/2011 11:21

Prep Date: 08/25/2011 09:32

Units : mg/L

Result

PQL

SpkVal

SpkRefVal

%REC

LCL(ME)

UCL(ME)

RPDRefVal

%RPD(Limit)

Qual

2.41

0.05

2.5

96

70

130

0.167

0.15

111

49

145

Sample Matrix Spike

File ID: 2A08231169.D

Sample ID: 11082426-01AMS

Analyte

TPH-E (DRO)

Surr: Nonane

Type **MS** Test Code: **EPA Method SW8015B/C Ext**

Batch ID: 27181

Run ID: FID_2_110825A

Analysis Date: 08/25/2011 13:00

Prep Date: 08/25/2011 09:32

Units : mg/L

Result

PQL

SpkVal

SpkRefVal

%REC

LCL(ME)

UCL(ME)

RPDRefVal

%RPD(Limit)

Qual

2.5

0.05

2.5

0

100

53

150

0.18

0.15

120

49

145

Sample Matrix Spike Duplicate

File ID: 2A08231170.D

Sample ID: 11082426-01AMSD

Analyte

TPH-E (DRO)

Surr: Nonane

Type **MSD** Test Code: **EPA Method SW8015B/C Ext**

Batch ID: 27181

Run ID: FID_2_110825A

Analysis Date: 08/25/2011 13:25

Prep Date: 08/25/2011 09:32

Units : mg/L

Result

PQL

SpkVal

SpkRefVal

%REC

LCL(ME)

UCL(ME)

RPDRefVal

%RPD(Limit)

Qual

2.44

0.05

2.5

0

98

53

150

2.5

2.4(47)

0.179

0.15

119

49

145

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



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Date:
26-Aug-11

QC Summary Report

Work Order:
11082220

Method Blank

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	ND	0.05								
Surr: 1,2-Dichloroethane-d4	0.0109		0.01		109	70	130			
Surr: Toluene-d8	0.0104		0.01		104	70	130			
Surr: 4-Bromofluorobenzene	0.0101		0.01		101	70	130			

Laboratory Control Spike

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	0.427	0.05	0.4		107	70	130			
Surr: 1,2-Dichloroethane-d4	0.0113		0.01		113	70	130			
Surr: Toluene-d8	0.00981		0.01		98	70	130			
Surr: 4-Bromofluorobenzene	0.0097		0.01		97	70	130			

Sample Matrix Spike

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	2.32	0.25	2	0	116	51	144			
Surr: 1,2-Dichloroethane-d4	0.0544		0.05		109	70	130			
Surr: Toluene-d8	0.0505		0.05		101	70	130			
Surr: 4-Bromofluorobenzene	0.0493		0.05		99	70	130			

Sample Matrix Spike Duplicate

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	2.35	0.25	2	0	118	51	144	2.316	1.5(29)	
Surr: 1,2-Dichloroethane-d4	0.054		0.05		108	70	130			
Surr: Toluene-d8	0.0502		0.05		100	70	130			
Surr: 4-Bromofluorobenzene	0.0497		0.05		99	70	130			

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



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Date:

26-Aug-11

QC Summary Report

Work Order:

11082220

n-Butylbenzene	ND	1				
1,2-Dibromo-3-chloropropane (DBCP)	ND	5				
1,2,4-Trichlorobenzene	ND	2				
Naphthalene	ND	10				
1,2,3-Trichlorobenzene	ND	2				
Surr: 1,2-Dichloroethane-d4	10.9		10	109	70	130
Surr: Toluene-d8	10.4		10	104	70	130
Surr: 4-Bromofluorobenzene	10.1		10	101	70	130



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Date:

26-Aug-11

QC Summary Report

Work Order:

11082220

Laboratory Control Spike

Type **LCS** Test Code: **EPA Method SW8260B**

File ID: C:\HPCHEM\MS07\DATA\110824\11082404.D

Batch ID: **MS07W0824A**

Analysis Date: **08/24/2011 11:05**

Sample ID: **LCS MS07W0824A**

Units : **µg/L**

Run ID: **MSD_07_110824A**

Prep Date: **08/24/2011 11:05**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	10.3	1	10		103	37	137			
Chloromethane	8.14	2	10		81	43	140			
Vinyl chloride	9.74	1	10		97	80	120			
Chloroethane	11	1	10		110	43	141			
Bromomethane	14	2	10		140	11	160			
Trichlorofluoromethane	13.2	1	10		132	40	148			
Acetone	163	10	200		82	36	171			
1,1-Dichloroethene	11.5	1	10		115	80	120			
Tertiary Butyl Alcohol (TBA)	101	10	100		101	44	156			
Dichloromethane	10.5	2	10		105	69	130			
Freon-113	12.3	1	10		123	70	137			
trans-1,2-Dichloroethene	11.6	1	10		116	70	130			
Methyl tert-butyl ether (MTBE)	11.7	0.5	10		117	65	140			
1,1-Dichloroethane	11.2	1	10		112	70	130			
2-Butanone (MEK)	175	10	200		87	23	182			
Di-isopropyl Ether (DIPE)	10.4	1	10		104	70	130			
cis-1,2-Dichloroethene	10.1	1	10		101	70	130			
Bromochloromethane	9.93	1	10		99	70	132			
Chloroform	9.99	1	10		99.9	80	120			
Ethyl Tertiary Butyl Ether (ETBE)	11.2	1	10		112	65	139			
2,2-Dichloropropane	11.2	1	10		112	68	154			
1,2-Dichloroethane	10.2	1	10		102	70	132			
1,1,1-Trichloroethane	10.6	1	10		106	70	135			
1,1-Dichloropropene	10.5	1	10		105	70	130			
Carbon tetrachloride	10.5	1	10		105	61	148			
Benzene	10.3	0.5	10		103	70	130			
Tertiary Amyl Methyl Ether (TAME)	9.06	1	10		91	68	134			
Dibromomethane	9.7	1	10		97	70	130			
1,2-Dichloropropane	10.4	1	10		104	80	120			
Trichloroethene	10.2	1	10		102	65	144			
Bromodichloromethane	9.7	1	10		97	50	157			
4-Methyl-2-pentanone (MIBK)	20.3	2.5	25		81	20	182			
cis-1,3-Dichloropropene	9.49	1	10		95	70	131			
trans-1,3-Dichloropropene	9.86	1	10		99	70	136			
1,1,2-Trichloroethane	9.68	1	10		97	70	130			
Toluene	10.7	0.5	10		107	80	120			
1,3-Dichloropropane	9.62	1	10		96	70	130			
2-Hexanone	76.3	5	100		76	20	182			
Dibromochloromethane	9.95	1	10		100	42	155			
1,2-Dibromoethane (EDB)	20.5	2	20		103	70	130			
Tetrachloroethene	11.2	1	10		112	70	130			
1,1,1,2-Tetrachloroethane	11	1	10		110	70	130			
Chlorobenzene	10.2	1	10		102	70	130			
Ethylbenzene	11.1	0.5	10		111	80	120			
m,p-Xylene	11.1	0.5	10		111	70	130			
Bromoform	10.2	1	10		102	68	143			
Styrene	8.92	1	10		89	64	153			
o-Xylene	10.9	0.5	10		109	70	130			
1,1,2,2-Tetrachloroethane	9.34	1	10		93	70	130			
1,2,3-Trichloropropane	18.4	2	20		92	70	130			
Isopropylbenzene	10.3	1	10		103	68	138			
Bromobenzene	10.3	1	10		103	70	130			
n-Propylbenzene	10.7	1	10		107	70	133			
4-Chlorotoluene	10.6	1	10		106	70	130			
2-Chlorotoluene	10.9	1	10		109	70	130			
1,3,5-Trimethylbenzene	11.4	1	10		114	70	134			
tert-Butylbenzene	11	1	10		110	55	147			
1,2,4-Trimethylbenzene	11.2	1	10		112	70	134			
sec-Butylbenzene	11.1	1	10		111	70	135			
1,3-Dichlorobenzene	10.6	1	10		106	70	130			
1,4-Dichlorobenzene	10.6	1	10		106	70	130			
4-Isopropyltoluene	10.9	1	10		109	70	132			
1,2-Dichlorobenzene	10	1	10		100	70	130			
n-Butylbenzene	10.4	1	10		104	70	134			
1,2-Dibromo-3-chloropropane (DBCP)	52.7	3	50		105	67	130			



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Date:

26-Aug-11

QC Summary Report

Work Order:

11082220

1,2,4-Trichlorobenzene	10.1	2	10	101	67	132
Naphthalene	10.5	2	10	105	38	154
1,2,3-Trichlorobenzene	9.74	2	10	97	56	137
Surr: 1,2-Dichloroethane-d4	10.6		10	106	70	130
Surr: Toluene-d8	10.7		10	107	70	130
Surr: 4-Bromofluorobenzene	9.89		10	99	70	130



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Date:

26-Aug-11

QC Summary Report

Work Order:

11082220

Sample Matrix Spike

Type **MS** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS07\DATA\110824\11082411.D**

Batch ID: **MS07W0824A**

Analysis Date: **08/24/2011 13:54**

Sample ID: **11082222-01AMS**

Units: **µg/L**

Run ID: **MSD_07_110824A**

Prep Date: **08/24/2011 13:54**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	32.1	2.5	50	0	64	21	138			
Chloromethane	24.8	10	50	0	50	23	144			
Vinyl chloride	33.3	2.5	50	0	67	49	136			
Chloroethane	40.7	2.5	50	0	81	21	159			
Bromomethane	28.7	10	50	0	57	10	174			
Trichlorofluoromethane	52.9	2.5	50	0	106	32	154			
Acetone	582	50	1000	0	58	10	171			
1,1-Dichloroethene	48.1	2.5	50	0	96	64	130			
Tertiary Butyl Alcohol (TBA)	469	25	500	0	94	41	157			
Dichloromethane	45.4	10	50	0	91	69	130			
Freon-113	52.9	2.5	50	0	106	55	141			
trans-1,2-Dichloroethene	48.8	2.5	50	0	98	63	130			
Methyl tert-butyl ether (MTBE)	42.8	1.3	50	0	86	47	150			
1,1-Dichloroethane	46.4	2.5	50	0	93	66	130			
2-Butanone (MEK)	728	50	1000	0	73	23	182			
Di-isopropyl Ether (DIPE)	39.4	2.5	50	0	79	59	139			
cis-1,2-Dichloroethene	44	2.5	50	0	88	70	130			
Bromochloromethane	46	2.5	50	0	92	70	132			
Chloroform	46.4	2.5	50	0	93	70	130			
Ethyl Tertiary Butyl Ether (ETBE)	44.3	2.5	50	0	89	59	182			
2,2-Dichloropropane	46.6	2.5	50	0	93	38	154			
1,2-Dichloroethane	47.8	2.5	50	0	96	65	134			
1,1,1-Trichloroethane	48.8	2.5	50	0	98	65	136			
1,1-Dichloropropene	45.3	2.5	50	0	91	68	132			
Carbon tetrachloride	51.2	2.5	50	0	102	58	148			
Benzene	41.6	1.3	50	0	83	59	138			
Tertiary Amyl Methyl Ether (TAME)	38	2.5	50	0	76	63	135			
Dibromomethane	44.8	2.5	50	0	90	70	130			
1,2-Dichloropropane	48.4	2.5	50	0	97	70	131			
Trichloroethene	43.6	2.5	50	0	87	65	144			
Bromodichloromethane	46	2.5	50	0	92	50	157			
4-Methyl-2-pentanone (MIBK)	92.6	13	125	0	74	20	182			
cis-1,3-Dichloropropene	40	2.5	50	0	80	63	131			
trans-1,3-Dichloropropene	44.6	2.5	50	0	89	65	136			
1,1,2-Trichloroethane	42	2.5	50	0	84	70	131			
Toluene	42.1	1.3	50	0	84	68	130			
1,3-Dichloropropane	42	2.5	50	0	84	70	130			
2-Hexanone	297	25	500	0	59	20	182			
Dibromochloromethane	47.2	2.5	50	0	94	42	155			
1,2-Dibromoethane (EDB)	91.9	5	100	0	92	70	130			
Tetrachloroethene	47.1	2.5	50	0	94	65	130			
1,1,1,2-Tetrachloroethane	48.1	2.5	50	0	96	70	130			
Chlorobenzene	43.2	2.5	50	0	86	70	130			
Ethylbenzene	44.2	1.3	50	0	88	68	130			
m,p-Xylene	44.2	1.3	50	0	88	68	131			
Bromoform	50.8	2.5	50	0	102	65	143			
Styrene	43.5	2.5	50	0	87	59	153			
o-Xylene	44.2	1.3	50	0	88	70	130			
1,1,2,2-Tetrachloroethane	43.1	2.5	50	0	86	67	130			
1,2,3-Trichloropropane	82.3	10	100	0	82	70	130			
Isopropylbenzene	40.8	2.5	50	0	82	55	138			
Bromobenzene	43.4	2.5	50	0	87	70	130			
n-Propylbenzene	42.4	2.5	50	0	85	67	133			
4-Chlorotoluene	42.5	2.5	50	0	85	70	130			
2-Chlorotoluene	43.2	2.5	50	0	86	70	130			
1,3,5-Trimethylbenzene	44.9	2.5	50	0	90	67	134			
tert-Butylbenzene	43.6	2.5	50	0	87	55	147			
1,2,4-Trimethylbenzene	44.3	2.5	50	0	89	65	135			
sec-Butylbenzene	43.7	2.5	50	0	87	68	135			
1,3-Dichlorobenzene	43.4	2.5	50	0	87	70	130			
1,4-Dichlorobenzene	43.3	2.5	50	0	87	70	130			
4-Isopropyltoluene	42.4	2.5	50	0	85	68	132			
1,2-Dichlorobenzene	42	2.5	50	0	84	70	130			
n-Butylbenzene	40.1	2.5	50	0	80	62	134			
1,2-Dibromo-3-chloropropane (DBCP)	238	15	250	0	95	64	130			



Alpha Analytical, Inc.

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Date:

26-Aug-11

QC Summary Report

Work Order:

11082220

1,2,4-Trichlorobenzene	43	10	50	0	86	62	133
Naphthalene	47.4	10	50	0	95	32	166
1,2,3-Trichlorobenzene	43.1	10	50	0	86	55	138
Surr: 1,2-Dichloroethane-d4	56.9		50		114	70	130
Surr: Toluene-d8	50.8		50		102	70	130
Surr: 4-Bromofluorobenzene	47.9		50		96	70	130



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:

26-Aug-11

QC Summary Report

Work Order:

11082220

Sample Matrix Spike Duplicate

Type **MSD** Test Code: **EPA Method SW8260B**

File ID: C:\HPCHEM\MS07\DATA\110824\11082412.D

Batch ID: **MS07W0824A**

Analysis Date: **08/24/2011 14:19**

Sample ID: **11082222-01AMSD**

Units : **µg/L**

Run ID: **MSD_07_110824A**

Prep Date: **08/24/2011 14:19**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	36.8	2.5	50	0	74	21	138	32.06	13.8(33)	
Chloromethane	29.9	10	50	0	60	23	144	24.75	18.8(27)	
Vinyl chloride	39.2	2.5	50	0	78	49	136	33.33	16.1(21)	
Chloroethane	46.7	2.5	50	0	93	21	159	40.66	13.7(40)	
Bromomethane	44.4	10	50	0	89	10	174	28.7	43.0(40)	R5
Trichlorofluoromethane	61	2.5	50	0	122	32	154	52.87	14.3(37)	
Acetone	647	50	1000	0	65	10	171	581.8	10.6(23)	
1,1-Dichloroethene	56.8	2.5	50	0	114	64	130	48.14	16.5(21)	
Tertiary Butyl Alcohol (TBA)	504	25	500	0	101	41	157	468.5	7.3(30)	
Dichloromethane	50.9	10	50	0	102	69	130	45.41	11.4(20)	
Freon-113	63	2.5	50	0	126	55	141	52.85	17.5(40)	
trans-1,2-Dichloroethene	56.1	2.5	50	0	112	63	130	48.79	14.0(20)	
Methyl tert-butyl ether (MTBE)	49	1.3	50	0	98	47	150	42.84	13.4(40)	
1,1-Dichloroethane	53.2	2.5	50	0	106	66	130	46.35	13.7(20)	
2-Butanone (MEK)	796	50	1000	0	80	23	182	728.2	8.9(22)	
Di-isopropyl Ether (DIPE)	44.5	2.5	50	0	89	59	139	39.43	12.1(20)	
cis-1,2-Dichloroethene	51.6	2.5	50	0	103	70	130	43.97	15.9(20)	
Bromochloromethane	53.1	2.5	50	0	106	70	132	46.03	14.2(20)	
Chloroform	53.1	2.5	50	0	106	70	130	46.42	13.5(20)	
Ethyl Tertiary Butyl Ether (ETBE)	48.9	2.5	50	0	98	59	182	44.3	9.8(40)	
2,2-Dichloropropane	54.9	2.5	50	0	110	38	154	46.62	16.3(22)	
1,2-Dichloroethane	53.2	2.5	50	0	106	65	134	47.8	10.7(20)	
1,1,1-Trichloroethane	55.7	2.5	50	0	111	65	136	48.8	13.2(20)	
1,1-Dichloropropene	51.1	2.5	50	0	102	68	132	45.28	12.2(20)	
Carbon tetrachloride	57.4	2.5	50	0	115	58	148	51.19	11.4(20)	
Benzene	46.6	1.3	50	0	93	59	138	41.62	11.3(21)	
Tertiary Amyl Methyl Ether (TAME)	42.3	2.5	50	0	85	63	135	37.97	10.7(40)	
Dibromomethane	50.3	2.5	50	0	101	70	130	44.78	11.7(20)	
1,2-Dichloropropane	52.8	2.5	50	0	106	70	131	48.36	8.7(20)	
Trichloroethene	49.1	2.5	50	0	98	65	144	43.56	12.0(20)	
Bromodichloromethane	50.8	2.5	50	0	102	50	157	45.98	9.9(20)	
4-Methyl-2-pentanone (MIBK)	101	13	125	0	81	20	182	92.63	8.4(20)	
cis-1,3-Dichloropropene	44.4	2.5	50	0	89	63	131	40.02	10.4(20)	
trans-1,3-Dichloropropene	49.7	2.5	50	0	99	65	136	44.57	10.8(20)	
1,1,2-Trichloroethane	45.9	2.5	50	0	92	70	131	42.04	8.8(20)	
Toluene	47	1.3	50	0	94	68	130	42.1	11.0(20)	
1,3-Dichloropropane	45.7	2.5	50	0	91	70	130	41.96	8.5(20)	
2-Hexanone	324	25	500	0	65	20	182	297.3	8.5(20)	
Dibromochloromethane	51.2	2.5	50	0	102	42	155	47.16	8.2(20)	
1,2-Dibromoethane (EDB)	102	5	100	0	102	70	130	91.87	10.6(20)	
Tetrachloroethene	53	2.5	50	0	106	65	130	47.05	11.9(20)	
1,1,1,2-Tetrachloroethane	52.5	2.5	50	0	105	70	130	48.1	8.7(20)	
Chlorobenzene	47.6	2.5	50	0	95	70	130	43.24	9.7(20)	
Ethylbenzene	49.4	1.3	50	0	99	68	130	44.16	11.2(20)	
m,p-Xylene	49	1.3	50	0	98	68	131	44.22	10.3(20)	
Bromoform	55.3	2.5	50	0	111	65	143	50.82	8.4(20)	
Styrene	48.3	2.5	50	0	97	59	153	43.54	10.4(37)	
o-Xylene	49.1	1.3	50	0	98	70	130	44.24	10.4(20)	
1,1,2,2-Tetrachloroethane	48.1	2.5	50	0	96	67	130	43.11	11.0(20)	
1,2,3-Trichloropropane	90.5	10	100	0	91	70	130	82.32	9.5(20)	
Isopropylbenzene	45.9	2.5	50	0	92	55	138	40.83	11.7(20)	
Bromobenzene	47.9	2.5	50	0	96	70	130	43.42	9.8(20)	
n-Propylbenzene	47.3	2.5	50	0	95	67	133	42.39	11.0(30)	
4-Chlorotoluene	47.9	2.5	50	0	96	70	130	42.47	12.0(20)	
2-Chlorotoluene	48.8	2.5	50	0	98	70	130	43.15	12.2(20)	
1,3,5-Trimethylbenzene	50.9	2.5	50	0	102	67	134	44.92	12.4(21)	
tert-Butylbenzene	49.2	2.5	50	0	98	55	147	43.61	12.1(20)	
1,2,4-Trimethylbenzene	49.8	2.5	50	0	99.5	65	135	44.31	11.6(25)	
sec-Butylbenzene	50.3	2.5	50	0	101	68	135	43.67	14.2(20)	
1,3-Dichlorobenzene	49.1	2.5	50	0	98	70	130	43.38	12.5(20)	
1,4-Dichlorobenzene	49.1	2.5	50	0	98	70	130	43.32	12.5(20)	
4-Isopropyltoluene	48.7	2.5	50	0	97	68	132	42.39	13.8(20)	
1,2-Dichlorobenzene	47.6	2.5	50	0	95	70	130	42.04	12.3(20)	
n-Butylbenzene	46.7	2.5	50	0	93	62	134	40.08	15.2(21)	
1,2-Dibromo-3-chloropropane (DBCP)	260	15	250	0	104	64	130	237.8	9.1(20)	



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

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Date:	QC Summary Report							Work Order:	
26-Aug-11								11082220	
1,2,4-Trichlorobenzene	49.4	10	50	0	99	62	133	43.02	13.8(29)
Naphthalene	53.4	10	50	0	107	32	166	47.44	11.9(40)
1,2,3-Trichlorobenzene	49.1	10	50	0	98	55	138	43.1	12.9(36)
Surr: 1,2-Dichloroethane-d4	57.7		50		115	70	130		
Surr: Toluene-d8	50.7		50		101	70	130		
Surr: 4-Bromofluorobenzene	47.9		50		96	70	130		

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

R5 = MS/MSD RPD exceeded the laboratory control limit. Recovery met acceptance criteria.

Billing Information :

CHAIN-OF-CUSTODY RECORD

Alpha Analytical, Inc.

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778
 TEL: (775) 355-1044 FAX: (775) 355-0406

CA

WorkOrder : CHHHL11082220

Report Due By : 5:00 PM On : 30-Aug-11

Client:

CH2M Hill
 1000 Wilshire Boulevard
 21st Floor
 Los Angeles, CA 90017

Report Attention

Daniel Jablonski (213) 228-8271 x daniel.jablonski@ch2m.com
 Vladimir Carino (213) 228-8271 x vladimir.carino@ch2m.com

Phone Number

Email Address

EDD Required : Yes

Sampled by : TR

Client's COC # : none

Job : KMEP DFSP Norwalk

Cooler Temp 0 °C

Samples Received 20-Aug-11

Date Printed 22-Aug-11

QC Level : S3 = Final Rpt. MBLK, LCS, MS/MSD With Surrogates

Alpha Sample ID	Client Sample ID	Collection Matrix Date	No. of Bottles			Requested Tests						Sample Remarks
			Alpha	Sub	TAT	TPHE_W	TPHP_W	VOC_W				
CHH11082220-01A	TB-1	AQ 08/19/11 08:00	2	0	6	TPHE(0.10) +Vmyl acetate	TPHP(0.10) +Vmyl acetate	TPHE(0.10) +Vmyl acetate				Reno Trip Blank 4/27/11, 6/22/11
CHH11082220-02A	DUP-1	AQ 08/19/11 00:00	6	0	6	TPHE(0.10) +Vmyl acetate	TPHP(0.10) +Vmyl acetate	TPHE(0.10) +Vmyl acetate				
CHH11082220-03A	EB-1	AQ 08/19/11 12:50	6	0	6	TPHE(0.10) +Vmyl acetate	TPHP(0.10) +Vmyl acetate	TPHE(0.10) +Vmyl acetate				
CHH11082220-04A	GMMW-O-15	AQ 08/19/11 11:55	6	0	6	TPHE(0.10) +Vmyl acetate	TPHP(0.10) +Vmyl acetate	TPHE(0.10) +Vmyl acetate				
CHH11082220-05A	GMMW-O-16	AQ 08/19/11 11:09	6	0	6	TPHE(0.10) +Vmyl acetate	TPHP(0.10) +Vmyl acetate	TPHE(0.10) +Vmyl acetate				
CHH11082220-06A	GMMW-O-18	AQ 08/19/11 08:56	6	0	6	TPHE(0.10) +Vmyl acetate	TPHP(0.10) +Vmyl acetate	TPHE(0.10) +Vmyl acetate				
CHH11082220-07A	GMMW-O-19	AQ 08/19/11 10:21	6	0	6	TPHE(0.10) +Vmyl acetate	TPHP(0.10) +Vmyl acetate	TPHE(0.10) +Vmyl acetate				
CHH11082220-08A	GMMW-36	AQ 08/19/11 12:29	6	0	6	TPHE(0.10) +Vmyl acetate	TPHP(0.10) +Vmyl acetate	TPHE(0.10) +Vmyl acetate				

Comments: Security seals intact. Frozen ice. Saturday delivery. Samples kept cold and secure until login on Monday. Analysis: Run two analyses in order to achieve lower reporting limits for all other analytes due to high TBA values. .

Signature

Print Name

Company

Date/Time

Logged in by:

K Murray

K Murray

Alpha Analytical, Inc.

6/22/11 0900

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

The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report. Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

CHAIN-OF-CUSTODY RECORD

CA

Alpha Analytical, Inc.

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778
TEL: (775) 355-1044 FAX: (775) 355-0406

WorkOrder : CHHL11082220

Report Due By : 5:00 PM On : 30-Aug-11

Client:

CH2M Hill
1000 Wilshire Boulevard
21st Floor
Los Angeles, CA 90017

Report Attention

Daniel Jablonski (213) 228-8271 x daniel.jablonski@ch2m.com
Vladimir Carino (213) 228-8271 x vladimir.carino@ch2m.com

Phone Number

Email Address

EDD Required : Yes

Sampled by : TR

Client's COC # : none

Job : KMEP DFSP Norwalk

Cooler Temp

Samples Received

Date Printed

QC Level : S3 = Final Rpt. MBLK, LCS, MS/MSD With Surrogates

0 °C

20-Aug-11

22-Aug-11

Alpha Sample ID	Client Sample ID	Collection Matrix	Date	No. of Bottles			Requested Tests			Sample Remarks
				Alpha	Sub	TAT	TPHE_W	TPHP_W	VOC_W	
CHH11082220-09A	PZ-5	AQ	08/19/11 09:39	6	0	6	TPHE(0.10) +Vinyl acetate	TPHP(0.10) +Vinyl acetate	TPHE(0.10) +Vinyl acetate	

Comments: Security seals intact. Frozen ice. Saturday delivery. Samples kept cold and secure until login on Monday. Analysts: Run two analyses in order to achieve lower reporting limits for all other analytes due to high TBA values. :

Signature

Print Name

K Murray

Company

Alpha Analytical, Inc.

Date/Time

8/22/11 0900

Logged in by:

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

The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report.
Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

BLAINE

TECH SERVICES, INC.

1680 ROGERS AVENUE
 SAN JOSE, CALIFORNIA 95112-1105
 FAX (408) 573-7771
 PHONE (408) 573-0555

Alpha Analytical COC 1 of 1

CHAIN OF CUSTODY

CLIENT: Kinder Morgan
 SITE: DFSP Norwalk
 15306 Norwalk Blvd, Norwalk

LAB: Kinder Morgan Norwalk
 Billing Information:
 Kinder Morgan
 1100 Town and Country Rd.
 Orange CA 95112
 Report to:
 Dan Jablonski
 CH2MHILL
 1000 Wilshire Blvd 21st floor
 Los Angeles, CA 90017

CHH11082220

SAMPLE I.D.	DATE	TIME	MATRIX AQ = Water	#	CONTAINERS		TPHg, TPHfp (EPA 8015M)	VOC's & Oxygenates (EPA 8260B)	CONDUCT ANALYSIS TO DETECT		LAB	RESULTS NEEDED NO LATER THAN
					Preservation	Type						
TR-1	8-19-11	0800	AQ	2	HCl	VDA		X				Standard
DFP-1				6				X				
EB-1		1250		4				X				
GMW-0-15		1155		6				X				
GMW-0-16		1109		4				X				
GMW-0-18		0856		6				X				
GMW-0-19		1021		6				X				
GMW-36		1229		6				X				
P2-5		0939		6				X				

SAMPLING COMPLETED 8-19-11 1335

RELEASED BY: *TR* DATE: 8/19/11 TIME: 1335

RECEIVED BY: *TR* DATE: 8/19/11 TIME: 1335

RELEASED BY: *Nicole (Sample Custodian)* DATE: 8/19/11 TIME: 1600

RECEIVED BY: *Chumney* DATE: 8/22/11 TIME: 0850

SHIPPED VIA: *TR* TIME SENT: *1600* COOLER #:

September 2011

WELL GAUGING DATA

Project # 110922-MU Date 9/22/11 Client KMEP

Site Kinder Morgan Norwalk

Well ID	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Time
EXP-5	4					48.12	113.75	↓	1000
GMW-0-15	- UNABLE TO ACCESS - EXTRACTION SYSTEM IN WELL -								
GMW-0-16	4					26.32	48.61	TOC	1421
GMW-0-18	- UNABLE TO ACCESS - EXTRACTION SYSTEM IN WELL -								
GMW-0-19	4					25.82	40.03	TOC	1336
GMW-36	- UNABLE TO ACCESS - EXTRACTION SYSTEM IN WELL -								
PZ-5	4					25.96	38.48	TOC	1140

LOW FLOW WELL MONITORING DATA SHEET

Project #: 110922 - MLI	Client: KMEP
Sampler: ML	Start Date: 9/22/11
Well I.D.: EXP-5	Well Diameter: 2 3 ④ 6 8
Total Well Depth: 113.25	Depth to Water: Pre: 48.12 Post: 48.17
Depth to Free Product: _____	Thickness of Free Product (feet): _____
Referenced to: (PVC) Grade	Flow Cell Type: YSI 556

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other _____
 Start Purge Time: 1016 Flow Rate: 500 ml/min Pump Depth: 100'

Time	Temp. (°C or °F)	pH	Cond. (mS or μS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to water
1019	21.3	7.37	981	10	0.76	-83.7	1500	48.14
1022	21.4	7.33	988	8	0.41	-91.2	3000	48.17
1025	21.5	7.29	994	6	0.28	-105.9	4500	48.17
1028	21.7	7.26	1008	4	0.29	-108.3	6000	48.17
1031	22.1	7.25	1012	3	0.31	-112.4	7500	48.17
1034	22.3	7.24	1014	3	0.30	-115.2	9000	48.17

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: 9000 mL
Sampling Time: 1035	Sampling Date: 9/22/11
Sample I.D.: EXP-5	Laboratory: Alpha Analytical
Analyzed for: (TPHg) (TPHfp) (VOCs) MTBE	Other: SEE CAC
Equipment Blank I.D.: EB-1 @ Time 0955	Duplicate I.D.: _____

LOW FLOW WELL MONITORING DATA SHEET

Project #: 110922-MU	Client: KMEP
Sampler: ML	Start Date: 9/22/11
Well I.D.: GMW-0-15	Well Diameter: 2 3 4 6 8
Total Well Depth: EXT PUMP	Depth to Water: Pre: Post:
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: PVC Grade	Flow Cell Type: YSI 556

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other: EXT PORT
 Start Purge Time: 1455 Flow Rate: 200 ml/min Pump Depth: —

Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to water
1458	23.1	7.01	2396	11	0.73	-241.9	600	—
1501	23.6	6.94	2478	9	0.42	-223.7	1200	—
1504	24.8	6.93	2507	5	0.38	-205.4	1800	—
1507	24.8	6.93	2514	5	0.36	-202.6	2400	—
1510	24.8	6.93	2509	4	0.34	-199.8	3000	—
1513	24.9	6.92	2511	4	0.32	199.4	3600	—

Did well dewater? Yes <input checked="" type="radio"/> No	Amount actually evacuated: 3600
Sampling Time: 1514	Sampling Date: 9/22/11
Sample I.D.: GMW-0-15	Laboratory: Alpha Analytical
Analyzed for: TPHg TPHfp VOCs MTBE	Other: SEE COL
Equipment Blank I.D.: @	Duplicate I.D.: —

LOW FLOW WELL MONITORING DATA SHEET

Project #: 110922-MU1	Client: KMEP
Sampler: ML	Start Date: 9/22/11
Well I.D.: 6MW-0-16	Well Diameter: 2 3 ④ 6 8 _____
Total Well Depth: 48.61	Depth to Water: Pre: 26.32 Post: 26.35
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC Grade	Flow Cell Type: YSI 556

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other _____
 Start Purge Time: 1425 Flow Rate: 500ml/min Pump Depth: 43'

Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to water
1428	22.8	7.12	1624	12	1.12	-288.7	1500	26.29
1431	22.7	7.12	1623	10	1.01	-220.4	3000	26.32
1434	22.8	7.11	1624	9	0.90	-222.8	4500	26.32
1437	22.9	7.10	1625	8	0.66	-224.2	6000	26.35
1440	22.8	7.11	1623	6	0.63	-226.7	7500	26.35
1443	22.7	7.12	1625	5	0.61	-228.3	9000	26.35

Did well dewater? Yes <input type="radio"/> No <input checked="" type="radio"/>	Amount actually evacuated: 9000 ml
Sampling Time: 1444	Sampling Date: 9/22/11
Sample I.D.: 6MW-0-16	Laboratory: Alpha Analytical
Analyzed for: TPHg TPHfp VOC's MTBE	Other: SEE COC
Equipment Blank I.D.: @ _____	Duplicate I.D.: _____

LOW FLOW WELL MONITORING DATA SHEET

Project #: 110922-MC1	Client: KMEP
Sampler: <u>MC</u>	Start Date: <u>9/22/11</u>
Well I.D.: <u>GMW-0-18</u>	Well Diameter: 2 3 4 6 8 <u> </u>
Total Well Depth: <u>EXT PUMP</u>	Depth to Water: Pre: Post:
Depth to Free Product: <u> </u>	Thickness of Free Product (feet): <u> </u>
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>YSI 556</u>

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other EXT PORT
 Start Purge Time: 1230 Flow Rate: 500 mL/min Pump Depth:

Time	Temp. (°C or °F)	pH	Cond. (mS or μ S)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to water
1233	20.2	7.24	2753	468	1.21	-87.4	1500	—
1236	20.3	7.21	2782	413	2.34	-90.6	3000	—
1239	20.4	7.16	2798	331	2.79	-94.2	4500	—
1242	20.6	7.17	2773	308	3.13	-97.8	6000	—
1245	20.8	7.18	2756	284	3.01	-98.3	7500	—
1248	21.0	7.19	2752	276	2.97	-99.4	9000	—

Did well dewater? Yes <input type="radio"/> No <input checked="" type="radio"/>	Amount actually evacuated: <u>9000 mL</u>
Sampling Time: <u>1249</u>	Sampling Date: <u>9/22/11</u>
Sample I.D.: <u>GMW-0-18</u>	Laboratory: <u>Alpha Analytical</u>
Analyzed for: <u>TPHg</u> <u>TPHfp</u> <u>VOC's</u> <u>MTBE</u>	<u>Other</u> : <u>SEE COC</u>
Equipment Blank I.D.: <u> </u> @ <u> </u> Time	Duplicate I.D.: <u> </u>

LOW FLOW WELL MONITORING DATA SHEET

Project #: 110922-MU	Client: KMEP
Sampler: ML	Start Date: 9/22/11
Well I.D.: GMW-0-19	Well Diameter: 2 3 (4) 6 8
Total Well Depth: 40.03	Depth to Water: Pre: 25.82 Post: 25.89
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: PVO Grade	Flow Cell Type: YSI 556

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other _____
 Start Purge Time: 1341 Flow Rate: 500 ml/min Pump Depth: 35'

Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to water
1344	22.8	7.13	1594	13	1.97	-118.7	1500	25.89
1347	22.9	7.13	1603	10	1.29	-120.4	3000	25.89
1349 1350	22.9	7.12	1614	9	0.81	-122.9	4500	25.89
1353	22.7	7.09	1620	7	0.75	-124.3	6000	25.89
1356	22.7	7.08	1611	5	0.71	-126.1	7500	25.89
1359	22.8	7.08	1609	5	0.68	-127.8	9000	25.89

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: 9000 mL
Sampling Time: 1400	Sampling Date: 9/22/11
Sample I.D.: GMW-0-19	Laboratory: Alpha Analytical
Analyzed for: TPHg TPHfp VOC's MTBE	Other: SEE COC
Equipment Blank I.D.: @ _____	Duplicate I.D.: _____

LOW FLOW WELL MONITORING DATA SHEET

Project #: 110922-MC1	Client: KMEP
Sampler: <u>ML</u>	Start Date: <u>9/22/11</u>
Well I.D.: <u>GMW-36</u>	Well Diameter: 2 3 4 6 8 <u> </u>
Total Well Depth: <u>EXT PUMP</u>	Depth to Water: Pre: Post:
Depth to Free Product: <u> </u>	Thickness of Free Product (feet): <u> </u>
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>YSI 556</u>

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other: EXT PUMP
 Start Purge Time: 1525 Flow Rate: 200 ml/min Pump Depth:

Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to water
1528	27.6	7.03	2662	11	0.26	-213.0	600	—
1531	27.2	7.01	2635	9	0.22	-210.5	1200	—
1534	26.9	7.00	2585	6	0.20	-207.3	1800	—
1537	26.3	6.98	2533	4	0.17	-206.7	2400	—
1540	26.1	6.96	2514	4	0.15	-205.9	3000	—
1543	26.0	6.95	2510	3	0.14	-205.1	3600	—

Did well dewater? Yes <input type="radio"/> No <input checked="" type="radio"/>	Amount actually evacuated: <u>3600 mL</u>
Sampling Time: <u>1544</u>	Sampling Date: <u>9/22/11</u>
Sample I.D.: <u>GMW-36</u>	Laboratory: <u>Alpha Analytical</u>
Analyzed for: <u>TPHg</u> <u>TPHfp</u> <u>VOC's</u> MTBE	Other: <u>SEE COC</u>
Equipment Blank I.D.: <u> </u> @ <u> </u> Time	Duplicate I.D.: <u> </u>

LOW FLOW WELL MONITORING DATA SHEET

Project #: 110922-MCI	Client: KMEP
Sampler: ML	Start Date: 9/22/11
Well I.D.: PZ-5	Well Diameter: 2 3 (4) 6 8
Total Well Depth: 38.48	Depth to Water: Pre: 25.96 Post: 26.20
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: PVC Grade	Flow Cell Type: YSI 556

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other _____
 Start Purge Time: 1146 Flow Rate: 500 ml/min Pump Depth: 34'

Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to water
1149	21.9	6.81	2022	17	0.83	-123.6	1590	26.16
1152	21.7	6.78	2226	11	0.64	-141.8	3000	26.17
1155	22.4	6.73	2264	9	0.55	-153.7	4500	26.19
1158	22.7	6.74	2275	5	0.57	-159.3	6000	26.19
1201	22.9	6.75	2291	3	0.57	-163.1	7500	26.19
1204	23.0	6.76	2285	2	0.54	-165.2	9000	26.20

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: 9000 mL
Sampling Time: 1205	Sampling Date: 9/22/11
Sample I.D.: PZ-5	Laboratory: Alpha Analytical
Analyzed for: TPHg TPHfp VOCs MTBE	Other: SEE CAC
Equipment Blank I.D.: @ Time	Duplicate I.D.: DUP-1

BLAINE

TECH SERVICES, INC.

1680 ROGERS AVENUE
 SAN JOSE, CALIFORNIA 95112-1105
 FAX (408) 573-7771
 PHONE (408) 573-0555

LAB Alpha Analytical COC 1 of 1

Billing Information:
 Kinder Morgan
 1100 Town and Country Rd.
 Orange CA 95112

CHAIN OF CUSTODY

CLIENT Kinder Morgan

SITE DFSP Norwalk

15306 Norwalk Blvd, Norwalk

Report to:
 Kinder Morgan Norwalk
 Dan Jablonski
 CH2MHILL
 1000 Wilshire Blvd 21st floor
 Los Angeles, CA 90017

CONDUCT ANALYSIS TO DETECT

TPHg, TPHp (EPA 8015M)
 VOC's & Oxygenates (EPA 8260B)

CONTAINERS

SAMPLE I.D.	DATE	TIME	MATRIX	#	Preservation	Type	TPHg, TPHp (EPA 8015M)	VOC's & Oxygenates (EPA 8260B)	STATUS	CONDITION	LAB SAMPLE #
TB-1	9/22/11	0950	AQ	3	HCL	VOA	X	X			
EG-1		0955	AQ	6	HCL	VOA	X	X			
PZ-5		1205	AQ	6	HCL	VOA	X	X			
GMW-0-18		1249	AQ	6	HCL	VOA	X	X			
GMW-0-19		1400	AQ	6	HCL	VOA	X	X			
GMW-0-16		1444	AQ	6	HCL	VOA	X	X			
GMW-0-15		1514	AQ	6	HCL	VOA	X	X			
GMW-36		1544	AQ	6	HCL	VOA	X	X			
DOP-1		-	AQ	6	HCL	VOA	X	X			

RESULTS NEEDED
 NO LATER THAN

Standard

RECEIVED BY	TIME	DATE	TIME	DATE	TIME
<i>[Signature]</i>	1730	9/22/11	1730	9/22/11	1730
RECEIVED BY	TIME	DATE	TIME	DATE	TIME
<i>[Signature]</i>	1500	9/23/11	1500	9/23/11	1500
RECEIVED BY	TIME	DATE	TIME	DATE	TIME
<i>[Signature]</i>					

Nicole (Sample Custodian)

FEDEX

SHIPPED VIA

TIME SENT

COOLER #

BLAINE
TECH SERVICES, INC.

1680 ROGERS AVENUE
SAN JOSE, CALIFORNIA 95112-1105
FAX (408) 573-7771
PHONE (408) 573-0555

LAB

Alpha Analytical COC 1 of 1

Billing Information:

Kinder Morgan
1100 Town and Country Rd.
Orange CA 95112

Kindergarten Norwalk

Report to:
Dan Jablonski
CH2MHILL
1000 Wilshire Blvd 21st floor
Los Angeles, CA 90017

CHAIN OF CUSTODY

CLIENT Kinder Morgan

SITE DFSP Norwalk

15306 Norwalk Blvd, Norwalk

CONDUCT ANALYSIS TO DETECT

VOC's & Oxygenates (EPA 8260B)
TPHg, TPHp (EPA 8015M)

SAMPLE I.D.	DATE	TIME	MATRIX	CONTAINERS		ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
				Water	Type				
EXP-5	9/22/11	10:35	AQ	6	HCL VOA				

RESULTS NEEDED
NO LATER THAN

Standard

RELEASING BY	DATE	TIME	RECEIVED BY	DATE	TIME
	9/22/11	1500		9/22/11	1730
RELEASING BY	DATE	TIME	RECEIVED BY	DATE	TIME
			FEDEX	9/23/11	1500
RELEASING BY	DATE	TIME	RECEIVED BY	DATE	TIME

SHIPPED VIA
TIME SENT
COOLER #

WELLHEAD INSPECTION CHECKLIST

Client CH2MHILL

Site Address DFSP NORWALK Date: 9/22/11

Job Number 110922-MU Technician: ML

Well ID	Well Inspected - No Corrective Action Required	Is access to the well unobstructed?	Flush Mounted wellbox	Standpipe	Guard posts	If applicable, is the well vault dry and free of debris?	Is there any physical damage to the well, well vault and cover, or protective casing?	Is a well identification tag present and legible?	Is the well easily visible?	Is there evidence of heaving or settling of the well, vault, or protective casing?	Stripped or Missing Bolts	Expansion Cap & lock in good working order	Cracked Apron	Well Not Inspected (explain below)	Corrective actions still required
EXP-5			X			Yes	Cracked apron	Yes	Yes	no		Yes	Yes		
GMW-0-15			X			Yes	no	Yes	Yes	no		Yes			
GMW-0-16			X			Yes	1/2 tabs stripped	Yes	Yes	no	1/2	Yes			
GMW-0-18			X			Yes	no	no	Yes	no		Yes			
GMW-0-19			X			Yes	1/2 tabs stripped	Yes	Yes	no	1/2	no lock			
GMW-36			X			Yes	1/4 bolts missing	Yes	Yes	no	1/4	Yes			
PZ-5			X			Yes	cracked apron	Yes	Yes	no		Yes	Yes		

NOTES: GMW-0-16 - stinger in well



Alpha Analytical, Inc.

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ANALYTICAL REPORT

CH2M Hill
1000 Wilshire Boulevard
Los Angeles, CA 90017

Attn: Daniel Jablonski
Phone: (213) 228-8271
Fax: (714) 424-2135
Date Received : 09/26/11

Job: KMEP DSFP Norwalk

Total Petroleum Hydrocarbons - Extractable (TPH-E) EPA Method SW8015B
Total Petroleum Hydrocarbons - Purgeable (TPH-P) EPA Method SW8015B

Client ID	Lab ID	Date Sampled	Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
EB-1	CHH11092601-02A	09/22/11 09:55	TPH-E (Fuel Product)	ND	0.10 mg/L	09/27/11	09/27/11
			Surr: Nonane	102	(49-145) %REC	09/27/11	09/27/11
			TPH-P (GRO)	ND	0.050 mg/L	09/29/11	09/29/11
			Surr: 1,2-Dichloroethane-d4	117	(70-130) %REC	09/29/11	09/29/11
			Surr: Toluene-d8	97	(70-130) %REC	09/29/11	09/29/11
			Surr: 4-Bromofluorobenzene	87	(70-130) %REC	09/29/11	09/29/11
PZ-5	CHH11092601-03A	09/22/11 12:05	TPH-E (Fuel Product)	1.4	0.10 mg/L	09/27/11	09/27/11
			Surr: Nonane	112	(49-145) %REC	09/27/11	09/27/11
			TPH-P (GRO)	4.7	2.0 mg/L	09/29/11	09/29/11
			Surr: 1,2-Dichloroethane-d4	116	(70-130) %REC	09/29/11	09/29/11
			Surr: Toluene-d8	95	(70-130) %REC	09/29/11	09/29/11
			Surr: 4-Bromofluorobenzene	88	(70-130) %REC	09/29/11	09/29/11
GMW-O-18	CHH11092601-04A	09/22/11 12:49	TPH-E (Fuel Product)	64	1.0 mg/L	09/27/11	09/28/11
			Surr: Nonane	0	(49-145) %REC	09/27/11	09/28/11
			TPH-P (GRO)	34	5.0 mg/L	09/29/11	09/29/11
			Surr: 1,2-Dichloroethane-d4	114	(70-130) %REC	09/29/11	09/29/11
			Surr: Toluene-d8	93	(70-130) %REC	09/29/11	09/29/11
			Surr: 4-Bromofluorobenzene	88	(70-130) %REC	09/29/11	09/29/11
GMW-O-19	CHH11092601-05A	09/22/11 14:00	TPH-E (Fuel Product)	ND	0.10 mg/L	09/27/11	09/27/11
			Surr: Nonane	110	(49-145) %REC	09/27/11	09/27/11
			TPH-P (GRO)	ND	0.050 mg/L	09/29/11	09/29/11
			Surr: 1,2-Dichloroethane-d4	114	(70-130) %REC	09/29/11	09/29/11
			Surr: Toluene-d8	99	(70-130) %REC	09/29/11	09/29/11
			Surr: 4-Bromofluorobenzene	87	(70-130) %REC	09/29/11	09/29/11
GMW-O-16	CHH11092601-06A	09/22/11 14:44	TPH-E (Fuel Product)	ND	0.10 mg/L	09/27/11	09/27/11
			Surr: Nonane	110	(49-145) %REC	09/27/11	09/27/11
			TPH-P (GRO)	ND	0.050 mg/L	09/29/11	09/29/11
			Surr: 1,2-Dichloroethane-d4	113	(70-130) %REC	09/29/11	09/29/11
			Surr: Toluene-d8	97	(70-130) %REC	09/29/11	09/29/11
			Surr: 4-Bromofluorobenzene	87	(70-130) %REC	09/29/11	09/29/11
GMW-O-15	CHH11092601-07A	09/22/11 15:14	TPH-E (Fuel Product)	1.0	0.10 mg/L	09/27/11	09/27/11
			Surr: Nonane	117	(49-145) %REC	09/27/11	09/27/11
			TPH-P (GRO)	3.4	0.50 mg/L	09/29/11	09/29/11
			Surr: 1,2-Dichloroethane-d4	113	(70-130) %REC	09/29/11	09/29/11
			Surr: Toluene-d8	96	(70-130) %REC	09/29/11	09/29/11
			Surr: 4-Bromofluorobenzene	88	(70-130) %REC	09/29/11	09/29/11



Alpha Analytical, Inc.

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Client ID : **GMW-36**

Lab ID :	CHH11092601-08A	TPH-E (Fuel Product)	2.2		0.10 mg/L	09/27/11	09/27/11
Date Sampled	09/22/11 15:44	Surr: Nonane	0	S51	(49-145) %REC	09/27/11	09/27/11
		TPH-P (GRO)	5.2		0.50 mg/L	09/29/11	09/29/11
		Surr: 1,2-Dichloroethane-d4	114		(70-130) %REC	09/29/11	09/29/11
		Surr: Toluene-d8	97		(70-130) %REC	09/29/11	09/29/11
		Surr: 4-Bromofluorobenzene	87		(70-130) %REC	09/29/11	09/29/11

Client ID : **DUP-1**

Lab ID :	CHH11092601-09A	TPH-E (Fuel Product)	1.6		0.10 mg/L	09/27/11	09/27/11
Date Sampled	09/22/11 00:00	Surr: Nonane	116		(49-145) %REC	09/27/11	09/27/11
		TPH-P (GRO)	4.6		2.0 mg/L	09/29/11	09/29/11
		Surr: 1,2-Dichloroethane-d4	116		(70-130) %REC	09/29/11	09/29/11
		Surr: Toluene-d8	95		(70-130) %REC	09/29/11	09/29/11
		Surr: 4-Bromofluorobenzene	86		(70-130) %REC	09/29/11	09/29/11

**Note: Reported TPH-E (Fuel Product) may contain undifferentiated diesel range hydrocarbons.

Gasoline Range Organics (GRO) C4-C13

S50 = The analysis of the sample required a dilution such that the surrogate concentration was diluted below the laboratory acceptance criteria. The laboratory control sample was acceptable.

S51 = Surrogate recovery could not be determined due to the presence of co-eluting hydrocarbons.

ND = Not Detected

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.

10/4/11

Report Date



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ANALYTICAL REPORT

CH2M Hill
1000 Wilshire Boulevard
Los Angeles, CA 90017
Job: KMEP DSFP Norwalk

Attn: Daniel Jablonski
Phone: (213) 228-8271
Fax: (714) 424-2135

Alpha Analytical Number: CHH11092601-01A
Client I.D. Number: TB-1

Sampled: 09/22/11 09:50
Received: 09/26/11
Extracted: 09/29/11
Analyzed: 09/29/11

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	1.0 µg/L	45 Chlorobenzene	ND	1.0 µg/L
2 Chloromethane	ND	2.0 µg/L	46 Ethylbenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	47 m,p-Xylene	ND	0.50 µg/L
4 Chloroethane	ND	1.0 µg/L	48 Bromoform	ND	1.0 µg/L
5 Bromomethane	ND	2.0 µg/L	49 Styrene	ND	1.0 µg/L
6 Trichlorofluoromethane	ND	10 µg/L	50 o-Xylene	ND	0.50 µg/L
7 Acetone	ND	10 µg/L	51 1,1,2,2-Tetrachloroethane	ND	1.0 µg/L
8 1,1-Dichloroethene	ND	1.0 µg/L	52 1,2,3-Trichloropropane	ND	2.0 µg/L
9 Tertiary Butyl Alcohol (TBA)	ND	10 µg/L	53 Isopropylbenzene	ND	1.0 µg/L
10 Dichloromethane	ND	5.0 µg/L	54 Bromobenzene	ND	1.0 µg/L
11 Freon-113	ND	10 µg/L	55 n-Propylbenzene	ND	1.0 µg/L
12 Carbon disulfide	ND	2.5 µg/L	56 4-Chlorotoluene	ND	1.0 µg/L
13 trans-1,2-Dichloroethene	ND	1.0 µg/L	57 2-Chlorotoluene	ND	1.0 µg/L
14 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	58 1,3,5-Trimethylbenzene	ND	1.0 µg/L
15 1,1-Dichloroethane	ND	1.0 µg/L	59 tert-Butylbenzene	ND	1.0 µg/L
16 Vinyl acetate	ND	50 µg/L	60 1,2,4-Trimethylbenzene	ND	1.0 µg/L
17 2-Butanone (MEK)	ND	10 µg/L	61 sec-Butylbenzene	ND	1.0 µg/L
18 Di-isopropyl Ether (DIPE)	ND	1.0 µg/L	62 1,3-Dichlorobenzene	ND	1.0 µg/L
19 cis-1,2-Dichloroethene	ND	1.0 µg/L	63 1,4-Dichlorobenzene	ND	1.0 µg/L
20 Bromochloromethane	ND	1.0 µg/L	64 4-Isopropyltoluene	ND	1.0 µg/L
21 Chloroform	ND	1.0 µg/L	65 1,2-Dichlorobenzene	ND	1.0 µg/L
22 Ethyl Tertiary Butyl Ether (ETBE)	ND	1.0 µg/L	66 n-Butylbenzene	ND	1.0 µg/L
23 2,2-Dichloropropane	ND	1.0 µg/L	67 1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0 µg/L
24 1,2-Dichloroethane	ND	0.50 µg/L	68 1,2,4-Trichlorobenzene	ND	2.0 µg/L
25 1,1,1-Trichloroethane	ND	1.0 µg/L	69 Naphthalene	ND	10 µg/L
26 1,1-Dichloropropene	ND	1.0 µg/L	70 1,2,3-Trichlorobenzene	ND	2.0 µg/L
27 Carbon tetrachloride	ND	1.0 µg/L	71 Surr: 1,2-Dichloroethane-d4	115	(70-130) %REC
28 Benzene	ND	0.50 µg/L	72 Surr: Toluene-d8	96	(70-130) %REC
29 Tertiary Amyl Methyl Ether (TAME)	ND	1.0 µg/L	73 Surr: 4-Bromofluorobenzene	88	(70-130) %REC
30 Dibromomethane	ND	1.0 µg/L			
31 1,2-Dichloropropane	ND	1.0 µg/L			
32 Trichloroethene	ND	1.0 µg/L			
33 Bromodichloromethane	ND	1.0 µg/L			
34 4-Methyl-2-pentanone (MIBK)	ND	10 µg/L			
35 cis-1,3-Dichloropropene	ND	0.50 µg/L			
36 trans-1,3-Dichloropropene	ND	0.50 µg/L			
37 1,1,2-Trichloroethane	ND	1.0 µg/L			
38 Toluene	ND	0.50 µg/L			
39 1,3-Dichloropropane	ND	1.0 µg/L			
40 2-Hexanone	ND	5.0 µg/L			
41 Dibromochloromethane	ND	1.0 µg/L			
42 1,2-Dibromoethane (EDB)	ND	2.0 µg/L			
43 Tetrachloroethene	ND	1.0 µg/L			
44 1,1,1,2-Tetrachloroethane	ND	1.0 µg/L			

ND = Not Detected

Roger Scholl

Randy Gardner

Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer
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Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

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RS
10/4/11

Report Date



Alpha Analytical, Inc.

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ANALYTICAL REPORT

CH2M Hill
1000 Wilshire Boulevard
Los Angeles, CA 90017
Job: KMEP DSFP Norwalk

Attn: Daniel Jablonski
Phone: (213) 228-8271
Fax: (714) 424-2135

Alpha Analytical Number: CHH11092601-02A
Client I.D. Number: EB-1

Sampled: 09/22/11 09:55
Received: 09/26/11
Extracted: 09/29/11
Analyzed: 09/29/11

Volatile Organics by GC/MS EPA Method SW8260B

Reporting			Reporting		
Compound	Concentration	Limit	Compound	Concentration	Limit
1 Dichlorodifluoromethane	ND	1.0 µg/L	45 Chlorobenzene	ND	1.0 µg/L
2 Chloromethane	ND	2.0 µg/L	46 Ethylbenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	47 m,p-Xylene	ND	0.50 µg/L
4 Chloroethane	ND	1.0 µg/L	48 Bromoform	ND	1.0 µg/L
5 Bromomethane	ND	2.0 µg/L	49 Styrene	ND	1.0 µg/L
6 Trichlorofluoromethane	ND	10 µg/L	50 o-Xylene	ND	0.50 µg/L
7 Acetone	ND	10 µg/L	51 1,1,2,2-Tetrachloroethane	ND	1.0 µg/L
8 1,1-Dichloroethene	ND	1.0 µg/L	52 1,2,3-Trichloropropane	ND	2.0 µg/L
9 Tertiary Butyl Alcohol (TBA)	ND	10 µg/L	53 Isopropylbenzene	ND	1.0 µg/L
10 Dichloromethane	ND	5.0 µg/L	54 Bromobenzene	ND	1.0 µg/L
11 Freon-113	ND	10 µg/L	55 n-Propylbenzene	ND	1.0 µg/L
12 Carbon disulfide	ND	2.5 µg/L	56 4-Chlorotoluene	ND	1.0 µg/L
13 trans-1,2-Dichloroethene	ND	1.0 µg/L	57 2-Chlorotoluene	ND	1.0 µg/L
14 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	58 1,3,5-Trimethylbenzene	ND	1.0 µg/L
15 1,1-Dichloroethane	ND	1.0 µg/L	59 tert-Butylbenzene	ND	1.0 µg/L
16 Vinyl acetate	ND	50 µg/L	60 1,2,4-Trimethylbenzene	ND	1.0 µg/L
17 2-Butanone (MEK)	ND	10 µg/L	61 sec-Butylbenzene	ND	1.0 µg/L
18 Di-isopropyl Ether (DIPE)	ND	1.0 µg/L	62 1,3-Dichlorobenzene	ND	1.0 µg/L
19 cis-1,2-Dichloroethene	ND	1.0 µg/L	63 1,4-Dichlorobenzene	ND	1.0 µg/L
20 Bromochloromethane	ND	1.0 µg/L	64 4-Isopropyltoluene	ND	1.0 µg/L
21 Chloroform	6.3	1.0 µg/L	65 1,2-Dichlorobenzene	ND	1.0 µg/L
22 Ethyl Tertiary Butyl Ether (ETBE)	ND	1.0 µg/L	66 n-Butylbenzene	ND	1.0 µg/L
23 2,2-Dichloropropane	ND	1.0 µg/L	67 1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0 µg/L
24 1,2-Dichloroethane	ND	0.50 µg/L	68 1,2,4-Trichlorobenzene	ND	2.0 µg/L
25 1,1,1-Trichloroethane	ND	1.0 µg/L	69 Naphthalene	ND	10 µg/L
26 1,1-Dichloropropene	ND	1.0 µg/L	70 1,2,3-Trichlorobenzene	ND	2.0 µg/L
27 Carbon tetrachloride	ND	1.0 µg/L	71 Surr: 1,2-Dichloroethane-d4	117	(70-130) %REC
28 Benzene	ND	0.50 µg/L	72 Surr: Toluene-d8	97	(70-130) %REC
29 Tertiary Amyl Methyl Ether (TAME)	ND	1.0 µg/L	73 Surr: 4-Bromofluorobenzene	87	(70-130) %REC
30 Dibromomethane	ND	1.0 µg/L			
31 1,2-Dichloropropane	ND	1.0 µg/L			
32 Trichloroethene	ND	1.0 µg/L			
33 Bromodichloromethane	ND	1.0 µg/L			
34 4-Methyl-2-pentanone (MIBK)	ND	10 µg/L			
35 cis-1,3-Dichloropropene	ND	0.50 µg/L			
36 trans-1,3-Dichloropropene	ND	0.50 µg/L			
37 1,1,2-Trichloroethane	ND	1.0 µg/L			
38 Toluene	ND	0.50 µg/L			
39 1,3-Dichloropropane	ND	1.0 µg/L			
40 2-Hexanone	ND	5.0 µg/L			
41 Dibromochloromethane	ND	1.0 µg/L			
42 1,2-Dibromoethane (EDB)	ND	2.0 µg/L			
43 Tetrachloroethene	ND	1.0 µg/L			
44 1,1,1,2-Tetrachloroethane	ND	1.0 µg/L			

ND = Not Detected

Roger Scholl

Randy Gardner

Walter Hinichman

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinichman, Quality Assurance Officer
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Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.

[Signature]

10/4/11

Report Date



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ANALYTICAL REPORT

CH2M Hill
1000 Wilshire Boulevard
Los Angeles, CA 90017
Job: KMEP DSFP Norwalk

Attn: Daniel Jablonski
Phone: (213) 228-8271
Fax: (714) 424-2135

Alpha Analytical Number: CHH11092601-03A
Client I.D. Number: PZ-5

Sampled: 09/22/11 12:05
Received: 09/26/11
Extracted: 09/29/11
Analyzed: 09/29/11

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	20 µg/L	45 Chlorobenzene	ND	20 µg/L
2 Chloromethane	ND	80 µg/L	46 Ethylbenzene	100	10 µg/L
3 Vinyl chloride	ND	20 µg/L	47 m,p-Xylene	97	10 µg/L
4 Chloroethane	ND	20 µg/L	48 Bromoform	ND	20 µg/L
5 Bromomethane	ND	80 µg/L	49 Styrene	ND	20 µg/L
6 Trichlorofluoromethane	ND	20 µg/L	50 o-Xylene	100	10 µg/L
7 Acetone	ND	400 µg/L	51 1,1,2,2-Tetrachloroethane	ND	20 µg/L
8 1,1-Dichloroethene	ND	20 µg/L	52 1,2,3-Trichloropropane	ND	80 µg/L
9 Tertiary Butyl Alcohol (TBA)	64,000	500 µg/L	53 Isopropylbenzene	ND	20 µg/L
10 Dichloromethane	ND	80 µg/L	54 Bromobenzene	ND	20 µg/L
11 Freon-113	ND	20 µg/L	55 n-Propylbenzene	ND	20 µg/L
12 Carbon disulfide	ND	100 µg/L	56 4-Chlorotoluene	ND	20 µg/L
13 trans-1,2-Dichloroethene	ND	20 µg/L	57 2-Chlorotoluene	ND	20 µg/L
14 Methyl tert-butyl ether (MTBE)	200	10 µg/L	58 1,3,5-Trimethylbenzene	ND	20 µg/L
15 1,1-Dichloroethane	ND	20 µg/L	59 tert-Butylbenzene	ND	20 µg/L
16 Vinyl acetate	ND	2,000 µg/L	60 1,2,4-Trimethylbenzene	40	20 µg/L
17 2-Butanone (MEK)	ND	400 µg/L	61 sec-Butylbenzene	ND	20 µg/L
18 Di-isopropyl Ether (DIPE)	ND	20 µg/L	62 1,3-Dichlorobenzene	ND	20 µg/L
19 cis-1,2-Dichloroethene	ND	20 µg/L	63 1,4-Dichlorobenzene	ND	20 µg/L
20 Bromochloromethane	ND	20 µg/L	64 4-Isopropyltoluene	ND	20 µg/L
21 Chloroform	ND	20 µg/L	65 1,2-Dichlorobenzene	ND	20 µg/L
22 Ethyl Tertiary Butyl Ether (ETBE)	ND	20 µg/L	66 n-Butylbenzene	ND	20 µg/L
23 2,2-Dichloropropane	ND	20 µg/L	67 1,2-Dibromo-3-chloropropane (DBCP)	ND	120 µg/L
24 1,2-Dichloroethane	ND	20 µg/L	68 1,2,4-Trichlorobenzene	ND	80 µg/L
25 1,1,1-Trichloroethane	ND	20 µg/L	69 Naphthalene	ND	80 µg/L
26 1,1-Dichloropropene	ND	20 µg/L	70 1,2,3-Trichlorobenzene	ND	80 µg/L
27 Carbon tetrachloride	ND	20 µg/L	71 Surr: 1,2-Dichloroethane-d4	116	(70-130) %REC
28 Benzene	1,600	10 µg/L	72 Surr: Toluene-d8	95	(70-130) %REC
29 Tertiary Amyl Methyl Ether (TAME)	ND	20 µg/L	73 Surr: 4-Bromofluorobenzene	88	(70-130) %REC
30 Dibromomethane	ND	20 µg/L			
31 1,2-Dichloropropane	ND	20 µg/L			
32 Trichloroethene	ND	20 µg/L			
33 Bromodichloromethane	ND	20 µg/L			
34 4-Methyl-2-pentanone (MIBK)	ND	100 µg/L			
35 cis-1,3-Dichloropropene	ND	20 µg/L			
36 trans-1,3-Dichloropropene	ND	20 µg/L			
37 1,1,2-Trichloroethane	ND	20 µg/L			
38 Toluene	33	10 µg/L			
39 1,3-Dichloropropane	ND	20 µg/L			
40 2-Hexanone	ND	200 µg/L			
41 Dibromochloromethane	ND	20 µg/L			
42 1,2-Dibromoethane (EDB)	ND	40 µg/L			
43 Tetrachloroethene	ND	20 µg/L			
44 1,1,1,2-Tetrachloroethane	ND	20 µg/L			

*This analyte was analyzed separately in order to achieve lower reporting limits for the other analytes.

Reporting Limits were increased due to high concentrations of target analytes.

ND = Not Detected

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer
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10/4/11

Report Date



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
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ANALYTICAL REPORT

CH2M Hill
1000 Wilshire Boulevard
Los Angeles, CA 90017
Job: KMEP DSFP Norwalk

Attn: Daniel Jablonski
Phone: (213) 228-8271
Fax: (714) 424-2135

Alpha Analytical Number: CHH11092601-04A
Client I.D. Number: GMW-O-18

Sampled: 09/22/11 12:49
Received: 09/26/11
Extracted: 09/29/11
Analyzed: 09/29/11

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	50 µg/L	45 Chlorobenzene	ND	50 µg/L
2 Chloromethane	ND	200 µg/L	46 Ethylbenzene	690	25 µg/L
3 Vinyl chloride	ND	50 µg/L	47 m,p-Xylene	3,600	25 µg/L
4 Chloroethane	ND	50 µg/L	48 Bromoform	ND	50 µg/L
5 Bromomethane	ND	200 µg/L	49 Styrene	ND	50 µg/L
6 Trichlorofluoromethane	ND	50 µg/L	50 o-Xylene	1,700	25 µg/L
7 Acetone	ND	1,000 µg/L	51 1,1,2,2-Tetrachloroethane	ND	50 µg/L
8 1,1-Dichloroethene	ND	50 µg/L	52 1,2,3-Trichloropropane	ND	200 µg/L
9 Tertiary Butyl Alcohol (TBA)	6,100	500 µg/L	53 Isopropylbenzene	ND	50 µg/L
10 Dichloromethane	ND	200 µg/L	54 Bromobenzene	ND	50 µg/L
11 Freon-113	ND	50 µg/L	55 n-Propylbenzene	89	50 µg/L
12 Carbon disulfide	ND	250 µg/L	56 4-Chlorotoluene	ND	50 µg/L
13 trans-1,2-Dichloroethene	ND	50 µg/L	57 2-Chlorotoluene	ND	50 µg/L
14 Methyl tert-butyl ether (MTBE)	400	25 µg/L	58 1,3,5-Trimethylbenzene	530	50 µg/L
15 1,1-Dichloroethane	ND	50 µg/L	59 tert-Butylbenzene	ND	50 µg/L
16 Vinyl acetate	ND	5,000 µg/L	60 1,2,4-Trimethylbenzene	1,600	50 µg/L
17 2-Butanone (MEK)	ND	1,000 µg/L	61 sec-Butylbenzene	ND	50 µg/L
18 Di-isopropyl Ether (DIPE)	ND	50 µg/L	62 1,3-Dichlorobenzene	ND	50 µg/L
19 cis-1,2-Dichloroethene	ND	50 µg/L	63 1,4-Dichlorobenzene	ND	50 µg/L
20 Bromochloromethane	ND	50 µg/L	64 4-Isopropyltoluene	ND	50 µg/L
21 Chloroform	ND	50 µg/L	65 1,2-Dichlorobenzene	ND	50 µg/L
22 Ethyl Tertiary Butyl Ether (ETBE)	ND	50 µg/L	66 n-Butylbenzene	ND	50 µg/L
23 2,2-Dichloropropane	ND	50 µg/L	67 1,2-Dibromo-3-chloropropane (DBCP)	ND	300 µg/L
24 1,2-Dichloroethane	ND	50 µg/L	68 1,2,4-Trichlorobenzene	ND	200 µg/L
25 1,1,1-Trichloroethane	ND	50 µg/L	69 Naphthalene	330	200 µg/L
26 1,1-Dichloropropene	ND	50 µg/L	70 1,2,3-Trichlorobenzene	ND	200 µg/L
27 Carbon tetrachloride	ND	50 µg/L	71 Surr: 1,2-Dichloroethane-d4	114	(70-130) %REC
28 Benzene	700	25 µg/L	72 Surr: Toluene-d8	93	(70-130) %REC
29 Tertiary Amyl Methyl Ether (TAME)	54	50 µg/L	73 Surr: 4-Bromofluorobenzene	88	(70-130) %REC
30 Dibromomethane	ND	50 µg/L			
31 1,2-Dichloropropane	ND	50 µg/L			
32 Trichloroethene	ND	50 µg/L			
33 Bromodichloromethane	ND	50 µg/L			
34 4-Methyl-2-pentanone (MIBK)	ND	250 µg/L			
35 cis-1,3-Dichloropropene	ND	50 µg/L			
36 trans-1,3-Dichloropropene	ND	50 µg/L			
37 1,1,2-Trichloroethane	ND	50 µg/L			
38 Toluene	110	25 µg/L			
39 1,3-Dichloropropane	ND	50 µg/L			
40 2-Hexanone	ND	500 µg/L			
41 Dibromochloromethane	ND	50 µg/L			
42 1,2-Dibromoethane (EDB)	ND	100 µg/L			
43 Tetrachloroethene	ND	50 µg/L			
44 1,1,1,2-Tetrachloroethane	ND	50 µg/L			

Reporting Limits were increased due to high concentrations of target analytes.

ND = Not Detected

Roger Scholl

Randy Gardner

Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer
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Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

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10/4/11

Report Date



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ANALYTICAL REPORT

CH2M Hill
1000 Wilshire Boulevard
Los Angeles, CA 90017
Job: KMEP DSFP Norwalk

Attn: Daniel Jablonski
Phone: (213) 228-8271
Fax: (714) 424-2135

Alpha Analytical Number: CHH11092601-05A
Client I.D. Number: GMW-O-19

Sampled: 09/22/11 14:00
Received: 09/26/11
Extracted: 09/29/11
Analyzed: 09/29/11

Volatile Organics by GC/MS EPA Method SW8260B

Reporting			Reporting		
Compound	Concentration	Limit	Compound	Concentration	Limit
1 Dichlorodifluoromethane	ND	1.0 µg/L	45 Chlorobenzene	ND	1.0 µg/L
2 Chloromethane	ND	2.0 µg/L	46 Ethylbenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	47 m,p-Xylene	ND	0.50 µg/L
4 Chloroethane	ND	1.0 µg/L	48 Bromoform	ND	1.0 µg/L
5 Bromomethane	ND	2.0 µg/L	49 Styrene	ND	1.0 µg/L
6 Trichlorofluoromethane	ND	10 µg/L	50 o-Xylene	ND	0.50 µg/L
7 Acetone	ND	10 µg/L	51 1,1,2,2-Tetrachloroethane	ND	1.0 µg/L
8 1,1-Dichloroethene	ND	1.0 µg/L	52 1,2,3-Trichloropropane	ND	2.0 µg/L
9 Tertiary Butyl Alcohol (TBA)	ND	10 µg/L	53 Isopropylbenzene	ND	1.0 µg/L
10 Dichloromethane	ND	5.0 µg/L	54 Bromobenzene	ND	1.0 µg/L
11 Freon-113	ND	10 µg/L	55 n-Propylbenzene	ND	1.0 µg/L
12 Carbon disulfide	ND	2.5 µg/L	56 4-Chlorotoluene	ND	1.0 µg/L
13 trans-1,2-Dichloroethene	ND	1.0 µg/L	57 2-Chlorotoluene	ND	1.0 µg/L
14 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	58 1,3,5-Trimethylbenzene	ND	1.0 µg/L
15 1,1-Dichloroethane	ND	1.0 µg/L	59 tert-Butylbenzene	ND	1.0 µg/L
16 Vinyl acetate	ND	50 µg/L	60 1,2,4-Trimethylbenzene	ND	1.0 µg/L
17 2-Butanone (MEK)	ND	10 µg/L	61 sec-Butylbenzene	ND	1.0 µg/L
18 Di-isopropyl Ether (DIPE)	ND	1.0 µg/L	62 1,3-Dichlorobenzene	ND	1.0 µg/L
19 cis-1,2-Dichloroethene	ND	1.0 µg/L	63 1,4-Dichlorobenzene	ND	1.0 µg/L
20 Bromochloromethane	ND	1.0 µg/L	64 4-Isopropyltoluene	ND	1.0 µg/L
21 Chloroform	ND	1.0 µg/L	65 1,2-Dichlorobenzene	ND	1.0 µg/L
22 Ethyl Tertiary Butyl Ether (ETBE)	ND	1.0 µg/L	66 n-Butylbenzene	ND	1.0 µg/L
23 2,2-Dichloropropane	ND	1.0 µg/L	67 1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0 µg/L
24 1,2-Dichloroethane	ND	0.50 µg/L	68 1,2,4-Trichlorobenzene	ND	2.0 µg/L
25 1,1,1-Trichloroethane	ND	1.0 µg/L	69 Naphthalene	ND	10 µg/L
26 1,1-Dichloropropene	ND	1.0 µg/L	70 1,2,3-Trichlorobenzene	ND	2.0 µg/L
27 Carbon tetrachloride	ND	1.0 µg/L	71 Surr: 1,2-Dichloroethane-d4	114	(70-130) %REC
28 Benzene	ND	0.50 µg/L	72 Surr: Toluene-d8	99	(70-130) %REC
29 Tertiary Amyl Methyl Ether (TAME)	ND	1.0 µg/L	73 Surr: 4-Bromofluorobenzene	87	(70-130) %REC
30 Dibromomethane	ND	1.0 µg/L			
31 1,2-Dichloropropane	ND	1.0 µg/L			
32 Trichloroethene	ND	1.0 µg/L			
33 Bromodichloromethane	ND	1.0 µg/L			
34 4-Methyl-2-pentanone (MIBK)	ND	10 µg/L			
35 cis-1,3-Dichloropropene	ND	0.50 µg/L			
36 trans-1,3-Dichloropropene	ND	0.50 µg/L			
37 1,1,2-Trichloroethane	ND	1.0 µg/L			
38 Toluene	ND	0.50 µg/L			
39 1,3-Dichloropropane	ND	1.0 µg/L			
40 2-Hexanone	ND	5.0 µg/L			
41 Dibromochloromethane	ND	1.0 µg/L			
42 1,2-Dibromoethane (EDB)	ND	2.0 µg/L			
43 Tetrachloroethene	ND	1.0 µg/L			
44 1,1,1,2-Tetrachloroethane	ND	1.0 µg/L			

ND = Not Detected

Roger Scholl *Randy Gardner* *Walter Hinchman*
Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer
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Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.

[Signature]
10/4/11
Report Date



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ANALYTICAL REPORT

CH2M Hill
1000 Wilshire Boulevard
Los Angeles, CA 90017
Job: KMEP DSFP Norwalk

Attn: Daniel Jablonski
Phone: (213) 228-8271
Fax: (714) 424-2135

Alpha Analytical Number: CHH11092601-06A
Client I.D. Number: GMW-O-16

Sampled: 09/22/11 14:44
Received: 09/26/11
Extracted: 09/29/11
Analyzed: 09/29/11

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	1.0 µg/L	45 Chlorobenzene	ND	1.0 µg/L
2 Chloromethane	ND	2.0 µg/L	46 Ethylbenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	47 m,p-Xylene	ND	0.50 µg/L
4 Chloroethane	ND	1.0 µg/L	48 Bromoform	ND	1.0 µg/L
5 Bromomethane	ND	2.0 µg/L	49 Styrene	ND	1.0 µg/L
6 Trichlorofluoromethane	ND	10 µg/L	50 o-Xylene	ND	0.50 µg/L
7 Acetone	ND	10 µg/L	51 1,1,2,2-Tetrachloroethane	ND	1.0 µg/L
8 1,1-Dichloroethene	ND	1.0 µg/L	52 1,2,3-Trichloropropane	ND	2.0 µg/L
9 Tertiary Butyl Alcohol (TBA)	ND	10 µg/L	53 Isopropylbenzene	ND	1.0 µg/L
10 Dichloromethane	ND	5.0 µg/L	54 Bromobenzene	ND	1.0 µg/L
11 Freon-113	ND	10 µg/L	55 n-Propylbenzene	ND	1.0 µg/L
12 Carbon disulfide	ND	2.5 µg/L	56 4-Chlorotoluene	ND	1.0 µg/L
13 trans-1,2-Dichloroethene	ND	1.0 µg/L	57 2-Chlorotoluene	ND	1.0 µg/L
14 Methyl tert-butyl ether (MTBE)	2.9	0.50 µg/L	58 1,3,5-Trimethylbenzene	ND	1.0 µg/L
15 1,1-Dichloroethane	ND	1.0 µg/L	59 tert-Butylbenzene	ND	1.0 µg/L
16 Vinyl acetate	ND	50 µg/L	60 1,2,4-Trimethylbenzene	ND	1.0 µg/L
17 2-Butanone (MEK)	ND	10 µg/L	61 sec-Butylbenzene	ND	1.0 µg/L
18 Di-isopropyl Ether (DIPE)	ND	1.0 µg/L	62 1,3-Dichlorobenzene	ND	1.0 µg/L
19 cis-1,2-Dichloroethene	ND	1.0 µg/L	63 1,4-Dichlorobenzene	ND	1.0 µg/L
20 Bromochloromethane	ND	1.0 µg/L	64 4-Isopropyltoluene	ND	1.0 µg/L
21 Chloroform	ND	1.0 µg/L	65 1,2-Dichlorobenzene	ND	1.0 µg/L
22 Ethyl Tertiary Butyl Ether (ETBE)	ND	1.0 µg/L	66 n-Butylbenzene	ND	1.0 µg/L
23 2,2-Dichloropropane	ND	1.0 µg/L	67 1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0 µg/L
24 1,2-Dichloroethane	ND	0.50 µg/L	68 1,2,4-Trichlorobenzene	ND	2.0 µg/L
25 1,1,1-Trichloroethane	ND	1.0 µg/L	69 Naphthalene	ND	10 µg/L
26 1,1-Dichloropropene	ND	1.0 µg/L	70 1,2,3-Trichlorobenzene	ND	2.0 µg/L
27 Carbon tetrachloride	ND	1.0 µg/L	71 Surr: 1,2-Dichloroethane-d4	113	(70-130) %REC
28 Benzene	ND	0.50 µg/L	72 Surr: Toluene-d8	97	(70-130) %REC
29 Tertiary Amyl Methyl Ether (TAME)	ND	1.0 µg/L	73 Surr: 4-Bromofluorobenzene	87	(70-130) %REC
30 Dibromomethane	ND	1.0 µg/L			
31 1,2-Dichloropropane	ND	1.0 µg/L			
32 Trichloroethene	ND	1.0 µg/L			
33 Bromodichloromethane	ND	1.0 µg/L			
34 4-Methyl-2-pentanone (MIBK)	ND	10 µg/L			
35 cis-1,3-Dichloropropene	ND	0.50 µg/L			
36 trans-1,3-Dichloropropene	ND	0.50 µg/L			
37 1,1,2-Trichloroethane	ND	1.0 µg/L			
38 Toluene	ND	0.50 µg/L			
39 1,3-Dichloropropane	ND	1.0 µg/L			
40 2-Hexanone	ND	5.0 µg/L			
41 Dibromochloromethane	ND	1.0 µg/L			
42 1,2-Dibromoethane (EDB)	ND	2.0 µg/L			
43 Tetrachloroethene	ND	1.0 µg/L			
44 1,1,1,2-Tetrachloroethane	ND	1.0 µg/L			

ND = Not Detected

Roger Scholl

Randy Gardner

Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

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YAG

10/4/11

Report Date

Page 1 of 1



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ANALYTICAL REPORT

CH2M Hill
1000 Wilshire Boulevard
Los Angeles, CA 90017
Job: KMEP DSFP Norwalk

Attn: Daniel Jablonski
Phone: (213) 228-8271
Fax: (714) 424-2135

Alpha Analytical Number: CHH11092601-07A
Client I.D. Number: GMW-O-15

Sampled: 09/22/11 15:14
Received: 09/26/11
Extracted: 09/29/11
Analyzed: 09/29/11

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	5.0 µg/L	45 Chlorobenzene	ND	5.0 µg/L
2 Chloromethane	ND	20 µg/L	46 Ethylbenzene	58	2.5 µg/L
3 Vinyl chloride	ND	5.0 µg/L	47 m,p-Xylene	240	2.5 µg/L
4 Chloroethane	ND	5.0 µg/L	48 Bromoform	ND	5.0 µg/L
5 Bromomethane	ND	20 µg/L	49 Styrene	ND	5.0 µg/L
6 Trichlorofluoromethane	ND	10 µg/L	50 o-Xylene	85	2.5 µg/L
7 Acetone	ND	100 µg/L	51 1,1,2,2-Tetrachloroethane	ND	5.0 µg/L
8 1,1-Dichloroethene	ND	5.0 µg/L	52 1,2,3-Trichloropropane	ND	20 µg/L
9 Tertiary Butyl Alcohol (TBA)	6,800	100 µg/L	53 Isopropylbenzene	ND	5.0 µg/L
10 Dichloromethane	ND	20 µg/L	54 Bromobenzene	ND	5.0 µg/L
11 Freon-113	ND	10 µg/L	55 n-Propylbenzene	5.5	5.0 µg/L
12 Carbon disulfide	ND	25 µg/L	56 4-Chlorotoluene	ND	5.0 µg/L
13 trans-1,2-Dichloroethene	ND	5.0 µg/L	57 2-Chlorotoluene	ND	5.0 µg/L
14 Methyl tert-butyl ether (MTBE)	640	2.5 µg/L	58 1,3,5-Trimethylbenzene	19	5.0 µg/L
15 1,1-Dichloroethane	ND	5.0 µg/L	59 tert-Butylbenzene	ND	5.0 µg/L
16 Vinyl acetate	ND	500 µg/L	60 1,2,4-Trimethylbenzene	63	5.0 µg/L
17 2-Butanone (MEK)	ND	100 µg/L	61 sec-Butylbenzene	ND	5.0 µg/L
18 Di-isopropyl Ether (DIPE)	ND	5.0 µg/L	62 1,3-Dichlorobenzene	ND	5.0 µg/L
19 cis-1,2-Dichloroethene	ND	5.0 µg/L	63 1,4-Dichlorobenzene	ND	5.0 µg/L
20 Bromochloromethane	ND	5.0 µg/L	64 4-Isopropyltoluene	ND	5.0 µg/L
21 Chloroform	ND	5.0 µg/L	65 1,2-Dichlorobenzene	ND	5.0 µg/L
22 Ethyl Tertiary Butyl Ether (ETBE)	ND	5.0 µg/L	66 n-Butylbenzene	ND	5.0 µg/L
23 2,2-Dichloropropane	ND	5.0 µg/L	67 1,2-Dibromo-3-chloropropane (DBCP)	ND	30 µg/L
24 1,2-Dichloroethane	ND	5.0 µg/L	68 1,2,4-Trichlorobenzene	ND	20 µg/L
25 1,1,1-Trichloroethane	ND	5.0 µg/L	69 Naphthalene	ND	20 µg/L
26 1,1-Dichloropropene	ND	5.0 µg/L	70 1,2,3-Trichlorobenzene	ND	20 µg/L
27 Carbon tetrachloride	ND	5.0 µg/L	71 Surr: 1,2-Dichloroethane-d4	113	(70-130) %REC
28 Benzene	480	2.5 µg/L	72 Surr: Toluene-d8	96	(70-130) %REC
29 Tertiary Amyl Methyl Ether (TAME)	10	5.0 µg/L	73 Surr: 4-Bromofluorobenzene	88	(70-130) %REC
30 Dibromomethane	ND	5.0 µg/L			
31 1,2-Dichloropropane	ND	5.0 µg/L			
32 Trichloroethene	ND	5.0 µg/L			
33 Bromodichloromethane	ND	5.0 µg/L			
34 4-Methyl-2-pentanone (MIBK)	ND	25 µg/L			
35 cis-1,3-Dichloropropene	ND	5.0 µg/L			
36 trans-1,3-Dichloropropene	ND	5.0 µg/L			
37 1,1,2-Trichloroethane	ND	5.0 µg/L			
38 Toluene	290	2.5 µg/L			
39 1,3-Dichloropropane	ND	5.0 µg/L			
40 2-Hexanone	ND	50 µg/L			
41 Dibromochloromethane	ND	5.0 µg/L			
42 1,2-Dibromoethane (EDB)	ND	10 µg/L			
43 Tetrachloroethene	ND	5.0 µg/L			
44 1,1,1,2-Tetrachloroethane	ND	5.0 µg/L			

*This analyte was analyzed separately in order to achieve lower reporting limits for the other analytes.

Reporting Limits were increased due to high concentrations of target analytes.

ND = Not Detected

Roger Scholl

Randy Gardner

Walter Hinchman

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JG

10/4/11

Report Date



Alpha Analytical, Inc.

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(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ANALYTICAL REPORT

CH2M Hill
1000 Wilshire Boulevard
Los Angeles, CA 90017
Job: KMEP DSFP Norwalk

Attn: Daniel Jablonski
Phone: (213) 228-8271
Fax: (714) 424-2135

Alpha Analytical Number: CHH11092601-08A
Client I.D. Number: GMW-36

Sampled: 09/22/11 15:44
Received: 09/26/11
Extracted: 09/29/11
Analyzed: 09/29/11

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	5.0 µg/L	45 Chlorobenzene	ND	5.0 µg/L
2 Chloromethane	ND	20 µg/L	46 Ethylbenzene	52	2.5 µg/L
3 Vinyl chloride	ND	5.0 µg/L	47 m,p-Xylene	290	2.5 µg/L
4 Chloroethane	ND	5.0 µg/L	48 Bromoform	ND	5.0 µg/L
5 Bromomethane	ND	20 µg/L	49 Styrene	ND	5.0 µg/L
6 Trichlorofluoromethane	ND	10 µg/L	50 o-Xylene	180	2.5 µg/L
7 Acetone	ND	100 µg/L	51 1,1,2,2-Tetrachloroethane	ND	5.0 µg/L
8 1,1-Dichloroethene	ND	5.0 µg/L	52 1,2,3-Trichloropropane	ND	20 µg/L
9 Tertiary Butyl Alcohol (TBA)	7,400	100 µg/L	53 Isopropylbenzene	ND	5.0 µg/L
10 Dichloromethane	ND	20 µg/L	54 Bromobenzene	ND	5.0 µg/L
11 Freon-113	ND	10 µg/L	55 n-Propylbenzene	6.9	5.0 µg/L
12 Carbon disulfide	ND	25 µg/L	56 4-Chlorotoluene	ND	5.0 µg/L
13 trans-1,2-Dichloroethene	ND	5.0 µg/L	57 2-Chlorotoluene	ND	5.0 µg/L
14 Methyl tert-butyl ether (MTBE)	660	2.5 µg/L	58 1,3,5-Trimethylbenzene	76	5.0 µg/L
15 1,1-Dichloroethane	ND	5.0 µg/L	59 tert-Butylbenzene	ND	5.0 µg/L
16 Vinyl acetate	ND	500 µg/L	60 1,2,4-Trimethylbenzene	210	5.0 µg/L
17 2-Butanone (MEK)	ND	100 µg/L	61 sec-Butylbenzene	ND	5.0 µg/L
18 Di-isopropyl Ether (DIPE)	ND	5.0 µg/L	62 1,3-Dichlorobenzene	ND	5.0 µg/L
19 cis-1,2-Dichloroethene	ND	5.0 µg/L	63 1,4-Dichlorobenzene	ND	5.0 µg/L
20 Bromochloromethane	ND	5.0 µg/L	64 4-Isopropyltoluene	ND	5.0 µg/L
21 Chloroform	ND	5.0 µg/L	65 1,2-Dichlorobenzene	ND	5.0 µg/L
22 Ethyl Tertiary Butyl Ether (ETBE)	ND	5.0 µg/L	66 n-Butylbenzene	ND	5.0 µg/L
23 2,2-Dichloropropane	ND	5.0 µg/L	67 1,2-Dibromo-3-chloropropane (DBCP)	ND	30 µg/L
24 1,2-Dichloroethane	ND	5.0 µg/L	68 1,2,4-Trichlorobenzene	ND	20 µg/L
25 1,1,1-Trichloroethane	ND	5.0 µg/L	69 Naphthalene	51	20 µg/L
26 1,1-Dichloropropene	ND	5.0 µg/L	70 1,2,3-Trichlorobenzene	ND	20 µg/L
27 Carbon tetrachloride	ND	5.0 µg/L	71 Surr: 1,2-Dichloroethane-d4	114	(70-130) %REC
28 Benzene	490	2.5 µg/L	72 Surr: Toluene-d8	97	(70-130) %REC
29 Tertiary Amyl Methyl Ether (TAME)	17	5.0 µg/L	73 Surr: 4-Bromofluorobenzene	87	(70-130) %REC
30 Dibromomethane	ND	5.0 µg/L			
31 1,2-Dichloropropane	ND	5.0 µg/L			
32 Trichloroethene	ND	5.0 µg/L			
33 Bromodichloromethane	ND	5.0 µg/L			
34 4-Methyl-2-pentanone (MIBK)	ND	25 µg/L			
35 cis-1,3-Dichloropropene	ND	5.0 µg/L			
36 trans-1,3-Dichloropropene	ND	5.0 µg/L			
37 1,1,2-Trichloroethane	ND	5.0 µg/L			
38 Toluene	240	2.5 µg/L			
39 1,3-Dichloropropane	ND	5.0 µg/L			
40 2-Hexanone	ND	50 µg/L			
41 Dibromochloromethane	ND	5.0 µg/L			
42 1,2-Dibromoethane (EDB)	ND	10 µg/L			
43 Tetrachloroethene	ND	5.0 µg/L			
44 1,1,1,2-Tetrachloroethane	ND	5.0 µg/L			

*This analyte was analyzed separately on 9/30/11 in order to achieve lower reporting limits for the other analytes.

Reporting Limits were increased due to high concentrations of target analytes.

ND = Not Detected

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10/4/11

Report Date

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Alpha Analytical, Inc.

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ANALYTICAL REPORT

CH2M Hill
1000 Wilshire Boulevard
Los Angeles, CA 90017
Job: KMEP DSFP Norwalk

Attn: Daniel Jablonski
Phone: (213) 228-8271
Fax: (714) 424-2135

Alpha Analytical Number: CHH11092601-09A
Client I.D. Number: DUP-1

Sampled: 09/22/11 00:00
Received: 09/26/11
Extracted: 09/29/11
Analyzed: 09/29/11

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	20 µg/L	45 Chlorobenzene	ND	20 µg/L
2 Chloromethane	ND	80 µg/L	46 Ethylbenzene	99	10 µg/L
3 Vinyl chloride	ND	20 µg/L	47 m,p-Xylene	93	10 µg/L
4 Chloroethane	ND	20 µg/L	48 Bromoform	ND	20 µg/L
5 Bromomethane	ND	80 µg/L	49 Styrene	ND	20 µg/L
6 Trichlorofluoromethane	ND	20 µg/L	50 o-Xylene	100	10 µg/L
7 Acetone	ND	400 µg/L	51 1,1,2,2-Tetrachloroethane	ND	20 µg/L
8 1,1-Dichloroethene	ND	20 µg/L	52 1,2,3-Trichloropropane	ND	80 µg/L
9 Tertiary Butyl Alcohol (TBA)	63,000	500 µg/L	53 Isopropylbenzene	ND	20 µg/L
10 Dichloromethane	ND	80 µg/L	54 Bromobenzene	ND	20 µg/L
11 Freon-113	ND	20 µg/L	55 n-Propylbenzene	ND	20 µg/L
12 Carbon disulfide	ND	100 µg/L	56 4-Chlorotoluene	ND	20 µg/L
13 trans-1,2-Dichloroethene	ND	20 µg/L	57 2-Chlorotoluene	ND	20 µg/L
14 Methyl tert-butyl ether (MTBE)	190	10 µg/L	58 1,3,5-Trimethylbenzene	ND	20 µg/L
15 1,1-Dichloroethane	ND	20 µg/L	59 tert-Butylbenzene	ND	20 µg/L
16 Vinyl acetate	ND	2,000 µg/L	60 1,2,4-Trimethylbenzene	40	20 µg/L
17 2-Butanone (MEK)	ND	400 µg/L	61 sec-Butylbenzene	ND	20 µg/L
18 Di-isopropyl Ether (DIPE)	ND	20 µg/L	62 1,3-Dichlorobenzene	ND	20 µg/L
19 cis-1,2-Dichloroethene	ND	20 µg/L	63 1,4-Dichlorobenzene	ND	20 µg/L
20 Bromochloromethane	ND	20 µg/L	64 4-Isopropyltoluene	ND	20 µg/L
21 Chloroform	ND	20 µg/L	65 1,2-Dichlorobenzene	ND	20 µg/L
22 Ethyl Tertiary Butyl Ether (ETBE)	ND	20 µg/L	66 n-Butylbenzene	ND	20 µg/L
23 2,2-Dichloropropane	ND	20 µg/L	67 1,2-Dibromo-3-chloropropane (DBCP)	ND	120 µg/L
24 1,2-Dichloroethane	ND	20 µg/L	68 1,2,4-Trichlorobenzene	ND	80 µg/L
25 1,1,1-Trichloroethane	ND	20 µg/L	69 Naphthalene	ND	80 µg/L
26 1,1-Dichloropropene	ND	20 µg/L	70 1,2,3-Trichlorobenzene	ND	80 µg/L
27 Carbon tetrachloride	ND	20 µg/L	71 Surr: 1,2-Dichloroethane-d4	116	(70-130) %REC
28 Benzene	1,600	10 µg/L	72 Surr: Toluene-d8	95	(70-130) %REC
29 Tertiary Amyl Methyl Ether (TAME)	ND	20 µg/L	73 Surr: 4-Bromofluorobenzene	86	(70-130) %REC
30 Dibromomethane	ND	20 µg/L			
31 1,2-Dichloropropane	ND	20 µg/L			
32 Trichloroethene	ND	20 µg/L			
33 Bromodichloromethane	ND	20 µg/L			
34 4-Methyl-2-pentanone (MIBK)	ND	100 µg/L			
35 cis-1,3-Dichloropropene	ND	20 µg/L			
36 trans-1,3-Dichloropropene	ND	20 µg/L			
37 1,1,2-Trichloroethane	ND	20 µg/L			
38 Toluene	32	10 µg/L			
39 1,3-Dichloropropane	ND	20 µg/L			
40 2-Hexanone	ND	200 µg/L			
41 Dibromochloromethane	ND	20 µg/L			
42 1,2-Dibromoethane (EDB)	ND	40 µg/L			
43 Tetrachloroethene	ND	20 µg/L			
44 1,1,1,2-Tetrachloroethane	ND	20 µg/L			

*This analyte was analyzed separately in order to achieve lower reporting limits for the other analytes.

Reporting Limits were increased due to high concentrations of target analytes.

ND = Not Detected

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10/4/11
Report Date



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

VOC Sample Preservation Report

Work Order: CHH11092601

Job: KMEP DSFP Norwalk

Alpha's Sample ID	Client's Sample ID	Matrix	pH
11092601-01A	TB-1	Aqueous	2
11092601-02A	EB-1	Aqueous	2
11092601-03A	PZ-5	Aqueous	6
11092601-04A	GMW-O-18	Aqueous	5
11092601-05A	GMW-O-19	Aqueous	3
11092601-06A	GMW-O-16	Aqueous	3
11092601-07A	GMW-O-15	Aqueous	3
11092601-08A	GMW-36	Aqueous	2
11092601-09A	DUP-1	Aqueous	6

10/4/11
Report Date

Page 1 of 1



Alpha Analytical, Inc.

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VOC Sample Preservation Report

Work Order: CHH11092601

Job: KMED DSFP Norwalk

Alpha's Sample ID	Client's Sample ID	Matrix	pH
11092601-01A	TB-1	Aqueous	2
11092601-02A	EB-1	Aqueous	2
11092601-03A	PZ-5	Aqueous	6
11092601-04A	GMW-O-18	Aqueous	5
11092601-05A	GMW-O-19	Aqueous	3
11092601-06A	GMW-O-16	Aqueous	3
11092601-07A	GMW-O-15	Aqueous	3
11092601-08A	GMW-36	Aqueous	2
11092601-09A	DUP-1	Aqueous	6

10/4/11
Report Date

Page 1 of 1



Alpha Analytical, Inc.

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Date:
03-Oct-11

QC Summary Report

Work Order:
11092601

Method Blank

File ID: 7A09271106.D

Sample ID: MBLK-27384

Analyte

TPH-E (Fuel Product)

Surr: Nonane

Type **MBLK** Test Code: EPA Method SW8015B/C Ext

Batch ID: 27384

Run ID: FID_7_110927A

Analysis Date: 09/27/2011 17:08

Prep Date: 09/27/2011 09:57

Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
ND	0.1								
0.147		0.15		98	49	145			

Laboratory Control Spike

File ID: 7A09271107.D

Sample ID: LCS-27384

Analyte

TPH-E (DRO)

Surr: Nonane

Type **LCS** Test Code: EPA Method SW8015B/C Ext

Batch ID: 27384

Run ID: FID_7_110927A

Analysis Date: 09/27/2011 17:35

Prep Date: 09/27/2011 09:57

Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
2.42	0.05	2.5		97	70	130			
0.164		0.15		109	49	145			

Sample Matrix Spike

File ID: 7A09271123.D

Sample ID: 11092608-04AMS

Analyte

TPH-E (DRO)

Surr: Nonane

Type **MS** Test Code: EPA Method SW8015B/C Ext

Batch ID: 27384

Run ID: FID_7_110927A

Analysis Date: 09/28/2011 00:41

Prep Date: 09/27/2011 09:57

Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
2.02	0.05	2.5	0	81	53	150			
0.171		0.15		114	49	145			

Sample Matrix Spike Duplicate

File ID: 7A09271124.D

Sample ID: 11092608-04AMSD

Analyte

TPH-E (DRO)

Surr: Nonane

Type **MSD** Test Code: EPA Method SW8015B/C Ext

Batch ID: 27384

Run ID: FID_7_110927A

Analysis Date: 09/28/2011 01:07

Prep Date: 09/27/2011 09:57

Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
2.05	0.05	2.5	0	82	53	150	2.017	1.4(47)	
0.175		0.15		117	49	145			

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



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Date:
03-Oct-11

QC Summary Report

Work Order:
11092601

Method Blank

File ID: 11092907.D

Type **MBLK** Test Code: **EPA Method SW8015B/C**

Batch ID: **MS15W0929B**

Analysis Date: **09/29/2011 10:34**

Sample ID: **MBLK MS15W0929B**

Units : **mg/L**

Run ID: **MSD_15_110929A**

Prep Date: **09/29/2011 10:34**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	ND	0.05								
Surr: 1,2-Dichloroethane-d4	0.0114		0.01		114	70	130			
Surr: Toluene-d8	0.00988		0.01		99	70	130			
Surr: 4-Bromofluorobenzene	0.00886		0.01		89	70	130			

Laboratory Control Spike

File ID: 11092903.D

Type **LCS** Test Code: **EPA Method SW8015B/C**

Batch ID: **MS15W0929B**

Analysis Date: **09/29/2011 08:55**

Sample ID: **GLCS MS15W0929B**

Units : **mg/L**

Run ID: **MSD_15_110929A**

Prep Date: **09/29/2011 08:55**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	0.412	0.05	0.4		103	70	130			
Surr: 1,2-Dichloroethane-d4	0.0109		0.01		109	70	130			
Surr: Toluene-d8	0.00966		0.01		97	70	130			
Surr: 4-Bromofluorobenzene	0.009		0.01		90	70	130			

Sample Matrix Spike

File ID: 11092911.D

Type **MS** Test Code: **EPA Method SW8015B/C**

Batch ID: **MS15W0929B**

Analysis Date: **09/29/2011 12:01**

Sample ID: **11092601-05AGS**

Units : **mg/L**

Run ID: **MSD_15_110929A**

Prep Date: **09/29/2011 12:01**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	2.12	0.25	2	0	106	51	144			
Surr: 1,2-Dichloroethane-d4	0.0563		0.05		113	70	130			
Surr: Toluene-d8	0.0479		0.05		96	70	130			
Surr: 4-Bromofluorobenzene	0.045		0.05		90	70	130			

Sample Matrix Spike Duplicate

File ID: 11092912.D

Type **MSD** Test Code: **EPA Method SW8015B/C**

Batch ID: **MS15W0929B**

Analysis Date: **09/29/2011 12:22**

Sample ID: **11092601-05AGSD**

Units : **mg/L**

Run ID: **MSD_15_110929A**

Prep Date: **09/29/2011 12:22**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	2.07	0.25	2	0	103	51	144	2.116	2.2(29)	
Surr: 1,2-Dichloroethane-d4	0.0566		0.05		113	70	130			
Surr: Toluene-d8	0.048		0.05		96	70	130			
Surr: 4-Bromofluorobenzene	0.0447		0.05		89	70	130			

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

QC Summary Report

Date: 03-Oct-11 Work Order: 11092601

n-Butylbenzene	ND	1				
1,2-Dibromo-3-chloropropane (DBCP)	ND	5				
1,2,4-Trichlorobenzene	ND	2				
Naphthalene	ND	10				
1,2,3-Trichlorobenzene	ND	2				
Surr: 1,2-Dichloroethane-d4	11.4	10	114	70	130	
Surr: Toluene-d8	9.88	10	99	70	130	
Surr: 4-Bromofluorobenzene	8.86	10	89	70	130	

Laboratory Control Spike

Type **LCS** Test Code: **EPA Method SW8260B**

File ID: **11092904.D**

Batch ID: **MS15W0929A**

Analysis Date: **09/29/2011 09:19**

Sample ID: **LCS MS15W0929A**

Units: **µg/L**

Run ID: **MSD_15_110929A**

Prep Date: **09/29/2011 09:19**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
1,1-Dichloroethene	10.1	1	10		101	80	120			
Methyl tert-butyl ether (MTBE)	11	0.5	10		110	65	140			
Benzene	10.7	0.5	10		107	70	130			
Trichloroethene	10.7	1	10		107	65	144			
Toluene	10.2	0.5	10		102	80	120			
Chlorobenzene	10.1	1	10		101	70	130			
Ethylbenzene	11	0.5	10		110	80	120			
m,p-Xylene	10.7	0.5	10		107	70	130			
o-Xylene	10.6	0.5	10		106	70	130			
Surr: 1,2-Dichloroethane-d4	11.3		10		113	70	130			
Surr: Toluene-d8	9.51		10		95	70	130			
Surr: 4-Bromofluorobenzene	9.02		10		90	70	130			

Sample Matrix Spike

Type **MS** Test Code: **EPA Method SW8260B**

File ID: **11092909.D**

Batch ID: **MS15W0929A**

Analysis Date: **09/29/2011 11:17**

Sample ID: **11092601-05AMS**

Units: **µg/L**

Run ID: **MSD_15_110929A**

Prep Date: **09/29/2011 11:17**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
1,1-Dichloroethene	44.8	2.5	50	0	90	64	130			
Methyl tert-butyl ether (MTBE)	49.6	1.3	50	0	99	47	150			
Benzene	46.5	1.3	50	0	93	59	138			
Trichloroethene	46	2.5	50	0	92	65	144			
Toluene	44.1	1.3	50	0	88	68	130			
Chlorobenzene	44.8	2.5	50	0	90	70	130			
Ethylbenzene	48	1.3	50	0	96	68	130			
m,p-Xylene	46.3	1.3	50	0	93	68	131			
o-Xylene	46.4	1.3	50	0	93	70	130			
Surr: 1,2-Dichloroethane-d4	56.8		50		114	70	130			
Surr: Toluene-d8	47.2		50		94	70	130			
Surr: 4-Bromofluorobenzene	45		50		90	70	130			

Sample Matrix Spike Duplicate

Type **MSD** Test Code: **EPA Method SW8260B**

File ID: **11092910.D**

Batch ID: **MS15W0929A**

Analysis Date: **09/29/2011 11:39**

Sample ID: **11092601-05AMSD**

Units: **µg/L**

Run ID: **MSD_15_110929A**

Prep Date: **09/29/2011 11:39**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
1,1-Dichloroethene	44.9	2.5	50	0	90	64	130	44.75	0.3(21)	
Methyl tert-butyl ether (MTBE)	54	1.3	50	0	108	47	150	49.59	8.5(40)	
Benzene	47.5	1.3	50	0	95	59	138	46.51	2.2(21)	
Trichloroethene	47.2	2.5	50	0	94	65	144	45.98	2.6(20)	
Toluene	45	1.3	50	0	90	68	130	44.1	2.1(20)	
Chlorobenzene	45.1	2.5	50	0	90	70	130	44.79	0.8(20)	
Ethylbenzene	48.4	1.3	50	0	97	68	130	47.97	0.8(20)	
m,p-Xylene	46.5	1.3	50	0	93	68	131	46.34	0.3(20)	
o-Xylene	47.1	1.3	50	0	94	70	130	46.4	1.6(20)	
Surr: 1,2-Dichloroethane-d4	57.9		50		116	70	130			
Surr: Toluene-d8	46.9		50		94	70	130			
Surr: 4-Bromofluorobenzene	44.3		50		89	70	130			



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:

03-Oct-11

QC Summary Report

Work Order:

11092601

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

Billing Information :

CHAIN-OF-CUSTODY RECORD

CA

Alpha Analytical, Inc.

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778
 TEL: (775) 355-1044 FAX: (775) 355-0406

WorkOrder : CHHL11092601

Report Due By : 5:00 PM On : 05-Oct-11

Client:

CH2M Hill
 1000 Wilshire Boulevard
 21st Floor
 Los Angeles, CA 90017

Report Attention

Daniel Jablonski (213) 228-8271 x daniel.jablonski@ch2m.com
 Matthew Mayry (213) 228-8271 x matthew.mayry@ch2m.com

Email Address

EDD Required : Yes

Sampled by : Matthew Linder

Cooler Temp 3 °C

Samples Received 26-Sep-11

Date Printed 26-Sep-11

Client's COC # : None

Job : KMEP DSFP Norwalk

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD With Surrogates

Alpha Sample ID	Client Sample ID	Collection Matrix Date	No. of Bottles			Requested Tests			Sample Remarks
			Alpha	Sub	TAT	TPHE_W	TPHP_W	VOC_W	
CHH11092601-01A	TB-1	AQ 09/22/11 09:50	3	0	7				RENO TRIP BLANKS 8/15/11
CHH11092601-02A	EB-1	AQ 09/22/11 09:55	6	0	7	TPHE(0.10) +Vmyl acetate	TPHE(0.10) +Vmyl acetate	TPHE(0.10) +Vmyl acetate	
CHH11092601-03A	PZ-5	AQ 09/22/11 12:05	6	0	7	TPHE(0.10) +Vmyl acetate	TPHE(0.10) +Vmyl acetate	TPHE(0.10) +Vmyl acetate	
CHH11092601-04A	GMW-O-18	AQ 09/22/11 12:49	6	0	7	TPHE(0.10) +Vmyl acetate	TPHE(0.10) +Vmyl acetate	TPHE(0.10) +Vmyl acetate	
CHH11092601-05A	GMW-O-19	AQ 09/22/11 14:00	6	0	7	TPHE(0.10) +Vmyl acetate	TPHE(0.10) +Vmyl acetate	TPHE(0.10) +Vmyl acetate	
CHH11092601-06A	GMW-O-16	AQ 09/22/11 14:44	5	0	7	TPHE(0.10) +Vmyl acetate	TPHE(0.10) +Vmyl acetate	TPHE(0.10) +Vmyl acetate	1-VOA received broken
CHH11092601-07A	GMW-O-15	AQ 09/22/11 15:14	6	0	7	TPHE(0.10) +Vmyl acetate	TPHE(0.10) +Vmyl acetate	TPHE(0.10) +Vmyl acetate	
CHH11092601-08A	GMW-36	AQ 09/22/11 15:44	6	0	7	TPHE(0.10) +Vmyl acetate	TPHE(0.10) +Vmyl acetate	TPHE(0.10) +Vmyl acetate	

Comments: Security seals intact. Mailed Ice. Analysis: Run two analyses in order to achieve lower reporting limits for all other analytes due to high TBA values.

Logged in by:  Signature  Print Name  Company  Date/Time

Alpha Analytical, Inc. 9/26/11 11:30

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.
 The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report.
 Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

Billing Information :

CHAIN-OF-CUSTODY RECORD

CA

Alpha Analytical, Inc.

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778
 TEL: (775) 355-1044 FAX: (775) 355-0406

WorkOrder : CHHL11092601

Report Due By : 5:00 PM On : 05-Oct-11

Client:

CH2M Hill
 1000 Wilshire Boulevard
 21st Floor
 Los Angeles, CA 90017

Report Attention Phone Number Email Address

Daniel Jablonski (213) 228-8271 x daniel.jablonski@ch2m.com
 Mathew Mayry (213) 228-8271 x mathew.mayry@ch2m.com

EDD Required : Yes

Sampled by : Matthew Linder

PO :

Client's COC # : None

Job : KMEP DSFP Nonwalk

Cooler Temp 3 °C

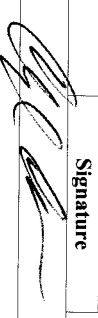
Samples Received 26-Sep-11

Date Printed 26-Sep-11

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD With Surrogates

Alpha Sample ID	Client Sample ID	Collection Date	No. of Bottles			Requested Tests			Sample Remarks
			Alpha	Sub	TAT	TPHE_W	TPHP_W	VOC_W	
CHH11092601-09A	DUP-1	AQ 09/22/11 00:00	6	0	7	TPHE(0.10) +Vinyl acetate	TPHP(0.10) +Vinyl acetate	TPHE(0.10) +Vinyl acetate	

Comments: Security seals intact. Melted Ice. Analysts: Run two analyses in order to achieve lower reporting limits for all other analytes due to high TBA values. .

Logged in by:  Signature Print Name Company Date/Time

Cheryl Gamble Alpha Analytical, Inc. 9/26/11 11:30

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.
 The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report.
 Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

BLAINE

TECH SERVICES, INC.

1680 ROGERS AVENUE
 SAN JOSE, CALIFORNIA 95112-1105
 FAX (408) 573-7771
 PHONE (408) 573-0555

Alpha Analytical COC 1 of 1

LAB Billing Information:
 Kinder Morgan
 1100 Town and Country Rd.
 Orange CA 95112

Kinder Morgan Norwalk
 Report to:
 Dan Jablonski
 CH2MHILL
 1000 Wilshire Blvd 21st floor
 Los Angeles, CA 90017

QHH11092601

CHAIN OF CUSTODY

CLIENT Kinder Morgan
 SITE DFSP Norwalk
 15306 Norwalk Blvd, Norwalk

SAMPLE I.D.	DATE	TIME	MATRIX	#	Preservation	Type	CONTAINERS		TPHg, TPHfp (EPA 8015M)	VOC's & Oxygenates (EPA 8260B)	CONDUCT ANALYSIS TO DETECT		LAB	ADDITIONAL INFORMATION	STATUS	CONDITION	LAB SAMPLE #
							Water										
TR-1	9/22/11	0950	AQ	3	HCL	VOA			X	X							-01A
EG-1		0955	AQ	6	HCL	VOA			X	X							-02A
P2-5		1205	AQ	6	HCL	VOA			X	X							-03A
GMW-0-18		1249	AQ	6	HCL	VOA			X	X							-04A
GMW-0-19		1400	AQ	6	HCL	VOA			X	X							-05A
GMW-0-16		1444	AQ	6	HCL	VOA			X	X							-06A
GMW-0-15		1514	AQ	6	HCL	VOA			X	X							-07A
GMW-36		1544	AQ	6	HCL	VOA			X	X							-08A
DOP-1			AQ	6	HCL	VOA			X	X							-09A

SAMPLING COMPLETED 9/22/11 1550
 PERFORMED BY Matthew Linder

RELEASED BY [Signature] TIME 1730 RECEIVED BY [Signature] DATE 9/22/11 TIME 1730
 RESULTS NEEDED NO LATER THAN Standard

RELEASED BY Nicole (Sample Custodian) TIME 1500 RECEIVED BY FEDEX DATE 9/23/11 TIME 1500

SHIPPED VIA [Signature] TIME SENT [Signature] COOLER # [Signature] DATE 9/26/11 TIME 10:22

November 2011

WELL GAUGING DATA

Project # 11128-MH1 Date 11/28/11 Client KMCT

Site Rockwell Terminal

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Notes
EXP-5	1240	4					47.52	113.30	TOC	
GMW-D-1	1315	4					25.00	40.00	↓	
GMW-D-6	1352	4				26.42	48.63			
PZ-5	1448	4				26.16	38.44			

LOW FLOW WELL MONITORING DATA SHEET

Project #: 111173-ES1	Client: KMEP
Sampler: ES	Start Date: 11-23-11
Well I.D.: GMW-015	Well Diameter: 2 3 4 6 8 _____
Total Well Depth: _____	Depth to Water: Pre: _____ Post: _____
Depth to Free Product: _____	Thickness of Free Product (feet): _____
Referenced to: PVC Grade	Flow Cell Type: YSI 556

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other _____

Start Purge Time: _____ Flow Rate: _____ Pump Depth: _____

Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to water
	_____		System	Not	Fluctuating	Low	_____	
			No sample taken					

Did well dewater? Yes No	Amount actually evacuated: _____
Sampling Time: _____	Sampling Date: _____
Sample I.D.: _____	Laboratory: Alpha Analytical
Analyzed for: TPHg TPHfp VOC's MTBE Other: _____	
Equipment Blank I.D.: _____ @ _____ Time	Duplicate I.D.: _____

LOW FLOW WELL MONITORING DATA SHEET

Project #: 11128-MK2	Client: KMEP
Sampler: <i>M. H. H.</i>	Start Date: 11/28/11
Well I.D.: GMMW-0-16	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: 48.63	Depth to Water: Pre: 26.42 Post: 26.52
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVE</u> Grade	Flow Cell Type: YSI 556

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other _____

Start Purge Time: 1354 Flow Rate: 500 mL Pump Depth: 43

Time	Temp. (°C or °F)	pH	Cond. (mS or <u>µS</u>)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or <u>mL</u>)	Depth to water
1400	21.8	7.19	1554	6	1.25	115.5	1500	26.46
1403	21.7	7.20	1557	4	0.92	115.9	3000	26.50
1406	21.7	7.27	1560	4	0.90	117.9	4500	26.52
1409	21.6	7.28	1563	4	0.88	118.1	6000	26.52
1412	21.5	7.27	1564	4	0.87	118.5	7500	26.52
1415	21.5	7.27	1564	4	0.87	119.0	9000	26.52

Did well dewater? Yes <input checked="" type="radio"/> No <input type="radio"/>	Amount actually evacuated: 9000
Sampling Time: 1416	Sampling Date: 11/28/11
Sample I.D.: GMMW-0-16	Laboratory: Alpha Analytical
Analyzed for: TPHg TPHfp VOC's MTBE	Other: See Scope
Equipment Blank I.D.: @ <small>Time</small>	Duplicate I.D.:

LOW FLOW WELL MONITORING DATA SHEET

Project #: 11123-ES1	Client: KMEP
Sampler: ES	Start Date: 11-23-11
Well I.D.: GMLW-0-18	Well Diameter: 2 3 4 6 8 _____
Total Well Depth: _____	Depth to Water: Pre: _____ Post: _____
Depth to Free Product: _____	Thickness of Free Product (feet): _____
Referenced to: PVC Grade	Flow Cell Type: YSI 556

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other _____
 Start Purge Time: 1248 Flow Rate: _____ Pump Depth: _____

Time	Temp. °C or °F	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to water
1251	14.65	7.16	2627	15	2.27	-36.2		
1254	14.69	7.14	2629	12	2.09	-41.2		
1257	14.72	7.13	2632	9	1.92	-41.3		

Did well dewater? Yes <input type="radio"/> No <input checked="" type="radio"/>	Amount actually evacuated: _____
Sampling Time: 1258	Sampling Date: 11-23-11
Sample I.D.: GMLW-0-18	Laboratory: Alpha Analytical
Analyzed for: TPHg TPHfp VOC's MTBE	Other: _____
Equipment Blank I.D.: _____ @ _____ Time	Duplicate I.D.: _____

LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>11128-MHC</u>	Client: KMEP
Sampler: <u>Mitt</u>	Start Date: <u>11/28/11</u>
Well I.D.: <u>GMW-019</u>	Well Diameter: 2 3 <u>4</u> 6 8 _____
Total Well Depth: <u>40.00</u>	Depth to Water: Pre: <u>25.96</u> Post: <u>26.02</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	Flow Cell Type: YSI 556

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other _____
 Start Purge Time: 1330 Flow Rate: 400ml Pump Depth: 35

Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or ml)	Depth to water
1333	22.2	7.27	1451	8	0.73	82.4	1500	25.98
1336	22.3	7.18	1499	7	0.80	92.4	3600	26.00
1339	22.5	7.43	1499	5	0.82	100.2	4500	26.01
1342	22.6	7.44	1502	5	0.80	101.6	6000	26.02
1345	22.6	7.46	1502	5	0.79	102.0	7500	26.02
1348	22.6	7.47	1501	5	0.79	102.4	9000	26.02

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: <u>9000ml</u>
Sampling Time: <u>1349</u>	Sampling Date: <u>11/28/11</u>
Sample I.D.: <u>GMW-019</u>	Laboratory: <u>Alpha Analytical</u>
Analyzed for: <u>TPHg TPHfp VOC's MTBE</u>	Other: <u>See Scope</u>
Equipment Blank I.D.: _____ @ _____ Time	Duplicate I.D.: _____

LOW FLOW WELL MONITORING DATA SHEET

Project #: 11123-ES7	Client: KMEP
Sampler: ES	Start Date: 11-23-11
Well I.D.: GMW-36	Well Diameter: 2 3 4 6 8 _____
Total Well Depth: —	Depth to Water: Pre: — Post: —
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC Grade	Flow Cell Type: YSI 556

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other _____
 Start Purge Time: 1205 Flow Rate: _____ Pump Depth: _____

Time	Temp. (°C or °F)	pH	Cond. (mS or μ S)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to water
1208	14.58	7.02	2368	28	7.12	125.7	—	—
1211	14.62	7.08	2372	27	6.97	97.9	—	—
1214	14.64	7.09	2375	24	7.04	94.3	—	—

Did well dewater? Yes <input type="radio"/> No <input checked="" type="radio"/>	Amount actually evacuated:
Sampling Time: 1215	Sampling Date: 11-23-11
Sample I.D.: GMW-36	Laboratory: Alpha Analytical
Analyzed for: TPHg TPHfp VOC's MTBE	Other:
Equipment Blank I.D.: @ <small>Time</small>	Duplicate I.D.:

WELL MONITORING DATA SHEET

Project #: <u>11128-MH2</u>	Client: <u>KMEP</u>
Sampler: <u>mat</u>	Date: <u>11/28/11</u>
Well I.D.: <u>P2-5</u>	Well Diameter: 2 3 4 6 8 ____
Total Well Depth (TD): <u>350.44</u>	Depth to Water (DTW): <u>26.16</u> <u>26.21</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>YSI</u> HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method: Bailer Waterra Sampling Method: Bailer
 Disposable Bailer Peristaltic Disposable Bailer
 Positive Air Displacement Extraction Pump Extraction Port
 Electric Submersible Other _____ Dedicated Tubing

Other: _____

1454 @ 500ml
 _____ (Gals.) X _____ = _____ Gals.
 1 Case Volume Specified Volumes Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius ² * 0.163

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	ML / 15/2 Gals. Removed		DO / OEP Observations	
1454	22.5	7.12	2074	6	1500	26.16	0.74	-107.4
1500	22.6	7.08	2261	4	1500	26.17	0.69	-110.6
1505	22.4	7.00	2280	4	4500	26.15	0.66	-116.3
1506	22.4	6.92	2285	4	6000	26.10	0.64	-120.1
1509	22.4	6.94	2284	4	7500	26.21	0.64	-122.3
1512	22.4	6.94	2285	4	9000	26.21	0.63	-123.8

Did well dewater? Yes No Gallons actually evacuated: 9000 ml

Sampling Date: 11/28/11 Sampling Time: 1513 Depth to Water: 26.21

Sample I.D.: P2-5 Laboratory: Kiff CalScience Other: ALPHA

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable): DUP-1

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

D.O. (if req'd): Pre-purge: _____ mg/L Post-purge: _____ mg/L

O.R.P. (if req'd): Pre-purge: _____ mV Post-purge: _____ mV

BLAINE

TECH SERVICES, INC.

1680 ROGERS AVENUE
 SAN JOSE, CALIFORNIA 95112-1105
 FAX (408) 573-7771
 PHONE (408) 573-0555

CONDUCT ANALYSIS TO DETECT

LAB ~~01113~~ ^{EX} 11-29-11 Alpha Analytical COC 1 of 1

CHAIN OF CUSTODY

CLIENT **Kinder Morgan**
 SITE **DFSP Norwalk**
15306 Norwalk Blvd, Norwalk

Billing information:
 Kinder Morgan
 1100 Town and Country Rd.
 Orange CA 95112

Kinder Morgan Norwalk
 Report to:
 Dan Jablonski
 CH2MHILL
 1000 Wilshire Blvd 21st floor
 Los Angeles, CA 90017

SAMPLE I.D.	DATE	TIME	MATRIX		CONTAINERS		TPHg, TPHfp (EPA 8015M)	VOC's & Oxygenates (EPA 8260B)							ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
			AQ=	Water	#	Preservation												
GMW-18	11-23-11	1258	AQ	Water	6	Hcl	var	X	X									CHH11113044-01
GMW-36	11-23-11	1215	AQ	Water	6	Hcl	var	X	X									-02

SAMPLING COMPLETED DATE 11-23-11 TIME 1300 SAMPLING PERFORMED BY [Signature] RESULTS NEEDED NO LATER THAN Standard

RELEASED BY [Signature] TIME 1400 RECEIVED BY [Signature] DATE 11-28-11 TIME 1400

RELEASED BY Nicole (Sample Custodian) TIME 11/28 17:30 RECEIVED BY [Signature] DATE 11/28/11 TIME 1845

SHIPPED VIA [Signature] TIME SENT 11-29-11 COOLER # 1 3.9 + 0.1 = 4.0°C

Released by: Elvin Kumar [Signature] / Accutest 11-29-11 @ 15:00 Recv'd by: Sarah Laffer 11/30/11 12:42

BLAINE

TECH SERVICES, INC.

1680 ROGERS AVENUE
 SAN JOSE, CALIFORNIA 95112-1105
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CONDUCT ANALYSIS TO DETECT

LAB

Alpha Analytical COC ___ of ___

Billing Information:
 Kinder Morgan
 1100 Town and Country Rd.
 Orange CA 95112

Kinder Morgan Norwalk
 Report to:
 Dan Jablonski
 CH2MHILL
 1000 Wilshire Blvd 21st floor
 Los Angeles, CA 90017

CHAIN OF CUSTODY

CLIENT **Kinder Morgan**
 SITE **DFSP Norwalk**
15306 Norwalk Blvd, Norwalk

SAMPLE I.D.	DATE	TIME	MATRIX	CONTAINERS			TPHg, TPHfp (EPA 8015M)	VOC's & Oxygenates (EPA 8260B)							ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
			AQ= Water	#	Preservation	Type												
TB-1	11/28/11	1300	AQ	2	Ice	VO2	✓	✓										CHH11113041-01A
EB-1		1530		6			✓	✓										-02
EXP-5		1307					✓	✓										-03
GMW-016		1416					✓	✓										-04
GMW-D-19		1319					✓	✓										-05
PZ-5		1513					✓	✓										-06
DUP-1		-					✓	✓										-07

SAMPLING COMPLETED	DATE	TIME	SAMPLING PERFORMED BY	RESULTS NEEDED	NO LATER THAN
	11/28/11	1600	M.H.	Standard	
RELEASED BY	TIME	RECEIVED BY	DATE	TIME	
M.H.	1640	SC	11/28/11	1700	
RELEASED BY	TIME	RECEIVED BY	DATE	TIME	
Michelle (SC)	1230		11/29/11	1230	
RELEASED BY	TIME	RECEIVED BY	DATE	TIME	
	1230	Marulappae	11/30/11	12:28	
SHIPPED VIA	TIME SENT	COOLER #			

Remediation Form 7.3-1, Well Inspection Checklist

Well Number: PZ-5 Inspector: MJ Date: 11/28/11

Item	Inspection Element	Yes	No	Comments/Remarks/Actions Taken
1	Is access to the well unobstructed?	✓		
2	Is the well easily visible?	✓		
3	Is the well vault cover or protective casing clearly labeled?	✓		
4	Is a well identification tag present and legible?	✓		
5	Is there any physical damage to the well, well vault and cover, or protective casing?		✓	
6	If applicable, is the cover to the well vault properly secured?	✓		
7	Is there evidence of heaving or settling of the well, vault, or protective casing?	✓		Small crack in apron
8	Is the well pad in good condition (not cracked, settled, or elevated)?	✓	✓	
9	Is the well secured with a functioning lock?	✓		
10	Is the well fitted with a water tight well cap?	✓		
11	If applicable, is the well vault dry and free of debris?	✓		
12	What is the measured depth of the well?	✓		
13	Is the measured depth consistent with the as-built record?	✓		
List any corrective measures to be considered:				



Remediation Form 7.3-1, Well Inspection Checklist

Well Number: GMLW-016 Inspector: MAH Date: 11/28/14

Item	Inspection Element	Yes	No	Comments/Remarks/Actions Taken
1	Is access to the well unobstructed?	✓		
2	Is the well easily visible?	✓		
3	Is the well vault cover or protective casing clearly labeled?	✓		
4	Is a well identification tag present and legible?	✓		
5	Is there any physical damage to the well, well vault and cover, or protective casing?		✓	
6	If applicable, is the cover to the well vault properly secured?	✓		
7	Is there evidence of heaving or settling of the well, vault, or protective casing?		✓	
8	Is the well pad in good condition (not cracked, settled, or elevated)?	N/A		not visible / dangerous wild life
9	Is the well secured with a functioning lock?	✓		
10	Is the well fitted with a water tight well cap?	✓		
11	If applicable, is the well vault dry and free of debris?		✓	spiders
12	What is the measured depth of the well?	✓		
13	Is the measured depth consistent with the as-built record?	✓		
List any corrective measures to be considered:				



Remediation Form 7.3-1, Well Inspection Checklist

Well Number: GMU-015 Inspector: MDL Date: 11/28/14

Item	Inspection Element	Yes	No	Comments/Remarks/Actions Taken
1	Is access to the well unobstructed?	✓		
2	Is the well easily visible?	✓		
3	Is the well vault cover or protective casing clearly labeled?	✓		
4	Is a well identification tag present and legible?	✓		
5	Is there any physical damage to the well, well vault and cover, or protective casing?		✓	
6	If applicable, is the cover to the well vault properly secured?	✓		
7	Is there evidence of heaving or settling of the well, vault, or protective casing?		✓	
8	Is the well pad in good condition (not cracked, settled, or elevated)?	✓		
9	Is the well secured with a functioning lock?		✓	Pump
10	Is the well fitted with a water tight well cap?	✓		
11	If applicable, is the well vault dry and free of debris?	✓		
12	What is the measured depth of the well?	✓		
13	Is the measured depth consistent with the as-built record?	✓		
List any corrective measures to be considered:				



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ANALYTICAL REPORT

CH2M Hill
1000 Wilshire Boulevard
Los Angeles, CA 90017

Attn: Daniel Jablonski
Phone: (213) 228-8271
Fax: (714) 424-2135
Date Received : 11/30/11

Job: KMEP Norwalk

Total Petroleum Hydrocarbons - Extractable (TPH-E) EPA Method SW8015B
Total Petroleum Hydrocarbons - Purgeable (TPH-P) EPA Method SW8015B

	Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID : TB-1					
Lab ID : CHH11113041-01A	TPH-E (Fuel Product)	ND	0.10 mg/L	12/05/11	12/05/11
Date Sampled 11/28/11 13:00	Surr: Nonane	135	(49-145) %REC	12/05/11	12/05/11
	TPH-P (GRO)	ND	0.050 mg/L	12/05/11	12/05/11
	Surr: 1,2-Dichloroethane-d4	101	(70-130) %REC	12/05/11	12/05/11
	Surr: Toluene-d8	101	(70-130) %REC	12/05/11	12/05/11
	Surr: 4-Bromofluorobenzene	95	(70-130) %REC	12/05/11	12/05/11
Client ID : EB-1					
Lab ID : CHH11113041-02A	TPH-E (Fuel Product)	ND	0.10 mg/L	12/05/11	12/05/11
Date Sampled 11/28/11 15:30	Surr: Nonane	122	(49-145) %REC	12/05/11	12/05/11
	TPH-P (GRO)	ND	0.050 mg/L	12/05/11	12/05/11
	Surr: 1,2-Dichloroethane-d4	101	(70-130) %REC	12/05/11	12/05/11
	Surr: Toluene-d8	103	(70-130) %REC	12/05/11	12/05/11
	Surr: 4-Bromofluorobenzene	94	(70-130) %REC	12/05/11	12/05/11
Client ID : GMW-O-16					
Lab ID : CHH11113041-04A	TPH-E (Fuel Product)	ND	0.10 mg/L	12/05/11	12/06/11
Date Sampled 11/28/11 14:16	Surr: Nonane	124	(49-145) %REC	12/05/11	12/06/11
	TPH-P (GRO)	ND	0.050 mg/L	12/05/11	12/05/11
	Surr: 1,2-Dichloroethane-d4	101	(70-130) %REC	12/05/11	12/05/11
	Surr: Toluene-d8	100	(70-130) %REC	12/05/11	12/05/11
	Surr: 4-Bromofluorobenzene	95	(70-130) %REC	12/05/11	12/05/11
Client ID : GMW-O-19					
Lab ID : CHH11113041-05A	TPH-E (Fuel Product)	ND	0.10 mg/L	12/05/11	12/06/11
Date Sampled 11/28/11 13:49	Surr: Nonane	128	(49-145) %REC	12/05/11	12/06/11
	TPH-P (GRO)	ND	0.050 mg/L	12/05/11	12/05/11
	Surr: 1,2-Dichloroethane-d4	85	(70-130) %REC	12/05/11	12/05/11
	Surr: Toluene-d8	109	(70-130) %REC	12/05/11	12/05/11
	Surr: 4-Bromofluorobenzene	78	(70-130) %REC	12/05/11	12/05/11
Client ID : PZ-5					
Lab ID : CHH11113041-06A	TPH-E (Fuel Product)	1.5	0.10 mg/L	12/05/11	12/06/11
Date Sampled 11/28/11 15:13	Surr: Nonane	106	(49-145) %REC	12/05/11	12/06/11
	TPH-P (GRO)	4.6	2.0 mg/L	12/05/11	12/05/11
	Surr: 1,2-Dichloroethane-d4	102	(70-130) %REC	12/05/11	12/05/11
	Surr: Toluene-d8	100	(70-130) %REC	12/05/11	12/05/11
	Surr: 4-Bromofluorobenzene	95	(70-130) %REC	12/05/11	12/05/11
Client ID : DUP-1					
Lab ID : CHH11113041-07A	TPH-E (Fuel Product)	1.4	0.10 mg/L	12/05/11	12/06/11
Date Sampled 11/28/11 00:00	Surr: Nonane	123	(49-145) %REC	12/05/11	12/06/11
	TPH-P (GRO)	4.5	2.0 mg/L	12/05/11	12/05/11
	Surr: 1,2-Dichloroethane-d4	100	(70-130) %REC	12/05/11	12/05/11
	Surr: Toluene-d8	101	(70-130) %REC	12/05/11	12/05/11
	Surr: 4-Bromofluorobenzene	95	(70-130) %REC	12/05/11	12/05/11



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Gasoline Range Organics (GRO) C4-C13

ND = Not Detected

Roger Scholl *Randy Gardner* *Walter Hinchman*

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

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12/8/11

Report Date



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255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ANALYTICAL REPORT

CH2M Hill
1000 Wilshire Boulevard
Los Angeles, CA 90017
Job: KMEP Norwalk

Attn: Daniel Jablonski
Phone: (213) 228-8271
Fax: (714) 424-2135

Alpha Analytical Number: CHH11113041-01A
Client I.D. Number: TB-1

Sampled: 11/28/11 13:00
Received: 11/30/11
Extracted: 12/05/11
Analyzed: 12/05/11

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	1.0 µg/L	45 Chlorobenzene	ND	1.0 µg/L
2 Chloromethane	ND	2.0 µg/L	46 Ethylbenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	47 m,p-Xylene	ND	0.50 µg/L
4 Chloroethane	ND	1.0 µg/L	48 Bromoform	ND	1.0 µg/L
5 Bromomethane	ND	2.0 µg/L	49 Xylenes, Total	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	10 µg/L	50 Styrene	ND	1.0 µg/L
7 Acetone	ND	10 µg/L	51 o-Xylene	ND	0.50 µg/L
8 1,1-Dichloroethene	ND	1.0 µg/L	52 1,1,2,2-Tetrachloroethane	ND	1.0 µg/L
9 Tertiary Butyl Alcohol (TBA)	ND	10 µg/L	53 1,2,3-Trichloropropane	ND	2.0 µg/L
10 Dichloromethane	ND	5.0 µg/L	54 Isopropylbenzene	ND	1.0 µg/L
11 Freon-113	ND	10 µg/L	55 Bromobenzene	ND	1.0 µg/L
12 Carbon disulfide	ND	2.5 µg/L	56 n-Propylbenzene	ND	1.0 µg/L
13 trans-1,2-Dichloroethene	ND	1.0 µg/L	57 4-Chlorotoluene	ND	1.0 µg/L
14 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	58 2-Chlorotoluene	ND	1.0 µg/L
15 1,1-Dichloroethane	ND	1.0 µg/L	59 1,3,5-Trimethylbenzene	ND	1.0 µg/L
16 Vinyl acetate	ND	50 µg/L	60 tert-Butylbenzene	ND	1.0 µg/L
17 2-Butanone (MEK)	ND	10 µg/L	61 1,2,4-Trimethylbenzene	ND	1.0 µg/L
18 Di-isopropyl Ether (DIPE)	ND	1.0 µg/L	62 sec-Butylbenzene	ND	1.0 µg/L
19 cis-1,2-Dichloroethene	ND	1.0 µg/L	63 1,3-Dichlorobenzene	ND	1.0 µg/L
20 Bromochloromethane	ND	1.0 µg/L	64 1,4-Dichlorobenzene	ND	1.0 µg/L
21 Chloroform	ND	1.0 µg/L	65 4-Isopropyltoluene	ND	1.0 µg/L
22 Ethyl Tertiary Butyl Ether (ETBE)	ND	1.0 µg/L	66 1,2-Dichlorobenzene	ND	1.0 µg/L
23 2,2-Dichloropropane	ND	1.0 µg/L	67 n-Butylbenzene	ND	1.0 µg/L
24 1,2-Dichloroethane	ND	0.50 µg/L	68 1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0 µg/L
25 1,1,1-Trichloroethane	ND	1.0 µg/L	69 1,2,4-Trichlorobenzene	ND	2.0 µg/L
26 1,1-Dichloropropene	ND	1.0 µg/L	70 Naphthalene	ND	10 µg/L
27 Carbon tetrachloride	ND	1.0 µg/L	71 1,2,3-Trichlorobenzene	ND	2.0 µg/L
28 Benzene	ND	0.50 µg/L	72 Surr: 1,2-Dichloroethane-d4	101	(70-130) %REC
29 Tertiary Amyl Methyl Ether (TAME)	ND	1.0 µg/L	73 Surr: Toluene-d8	101	(70-130) %REC
30 Dibromomethane	ND	1.0 µg/L	74 Surr: 4-Bromofluorobenzene	95	(70-130) %REC
31 1,2-Dichloropropane	ND	1.0 µg/L			
32 Trichloroethene	ND	1.0 µg/L			
33 Bromodichloromethane	ND	1.0 µg/L			
34 4-Methyl-2-pentanone (MIBK)	ND	1.0 µg/L			
35 cis-1,3-Dichloropropene	ND	0.50 µg/L			
36 trans-1,3-Dichloropropene	ND	0.50 µg/L			
37 1,1,2-Trichloroethane	ND	1.0 µg/L			
38 Toluene	ND	0.50 µg/L			
39 1,3-Dichloropropane	ND	1.0 µg/L			
40 2-Hexanone	ND	5.0 µg/L			
41 Dibromochloromethane	ND	1.0 µg/L			
42 1,2-Dibromoethane (EDB)	ND	2.0 µg/L			
43 Tetrachloroethene	ND	1.0 µg/L			
44 1,1,1,2-Tetrachloroethane	ND	1.0 µg/L			

ND = Not Detected

Roger Scholl

Randy Gardner

Walter Hinchman

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[Signature]

12/8/11

Report Date

Page 1 of 1



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ANALYTICAL REPORT

CH2M Hill
1000 Wilshire Boulevard
Los Angeles, CA 90017
Job: KMEP Norwalk

Attn: Daniel Jablonski
Phone: (213) 228-8271
Fax: (714) 424-2135

Alpha Analytical Number: CHH11113041-02A
Client I.D. Number: EB-1

Sampled: 11/28/11 15:30
Received: 11/30/11
Extracted: 12/05/11
Analyzed: 12/05/11

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	1.0 µg/L	45 Chlorobenzene	ND	1.0 µg/L
2 Chloromethane	ND	2.0 µg/L	46 Ethylbenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	47 m,p-Xylene	ND	0.50 µg/L
4 Chloroethane	ND	1.0 µg/L	48 Bromoform	ND	1.0 µg/L
5 Bromomethane	ND	2.0 µg/L	49 Xylenes, Total	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	10 µg/L	50 Styrene	ND	1.0 µg/L
7 Acetone	ND	10 µg/L	51 o-Xylene	ND	0.50 µg/L
8 1,1-Dichloroethene	ND	1.0 µg/L	52 1,1,2,2-Tetrachloroethane	ND	1.0 µg/L
9 Tertiary Butyl Alcohol (TBA)	ND	10 µg/L	53 1,2,3-Trichloropropane	ND	2.0 µg/L
10 Dichloromethane	ND	5.0 µg/L	54 Isopropylbenzene	ND	1.0 µg/L
11 Freon-113	ND	10 µg/L	55 Bromobenzene	ND	1.0 µg/L
12 Carbon disulfide	ND	2.5 µg/L	56 n-Propylbenzene	ND	1.0 µg/L
13 trans-1,2-Dichloroethene	ND	1.0 µg/L	57 4-Chlorotoluene	ND	1.0 µg/L
14 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	58 2-Chlorotoluene	ND	1.0 µg/L
15 1,1-Dichloroethane	ND	1.0 µg/L	59 1,3,5-Trimethylbenzene	ND	1.0 µg/L
16 Vinyl acetate	ND	5.0 µg/L	60 tert-Butylbenzene	ND	1.0 µg/L
17 2-Butanone (MEK)	ND	10 µg/L	61 1,2,4-Trimethylbenzene	ND	1.0 µg/L
18 Di-isopropyl Ether (DIPE)	ND	1.0 µg/L	62 sec-Butylbenzene	ND	1.0 µg/L
19 cis-1,2-Dichloroethene	ND	1.0 µg/L	63 1,3-Dichlorobenzene	ND	1.0 µg/L
20 Bromochloromethane	ND	1.0 µg/L	64 1,4-Dichlorobenzene	ND	1.0 µg/L
21 Chloroform	ND	1.0 µg/L	65 4-Isopropyltoluene	ND	1.0 µg/L
22 Ethyl Tertiary Butyl Ether (ETBE)	ND	1.0 µg/L	66 1,2-Dichlorobenzene	ND	1.0 µg/L
23 2,2-Dichloropropane	ND	1.0 µg/L	67 n-Butylbenzene	ND	1.0 µg/L
24 1,2-Dichloroethane	ND	0.50 µg/L	68 1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0 µg/L
25 1,1,1-Trichloroethane	ND	1.0 µg/L	69 1,2,4-Trichlorobenzene	ND	2.0 µg/L
26 1,1-Dichloropropene	ND	1.0 µg/L	70 Naphthalene	ND	10 µg/L
27 Carbon tetrachloride	ND	1.0 µg/L	71 1,2,3-Trichlorobenzene	ND	2.0 µg/L
28 Benzene	ND	0.50 µg/L	72 Surr: 1,2-Dichloroethane-d4	101	(70-130) %REC
29 Tertiary Amyl Methyl Ether (TAME)	ND	1.0 µg/L	73 Surr: Toluene-d8	103	(70-130) %REC
30 Dibromomethane	ND	1.0 µg/L	74 Surr: 4-Bromofluorobenzene	94	(70-130) %REC
31 1,2-Dichloropropane	ND	1.0 µg/L			
32 Trichloroethene	ND	1.0 µg/L			
33 Bromodichloromethane	ND	1.0 µg/L			
34 4-Methyl-2-pentanone (MIBK)	ND	10 µg/L			
35 cis-1,3-Dichloropropene	ND	0.50 µg/L			
36 trans-1,3-Dichloropropene	ND	0.50 µg/L			
37 1,1,2-Trichloroethane	ND	1.0 µg/L			
38 Toluene	ND	0.50 µg/L			
39 1,3-Dichloropropane	ND	1.0 µg/L			
40 2-Hexanone	ND	5.0 µg/L			
41 Dibromochloromethane	ND	1.0 µg/L			
42 1,2-Dibromoethane (EDB)	ND	2.0 µg/L			
43 Tetrachloroethene	ND	1.0 µg/L			
44 1,1,1,2-Tetrachloroethane	ND	1.0 µg/L			

ND = Not Detected

Roger Scholl

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JS

12/8/11

Report Date

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Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ANALYTICAL REPORT

CH2M Hill
1000 Wilshire Boulevard
Los Angeles, CA 90017
Job: KMEP Norwalk

Attn: Daniel Jablonski
Phone: (213) 228-8271
Fax: (714) 424-2135

Alpha Analytical Number: CHH11113041-04A
Client I.D. Number: GMW-O-16

Sampled: 11/28/11 14:16
Received: 11/30/11
Extracted: 12/05/11
Analyzed: 12/05/11

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	1.0 µg/L	45 Chlorobenzene	ND	1.0 µg/L
2 Chloromethane	ND	2.0 µg/L	46 Ethylbenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	47 m,p-Xylene	ND	0.50 µg/L
4 Chloroethane	ND	1.0 µg/L	48 Bromoform	ND	1.0 µg/L
5 Bromomethane	ND	2.0 µg/L	49 Xylenes, Total	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	10 µg/L	50 Styrene	ND	1.0 µg/L
7 Acetone	ND	10 µg/L	51 o-Xylene	ND	0.50 µg/L
8 1,1-Dichloroethene	ND	1.0 µg/L	52 1,1,2,2-Tetrachloroethane	ND	1.0 µg/L
9 Tertiary Butyl Alcohol (TBA)	ND	10 µg/L	53 1,2,3-Trichloropropane	ND	2.0 µg/L
10 Dichloromethane	ND	5.0 µg/L	54 Isopropylbenzene	ND	1.0 µg/L
11 Freon-113	ND	10 µg/L	55 Bromobenzene	ND	1.0 µg/L
12 Carbon disulfide	ND	2.5 µg/L	56 n-Propylbenzene	ND	1.0 µg/L
13 trans-1,2-Dichloroethene	ND	1.0 µg/L	57 4-Chlorotoluene	ND	1.0 µg/L
14 Methyl tert-butyl ether (MTBE)	1.3	0.50 µg/L	58 2-Chlorotoluene	ND	1.0 µg/L
15 1,1-Dichloroethane	ND	1.0 µg/L	59 1,3,5-Trimethylbenzene	ND	1.0 µg/L
16 Vinyl acetate	ND	50 µg/L	60 tert-Butylbenzene	ND	1.0 µg/L
17 2-Butanone (MEK)	ND	10 µg/L	61 1,2,4-Trimethylbenzene	ND	1.0 µg/L
18 Di-isopropyl Ether (DIPE)	ND	1.0 µg/L	62 sec-Butylbenzene	ND	1.0 µg/L
19 cis-1,2-Dichloroethene	ND	1.0 µg/L	63 1,3-Dichlorobenzene	ND	1.0 µg/L
20 Bromochloromethane	ND	1.0 µg/L	64 1,4-Dichlorobenzene	ND	1.0 µg/L
21 Chloroform	ND	1.0 µg/L	65 4-Isopropyltoluene	ND	1.0 µg/L
22 Ethyl Tertiary Butyl Ether (ETBE)	ND	1.0 µg/L	66 1,2-Dichlorobenzene	ND	1.0 µg/L
23 2,2-Dichloropropane	ND	1.0 µg/L	67 n-Butylbenzene	ND	1.0 µg/L
24 1,2-Dichloroethane	ND	0.50 µg/L	68 1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0 µg/L
25 1,1,1-Trichloroethane	ND	1.0 µg/L	69 1,2,4-Trichlorobenzene	ND	2.0 µg/L
26 1,1-Dichloropropene	ND	1.0 µg/L	70 Naphthalene	ND	10 µg/L
27 Carbon tetrachloride	ND	1.0 µg/L	71 1,2,3-Trichlorobenzene	ND	2.0 µg/L
28 Benzene	ND	0.50 µg/L	72 Surr: 1,2-Dichloroethane-d4	101	(70-130) %REC
29 Tertiary Amyl Methyl Ether (TAME)	ND	1.0 µg/L	73 Surr: Toluene-d8	100	(70-130) %REC
30 Dibromomethane	ND	1.0 µg/L	74 Surr: 4-Bromofluorobenzene	95	(70-130) %REC
31 1,2-Dichloropropane	ND	1.0 µg/L			
32 Trichloroethene	ND	1.0 µg/L			
33 Bromodichloromethane	ND	1.0 µg/L			
34 4-Methyl-2-pentanone (MIBK)	ND	10 µg/L			
35 cis-1,3-Dichloropropene	ND	0.50 µg/L			
36 trans-1,3-Dichloropropene	ND	0.50 µg/L			
37 1,1,2-Trichloroethane	ND	1.0 µg/L			
38 Toluene	ND	0.50 µg/L			
39 1,3-Dichloropropane	ND	1.0 µg/L			
40 2-Hexanone	ND	5.0 µg/L			
41 Dibromochloromethane	ND	1.0 µg/L			
42 1,2-Dibromoethane (EDB)	ND	2.0 µg/L			
43 Tetrachloroethene	ND	1.0 µg/L			
44 1,1,1,2-Tetrachloroethane	ND	1.0 µg/L			

ND = Not Detected

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ANALYTICAL REPORT

CH2M Hill
1000 Wilshire Boulevard
Los Angeles, CA 90017
Job: KMEP Norwalk

Attn: Daniel Jablonski
Phone: (213) 228-8271
Fax: (714) 424-2135

Alpha Analytical Number: CHH11113041-05A
Client I.D. Number: GMW-O-19

Sampled: 11/28/11 13:49
Received: 11/30/11
Extracted: 12/05/11
Analyzed: 12/05/11

Volatile Organics by GC/MS EPA Method SW8260B

Reporting			Reporting		
Compound	Concentration	Limit	Compound	Concentration	Limit
1 Dichlorodifluoromethane	ND	1.0 µg/L	45 Chlorobenzene	ND	1.0 µg/L
2 Chloromethane	ND	2.0 µg/L	46 Ethylbenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	47 m,p-Xylene	ND	0.50 µg/L
4 Chloroethane	ND	1.0 µg/L	48 Bromoform	ND	1.0 µg/L
5 Bromomethane	ND	2.0 µg/L	49 Xylenes, Total	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	10 µg/L	50 Styrene	ND	1.0 µg/L
7 Acetone	ND	10 µg/L	51 o-Xylene	ND	0.50 µg/L
8 1,1-Dichloroethene	ND	1.0 µg/L	52 1,1,2,2-Tetrachloroethane	ND	1.0 µg/L
9 Tertiary Butyl Alcohol (TBA)	ND	10 µg/L	53 1,2,3-Trichloropropane	ND	2.0 µg/L
10 Dichloromethane	ND	5.0 µg/L	54 Isopropylbenzene	ND	1.0 µg/L
11 Freon-113	ND	10 µg/L	55 Bromobenzene	ND	1.0 µg/L
12 Carbon disulfide	ND	2.5 µg/L	56 n-Propylbenzene	ND	1.0 µg/L
13 trans-1,2-Dichloroethene	ND	1.0 µg/L	57 4-Chlorotoluene	ND	1.0 µg/L
14 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	58 2-Chlorotoluene	ND	1.0 µg/L
15 1,1-Dichloroethane	ND	1.0 µg/L	59 1,3,5-Trimethylbenzene	ND	1.0 µg/L
16 Vinyl acetate	ND	50 µg/L	60 tert-Butylbenzene	ND	1.0 µg/L
17 2-Butanone (MEK)	ND	10 µg/L	61 1,2,4-Trimethylbenzene	ND	1.0 µg/L
18 Di-isopropyl Ether (DIPE)	ND	1.0 µg/L	62 sec-Butylbenzene	ND	1.0 µg/L
19 cis-1,2-Dichloroethene	ND	1.0 µg/L	63 1,3-Dichlorobenzene	ND	1.0 µg/L
20 Bromochloromethane	ND	1.0 µg/L	64 1,4-Dichlorobenzene	ND	1.0 µg/L
21 Chloroform	ND	1.0 µg/L	65 4-Isopropyltoluene	ND	1.0 µg/L
22 Ethyl Tertiary Butyl Ether (ETBE)	ND	1.0 µg/L	66 1,2-Dichlorobenzene	ND	1.0 µg/L
23 2,2-Dichloropropane	ND	1.0 µg/L	67 n-Butylbenzene	ND	1.0 µg/L
24 1,2-Dichloroethane	ND	0.50 µg/L	68 1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0 µg/L
25 1,1,1-Trichloroethane	ND	1.0 µg/L	69 1,2,4-Trichlorobenzene	ND	2.0 µg/L
26 1,1-Dichloropropene	ND	1.0 µg/L	70 Naphthalene	ND	10 µg/L
27 Carbon tetrachloride	ND	1.0 µg/L	71 1,2,3-Trichlorobenzene	ND	2.0 µg/L
28 Benzene	ND	0.50 µg/L	72 Surr: 1,2-Dichloroethane-d4	85	(70-130) %REC
29 Tertiary Amyl Methyl Ether (TAME)	ND	1.0 µg/L	73 Surr: Toluene-d8	109	(70-130) %REC
30 Dibromomethane	ND	1.0 µg/L	74 Surr: 4-Bromofluorobenzene	78	(70-130) %REC
31 1,2-Dichloropropane	ND	1.0 µg/L			
32 Trichloroethene	ND	1.0 µg/L			
33 Bromodichloromethane	ND	1.0 µg/L			
34 4-Methyl-2-pentanone (MIBK)	ND	1.0 µg/L			
35 cis-1,3-Dichloropropene	ND	0.50 µg/L			
36 trans-1,3-Dichloropropene	ND	0.50 µg/L			
37 1,1,2-Trichloroethane	ND	1.0 µg/L			
38 Toluene	ND	0.50 µg/L			
39 1,3-Dichloropropane	ND	1.0 µg/L			
40 2-Hexanone	ND	5.0 µg/L			
41 Dibromochloromethane	ND	1.0 µg/L			
42 1,2-Dibromoethane (EDB)	ND	2.0 µg/L			
43 Tetrachloroethene	ND	1.0 µg/L			
44 1,1,1,2-Tetrachloroethane	ND	1.0 µg/L			

ND = Not Detected

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Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ANALYTICAL REPORT

CH2M Hill
1000 Wilshire Boulevard
Los Angeles, CA 90017
Job: KMEP Norwalk

Attn: Daniel Jablonski
Phone: (213) 228-8271
Fax: (714) 424-2135

Alpha Analytical Number: CHH11113041-06A
Client I.D. Number: PZ-5

Sampled: 11/28/11 15:13
Received: 11/30/11
Extracted: 12/05/11
Analyzed: 12/05/11

Volatile Organics by GC/MS EPA Method SW8260B

Reporting			Reporting		
Compound	Concentration	Limit	Compound	Concentration	Limit
1 Dichlorodifluoromethane	ND	20 µg/L	45 Chlorobenzene	ND	20 µg/L
2 Chloromethane	ND	80 µg/L	46 Ethylbenzene	150	10 µg/L
3 Vinyl chloride	ND	20 µg/L	47 m,p-Xylene	12	10 µg/L
4 Chloroethane	ND	20 µg/L	48 Bromoform	ND	20 µg/L
5 Bromomethane	ND	80 µg/L	49 Xylenes, Total	140	10 µg/L
6 Trichlorofluoromethane	ND	20 µg/L	50 Styrene	ND	20 µg/L
7 Acetone	ND	400 µg/L	51 o-Xylene	130	10 µg/L
8 1,1-Dichloroethene	ND	20 µg/L	52 1,1,2,2-Tetrachloroethane	ND	20 µg/L
9 Tertiary Butyl Alcohol (TBA)	61,000	2,000 µg/L	53 1,2,3-Trichloropropane	ND	80 µg/L
10 Dichloromethane	ND	80 µg/L	54 Isopropylbenzene	ND	20 µg/L
11 Freon-113	ND	20 µg/L	55 Bromobenzene	ND	20 µg/L
12 Carbon disulfide	ND	100 µg/L	56 n-Propylbenzene	ND	20 µg/L
13 trans-1,2-Dichloroethene	ND	20 µg/L	57 4-Chlorotoluene	ND	20 µg/L
14 Methyl tert-butyl ether (MTBE)	220	10 µg/L	58 2-Chlorotoluene	ND	20 µg/L
15 1,1-Dichloroethane	ND	20 µg/L	59 1,3,5-Trimethylbenzene	ND	20 µg/L
16 Vinyl acetate	ND	2,000 µg/L	60 tert-Butylbenzene	ND	20 µg/L
17 2-Butanone (MEK)	ND	400 µg/L	61 1,2,4-Trimethylbenzene	28	20 µg/L
18 Di-isopropyl Ether (DIPE)	ND	20 µg/L	62 sec-Butylbenzene	ND	20 µg/L
19 cis-1,2-Dichloroethene	ND	20 µg/L	63 1,3-Dichlorobenzene	ND	20 µg/L
20 Bromochloromethane	ND	20 µg/L	64 1,4-Dichlorobenzene	ND	20 µg/L
21 Chloroform	ND	20 µg/L	65 4-Isopropyltoluene	ND	20 µg/L
22 Ethyl Tertiary Butyl Ether (ETBE)	ND	20 µg/L	66 1,2-Dichlorobenzene	ND	20 µg/L
23 2,2-Dichloropropane	ND	20 µg/L	67 n-Butylbenzene	ND	20 µg/L
24 1,2-Dichloroethane	ND	20 µg/L	68 1,2-Dibromo-3-chloropropane (DBCP)	ND	120 µg/L
25 1,1,1-Trichloroethane	ND	20 µg/L	69 1,2,4-Trichlorobenzene	ND	80 µg/L
26 1,1-Dichloropropene	ND	20 µg/L	70 Naphthalene	ND	80 µg/L
27 Carbon tetrachloride	ND	20 µg/L	71 1,2,3-Trichlorobenzene	ND	80 µg/L
28 Benzene	1,700	10 µg/L	72 Surr: 1,2-Dichloroethane-d4	102	(70-130) %REC
29 Tertiary Amyl Methyl Ether (TAME)	ND	20 µg/L	73 Surr: Toluene-d8	100	(70-130) %REC
30 Dibromomethane	ND	20 µg/L	74 Surr: 4-Bromofluorobenzene	95	(70-130) %REC
31 1,2-Dichloropropane	ND	20 µg/L			
32 Trichloroethene	ND	20 µg/L			
33 Bromodichloromethane	ND	20 µg/L			
34 4-Methyl-2-pentanone (MIBK)	ND	100 µg/L			
35 cis-1,3-Dichloropropene	ND	20 µg/L			
36 trans-1,3-Dichloropropene	ND	20 µg/L			
37 1,1,2-Trichloroethane	ND	20 µg/L			
38 Toluene	18	10 µg/L			
39 1,3-Dichloropropane	ND	20 µg/L			
40 2-Hexanone	ND	200 µg/L			
41 Dibromochloromethane	ND	20 µg/L			
42 1,2-Dibromoethane (EDB)	ND	40 µg/L			
43 Tetrachloroethene	ND	20 µg/L			
44 1,1,1,2-Tetrachloroethane	ND	20 µg/L			

Reporting Limits were increased due to high concentrations of target analytes.

*This analyte was analyzed separately in order to achieve lower reporting limits for the other analytes.

ND = Not Detected

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Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ANALYTICAL REPORT

CH2M Hill
1000 Wilshire Boulevard
Los Angeles, CA 90017
Job: KMEP Norwalk

Attn: Daniel Jablonski
Phone: (213) 228-8271
Fax: (714) 424-2135

Alpha Analytical Number: CHH11113041-07A
Client I.D. Number: DUP-1

Sampled: 11/28/11 00:00
Received: 11/30/11
Extracted: 12/05/11
Analyzed: 12/05/11

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	20 µg/L	45 Chlorobenzene	ND	20 µg/L
2 Chloromethane	ND	80 µg/L	46 Ethylbenzene	150	10 µg/L
3 Vinyl chloride	ND	20 µg/L	47 m,p-Xylene	13	10 µg/L
4 Chloroethane	ND	20 µg/L	48 Bromoform	ND	20 µg/L
5 Bromomethane	ND	80 µg/L	49 Xylenes, Total	150	10 µg/L
6 Trichlorofluoromethane	ND	20 µg/L	50 Styrene	ND	20 µg/L
7 Acetone	ND	400 µg/L	51 o-Xylene	130	10 µg/L
8 1,1-Dichloroethene	ND	20 µg/L	52 1,1,2,2-Tetrachloroethane	ND	20 µg/L
9 Tertiary Butyl Alcohol (TBA)	54,000	2,000 µg/L	53 1,2,3-Trichloropropane	ND	80 µg/L
10 Dichloromethane	ND	80 µg/L	54 Isopropylbenzene	ND	20 µg/L
11 Freon-113	ND	20 µg/L	55 Bromobenzene	ND	20 µg/L
12 Carbon disulfide	ND	100 µg/L	56 n-Propylbenzene	ND	20 µg/L
13 trans-1,2-Dichloroethene	ND	20 µg/L	57 4-Chlorotoluene	ND	20 µg/L
14 Methyl tert-butyl ether (MTBE)	220	10 µg/L	58 2-Chlorotoluene	ND	20 µg/L
15 1,1-Dichloroethane	ND	20 µg/L	59 1,3,5-Trimethylbenzene	ND	20 µg/L
16 Vinyl acetate	ND	2,000 µg/L	60 tert-Butylbenzene	ND	20 µg/L
17 2-Butanone (MEK)	ND	400 µg/L	61 1,2,4-Trimethylbenzene	28	20 µg/L
18 Di-isopropyl Ether (DIPE)	ND	20 µg/L	62 sec-Butylbenzene	ND	20 µg/L
19 cis-1,2-Dichloroethene	ND	20 µg/L	63 1,3-Dichlorobenzene	ND	20 µg/L
20 Bromochloromethane	ND	20 µg/L	64 1,4-Dichlorobenzene	ND	20 µg/L
21 Chloroform	ND	20 µg/L	65 4-Isopropyltoluene	ND	20 µg/L
22 Ethyl Tertiary Butyl Ether (ETBE)	ND	20 µg/L	66 1,2-Dichlorobenzene	ND	20 µg/L
23 2,2-Dichloropropane	ND	20 µg/L	67 n-Butylbenzene	ND	20 µg/L
24 1,2-Dichloroethane	ND	20 µg/L	68 1,2-Dibromo-3-chloropropane (DBCP)	ND	120 µg/L
25 1,1,1-Trichloroethane	ND	20 µg/L	69 1,2,4-Trichlorobenzene	ND	80 µg/L
26 1,1-Dichloropropene	ND	20 µg/L	70 Naphthalene	ND	80 µg/L
27 Carbon tetrachloride	ND	20 µg/L	71 1,2,3-Trichlorobenzene	ND	80 µg/L
28 Benzene	1,700	10 µg/L	72 Surr: 1,2-Dichloroethane-d4	100	(70-130) %REC
29 Tertiary Amyl Methyl Ether (TAME)	ND	20 µg/L	73 Surr: Toluene-d8	101	(70-130) %REC
30 Dibromomethane	ND	20 µg/L	74 Surr: 4-Bromofluorobenzene	95	(70-130) %REC
31 1,2-Dichloropropane	ND	20 µg/L			
32 Trichloroethene	ND	20 µg/L			
33 Bromodichloromethane	ND	20 µg/L			
34 4-Methyl-2-pentanone (MIBK)	ND	100 µg/L			
35 cis-1,3-Dichloropropene	ND	20 µg/L			
36 trans-1,3-Dichloropropene	ND	20 µg/L			
37 1,1,2-Trichloroethane	ND	20 µg/L			
38 Toluene	19	10 µg/L			
39 1,3-Dichloropropane	ND	20 µg/L			
40 2-Hexanone	ND	200 µg/L			
41 Dibromochloromethane	ND	20 µg/L			
42 1,2-Dibromoethane (EDB)	ND	40 µg/L			
43 Tetrachloroethene	ND	20 µg/L			
44 1,1,1,2-Tetrachloroethane	ND	20 µg/L			

Reporting Limits were increased due to high concentrations of target analytes.

*This analyte was analyzed separately in order to achieve lower reporting limits for the other analytes.

ND = Not Detected

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12/8/11

Report Date

Page 1 of 1



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

VOC Sample Preservation Report

Work Order: CHH11113041

Job: KMEP Norwalk

Alpha's Sample ID	Client's Sample ID	Matrix	pH
11113041-01A	TB-1	Aqueous	2
11113041-02A	EB-1	Aqueous	2
11113041-04A	GMW-O-16	Aqueous	2
11113041-05A	GMW-O-19	Aqueous	2
11113041-06A	PZ-5	Aqueous	6
11113041-07A	DUP-1	Aqueous	6

12/8/11
Report Date

Page 1 of 1



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:
08-Dec-11

QC Summary Report

Work Order:
11113041

Method Blank

File ID: 1A12051106.D

Sample ID: MBLK-27835

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-E (Fuel Product)	ND	0.1								
Surr: Nonane	0.176		0.15		117	49	145			

Type: MBLK Test Code: EPA Method SW8015B/C Ext

Batch ID: 27835

Analysis Date: 12/05/2011 15:35

Run ID: FID_1_111205A

Prep Date: 12/05/2011 14:06

Laboratory Control Spike

File ID: 1A12051107.D

Sample ID: LCS-27835

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-E (DRO)	2.27	0.05	2.5		91	70	130			
Surr: Nonane	0.178		0.15		119	49	145			

Type: LCS Test Code: EPA Method SW8015B/C Ext

Batch ID: 27835

Analysis Date: 12/05/2011 16:01

Run ID: FID_1_111205A

Prep Date: 12/05/2011 14:06

Sample Matrix Spike

File ID: 1A12051112.D

Sample ID: 11120543-10AMS

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-E (DRO)	2.66	0.05	2.5	0.111	102	53	150			
Surr: Nonane	0.198		0.15		132	49	145			

Type: MS Test Code: EPA Method SW8015B/C Ext

Batch ID: 27835

Analysis Date: 12/05/2011 18:09

Run ID: FID_1_111205A

Prep Date: 12/05/2011 14:06

Sample Matrix Spike Duplicate

File ID: 1A12051113.D

Sample ID: 11120543-10AMSD

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-E (DRO)	2.25	0.05	2.5	0.111	86	53	150	2.655	16.5(47)	
Surr: Nonane	0.13		0.15		87	49	145			

Type: MSD Test Code: EPA Method SW8015B/C Ext

Batch ID: 27835

Analysis Date: 12/05/2011 18:35

Run ID: FID_1_111205A

Prep Date: 12/05/2011 14:06

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:
08-Dec-11

QC Summary Report

Work Order:
11113041

Method Blank

File ID: 11120507.D

Type: MBLK Test Code: EPA Method SW8015B/C

Batch ID: MS15W1205B

Analysis Date: 12/05/2011 11:24

Sample ID: MBLK MS15W1205B

Units : mg/L

Run ID: MSD_15_111205A

Prep Date: 12/05/2011 11:24

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	ND	0.05								
Surr: 1,2-Dichloroethane-d4	0.01		0.01		100	70	130			
Surr: Toluene-d8	0.0101		0.01		101	70	130			
Surr: 4-Bromofluorobenzene	0.00948		0.01		95	70	130			

Laboratory Control Spike

File ID: 11120504.D

Type: LCS Test Code: EPA Method SW8015B/C

Batch ID: MS15W1205B

Analysis Date: 12/05/2011 10:19

Sample ID: GLCS MS15W1205B

Units : mg/L

Run ID: MSD_15_111205A

Prep Date: 12/05/2011 10:19

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	0.396	0.05	0.4		99	70	130			
Surr: 1,2-Dichloroethane-d4	0.00993		0.01		99	70	130			
Surr: Toluene-d8	0.00975		0.01		98	70	130			
Surr: 4-Bromofluorobenzene	0.00958		0.01		96	70	130			

Sample Matrix Spike

File ID: 11120518.D

Type: MS Test Code: EPA Method SW8015B/C

Batch ID: MS15W1205B

Analysis Date: 12/05/2011 15:21

Sample ID: 11112920-44AGS

Units : mg/L

Run ID: MSD_15_111205A

Prep Date: 12/05/2011 15:21

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	2	0.25	2	0	99.9	51	144			
Surr: 1,2-Dichloroethane-d4	0.0497		0.05		99	70	130			
Surr: Toluene-d8	0.0485		0.05		97	70	130			
Surr: 4-Bromofluorobenzene	0.0486		0.05		97	70	130			

Sample Matrix Spike Duplicate

File ID: 11120519.D

Type: MSD Test Code: EPA Method SW8015B/C

Batch ID: MS15W1205B

Analysis Date: 12/05/2011 15:42

Sample ID: 11112920-44AGSD

Units : mg/L

Run ID: MSD_15_111205A

Prep Date: 12/05/2011 15:42

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	1.82	0.25	2	0	91	51	144	1.998	9.3(29)	
Surr: 1,2-Dichloroethane-d4	0.0494		0.05		99	70	130			
Surr: Toluene-d8	0.0498		0.05		99.6	70	130			
Surr: 4-Bromofluorobenzene	0.0478		0.05		96	70	130			

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



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Date:
08-Dec-11

QC Summary Report

Work Order:
11113041

n-Butylbenzene	ND	1							
1,2-Dibromo-3-chloropropane (DBCP)	ND	5							
1,2,4-Trichlorobenzene	ND	2							
Naphthalene	ND	10							
1,2,3-Trichlorobenzene	ND	2							
Xylenes, Total	ND	0.5							
Surr: 1,2-Dichloroethane-d4	10		10		100	70	130		
Surr: Toluene-d8	10.1		10		101	70	130		
Surr: 4-Bromofluorobenzene	9.48		10		95	70	130		

Laboratory Control Spike

Type: LCS Test Code: EPA Method SW8260B

File ID: 11120503.D

Batch ID: MS15W1205A

Analysis Date: 12/05/2011 09:58

Sample ID: LCS MS15W1205A

Units: µg/L

Run ID: MSD_15_111205A

Prep Date: 12/05/2011 09:58

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
1,1-Dichloroethene	9.87	1	10		99	80	120			
Methyl tert-butyl ether (MTBE)	10.7	0.5	10		107	65	140			
Benzene	10	0.5	10		100	70	130			
Trichloroethene	11.3	1	10		113	65	144			
Toluene	9.97	0.5	10		99.7	80	120			
Chlorobenzene	10.1	1	10		101	70	130			
Ethylbenzene	10.8	0.5	10		108	80	120			
m,p-Xylene	10.5	0.5	10		105	70	130			
o-Xylene	10.5	0.5	10		105	70	130			
Xylenes, Total	21	0.5	20		105	70	130			
Surr: 1,2-Dichloroethane-d4	11.1		10		111	70	130			
Surr: Toluene-d8	9.91		10		99	70	130			
Surr: 4-Bromofluorobenzene	10.6		10		106	70	130			

Sample Matrix Spike

Type: MS Test Code: EPA Method SW8260B

File ID: 11120516.D

Batch ID: MS15W1205A

Analysis Date: 12/05/2011 14:38

Sample ID: 11112920-44AMS

Units: µg/L

Run ID: MSD_15_111205A

Prep Date: 12/05/2011 14:38

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
1,1-Dichloroethene	44.9	2.5	50	0	90	64	130			
Methyl tert-butyl ether (MTBE)	52.9	1.3	50	71.47	-37	47	150			M2
Benzene	45.1	1.3	50	0	90	59	138			
Trichloroethene	49.4	2.5	50	0	99	65	144			
Toluene	44.6	1.3	50	0	89	68	130			
Chlorobenzene	44.8	2.5	50	0	90	70	130			
Ethylbenzene	47.6	1.3	50	0	95	68	130			
m,p-Xylene	46.1	1.3	50	0	92	68	131			
o-Xylene	46.5	1.3	50	0	93	70	130			
Xylenes, Total	92.6	1.3	100	0	93	70	130			
Surr: 1,2-Dichloroethane-d4	50		50		100	70	130			
Surr: Toluene-d8	50		50		99.9	70	130			
Surr: 4-Bromofluorobenzene	49.9		50		99.7	70	130			

Sample Matrix Spike Duplicate

Type: MSD Test Code: EPA Method SW8260B

File ID: 11120517.D

Batch ID: MS15W1205A

Analysis Date: 12/05/2011 14:59

Sample ID: 11112920-44AMSD

Units: µg/L

Run ID: MSD_15_111205A

Prep Date: 12/05/2011 14:59

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
1,1-Dichloroethene	45.3	2.5	50	0	91	64	130	44.87	0.9(21)	
Methyl tert-butyl ether (MTBE)	54.6	1.3	50	71.47	-34	47	150	52.91	3.2(40)	M2
Benzene	45.3	1.3	50	0	91	59	138	45.09	0.4(21)	
Trichloroethene	50.4	2.5	50	0	101	65	144	49.4	1.9(20)	
Toluene	44.9	1.3	50	0	90	68	130	44.55	0.7(20)	
Chlorobenzene	46.1	2.5	50	0	92	70	130	44.76	2.8(20)	
Ethylbenzene	48.6	1.3	50	0	97	68	130	47.64	1.9(20)	
m,p-Xylene	46.9	1.3	50	0	94	68	131	46.13	1.7(20)	
o-Xylene	47.4	1.3	50	0	95	70	130	46.49	1.9(20)	
Xylenes, Total	94.3	1.3	100	0	94	70	130	92.62	1.8(20)	
Surr: 1,2-Dichloroethane-d4	54.5		50		109	70	130			
Surr: Toluene-d8	49.3		50		99	70	130			
Surr: 4-Bromofluorobenzene	50		50		100	70	130			



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:
08-Dec-11

QC Summary Report

Work Order:
11113041

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

M2 = Matrix spike recovery was low, the method control sample recovery was acceptable.

Billing Information :

CHAIN-OF-CUSTODY RECORD

AMENDED

Alpha Analytical, Inc.

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778
TEL: (775) 355-1044 FAX: (775) 355-0406

CA

WorkOrder : CHHL11113041

Report Due By : 5:00 PM On : 09-Dec-11

Client: CH2M Hill
1000 Wilshire Boulevard
21st Floor
Los Angeles, CA 90017

Report Attention: Daniel Jablonski
Phone Number: (213) 228-8271 x
Email Address: daniel.jablonski@ch2m.com
Matthew Mayry (213) 228-8271 x
matthew.mayry@ch2m.com

EDD Required : Yes

Sampled by : M.H.

PO : Client's COC # : none
QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD With Surrogates

Job : KMEP Norwalk
Requested Tests: VOC_w
Cooler Temp: 1 °C
Samples Received: 30-Nov-11
Date Printed: 05-Dec-11

Alpha Sample ID	Client Sample ID	Collection Date	No. of Bottles	Alpha Sub	TAT	HOLD	TPHE(0.10) +Vmyl acetate	TPHP(0.10) +Vmyl acetate	TPHE(0.10) +Vmyl acetate	VOC_w	Sample Remarks
CHH11113041-01A	TB-1	11/28/11 13:00	2	0	7		TPHE(0.10) +Vmyl acetate	TPHP(0.10) +Vmyl acetate	TPHE(0.10) +Vmyl acetate		
CHH11113041-02A	EB-1	11/28/11 15:30	6	0	7		TPHE(0.10) +Vmyl acetate	TPHP(0.10) +Vmyl acetate	TPHE(0.10) +Vmyl acetate		
CHH11113041-03A	EXP-5	11/28/11 13:07	6	0	7	Hold					
CHH11113041-04A	GMW-O-16	11/28/11 14:16	6	0	7		TPHE(0.10) +Vmyl acetate	TPHP(0.10) +Vmyl acetate	TPHE(0.10) +Vmyl acetate		
CHH11113041-05A	GMW-O-19	11/28/11 13:49	6	0	7		TPHE(0.10) +Vmyl acetate	TPHP(0.10) +Vmyl acetate	TPHE(0.10) +Vmyl acetate		
CHH11113041-06A	PZ-5	11/28/11 15:13	6	0	7		TPHE(0.10) +Vmyl acetate	TPHP(0.10) +Vmyl acetate	TPHE(0.10) +Vmyl acetate		
CHH11113041-07A	DUP-1	11/28/11 00:00	6	0	7		TPHE(0.10) +Vmyl acetate	TPHP(0.10) +Vmyl acetate	TPHE(0.10) +Vmyl acetate		

Comments: Security seals intact. Frozen Ice. Analysts: Run two analyses in order to achieve lower reporting limits for all other analytes due to high TBA values. Amended 12/5/11 @ 9:34 to place sample-03A on hold, per phone conversation with Cody, SC.

Logged in by:

Signature

Print Name

Company

Date/Time

Alpha Analytical, Inc.

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

The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report. Matrix Type: AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

CHAIN-OF-CUSTODY RECORD

CA

Alpha Analytical, Inc.
 255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778
 TEL: (775) 355-1044 FAX: (775) 355-0406

WorkOrder : CHH11113041
Report Due By : 5:00 PM On : 09-Dec-11

Client: CH2M Hill
 1000 Wilshire Boulevard
 21st Floor
 Los Angeles, CA 90017

Report Attention: Daniel Jablonski
 Phone Number: (213) 228-8271 x
 Email Address: danieljablonski@ch2m.com
 Matthew Mayry (213) 228-8271 x
 matthew.mayry@ch2m.com

EDD Required : Yes

Sampled by : M.H.

Client's COC # : none

Job : KMEP Norwalk

Cooler Temp : 1 °C

Samples Received : 30-Nov-11

Date Printed : 30-Nov-11

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD with Surrogates

Alpha Sample ID	Client Sample ID	Collection Date	No. of Bottles	Alpha	Sub	TAT	TPHE_W	TPHP_W	VOC_W	Requested Tests	Sample Remarks
CHH11113041-01A	TB-1	AQ 11/28/11 13:00	2	0	0	7	TPHE0.10 +Vinyl acetate	TPHE0.10 +Vinyl acetate	TPHE0.10 +Vinyl acetate		
CHH11113041-02A	EB-1	AQ 11/28/11 15:30	6	0	0	7	TPHE0.10 +Vinyl acetate	TPHE0.10 +Vinyl acetate	TPHE0.10 +Vinyl acetate		
CHH11113041-03A	EXP-5	AQ 11/28/11 13:07	6	0	0	7	TPHE0.10 +Vinyl acetate	TPHE0.10 +Vinyl acetate	TPHE0.10 +Vinyl acetate		
CHH11113041-04A	GMW-Q-16	AQ 11/28/11 14:16	6	0	0	7	TPHE0.10 +Vinyl acetate	TPHE0.10 +Vinyl acetate	TPHE0.10 +Vinyl acetate		
CHH11113041-05A	GMW-Q-19	AQ 11/28/11 13:49	6	0	0	7	TPHE0.10 +Vinyl acetate	TPHE0.10 +Vinyl acetate	TPHE0.10 +Vinyl acetate		
CHH11113041-06A	PZ-5	AQ 11/28/11 15:13	6	0	0	7	TPHE0.10 +Vinyl acetate	TPHE0.10 +Vinyl acetate	TPHE0.10 +Vinyl acetate		
CHH11113041-07A	DUP-1	AQ 11/28/11 00:00	6	0	0	7	TPHE0.10 +Vinyl acetate	TPHE0.10 +Vinyl acetate	TPHE0.10 +Vinyl acetate		

Comments: Security seals intact. Frozen Ice. Analysis: Run two analyses in order to achieve lower reporting limits for all other analytes due to high TBA values. .

Logged in by: Denise Luffe Sara Lotfee Signature Print Name
 Alpha Analytical, Inc. Company
 11/30/11 12:31 Date/Time

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.
 The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report.
 Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

BLAINE

TECH SERVICES, INC.

1680 ROGERS AVENUE
 SAN JOSE, CALIFORNIA 95112-1105
 FAX (408) 573-7771
 PHONE (408) 573-0555

CHAIN OF CUSTODY

CLIENT: Kinder Morgan
 SITE: DFSP Norwalk
 15306 Norwalk Blvd, Norwalk

CONDUCT ANALYSIS TO DETECT

TPHg, TPHfp (EPA 8015M)
 VOC's & Oxygenates (EPA 8260B)

LAB: Alpha Analytical COC of

Billing Information:
 Kinder Morgan
 1100 Town and Country Rd.
 Orange CA 95112
 Kinder Morgan Norwalk
 Report to:
 Dan Jablonski
 CH2MHILL
 1000 Wilshire Blvd 21st floor
 Los Angeles, CA 90017

SAMPLE I.D.	DATE	TIME	MATRIX A = Air W = Water	#	CONTAINERS		RESULTS NEEDED NO LATER THAN	STATUS	CONDITION	LAB SAMPLE #
					Preservation	Type				
761	11/8/11	1300	Air	2	Blue	VO2				CH11113041-01
751		1530								-02
6905		1300								-03
6MWC14		1416								-04
6MWC19		1319								-05
P25		1513								-06
D2P-1										-07

SAMPLING COMPLETED: 11/8/11 11:00
 TIME: 11:40
 RECEIVED BY: [Signature]
 DATE: 11/28/11
 TIME: 12:30

RELEASED BY: [Signature]
 TIME: 12:30
 RECEIVED BY: [Signature]
 DATE: 11/29/11
 TIME: 12:30

RELEASED BY: [Signature]
 TIME: 12:30
 RECEIVED BY: [Signature]
 DATE: 11/30/11
 TIME: 12:28

SHIPPED VIA: [Signature]
 TIME SENT: [Signature]
 COOLER #: [Signature]



Alpha Analytical, Inc.

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ANALYTICAL REPORT

CH2M Hill
1000 Wilshire Boulevard
Los Angeles, CA 90017

Attn: Daniel Jablonski
Phone: (213) 228-8271
Fax: (714) 424-2135
Date Received : 11/30/11

Job: KMEP Norwalk

Total Petroleum Hydrocarbons - Extractable (TPH-E) EPA Method SW8015B
Total Petroleum Hydrocarbons - Purgeable (TPH-P) EPA Method SW8015B

	Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID :	GMW-O-18				
Lab ID :	CHH11113044-01A	TPH-E (Fuel Product)	150 *	10 mg/L	12/05/11
Date Sampled	11/23/11 12:58	Surr: Nonane	0 S50	(49-145) %REC	12/05/11
		TPH-P (GRO)	25	2.0 mg/L	12/05/11
		Surr: 1,2-Dichloroethane-d4	106	(70-130) %REC	12/05/11
		Surr: Toluene-d8	98	(70-130) %REC	12/05/11
		Surr: 4-Bromofluorobenzene	101	(70-130) %REC	12/05/11
Client ID :	GMW-36				
Lab ID :	CHH11113044-02A	TPH-E (Fuel Product)	34 *	1.0 mg/L	12/05/11
Date Sampled	11/23/11 12:15	Surr: Nonane	144	(49-145) %REC	12/05/11
		TPH-P (GRO)	0.63	0.50 mg/L	12/05/11
		Surr: 1,2-Dichloroethane-d4	103	(70-130) %REC	12/05/11
		Surr: Toluene-d8	100	(70-130) %REC	12/05/11
		Surr: 4-Bromofluorobenzene	94	(70-130) %REC	12/05/11

*Note: Reported TPH-E (Fuel Product) is composed primarily of diesel range hydrocarbons.

Gasoline Range Organics (GRO) C4-C13

S50 = The analysis of the sample required a dilution such that the surrogate concentration was diluted below the laboratory acceptance criteria. The laboratory control sample was acceptable.

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

Statement of Data Authenticity : Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.

12/8/11

Report Date



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ANALYTICAL REPORT

CH2M Hill
1000 Wilshire Boulevard
Los Angeles, CA 90017
Job: KMEP Norwalk

Attn: Daniel Jablonski
Phone: (213) 228-8271
Fax: (714) 424-2135

Alpha Analytical Number: CHH11113044-01A
Client I.D. Number: GMW-O-18

Sampled: 11/23/11 12:58
Received: 11/30/11
Extracted: 12/05/11
Analyzed: 12/05/11

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	20 µg/L	45 Chlorobenzene	ND	20 µg/L
2 Chloromethane	ND	80 µg/L	46 Ethylbenzene	51	10 µg/L
3 Vinyl chloride	ND	20 µg/L	47 m,p-Xylene	ND	10 µg/L
4 Chloroethane	ND	20 µg/L	48 Bromoform	ND	20 µg/L
5 Bromomethane	ND	80 µg/L	49 Xylenes, Total	ND	10 µg/L
6 Trichlorofluoromethane	ND	20 µg/L	50 Styrene	ND	20 µg/L
7 Acetone	ND	400 µg/L	51 o-Xylene	ND	10 µg/L
8 1,1-Dichloroethene	ND	20 µg/L	52 1,1,2,2-Tetrachloroethane	ND	20 µg/L
9 Tertiary Butyl Alcohol (TBA)	6,000	200 µg/L	53 1,2,3-Trichloropropane	ND	80 µg/L
10 Dichloromethane	ND	80 µg/L	54 Isopropylbenzene	ND	20 µg/L
11 Freon-113	ND	20 µg/L	55 Bromobenzene	ND	20 µg/L
12 Carbon disulfide	ND	100 µg/L	56 n-Propylbenzene	33	20 µg/L
13 trans-1,2-Dichloroethene	ND	20 µg/L	57 4-Chlorotoluene	ND	20 µg/L
14 Methyl tert-butyl ether (MTBE)	310	10 µg/L	58 2-Chlorotoluene	ND	20 µg/L
15 1,1-Dichloroethane	ND	20 µg/L	59 1,3,5-Trimethylbenzene	ND	20 µg/L
16 Vinyl acetate	ND	2,000 µg/L	60 tert-Butylbenzene	ND	20 µg/L
17 2-Butanone (MEK)	ND	400 µg/L	61 1,2,4-Trimethylbenzene	ND	20 µg/L
18 Di-isopropyl Ether (DIPE)	ND	20 µg/L	62 sec-Butylbenzene	27	20 µg/L
19 cis-1,2-Dichloroethene	ND	20 µg/L	63 1,3-Dichlorobenzene	ND	20 µg/L
20 Bromochloromethane	ND	20 µg/L	64 1,4-Dichlorobenzene	ND	20 µg/L
21 Chloroform	ND	20 µg/L	65 4-Isopropyltoluene	23	20 µg/L
22 Ethyl Tertiary Butyl Ether (ETBE)	ND	20 µg/L	66 1,2-Dichlorobenzene	ND	20 µg/L
23 2,2-Dichloropropane	ND	20 µg/L	67 n-Butylbenzene	39	20 µg/L
24 1,2-Dichloroethane	ND	20 µg/L	68 1,2-Dibromo-3-chloropropane (DBCP)	ND	120 µg/L
25 1,1,1-Trichloroethane	ND	20 µg/L	69 1,2,4-Trichlorobenzene	ND	80 µg/L
26 1,1-Dichloropropene	ND	20 µg/L	70 Naphthalene	ND	80 µg/L
27 Carbon tetrachloride	ND	20 µg/L	71 1,2,3-Trichlorobenzene	ND	80 µg/L
28 Benzene	65	10 µg/L	72 Surr: 1,2-Dichloroethane-d4	106	(70-130) %REC
29 Tertiary Amyl Methyl Ether (TAME)	22	20 µg/L	73 Surr: Toluene-d8	98	(70-130) %REC
30 Dibromomethane	ND	20 µg/L	74 Surr: 4-Bromofluorobenzene	101	(70-130) %REC
31 1,2-Dichloropropane	ND	20 µg/L			
32 Trichloroethene	ND	20 µg/L			
33 Bromodichloromethane	ND	20 µg/L			
34 4-Methyl-2-pentanone (MIBK)	ND	100 µg/L			
35 cis-1,3-Dichloropropene	ND	20 µg/L			
36 trans-1,3-Dichloropropene	ND	20 µg/L			
37 1,1,2-Trichloroethane	ND	20 µg/L			
38 Toluene	ND	10 µg/L			
39 1,3-Dichloropropane	ND	20 µg/L			
40 2-Hexanone	ND	200 µg/L			
41 Dibromochloromethane	ND	20 µg/L			
42 1,2-Dibromoethane (EDB)	ND	40 µg/L			
43 Tetrachloroethene	ND	20 µg/L			
44 1,1,1,2-Tetrachloroethane	ND	20 µg/L			

Reporting Limits were increased due to high concentrations of target analytes.

ND = Not Detected

Roger Scholl

Randy Gardner

Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

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[Signature]

12/8/11

Report Date

Page 1 of 1



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ANALYTICAL REPORT

CH2M Hill
1000 Wilshire Boulevard
Los Angeles, CA 90017
Job: KMEP Norwalk

Attn: Daniel Jablonski
Phone: (213) 228-8271
Fax: (714) 424-2135

Alpha Analytical Number: CHH11113044-02A
Client I.D. Number: GMW-36

Sampled: 11/23/11 12:15
Received: 11/30/11
Extracted: 12/05/11
Analyzed: 12/05/11

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	5.0 µg/L	45 Chlorobenzene	ND	5.0 µg/L
2 Chloromethane	ND	20 µg/L	46 Ethylbenzene	ND	2.5 µg/L
3 Vinyl chloride	ND	5.0 µg/L	47 m,p-Xylene	10	2.5 µg/L
4 Chloroethane	ND	5.0 µg/L	48 Bromoform	ND	5.0 µg/L
5 Bromomethane	ND	20 µg/L	49 Xylenes, Total	14	2.5 µg/L
6 Trichlorofluoromethane	ND	10 µg/L	50 Styrene	ND	5.0 µg/L
7 Acetone	ND	100 µg/L	51 o-Xylene	3.8	2.5 µg/L
8 1,1-Dichloroethene	ND	5.0 µg/L	52 1,1,2,2-Tetrachloroethane	ND	5.0 µg/L
9 Tertiary Butyl Alcohol (TBA)	6,000	50 µg/L	53 1,2,3-Trichloropropane	ND	20 µg/L
10 Dichloromethane	ND	20 µg/L	54 Isopropylbenzene	ND	5.0 µg/L
11 Freon-113	ND	10 µg/L	55 Bromobenzene	ND	5.0 µg/L
12 Carbon disulfide	ND	25 µg/L	56 n-Propylbenzene	ND	5.0 µg/L
13 trans-1,2-Dichloroethene	ND	5.0 µg/L	57 4-Chlorotoluene	ND	5.0 µg/L
14 Methyl tert-butyl ether (MTBE)	110	2.5 µg/L	58 2-Chlorotoluene	ND	5.0 µg/L
15 1,1-Dichloroethane	ND	5.0 µg/L	59 1,3,5-Trimethylbenzene	ND	5.0 µg/L
16 Vinyl acetate	ND	500 µg/L	60 tert-Butylbenzene	ND	5.0 µg/L
17 2-Butanone (MEK)	ND	100 µg/L	61 1,2,4-Trimethylbenzene	ND	5.0 µg/L
18 Di-isopropyl Ether (DIPE)	ND	5.0 µg/L	62 sec-Butylbenzene	ND	5.0 µg/L
19 cis-1,2-Dichloroethene	ND	5.0 µg/L	63 1,3-Dichlorobenzene	ND	5.0 µg/L
20 Bromochloromethane	ND	5.0 µg/L	64 1,4-Dichlorobenzene	ND	5.0 µg/L
21 Chloroform	ND	5.0 µg/L	65 4-Isopropyltoluene	ND	5.0 µg/L
22 Ethyl Tertiary Butyl Ether (ETBE)	ND	5.0 µg/L	66 1,2-Dichlorobenzene	ND	5.0 µg/L
23 2,2-Dichloropropane	ND	5.0 µg/L	67 n-Butylbenzene	ND	5.0 µg/L
24 1,2-Dichloroethane	ND	5.0 µg/L	68 1,2-Dibromo-3-chloropropane (DBCP)	ND	30 µg/L
25 1,1,1-Trichloroethane	ND	5.0 µg/L	69 1,2,4-Trichlorobenzene	ND	20 µg/L
26 1,1-Dichloropropene	ND	5.0 µg/L	70 Naphthalene	ND	20 µg/L
27 Carbon tetrachloride	ND	5.0 µg/L	71 1,2,3-Trichlorobenzene	ND	20 µg/L
28 Benzene	17	2.5 µg/L	72 Surr: 1,2-Dichloroethane-d4	103	(70-130) %REC
29 Tertiary Amyl Methyl Ether (TAME)	ND	5.0 µg/L	73 Surr: Toluene-d8	100	(70-130) %REC
30 Dibromomethane	ND	5.0 µg/L	74 Surr: 4-Bromofluorobenzene	94	(70-130) %REC
31 1,2-Dichloropropane	ND	5.0 µg/L			
32 Trichloroethene	ND	5.0 µg/L			
33 Bromodichloromethane	ND	5.0 µg/L			
34 4-Methyl-2-pentanone (MIBK)	ND	25 µg/L			
35 cis-1,3-Dichloropropene	ND	5.0 µg/L			
36 trans-1,3-Dichloropropene	ND	5.0 µg/L			
37 1,1,2-Trichloroethane	ND	5.0 µg/L			
38 Toluene	ND	2.5 µg/L			
39 1,3-Dichloropropane	ND	5.0 µg/L			
40 2-Hexanone	ND	50 µg/L			
41 Dibromochloromethane	ND	5.0 µg/L			
42 1,2-Dibromoethane (EDB)	ND	10 µg/L			
43 Tetrachloroethene	ND	5.0 µg/L			
44 1,1,1,2-Tetrachloroethane	ND	5.0 µg/L			

Reporting Limits were increased due to high concentrations of target analytes.

ND = Not Detected

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JS

12/8/11

Report Date

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Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

VOC Sample Preservation Report

Work Order: CHH11113044

Job: KMEP Norwalk

Alpha's Sample ID	Client's Sample ID	Matrix	pH
11113044-01A	GMW-O-18	Aqueous	2
11113044-02A	GMW-36	Aqueous	2

12/8/11

Report Date

Page 1 of 1



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(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:
07-Dec-11

QC Summary Report

Work Order:
11113044

Method Blank

Type **MBLK** Test Code: **EPA Method SW8015B/C Ext**

File ID: **1A12051106.D**

Batch ID: **27835**

Analysis Date: **12/05/2011 15:35**

Sample ID: **MBLK-27835**

Units : **mg/L**

Run ID: **FID_1_111205A**

Prep Date: **12/05/2011 14:06**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-E (Fuel Product)	ND	0.1								
Surr: Nonane	0.176		0.15		117	49	145			

Laboratory Control Spike

Type **LCS** Test Code: **EPA Method SW8015B/C Ext**

File ID: **1A12051107.D**

Batch ID: **27835**

Analysis Date: **12/05/2011 16:01**

Sample ID: **LCS-27835**

Units : **mg/L**

Run ID: **FID_1_111205A**

Prep Date: **12/05/2011 14:06**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-E (DRO)	2.27	0.05	2.5		91	70	130			
Surr: Nonane	0.178		0.15		119	49	145			

Sample Matrix Spike

Type **MS** Test Code: **EPA Method SW8015B/C Ext**

File ID: **1A12051112.D**

Batch ID: **27835**

Analysis Date: **12/05/2011 18:09**

Sample ID: **11120543-10AMS**

Units : **mg/L**

Run ID: **FID_1_111205A**

Prep Date: **12/05/2011 14:06**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-E (DRO)	2.66	0.05	2.5	0.111	102	53	150			
Surr: Nonane	0.198		0.15		132	49	145			

Sample Matrix Spike Duplicate

Type **MSD** Test Code: **EPA Method SW8015B/C Ext**

File ID: **1A12051113.D**

Batch ID: **27835**

Analysis Date: **12/05/2011 18:35**

Sample ID: **11120543-10AMSD**

Units : **mg/L**

Run ID: **FID_1_111205A**

Prep Date: **12/05/2011 14:06**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-E (DRO)	2.25	0.05	2.5	0.111	86	53	150	2.655	16.5(47)	
Surr: Nonane	0.13		0.15		87	49	145			

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



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Date:
07-Dec-11

QC Summary Report

Work Order:
11113044

Method Blank

Method Blank		Type	Test Code: EPA Method SW8015B/C								
File ID: 11120507.D		MBLK	Batch ID: MS15W1205B			Analysis Date: 12/05/2011 11:24					
Sample ID:	MBLK MS15W1205B	Units : mg/L	Run ID: MSD_15_111205A			Prep Date: 12/05/2011 11:24					
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual	
TPH-P (GRO)	ND	0.05									
Surr: 1,2-Dichloroethane-d4	0.01		0.01		100	70	130				
Surr: Toluene-d8	0.0101		0.01		101	70	130				
Surr: 4-Bromofluorobenzene	0.00948		0.01		95	70	130				

Laboratory Control Spike

Laboratory Control Spike		Type	Test Code: EPA Method SW8015B/C								
File ID: 11120504.D		LCS	Batch ID: MS15W1205B			Analysis Date: 12/05/2011 10:19					
Sample ID:	GLCS MS15W1205B	Units : mg/L	Run ID: MSD_15_111205A			Prep Date: 12/05/2011 10:19					
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual	
TPH-P (GRO)	0.396	0.05	0.4		99	70	130				
TPH-P (Purgeable)	0.398	0.05	0.4		99	70	130				
Surr: 1,2-Dichloroethane-d4	0.00993		0.01		99	70	130				
Surr: Toluene-d8	0.00975		0.01		98	70	130				
Surr: 4-Bromofluorobenzene	0.00958		0.01		96	70	130				

Sample Matrix Spike

Sample Matrix Spike		Type	Test Code: EPA Method SW8015B/C								
File ID: 11120518.D		MS	Batch ID: MS15W1205B			Analysis Date: 12/05/2011 15:21					
Sample ID:	11112920-44AGS	Units : mg/L	Run ID: MSD_15_111205A			Prep Date: 12/05/2011 15:21					
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual	
TPH-P (GRO)	2	0.25	2		0 99.9	51	144				
TPH-P (Purgeable)	2.01	0.25	2		0 100	51	144				
Surr: 1,2-Dichloroethane-d4	0.0497		0.05		99	70	130				
Surr: Toluene-d8	0.0485		0.05		97	70	130				
Surr: 4-Bromofluorobenzene	0.0486		0.05		97	70	130				

Sample Matrix Spike Duplicate

Sample Matrix Spike Duplicate		Type	Test Code: EPA Method SW8015B/C								
File ID: 11120519.D		MSD	Batch ID: MS15W1205B			Analysis Date: 12/05/2011 15:42					
Sample ID:	11112920-44AGSD	Units : mg/L	Run ID: MSD_15_111205A			Prep Date: 12/05/2011 15:42					
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual	
TPH-P (GRO)	1.82	0.25	2		0 91	51	144	1.998	9.3(29)		
TPH-P (Purgeable)	1.83	0.25	2		0 91	51	144	2.009	9.4(29)		
Surr: 1,2-Dichloroethane-d4	0.0494		0.05		99	70	130				
Surr: Toluene-d8	0.0498		0.05		99.6	70	130				
Surr: 4-Bromofluorobenzene	0.0478		0.05		96	70	130				

Comments:

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Alpha Analytical, Inc.

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Date:
07-Dec-11

QC Summary Report

Work Order:
11113044

Method Blank

Type **MBLK** Test Code: **EPA Method SW8260B**

File ID: **11120507.D**

Batch ID: **MS15W1205A**

Analysis Date: **12/05/2011 11:24**

Sample ID: **MBLK MS15W1205A**

Units : **µg/L**

Run ID: **MSD_15_111205A**

Prep Date: **12/05/2011 11:24**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	ND		1							
Chloromethane	ND		2							
Vinyl chloride	ND	0.5								
Chloroethane	ND		1							
Bromomethane	ND		2							
Trichlorofluoromethane	ND		10							
Acetone	ND		10							
1,1-Dichloroethene	ND		1							
Tertiary Butyl Alcohol (TBA)	ND		10							
Dichloromethane	ND		5							
Freon-113	ND		10							
Carbon disulfide	ND	2.5								
trans-1,2-Dichloroethene	ND		1							
Methyl tert-butyl ether (MTBE)	ND	0.5								
1,1-Dichloroethane	ND		1							
Vinyl acetate	ND	50								
2-Butanone (MEK)	ND		10							
Di-isopropyl Ether (DIPE)	ND		1							
cis-1,2-Dichloroethene	ND		1							
Bromochloromethane	ND		1							
Chloroform	ND		1							
Ethyl Tertiary Butyl Ether (ETBE)	ND		1							
2,2-Dichloropropane	ND		1							
1,2-Dichloroethane	ND	0.5								
1,1,1-Trichloroethane	ND		1							
1,1-Dichloropropene	ND		1							
Carbon tetrachloride	ND		1							
Benzene	ND	0.5								
Tertiary Amyl Methyl Ether (TAME)	ND		1							
Dibromomethane	ND		1							
1,2-Dichloropropane	ND		1							
Trichloroethene	ND		1							
Bromodichloromethane	ND		1							
4-Methyl-2-pentanone (MIBK)	ND	10								
cis-1,3-Dichloropropene	ND	0.5								
trans-1,3-Dichloropropene	ND	0.5								
1,1,2-Trichloroethane	ND		1							
Toluene	ND	0.5								
1,3-Dichloropropane	ND		1							
2-Hexanone	ND	5								
Dibromochloromethane	ND		1							
1,2-Dibromoethane (EDB)	ND	2								
Tetrachloroethene	ND		1							
1,1,1,2-Tetrachloroethane	ND		1							
Chlorobenzene	ND		1							
Ethylbenzene	ND	0.5								
m,p-Xylene	ND	0.5								
Bromoform	ND		1							
Styrene	ND		1							
o-Xylene	ND	0.5								
1,1,2,2-Tetrachloroethane	ND		1							
1,2,3-Trichloropropane	ND	2								
Isopropylbenzene	ND		1							
Bromobenzene	ND		1							
n-Propylbenzene	ND		1							
4-Chlorotoluene	ND		1							
2-Chlorotoluene	ND		1							
1,3,5-Trimethylbenzene	ND		1							
tert-Butylbenzene	ND		1							
1,2,4-Trimethylbenzene	ND		1							
sec-Butylbenzene	ND		1							
1,3-Dichlorobenzene	ND		1							
1,4-Dichlorobenzene	ND		1							
4-Isopropyltoluene	ND		1							
1,2-Dichlorobenzene	ND		1							



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Date:

07-Dec-11

QC Summary Report

Work Order:

11113044

n-Butylbenzene	ND	1				
1,2-Dibromo-3-chloropropane (DBCP)	ND	5				
1,2,4-Trichlorobenzene	ND	2				
Naphthalene	ND	10				
1,2,3-Trichlorobenzene	ND	2				
Xylenes, Total	ND	0.5				
Surr: 1,2-Dichloroethane-d4	10		10	100	70	130
Surr: Toluene-d8	10.1		10	101	70	130
Surr: 4-Bromofluorobenzene	9.48		10	95	70	130



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Date:

07-Dec-11

QC Summary Report

Work Order:

11113044

Laboratory Control Spike

Type LCS Test Code: EPA Method SW8260B

File ID: 11120503.D

Batch ID: MS15W1205A

Analysis Date: 12/05/2011 09:58

Sample ID: LCS MS15W1205A

Units: µg/L

Run ID: MSD_15_111205A

Prep Date: 12/05/2011 09:58

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	9.96	1	10		99.6	37	137			
Chloromethane	9.89	2	10		99	43	140			
Vinyl chloride	9.11	1	10		91	80	120			
Chloroethane	12.2	1	10		122	43	141			
Bromomethane	8.78	2	10		88	11	160			
Trichlorofluoromethane	13.7	1	10		137	40	148			
Acetone	215	10	200		108	36	171			
1,1-Dichloroethene	9.87	1	10		99	80	120			
Tertiary Butyl Alcohol (TBA)	69.1	10	100		69	44	156			
Dichloromethane	9.66	2	10		97	69	130			
Freon-113	11.6	1	10		116	70	137			
trans-1,2-Dichloroethene	10.3	1	10		103	70	130			
Methyl tert-butyl ether (MTBE)	10.7	0.5	10		107	65	140			
1,1-Dichloroethane	10.6	1	10		106	70	130			
2-Butanone (MEK)	233	10	200		116	23	182			
Di-isopropyl Ether (DIPE)	9.87	1	10		99	70	130			
cis-1,2-Dichloroethene	10.4	1	10		104	70	130			
Bromochloromethane	11.4	1	10		114	70	132			
Chloroform	12	1	10		120	80	120			
Ethyl Tertiary Butyl Ether (ETBE)	10.2	1	10		102	65	139			
2,2-Dichloropropane	11.7	1	10		117	68	154			
1,2-Dichloroethane	12.7	1	10		127	70	132			
1,1,1-Trichloroethane	12.6	1	10		126	70	135			
1,1-Dichloropropene	11.5	1	10		115	70	130			
Carbon tetrachloride	12.5	1	10		125	61	148			
Benzene	10	0.5	10		100	70	130			
Tertiary Amyl Methyl Ether (TAME)	11.9	1	10		119	68	134			
Dibromomethane	11	1	10		110	70	130			
1,2-Dichloropropane	9.87	1	10		99	80	120			
Trichloroethene	11.3	1	10		113	65	144			
Bromodichloromethane	12.1	1	10		121	50	157			
4-Methyl-2-pentanone (MIBK)	26.5	2.5	25		106	20	182			
cis-1,3-Dichloropropene	10.6	1	10		106	70	131			
trans-1,3-Dichloropropene	10.3	1	10		103	70	136			
1,1,2-Trichloroethane	11.2	1	10		112	70	130			
Toluene	9.97	0.5	10		99.7	80	120			
1,3-Dichloropropane	10.5	1	10		105	70	130			
2-Hexanone	96.2	5	100		96	20	182			
Dibromochloromethane	10.5	1	10		105	42	155			
1,2-Dibromoethane (EDB)	21.9	2	20		109	70	130			
Tetrachloroethene	11.5	1	10		115	70	130			
1,1,1,2-Tetrachloroethane	11.9	1	10		119	70	130			
Chlorobenzene	10.1	1	10		101	70	130			
Ethylbenzene	10.8	0.5	10		108	80	120			
m,p-Xylene	10.5	0.5	10		105	70	130			
Bromoform	10.8	1	10		108	68	143			
Styrene	9.15	1	10		92	64	153			
o-Xylene	10.5	0.5	10		105	70	130			
1,1,2,2-Tetrachloroethane	9.98	1	10		99.8	70	130			
1,2,3-Trichloropropane	22.6	2	20		113	70	130			
Isopropylbenzene	10.5	1	10		105	68	138			
Bromobenzene	10.9	1	10		109	70	130			
n-Propylbenzene	10.2	1	10		102	70	133			
4-Chlorotoluene	10	1	10		100	70	130			
2-Chlorotoluene	10.2	1	10		102	70	130			
1,3,5-Trimethylbenzene	11.2	1	10		112	70	134			
tert-Butylbenzene	10.8	1	10		108	55	147			
1,2,4-Trimethylbenzene	11.1	1	10		111	70	134			
sec-Butylbenzene	10.4	1	10		104	70	135			
1,3-Dichlorobenzene	11	1	10		110	70	130			
1,4-Dichlorobenzene	9.94	1	10		99	70	130			
4-Isopropyltoluene	11.1	1	10		111	70	132			
1,2-Dichlorobenzene	10.1	1	10		101	70	130			
n-Butylbenzene	10.8	1	10		108	70	134			
1,2-Dibromo-3-chloropropane (DBCP)	50.2	3	50		100	67	130			



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:

07-Dec-11

QC Summary Report

Work Order:

11113044

1,2,4-Trichlorobenzene	10	2	10	100	67	132
Naphthalene	7.55	2	10	76	38	154
1,2,3-Trichlorobenzene	9.01	2	10	90	56	137
Xylenes, Total	21	0.5	20	105	70	130
Surr: 1,2-Dichloroethane-d4	11.1		10	111	70	130
Surr: Toluene-d8	9.91		10	99	70	130
Surr: 4-Bromofluorobenzene	10.6		10	106	70	130



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Date:
07-Dec-11

QC Summary Report

Work Order:
11113044

Sample Matrix Spike

Type **MS** Test Code: **EPA Method SW8260B**

File ID: **11120516.D**

Batch ID: **MS15W1205A**

Analysis Date: **12/05/2011 14:38**

Sample ID: **11112920-44AMS**

Units: **µg/L**

Run ID: **MSD_15_111205A**

Prep Date: **12/05/2011 14:38**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	41.5	2.5	50	0	83	21	138			
Chloromethane	45.5	10	50	0	91	23	144			
Vinyl chloride	42.6	2.5	50	0	85	49	136			
Chloroethane	54.4	2.5	50	0	109	21	159			
Bromomethane	38.4	10	50	0	77	10	174			
Trichlorofluoromethane	59.1	2.5	50	0	118	32	154			
Acetone	422	50	1000	0	42	10	171			
1,1-Dichloroethene	44.9	2.5	50	0	90	64	130			
Tertiary Butyl Alcohol (TBA)	367	25	500	0	73	41	157			
Dichloromethane	44.5	10	50	0	89	69	130			
Freon-113	52.4	2.5	50	0	105	55	141			
trans-1,2-Dichloroethene	46.6	2.5	50	0	93	63	130			
Methyl tert-butyl ether (MTBE)	52.9	1.3	50	71.47	-37	47	150			M2
1,1-Dichloroethane	47.9	2.5	50	0	96	66	130			
2-Butanone (MEK)	699	50	1000	0	70	23	182			
Di-isopropyl Ether (DIPE)	46.5	2.5	50	0	93	59	139			
cis-1,2-Dichloroethene	46.8	2.5	50	0	94	70	130			
Bromochloromethane	51.1	2.5	50	0	102	70	132			
Chloroform	53.2	2.5	50	0	106	70	130			
Ethyl Tertiary Butyl Ether (ETBE)	49	2.5	50	0	98	59	182			
2,2-Dichloropropane	49.6	2.5	50	0	99	38	154			
1,2-Dichloroethane	56.7	2.5	50	0	113	65	134			
1,1,1-Trichloroethane	54.8	2.5	50	0	110	65	136			
1,1-Dichloropropene	51.3	2.5	50	0	103	68	132			
Carbon tetrachloride	54.4	2.5	50	0	109	58	148			
Benzene	45.1	1.3	50	0	90	59	138			
Tertiary Amyl Methyl Ether (TAME)	55.2	2.5	50	0	110	63	135			
Dibromomethane	50.2	2.5	50	0	100	70	130			
1,2-Dichloropropane	44.6	2.5	50	0	89	70	131			
Trichloroethene	49.4	2.5	50	0	99	65	144			
Bromodichloromethane	52.7	2.5	50	0	105	50	157			
4-Methyl-2-pentanone (MIBK)	117	13	125	0	94	20	182			
cis-1,3-Dichloropropene	45.3	2.5	50	0	91	63	131			
trans-1,3-Dichloropropene	44.7	2.5	50	0	89	65	136			
1,1,2-Trichloroethane	50.8	2.5	50	0	102	70	131			
Toluene	44.6	1.3	50	0	89	68	130			
1,3-Dichloropropane	48.4	2.5	50	0	97	70	130			
2-Hexanone	305	25	500	0	61	20	182			
Dibromochloromethane	46.6	2.5	50	0	93	42	155			
1,2-Dibromoethane (EDB)	102	5	100	0	102	70	130			
Tetrachloroethene	50.5	2.5	50	0	101	65	130			
1,1,1,2-Tetrachloroethane	52.5	2.5	50	0	105	70	130			
Chlorobenzene	44.8	2.5	50	0	90	70	130			
Ethylbenzene	47.6	1.3	50	0	95	68	130			
m,p-Xylene	46.1	1.3	50	0	92	68	131			
Bromoform	47.9	2.5	50	0	96	65	143			
Styrene	40	2.5	50	0	80	59	153			
o-Xylene	46.5	1.3	50	0	93	70	130			
1,1,2,2-Tetrachloroethane	47.6	2.5	50	0	95	67	130			
1,2,3-Trichloropropane	107	10	100	0	107	70	130			
Isopropylbenzene	43.1	2.5	50	0	86	55	138			
Bromobenzene	45.4	2.5	50	0	91	70	130			
n-Propylbenzene	41.9	2.5	50	0	84	67	133			
4-Chlorotoluene	41.6	2.5	50	0	83	70	130			
2-Chlorotoluene	42.5	2.5	50	0	85	70	130			
1,3,5-Trimethylbenzene	46.2	2.5	50	0	92	67	134			
tert-Butylbenzene	45.3	2.5	50	0	91	55	147			
1,2,4-Trimethylbenzene	46.7	2.5	50	0	93	65	135			
sec-Butylbenzene	43.7	2.5	50	0	87	68	135			
1,3-Dichlorobenzene	46.5	2.5	50	0	93	70	130			
1,4-Dichlorobenzene	41.7	2.5	50	0	83	70	130			
4-Isopropyltoluene	46.3	2.5	50	0	93	68	132			
1,2-Dichlorobenzene	43.7	2.5	50	0	87	70	130			
n-Butylbenzene	44.9	2.5	50	0	90	62	134			
1,2-Dibromo-3-chloropropane (DBCP)	231	15	250	0	92	64	130			



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Date:
07-Dec-11

QC Summary Report

Work Order:
11113044

Sample Matrix Spike Duplicate

Type **MSD** Test Code: **EPA Method SW8260B**

File ID: **11120517.D**

Batch ID: **MS15W1205A**

Analysis Date: **12/05/2011 14:59**

Sample ID: **11112920-44AMSD**

Units : **µg/L**

Run ID: **MSD_15_111205A**

Prep Date: **12/05/2011 14:59**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	41	2.5	50	0	82	21	138	41.5	1.1(33)	
Chloromethane	48.8	10	50	0	98	23	144	45.51	7.1(27)	
Vinyl chloride	42.2	2.5	50	0	84	49	136	42.58	1.0(21)	
Chloroethane	54.7	2.5	50	0	109	21	159	54.38	0.6(40)	
Bromomethane	41.9	10	50	0	84	10	174	38.44	8.6(40)	
Trichlorofluoromethane	58.4	2.5	50	0	117	32	154	59.14	1.3(37)	
Acetone	455	50	1000	0	45	10	171	422	7.5(23)	
1,1-Dichloroethene	45.3	2.5	50	0	91	64	130	44.87	0.9(21)	
Tertiary Butyl Alcohol (TBA)	431	25	500	0	86	41	157	367.4	15.9(30)	
Dichloromethane	44.5	10	50	0	89	69	130	44.48	0.1(20)	
Freon-113	52.7	2.5	50	0	105	55	141	52.35	0.6(40)	
trans-1,2-Dichloroethene	47	2.5	50	0	94	63	130	46.57	0.8(20)	
Methyl tert-butyl ether (MTBE)	54.6	1.3	50	71.47	-34	47	150	52.91	3.2(40)	M2
1,1-Dichloroethane	47.9	2.5	50	0	96	66	130	47.94	0.2(20)	
2-Butanone (MEK)	762	50	1000	0	76	23	182	699	8.7(22)	
Di-isopropyl Ether (DIPE)	47.6	2.5	50	0	95	59	139	46.53	2.3(20)	
cis-1,2-Dichloroethene	47.4	2.5	50	0	95	70	130	46.77	1.3(20)	
Bromochloromethane	52.4	2.5	50	0	105	70	132	51.13	2.4(20)	
Chloroform	52.7	2.5	50	0	105	70	130	53.15	0.8(20)	
Ethyl Tertiary Butyl Ether (ETBE)	50.7	2.5	50	0	101	59	182	49.03	3.3(40)	
2,2-Dichloropropane	50.1	2.5	50	0	100	38	154	49.63	0.9(22)	
1,2-Dichloroethane	57	2.5	50	0	114	65	134	56.7	0.6(20)	
1,1,1-Trichloroethane	55.9	2.5	50	0	112	65	136	54.8	2.0(20)	
1,1-Dichloropropene	51.4	2.5	50	0	103	68	132	51.31	0.2(20)	
Carbon tetrachloride	54.8	2.5	50	0	110	58	148	54.43	0.7(20)	
Benzene	45.3	1.3	50	0	91	59	138	45.09	0.4(21)	
Tertiary Amyl Methyl Ether (TAME)	56.5	2.5	50	0	113	63	135	55.23	2.3(40)	
Dibromomethane	52	2.5	50	0	104	70	130	50.15	3.7(20)	
1,2-Dichloropropane	45.2	2.5	50	0	90	70	131	44.63	1.2(20)	
Trichloroethene	50.4	2.5	50	0	101	65	144	49.4	1.9(20)	
Bromodichloromethane	54.3	2.5	50	0	109	50	157	52.72	2.9(20)	
4-Methyl-2-pentanone (MIBK)	129	13	125	0	103	20	182	117	9.4(20)	
cis-1,3-Dichloropropene	46.9	2.5	50	0	94	63	131	45.29	3.5(20)	
trans-1,3-Dichloropropene	46.7	2.5	50	0	93	65	136	44.67	4.5(20)	
1,1,2-Trichloroethane	53.2	2.5	50	0	106	70	131	50.76	4.6(20)	
Toluene	44.9	1.3	50	0	90	68	130	44.55	0.7(20)	
1,3-Dichloropropane	50.2	2.5	50	0	100	70	130	48.35	3.7(20)	
2-Hexanone	328	25	500	0	66	20	182	305.1	7.2(20)	
Dibromochloromethane	48.6	2.5	50	0	97	42	155	46.62	4.2(20)	
1,2-Dibromoethane (EDB)	106	5	100	0	106	70	130	101.6	3.9(20)	
Tetrachloroethene	51.1	2.5	50	0	102	65	130	50.51	1.1(20)	
1,1,1,2-Tetrachloroethane	54	2.5	50	0	108	70	130	52.53	2.7(20)	
Chlorobenzene	46.1	2.5	50	0	92	70	130	44.76	2.8(20)	
Ethylbenzene	48.6	1.3	50	0	97	68	130	47.64	1.9(20)	
m,p-Xylene	46.9	1.3	50	0	94	68	131	46.13	1.7(20)	
Bromoform	51	2.5	50	0	102	65	143	47.86	6.3(20)	
Styrene	41.6	2.5	50	0	83	59	153	39.97	4.1(37)	
o-Xylene	47.4	1.3	50	0	95	70	130	46.49	1.9(20)	
1,1,2,2-Tetrachloroethane	49.9	2.5	50	0	99.8	67	130	47.56	4.8(20)	
1,2,3-Trichloropropane	112	10	100	0	112	70	130	106.6	4.8(20)	
Isopropylbenzene	43.6	2.5	50	0	87	55	138	43.1	1.3(20)	
Bromobenzene	46.3	2.5	50	0	93	70	130	45.41	2.0(20)	
n-Propylbenzene	42.7	2.5	50	0	85	67	133	41.9	1.8(30)	
4-Chlorotoluene	42.9	2.5	50	0	86	70	130	41.64	3.1(20)	
2-Chlorotoluene	43.4	2.5	50	0	87	70	130	42.54	2.1(20)	
1,3,5-Trimethylbenzene	46.9	2.5	50	0	94	67	134	46.18	1.5(21)	
tert-Butylbenzene	46.2	2.5	50	0	92	55	147	45.3	1.9(20)	
1,2,4-Trimethylbenzene	47.5	2.5	50	0	95	65	135	46.74	1.5(25)	
sec-Butylbenzene	44.7	2.5	50	0	89	68	135	43.66	2.4(20)	
1,3-Dichlorobenzene	47.5	2.5	50	0	95	70	130	46.49	2.2(20)	
1,4-Dichlorobenzene	43.3	2.5	50	0	87	70	130	41.68	3.7(20)	
4-Isopropyltoluene	47.2	2.5	50	0	94	68	132	46.3	1.9(20)	
1,2-Dichlorobenzene	45.2	2.5	50	0	90	70	130	43.66	3.5(20)	
n-Butylbenzene	46.1	2.5	50	0	92	62	134	44.87	2.8(21)	
1,2-Dibromo-3-chloropropane (DBCP)	242	15	250	0	97	64	130	231.1	4.5(20)	



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Date:

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QC Summary Report

Work Order:

11113044

1,2,4-Trichlorobenzene	45.5	10	50	0	91	62	133
Naphthalene	40.1	10	50	0	80	32	166
1,2,3-Trichlorobenzene	46.3	10	50	0	93	55	138
Xylenes, Total	92.6	1.3	100	0	93	70	130
Surr: 1,2-Dichloroethane-d4	50		50		100	70	130
Surr: Toluene-d8	50		50		99.9	70	130
Surr: 4-Bromofluorobenzene	49.9		50		99.7	70	130



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1,2,4-Trichlorobenzene	47.7	10	50	0	95	62	133	45.48	4.7(29)
Naphthalene	41.8	10	50	0	84	32	166	40.06	4.2(40)
1,2,3-Trichlorobenzene	48.1	10	50	0	96	55	138	46.26	3.8(36)
Xylenes, Total	94.3	1.3	100	0	94	70	130	92.62	1.8(20)
Surr: 1,2-Dichloroethane-d4	54.5		50		109	70	130		
Surr: Toluene-d8	49.3		50		99	70	130		
Surr: 4-Bromofluorobenzene	50		50		100	70	130		

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

M2 = Matrix spike recovery was low, the method control sample recovery was acceptable.

CHAIN-OF-CUSTODY RECORD

CA

Alpha Analytical, Inc.
 255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778
 TEL: (775) 355-1044 FAX: (775) 355-0406

WorkOrder : CHHL11113044
Report Due By : 5:00 PM On : 09-Dec-11

Client: CH2M Hill
 1000 Wilshire Boulevard
 21st Floor
 Los Angeles, CA 90017

Report Attention: Daniel Jablonski
 Phone Number: (213) 228-8271 x
 Email Address: daniel.jablonski@ch2m.com
 Matthew Mayry (213) 228-8271 x
 matthew.mayry@ch2m.com

EDD Required : Yes

Sampled by : Client

Client's COC # : none

Job : KMEP Norwalk

Cooler Temp 0 °C

Samples Received 30-Nov-11

Date Printed 30-Nov-11

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD with Surrogates

Alpha Sample ID	Client Sample ID	Collection Date	No. of Bottles			Requested Tests			Sample Remarks
			Alpha	Sub	TAT	TPH/E_W	TPHP_W	VOC_W	
CHH11113044-01A	GMW-O-18	11/23/11 12:58	6	0	7	TPHEQ.10 +Vnyl acetate	TPHEQ.10 +Vnyl acetate	TPHEQ.10 +Vnyl acetate	
CHH11113044-02A	GMW-36	11/23/11 12:15	6	0	7	TPHEQ.10 +Vnyl acetate	TPHEQ.10 +Vnyl acetate	TPHEQ.10 +Vnyl acetate	

Comments: No security seals. Frozen Ice. Run two analyses in order to achieve lower reporting limits for all other analytes due to high TBA values. Client provided temp blank.

Logged in by: *Sara Lofee* Signature: *Sara Lofee* Print Name: Sara Lofee Company: Alpha Analytical, Inc. Date/Time: 11/30/11 12:45


NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report. Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

BLAINE

TECH SERVICES, INC.

1680 ROGERS AVENUE
 SAN JOSE, CALIFORNIA 95112-1105
 FAX (408) 573-7771
 PHONE (408) 573-0555

CONDUCT ANALYSIS TO DETECT


LAB  Alpha Analytical COC 1 of 1


Billing Information:
 Kinder Morgan
 1100 Town and Country Rd.
 Orange CA 95112


Kinder Morgan Norwalk
 Report to:
 Dan Jablonski
 CH2MHILL
 1000 Wilshire Blvd 21st floor
 Los Angeles, CA 90017


CHAIN OF CUSTODY
 CLIENT: Kinder Morgan
 SITE: DFSP Norwalk
 15306 Norwalk Blvd, Norwalk

SAMPLE I.D.	DATE	TIME	MATRIX	CONTAINERS		TPHg, TPHfp (EPA 8015M)	VOC's & Oxygenates (EPA 8260B)	RESULTS NEEDED NO LATER THAN	STATUS	CONDITION	LAB SAMPLE #
				#	Preservation Type						
GM-018	11-23-11	1255	AQ Water	6	Hcl Ver	X	X				CH11113044
GM-36	11-23-11	1715	AQ	6	Hcl Ver	X	X				-02

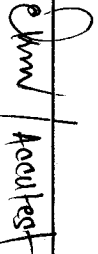
SAMPLING DATE: 11-23-11 TIME: 1300 SAMPLING PERFORMED BY: 

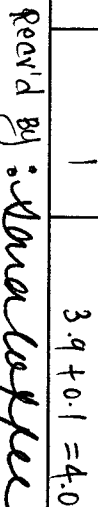
RECEIVED BY:  TIME: 1400

RECEIVED BY:  DATE: 11-28-11 TIME: 1045

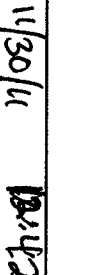
RECEIVED BY:  DATE: 11-29-11 TIME: 0835

RELEASSED BY: Nicole (Sample Custodian)

RELEASSED BY: Elwin Kinnar  DATE: 11-29-11 @ 15:00

SHIPPED VIA:  TIME SENT: 3.9 + 0.1 = 4.0°C

COOLER # 1

RECEIVED BY:  DATE: 11/30/11

December 2011

WELL GAUGING DATA

Project # 111221-201 Date 12-21-11 Client Kump & Associates

Site 15306 NORWALK BLVD NORWALK CA

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Notes
GMW-0-15	0903 0748	4					31-13	—	↓	EXT PUMP
GMW-0-16	0748	4				27-05	48-96			
GMW-0-18	1054	4				27-14	—			EXT PUMP
GMW-0-19	0828	4				26-43	40-10			
GMW-26	0934	4				28-17	—			EXT PUMP
PZ-5	1019	4				26-48	37-91			

LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>11221-1201</u>	Client: KMEP
Sampler: <u>R2</u>	Start Date: <u>12-21-11</u>
Well I.D.: <u>BMW-0-15</u>	Well Diameter: 2 3 <u>4</u> 6 8 _____
Total Well Depth: <u>—</u>	Depth to Water: Pre: <u>31.13</u> Post: <u>31.13</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	Flow Cell Type: YSI 556

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other: EXT PORT
 Start Purge Time: 0907 Flow Rate: 500 mL/min Pump Depth: —

Time	Temp. (°C or °F)	pH	Cond. (mS or μ S)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to water
0910	20.8	6.93	2467	7	0.38	-64.2	1500	31.13
0913	20.3	6.94	2466	5	0.31	-71.1	3000	31.13
0916	20.4	6.94	2463	5	0.28	-74.8	4500	31.13
0919	20.3	6.94	2465	5	0.27	-77.6	6000	31.13
0922	20.3	6.94	2464	5	0.27	-79.7	7500	31.13

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: <u>7500 mL</u>
Sampling Time: <u>0923</u>	Sampling Date: <u>12-21-11</u>
Sample I.D.: <u>BMW-0-15</u>	Laboratory: <u>Alpha Analytical</u>
Analyzed for: <u>TPH</u> <u>TPH₂</u> <u>VOC's</u> <u>MTBE</u>	Other: <u>See saw</u>
Equipment Blank I.D.: _____ @ _____ Time	Duplicate I.D.: _____

LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>111221-201</u>	Client: <u>KMEP</u>
Sampler: <u>LD</u>	Start Date: <u>12-21-11</u>
Well I.D.: <u>GMW-0-16</u>	Well Diameter: 2 3 <u>(4)</u> 6 8 _____
Total Well Depth: <u>48-96</u>	Depth to Water: Pre: <u>27-05</u> Post: <u>27-10</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>YSI 556</u>

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other _____
 Start Purge Time: 0755 Flow Rate: 500 mL/min Pump Depth: 43'

Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to water
0758	20.0	7.08	1742	10	0.45	152.6	1500	27.10
0801	20.6	7.08	1744	6	0.52	146.6	3000	27.10
0804	20.9	7.08	1746	6	0.47	141.1	4500	27.10
0807	21.0	7.08	1749	6	0.35	135.6	6000	27.10
0810	21.2	7.08	1748	6	0.34	131.3	7500	27.10
0813	21.4	7.08	1750	6	0.32	128.6	9000	27.10

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: <u>9000 mL</u>
Sampling Time: <u>0814</u>	Sampling Date: <u>12-21-11</u>
Sample I.D.: <u>GMW-0-16</u>	Laboratory: <u>Alpha Analytical</u>
Analyzed for: <u>TPHg</u> <u>TPHp</u> <u>VOC's</u> <u>MTBE</u>	Other: <u>see SOW</u>
Equipment Blank I.D.: <u>EB-1</u> @ Time <u>0730</u>	Duplicate I.D.:

LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>111221-R01</u>	Client: <u>KMEP</u>
Sampler: <u>RO</u>	Start Date: <u>12-21-11</u>
Well I.D.: <u>6MW-0-18</u>	Well Diameter: 2 3 <u>4</u> 6 8 _____
Total Well Depth: <u>—</u>	Depth to Water: Pre: <u>27.14</u> Post: _____
Depth to Free Product: _____	Thickness of Free Product (feet): _____
Referenced to: <u>PYO</u> Grade	Flow Cell Type: <u>YSI 556</u>

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other EXT Pump
 Start Purge Time: 1059 Flow Rate: 500 mL/min Pump Depth: —

Time	Temp. (°C or °F)	pH	Cond. (mS or μ S)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to water
<u>1102</u>	<u>12.8</u>	<u>6.73</u>	<u>2358</u>	<u>939</u>	<u>13.15</u>	<u>21.7</u>	<u>1500</u>	<u>27.14</u>
<u>1105</u>	<u>12.8</u>	<u>6.71</u>	<u>2358</u>	<u>724</u>	<u>13.30</u>	<u>35.1</u>	<u>3000</u>	<u>27.14</u>
<u>1108</u>	<u>12.9</u>	<u>6.71</u>	<u>2359</u>	<u>627</u>	<u>13.34</u>	<u>46.6</u>	<u>4500</u>	<u>27.14</u>
<u>1111</u>	<u>12.9</u>	<u>6.71</u>	<u>2361</u>	<u>625</u>	<u>13.37</u>	<u>52.8</u>	<u>6000</u>	<u>27.14</u>
<u>1114</u>	<u>13.0</u>	<u>6.71</u>	<u>2362</u>	<u>634</u>	<u>13.40</u>	<u>57.8</u>	<u>7500</u>	<u>27.14</u>
<u>1117</u>	<u>13.0</u>	<u>6.71</u>	<u>2364</u>	<u>644</u>	<u>13.42</u>	<u>60.4</u>	<u>9000</u>	<u>27.14</u>

Did well dewater? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Amount actually evacuated: <u>9000</u>
Sampling Time: <u>1118</u>	Sampling Date: <u>12-21-11</u>
Sample I.D.: <u>6MW-0-18</u>	Laboratory: <u>Alpha Analytical</u>
Analyzed for: <u>TPH_g</u> <u>TPH_f</u> <u>VOCs</u> <u>MTBE</u>	Other: <u>see SOL</u>
Equipment Blank I.D.: _____ @ _____ Time	Duplicate I.D.: _____

LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>111221-101</u>	Client: <u>KMEP</u>
Sampler: <u>LD</u>	Start Date: <u>12-21-11</u>
Well I.D.: <u>GMW-0-19</u>	Well Diameter: 2 3 <u>(4)</u> 6 8 _____
Total Well Depth: <u>40-10</u>	Depth to Water: Pre: <u>26-43</u> Post: <u>26-51</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	Flow Cell Type: <u>YSI 556</u>

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other _____
 Start Purge Time: 0832 Flow Rate: 400 mL/min Pump Depth: 35'

Time	Temp. (C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to water
0835	19.6	7.05	1676	12	0.78	148.7	1200	26.51
0838	20.3	7.04	1680	9	0.83	145.5	2400	26.51
0841	20.9	7.05	1682	8	0.79	141.2	3600	26.51
0844	21.1	7.05	1684	8	0.74	137.9	4800	26.51
0847	21.3	7.05	1685	7	0.69	134.2	6000	26.51

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: <u>6000 mL</u>
Sampling Time: <u>0848</u>	Sampling Date: <u>12-21-11</u>
Sample I.D.: <u>GMW-0-19</u>	Laboratory: <u>Alpha Analytical</u>
Analyzed for: <u>TPHg TPHfp VOCs MTBE</u>	Other: <u>See SOG</u>
Equipment Blank I.D.: _____ @ _____ Time	Duplicate I.D.: _____

LOW FLOW WELL MONITORING DATA SHEET

Project #: 111221-R01	Client: KMEP
Sampler: R0	Start Date: 12-21-11
Well I.D.: GMW-36	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: —	Depth to Water: Pre: 28.17 Post: 28.21
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC Grade	Flow Cell Type: YSI 556

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other: EXT RGT
 Start Purge Time: 0941 Flow Rate: 500 mL/min Pump Depth: —

Time	Temp. (°C or °F)	pH	Cond. (mS or μ S)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to water
0944	21.2	6.99	2347	23	0.97	-89.1	1500	28.21
0947	21.1	6.99	2352	11	0.94	-88.1	3000	28.21
0950	20.9	7.15	2342	7	0.90	-73.3	4500	28.21
0953	21.0	7.13	2343	8	0.87	-69.2	6000	28.21
0956	21.1	7.11	2344	7	0.85	-73.8	7500	28.21

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Amount actually evacuated: <u>7500 mL</u>
Sampling Time: <u>0957</u>	Sampling Date: <u>12-21-11</u>
Sample I.D.: <u>GMW-36</u>	Laboratory: <u>Alpha Analytical</u>
Analyzed for: <u>TPHg TRHfp VOCs MTBE</u>	Other: <u>See SOW</u>
Equipment Blank I.D.: @ _____ Time	Duplicate I.D.: _____

LOW FLOW WELL MONITORING DATA SHEET

Project #: 11221-R01	Client: KMEP
Sampler: R0	Start Date: 12-21-11
Well I.D.: P2-5	Well Diameter: 2 3 (4) 6 8
Total Well Depth: 37-91	Depth to Water: Pre: 26.48 Post: 26.57
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PYC Grade	Flow Cell Type: YSI 556

Purge Method: 2" Grundfos Pump Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other _____
 Start Purge Time: 1024 Flow Rate: 500 mL/min Pump Depth: 34'

Time	Temp. (C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to water
1027	19.8	6.80	2196	7	1.15	-100.9	1500	26.57
1030	20.9	6.81	2199	7	0.90	-110.1	3000	26.57
1033	21.3	6.81	2192	6	0.79	-112.1	4500	26.57
1036	21.5	6.80	2189	6	0.70	-113.4	6000	26.57
1039	21.7	6.80	2187	6	0.67	-114.6	7500	26.57

Did well dewater? Yes <input checked="" type="radio"/> No <input type="radio"/>	Amount actually evacuated: 7500 mL
Sampling Time: 1040	Sampling Date: 12-21-11
Sample I.D.: P2-5	Laboratory: Alpha Analytical
Analyzed for: TPHg <input checked="" type="checkbox"/> TPHfp <input checked="" type="checkbox"/> VOC's <input checked="" type="checkbox"/> MTBE	Other: See SOW
Equipment Blank I.D.: @ Time	Duplicate I.D.: Dup-1



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
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ANALYTICAL REPORT

CH2M Hill
1000 Wilshire Boulevard
Los Angeles, CA 90017

Attn: Daniel Jablonski
Phone: (213) 228-8271
Fax: (714) 424-2135
Date Received : 12/23/11

Job: KMEP Norwalk

Total Petroleum Hydrocarbons - Extractable (TPH-E) EPA Method SW8015B
Total Petroleum Hydrocarbons - Purgeable (TPH-P) EPA Method SW8015B

Client ID	Lab ID	Date Sampled	Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID : GMW-O-15	Lab ID : CHH11122340-01A	Date Sampled 12/21/11 09:23	TPH-E (Fuel Product)	0.57 *	0.10 mg/L	12/29/11	12/29/11
			Surr: Nonane	123	(49-145) %REC	12/29/11	12/29/11
			TPH-P (GRO)	0.52	0.20 mg/L	12/29/11	12/29/11
			Surr: 1,2-Dichloroethane-d4	93	(70-130) %REC	12/29/11	12/29/11
			Surr: Toluene-d8	98	(70-130) %REC	12/29/11	12/29/11
			Surr: 4-Bromofluorobenzene	99	(70-130) %REC	12/29/11	12/29/11
Client ID : GMW-O-16	Lab ID : CHH11122340-02A	Date Sampled 12/21/11 08:14	TPH-E (Fuel Product)	ND	0.10 mg/L	12/29/11	12/29/11
			Surr: Nonane	116	(49-145) %REC	12/29/11	12/29/11
			TPH-P (GRO)	ND	0.050 mg/L	12/29/11	12/29/11
			Surr: 1,2-Dichloroethane-d4	95	(70-130) %REC	12/29/11	12/29/11
			Surr: Toluene-d8	101	(70-130) %REC	12/29/11	12/29/11
			Surr: 4-Bromofluorobenzene	99	(70-130) %REC	12/29/11	12/29/11
Client ID : GMW-O-18	Lab ID : CHH11122340-03A	Date Sampled 12/21/11 11:18	TPH-E (Fuel Product)	26 *	1.0 mg/L	12/29/11	12/30/12
			Surr: Nonane	0 S50	(49-145) %REC	12/29/11	12/30/12
			TPH-P (GRO)	0.19	0.050 mg/L	12/29/11	12/29/11
			Surr: 1,2-Dichloroethane-d4	95	(70-130) %REC	12/29/11	12/29/11
			Surr: Toluene-d8	100	(70-130) %REC	12/29/11	12/29/11
			Surr: 4-Bromofluorobenzene	102	(70-130) %REC	12/29/11	12/29/11
Client ID : GMW-O-19	Lab ID : CHH11122340-04A	Date Sampled 12/21/11 08:48	TPH-E (Fuel Product)	ND	0.10 mg/L	12/29/11	12/30/11
			Surr: Nonane	104	(49-145) %REC	12/29/11	12/30/11
			TPH-P (GRO)	ND	0.050 mg/L	12/29/11	12/29/11
			Surr: 1,2-Dichloroethane-d4	94	(70-130) %REC	12/29/11	12/29/11
			Surr: Toluene-d8	102	(70-130) %REC	12/29/11	12/29/11
			Surr: 4-Bromofluorobenzene	98	(70-130) %REC	12/29/11	12/29/11
Client ID : GMW-36	Lab ID : CHH11122340-05A	Date Sampled 12/21/11 09:57	TPH-E (Fuel Product)	0.56 **	0.10 mg/L	12/29/11	12/30/11
			Surr: Nonane	109	(49-145) %REC	12/29/11	12/30/11
			TPH-P (GRO)	0.70	0.050 mg/L	12/29/11	12/29/11
			Surr: 1,2-Dichloroethane-d4	97	(70-130) %REC	12/29/11	12/29/11
			Surr: Toluene-d8	98	(70-130) %REC	12/29/11	12/29/11
			Surr: 4-Bromofluorobenzene	99	(70-130) %REC	12/29/11	12/29/11
Client ID : PZ-5	Lab ID : CHH11122340-06A	Date Sampled 12/21/11 10:40	TPH-E (Fuel Product)	2.0 **	0.10 mg/L	12/29/11	12/30/11
			Surr: Nonane	0 S51	(49-145) %REC	12/29/11	12/30/11
			TPH-P (GRO)	5.9	2.0 mg/L	12/30/11	12/30/11
			Surr: 1,2-Dichloroethane-d4	95	(70-130) %REC	12/30/11	12/30/11
			Surr: Toluene-d8	99	(70-130) %REC	12/30/11	12/30/11
			Surr: 4-Bromofluorobenzene	99	(70-130) %REC	12/30/11	12/30/11



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Client ID : **DUP-1**

Lab ID :	CHH11122340-07A	TPH-E (Fuel Product)	2.0	**	0.10 mg/L	12/29/11	12/30/11
Date Sampled	12/21/11 00:00	Surr: Nonane	0	S51	(49-145) %REC	12/29/11	12/30/11
		TPH-P (GRO)	5.6		2.0 mg/L	12/30/11	12/30/11
		Surr: 1,2-Dichloroethane-d4	93		(70-130) %REC	12/30/11	12/30/11
		Surr: Toluene-d8	99		(70-130) %REC	12/30/11	12/30/11
		Surr: 4-Bromofluorobenzene	99		(70-130) %REC	12/30/11	12/30/11

Client ID : **EB-1**

Lab ID :	CHH11122340-08A	TPH-E (Fuel Product)	ND		0.10 mg/L	12/29/11	12/30/11
Date Sampled	12/21/11 07:30	Surr: Nonane	116		(49-145) %REC	12/29/11	12/30/11
		TPH-P (GRO)	ND		0.050 mg/L	12/30/11	12/30/11
		Surr: 1,2-Dichloroethane-d4	116		(70-130) %REC	12/30/11	12/30/11
		Surr: Toluene-d8	96		(70-130) %REC	12/30/11	12/30/11
		Surr: 4-Bromofluorobenzene	93		(70-130) %REC	12/30/11	12/30/11

**Note: Reported TPH-E (Fuel Product) may contain undifferentiated diesel range hydrocarbons.

*Note: Reported TPH-E (Fuel Product) is composed primarily of diesel range hydrocarbons.

Gasoline Range Organics (GRO) C4-C13

S50 = The analysis of the sample required a dilution such that the surrogate concentration was diluted below the laboratory acceptance criteria. The laboratory control sample was acceptable.

S51 = Surrogate recovery could not be determined due to the presence of co-eluting hydrocarbons.

ND = Not Detected

Roger Scholl

Randy Gardner

Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

Statement of Data Authenticity : Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.

[Signature]
1/4/12

Report Date



Alpha Analytical, Inc.

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ANALYTICAL REPORT

CH2M Hill
1000 Wilshire Boulevard
Los Angeles, CA 90017
Job: KMEP Norwalk

Attn: Daniel Jablonski
Phone: (213) 228-8271
Fax: (714) 424-2135

Alpha Analytical Number: CHH11122340-01A
Client I.D. Number: GMW-O-15

Sampled: 12/21/11 09:23
Received: 12/23/11
Extracted: 12/29/11
Analyzed: 12/29/11

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	2.0 µg/L	45 Chlorobenzene	ND	2.0 µg/L
2 Chloromethane	ND	8.0 µg/L	46 Ethylbenzene	5.7	1.0 µg/L
3 Vinyl chloride	ND	2.0 µg/L	47 m,p-Xylene	19	1.0 µg/L
4 Chloroethane	ND	2.0 µg/L	48 Bromoform	ND	2.0 µg/L
5 Bromomethane	ND	8.0 µg/L	49 Xylenes, Total	22	1.0 µg/L
6 Trichlorofluoromethane	ND	10 µg/L	50 Styrene	ND	2.0 µg/L
7 Acetone	ND	40 µg/L	51 o-Xylene	2.3	1.0 µg/L
8 1,1-Dichloroethane	ND	2.0 µg/L	52 1,1,2,2-Tetrachloroethane	ND	2.0 µg/L
9 Tertiary Butyl Alcohol (TBA)	5,300	100 µg/L	53 1,2,3-Trichloropropane	ND	8.0 µg/L
10 Dichloromethane	ND	8.0 µg/L	54 Isopropylbenzene	ND	2.0 µg/L
11 Freon-113	ND	10 µg/L	55 Bromobenzene	ND	2.0 µg/L
12 Carbon disulfide	ND	10 µg/L	56 n-Propylbenzene	ND	2.0 µg/L
13 trans-1,2-Dichloroethene	ND	2.0 µg/L	57 4-Chlorotoluene	ND	2.0 µg/L
14 Methyl tert-butyl ether (MTBE)	79	1.0 µg/L	58 2-Chlorotoluene	ND	2.0 µg/L
15 1,1-Dichloroethane	ND	2.0 µg/L	59 1,3,5-Trimethylbenzene	5.3	2.0 µg/L
16 Vinyl acetate	ND	200 µg/L	60 tert-Butylbenzene	ND	2.0 µg/L
17 2-Butanone (MEK)	ND	40 µg/L	61 1,2,4-Trimethylbenzene	9.4	2.0 µg/L
18 Di-isopropyl Ether (DIPE)	ND	2.0 µg/L	62 sec-Butylbenzene	ND	2.0 µg/L
19 cis-1,2-Dichloroethene	ND	2.0 µg/L	63 1,3-Dichlorobenzene	ND	2.0 µg/L
20 Bromochloromethane	ND	2.0 µg/L	64 1,4-Dichlorobenzene	ND	2.0 µg/L
21 Chloroform	ND	2.0 µg/L	65 4-Isopropyltoluene	ND	2.0 µg/L
22 Ethyl Tertiary Butyl Ether (ETBE)	ND	2.0 µg/L	66 1,2-Dichlorobenzene	ND	2.0 µg/L
23 2,2-Dichloropropane	ND	2.0 µg/L	67 n-Butylbenzene	ND	2.0 µg/L
24 1,2-Dichloroethane	ND	2.0 µg/L	68 1,2-Dibromo-3-chloropropane (DBCP)	ND	12 µg/L
25 1,1,1-Trichloroethane	ND	2.0 µg/L	69 1,2,4-Trichlorobenzene	ND	8.0 µg/L
26 1,1-Dichloropropene	ND	2.0 µg/L	70 Naphthalene	ND	10 µg/L
27 Carbon tetrachloride	ND	2.0 µg/L	71 1,2,3-Trichlorobenzene	ND	8.0 µg/L
28 Benzene	110	1.0 µg/L	72 Surr: 1,2-Dichloroethane-d4	93	(70-130) %REC
29 Tertiary Amyl Methyl Ether (TAME)	ND	2.0 µg/L	73 Surr: Toluene-d8	98	(70-130) %REC
30 Dibromomethane	ND	2.0 µg/L	74 Surr: 4-Bromofluorobenzene	99	(70-130) %REC
31 1,2-Dichloropropane	ND	2.0 µg/L			
32 Trichloroethene	ND	2.0 µg/L			
33 Bromodichloromethane	ND	2.0 µg/L			
34 4-Methyl-2-pentanone (MIBK)	ND	10 µg/L			
35 cis-1,3-Dichloropropene	ND	2.0 µg/L			
36 trans-1,3-Dichloropropene	ND	2.0 µg/L			
37 1,1,2-Trichloroethane	ND	2.0 µg/L			
38 Toluene	1.5	1.0 µg/L			
39 1,3-Dichloropropane	ND	2.0 µg/L			
40 2-Hexanone	ND	20 µg/L			
41 Dibromochloromethane	ND	2.0 µg/L			
42 1,2-Dibromoethane (EDB)	ND	4.0 µg/L			
43 Tetrachloroethene	ND	2.0 µg/L			
44 1,1,1,2-Tetrachloroethane	ND	2.0 µg/L			

*This analyte was analyzed separately on 12/29/2011 in order to achieve lower reporting limits for the other analytes.

Some Reporting Limits were increased due to high concentrations of target analytes.

ND = Not Detected

Roger Scholl *Randy Gardner* *Walter Hinchman*
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ANALYTICAL REPORT

CH2M Hill
1000 Wilshire Boulevard
Los Angeles, CA 90017
Job: KMEP Norwalk

Attn: Daniel Jablonski
Phone: (213) 228-8271
Fax: (714) 424-2135

Alpha Analytical Number: CHH11122340-02A
Client I.D. Number: GMW-O-16

Sampled: 12/21/11 08:14
Received: 12/23/11
Extracted: 12/29/11
Analyzed: 12/29/11

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	1.0 µg/L	45 Chlorobenzene	ND	1.0 µg/L
2 Chloromethane	ND	2.0 µg/L	46 Ethylbenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	47 m,p-Xylene	ND	0.50 µg/L
4 Chloroethane	ND	1.0 µg/L	48 Bromoform	ND	1.0 µg/L
5 Bromomethane	ND	2.0 µg/L	49 Xylenes, Total	0.50	0.50 µg/L
6 Trichlorofluoromethane	ND	10 µg/L	50 Styrene	ND	1.0 µg/L
7 Acetone	ND	10 µg/L	51 o-Xylene	0.50	0.50 µg/L
8 1,1-Dichloroethene	ND	1.0 µg/L	52 1,1,2,2-Tetrachloroethane	ND	1.0 µg/L
9 Tertiary Butyl Alcohol (TBA)	ND	10 µg/L	53 1,2,3-Trichloropropane	ND	2.0 µg/L
10 Dichloromethane	ND	5.0 µg/L	54 Isopropylbenzene	ND	1.0 µg/L
11 Freon-113	ND	10 µg/L	55 Bromobenzene	ND	1.0 µg/L
12 Carbon disulfide	ND	2.5 µg/L	56 n-Propylbenzene	ND	1.0 µg/L
13 trans-1,2-Dichloroethene	ND	1.0 µg/L	57 4-Chlorotoluene	ND	1.0 µg/L
14 Methyl tert-butyl ether (MTBE)	1.8	0.50 µg/L	58 2-Chlorotoluene	ND	1.0 µg/L
15 1,1-Dichloroethane	ND	1.0 µg/L	59 1,3,5-Trimethylbenzene	ND	1.0 µg/L
16 Vinyl acetate	ND	50 µg/L	60 tert-Butylbenzene	ND	1.0 µg/L
17 2-Butanone (MEK)	ND	10 µg/L	61 1,2,4-Trimethylbenzene	ND	1.0 µg/L
18 Di-isopropyl Ether (DIPE)	ND	1.0 µg/L	62 sec-Butylbenzene	ND	1.0 µg/L
19 cis-1,2-Dichloroethene	ND	1.0 µg/L	63 1,3-Dichlorobenzene	ND	1.0 µg/L
20 Bromochloromethane	ND	1.0 µg/L	64 1,4-Dichlorobenzene	ND	1.0 µg/L
21 Chloroform	ND	1.0 µg/L	65 4-Isopropyltoluene	ND	1.0 µg/L
22 Ethyl Tertiary Butyl Ether (ETBE)	ND	1.0 µg/L	66 1,2-Dichlorobenzene	ND	1.0 µg/L
23 2,2-Dichloropropane	ND	1.0 µg/L	67 n-Butylbenzene	ND	1.0 µg/L
24 1,2-Dichloroethane	ND	0.50 µg/L	68 1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0 µg/L
25 1,1,1-Trichloroethane	ND	1.0 µg/L	69 1,2,4-Trichlorobenzene	ND	2.0 µg/L
26 1,1-Dichloropropene	ND	1.0 µg/L	70 Naphthalene	ND	10 µg/L
27 Carbon tetrachloride	ND	1.0 µg/L	71 1,2,3-Trichlorobenzene	ND	2.0 µg/L
28 Benzene	ND	0.50 µg/L	72 Surr: 1,2-Dichloroethane-d4	95	(70-130) %REC
29 Tertiary Amyl Methyl Ether (TAME)	ND	1.0 µg/L	73 Surr: Toluene-d8	101	(70-130) %REC
30 Dibromomethane	ND	1.0 µg/L	74 Surr: 4-Bromofluorobenzene	99	(70-130) %REC
31 1,2-Dichloropropane	ND	1.0 µg/L			
32 Trichloroethene	ND	1.0 µg/L			
33 Bromodichloromethane	ND	1.0 µg/L			
34 4-Methyl-2-pentanone (MIBK)	ND	10 µg/L			
35 cis-1,3-Dichloropropene	ND	0.50 µg/L			
36 trans-1,3-Dichloropropene	ND	0.50 µg/L			
37 1,1,2-Trichloroethane	ND	1.0 µg/L			
38 Toluene	ND	0.50 µg/L			
39 1,3-Dichloropropane	ND	1.0 µg/L			
40 2-Hexanone	ND	5.0 µg/L			
41 Dibromochloromethane	ND	1.0 µg/L			
42 1,2-Dibromoethane (EDB)	ND	2.0 µg/L			
43 Tetrachloroethene	ND	1.0 µg/L			
44 1,1,1,2-Tetrachloroethane	ND	1.0 µg/L			

ND = Not Detected

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ANALYTICAL REPORT

CH2M Hill
1000 Wilshire Boulevard
Los Angeles, CA 90017
Job: KMEP Norwalk

Attn: Daniel Jablonski
Phone: (213) 228-8271
Fax: (714) 424-2135

Alpha Analytical Number: CHH11122340-03A
Client I.D. Number: GMW-O-18

Sampled: 12/21/11 11:18
Received: 12/23/11
Extracted: 12/29/11
Analyzed: 12/29/11

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	1.0 µg/L	45 Chlorobenzene	ND	1.0 µg/L
2 Chloromethane	ND	2.0 µg/L	46 Ethylbenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	47 m,p-Xylene	ND	0.50 µg/L
4 Chloroethane	ND	1.0 µg/L	48 Bromoform	ND	1.0 µg/L
5 Bromomethane	ND	2.0 µg/L	49 Xylenes, Total	0.53	0.50 µg/L
6 Trichlorofluoromethane	ND	10 µg/L	50 Styrene	ND	1.0 µg/L
7 Acetone	ND	10 µg/L	51 o-Xylene	0.53	0.50 µg/L
8 1,1-Dichloroethene	ND	1.0 µg/L	52 1,1,2,2-Tetrachloroethane	ND	1.0 µg/L
9 Tertiary Butyl Alcohol (TBA)	1,600	20 µg/L	53 1,2,3-Trichloropropane	ND	2.0 µg/L
10 Dichloromethane	ND	5.0 µg/L	54 Isopropylbenzene	ND	1.0 µg/L
11 Freon-113	ND	10 µg/L	55 Bromobenzene	ND	1.0 µg/L
12 Carbon disulfide	ND	2.5 µg/L	56 n-Propylbenzene	ND	1.0 µg/L
13 trans-1,2-Dichloroethene	ND	1.0 µg/L	57 4-Chlorotoluene	ND	1.0 µg/L
14 Methyl tert-butyl ether (MTBE)	70	0.50 µg/L	58 2-Chlorotoluene	ND	1.0 µg/L
15 1,1-Dichloroethane	ND	1.0 µg/L	59 1,3,5-Trimethylbenzene	1.2	1.0 µg/L
16 Vinyl acetate	ND	50 µg/L	60 tert-Butylbenzene	ND	1.0 µg/L
17 2-Butanone (MEK)	ND	10 µg/L	61 1,2,4-Trimethylbenzene	ND	1.0 µg/L
18 Di-isopropyl Ether (DIPE)	ND	1.0 µg/L	62 sec-Butylbenzene	ND	1.0 µg/L
19 cis-1,2-Dichloroethene	ND	1.0 µg/L	63 1,3-Dichlorobenzene	ND	1.0 µg/L
20 Bromochloromethane	ND	1.0 µg/L	64 1,4-Dichlorobenzene	ND	1.0 µg/L
21 Chloroform	ND	1.0 µg/L	65 4-Isopropyltoluene	ND	1.0 µg/L
22 Ethyl Tertiary Butyl Ether (ETBE)	ND	1.0 µg/L	66 1,2-Dichlorobenzene	ND	1.0 µg/L
23 2,2-Dichloropropane	ND	1.0 µg/L	67 n-Butylbenzene	ND	1.0 µg/L
24 1,2-Dichloroethane	ND	0.50 µg/L	68 1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0 µg/L
25 1,1,1-Trichloroethane	ND	1.0 µg/L	69 1,2,4-Trichlorobenzene	ND	2.0 µg/L
26 1,1-Dichloropropene	ND	1.0 µg/L	70 Naphthalene	ND	10 µg/L
27 Carbon tetrachloride	ND	1.0 µg/L	71 1,2,3-Trichlorobenzene	ND	2.0 µg/L
28 Benzene	ND	0.50 µg/L	72 Surr: 1,2-Dichloroethane-d4	95	(70-130) %REC
29 Tertiary Amyl Methyl Ether (TAME)	ND	1.0 µg/L	73 Surr: Toluene-d8	100	(70-130) %REC
30 Dibromomethane	ND	1.0 µg/L	74 Surr: 4-Bromofluorobenzene	102	(70-130) %REC
31 1,2-Dichloropropane	ND	1.0 µg/L			
32 Trichloroethene	ND	1.0 µg/L			
33 Bromodichloromethane	ND	1.0 µg/L			
34 4-Methyl-2-pentanone (MIBK)	ND	10 µg/L			
35 cis-1,3-Dichloropropene	ND	0.50 µg/L			
36 trans-1,3-Dichloropropene	ND	0.50 µg/L			
37 1,1,2-Trichloroethane	ND	1.0 µg/L			
38 Toluene	ND	0.50 µg/L			
39 1,3-Dichloropropane	ND	1.0 µg/L			
40 2-Hexanone	ND	5.0 µg/L			
41 Dibromochloromethane	ND	1.0 µg/L			
42 1,2-Dibromoethane (EDB)	ND	2.0 µg/L			
43 Tetrachloroethene	ND	1.0 µg/L			
44 1,1,1,2-Tetrachloroethane	ND	1.0 µg/L			

*This analyte was analyzed separately on 12/29/2011 in order to achieve lower reporting limits for the other analytes.

ND = Not Detected

Roger Scholl

Randy Gardner

Walter Hinchman

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Alpha Analytical, Inc.

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ANALYTICAL REPORT

CH2M Hill
1000 Wilshire Boulevard
Los Angeles, CA 90017
Job: KMEP Norwalk

Attn: Daniel Jablonski
Phone: (213) 228-8271
Fax: (714) 424-2135

Alpha Analytical Number: CHH11122340-04A
Client I.D. Number: GMW-O-19

Sampled: 12/21/11 08:48
Received: 12/23/11
Extracted: 12/29/11
Analyzed: 12/29/11

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	1.0 µg/L	45 Chlorobenzene	ND	1.0 µg/L
2 Chloromethane	ND	2.0 µg/L	46 Ethylbenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	47 m,p-Xylene	ND	0.50 µg/L
4 Chloroethane	ND	1.0 µg/L	48 Bromoform	ND	1.0 µg/L
5 Bromomethane	ND	2.0 µg/L	49 Xylenes, Total	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	10 µg/L	50 Styrene	ND	1.0 µg/L
7 Acetone	ND	10 µg/L	51 o-Xylene	ND	0.50 µg/L
8 1,1-Dichloroethene	ND	1.0 µg/L	52 1,1,2,2-Tetrachloroethane	ND	1.0 µg/L
9 Tertiary Butyl Alcohol (TBA)	ND	10 µg/L	53 1,2,3-Trichloropropane	ND	2.0 µg/L
10 Dichloromethane	ND	5.0 µg/L	54 Isopropylbenzene	ND	1.0 µg/L
11 Freon-113	ND	10 µg/L	55 Bromobenzene	ND	1.0 µg/L
12 Carbon disulfide	ND	2.5 µg/L	56 n-Propylbenzene	ND	1.0 µg/L
13 trans-1,2-Dichloroethene	ND	1.0 µg/L	57 4-Chlorotoluene	ND	1.0 µg/L
14 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	58 2-Chlorotoluene	ND	1.0 µg/L
15 1,1-Dichloroethane	ND	1.0 µg/L	59 1,3,5-Trimethylbenzene	ND	1.0 µg/L
16 Vinyl acetate	ND	50 µg/L	60 tert-Butylbenzene	ND	1.0 µg/L
17 2-Butanone (MEK)	ND	10 µg/L	61 1,2,4-Trimethylbenzene	ND	1.0 µg/L
18 Di-isopropyl Ether (DIPE)	ND	1.0 µg/L	62 sec-Butylbenzene	ND	1.0 µg/L
19 cis-1,2-Dichloroethene	ND	1.0 µg/L	63 1,3-Dichlorobenzene	ND	1.0 µg/L
20 Bromochloromethane	ND	1.0 µg/L	64 1,4-Dichlorobenzene	ND	1.0 µg/L
21 Chloroform	ND	1.0 µg/L	65 4-Isopropyltoluene	ND	1.0 µg/L
22 Ethyl Tertiary Butyl Ether (ETBE)	ND	1.0 µg/L	66 1,2-Dichlorobenzene	ND	1.0 µg/L
23 2,2-Dichloropropane	ND	1.0 µg/L	67 n-Butylbenzene	ND	1.0 µg/L
24 1,2-Dichloroethane	ND	0.50 µg/L	68 1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0 µg/L
25 1,1,1-Trichloroethane	ND	1.0 µg/L	69 1,2,4-Trichlorobenzene	ND	2.0 µg/L
26 1,1-Dichloropropene	ND	1.0 µg/L	70 Naphthalene	ND	10 µg/L
27 Carbon tetrachloride	ND	1.0 µg/L	71 1,2,3-Trichlorobenzene	ND	2.0 µg/L
28 Benzene	ND	0.50 µg/L	72 Surr: 1,2-Dichloroethane-d4	94	(70-130) %REC
29 Tertiary Amyl Methyl Ether (TAME)	ND	1.0 µg/L	73 Surr: Toluene-d8	102	(70-130) %REC
30 Dibromomethane	ND	1.0 µg/L	74 Surr: 4-Bromofluorobenzene	98	(70-130) %REC
31 1,2-Dichloropropane	ND	1.0 µg/L			
32 Trichloroethene	ND	1.0 µg/L			
33 Bromodichloromethane	ND	1.0 µg/L			
34 4-Methyl-2-pentanone (MIBK)	ND	10 µg/L			
35 cis-1,3-Dichloropropene	ND	0.50 µg/L			
36 trans-1,3-Dichloropropene	ND	0.50 µg/L			
37 1,1,2-Trichloroethane	ND	1.0 µg/L			
38 Toluene	ND	0.50 µg/L			
39 1,3-Dichloropropane	ND	1.0 µg/L			
40 2-Hexanone	ND	5.0 µg/L			
41 Dibromochloromethane	ND	1.0 µg/L			
42 1,2-Dibromoethane (EDB)	ND	2.0 µg/L			
43 Tetrachloroethene	ND	1.0 µg/L			
44 1,1,1,2-Tetrachloroethane	ND	1.0 µg/L			

ND = Not Detected

Roger Scholl

Randy Gardner

Walter Hinchman

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Alpha Analytical, Inc.

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ANALYTICAL REPORT

CH2M Hill
1000 Wilshire Boulevard
Los Angeles, CA 90017
Job: KMEP Norwalk

Attn: Daniel Jablonski
Phone: (213) 228-8271
Fax: (714) 424-2135

Alpha Analytical Number: CHH11122340-05A
Client I.D. Number: GMW-36

Sampled: 12/21/11 09:57
Received: 12/23/11
Extracted: 12/29/11
Analyzed: 12/29/11

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	1.0 µg/L	45 Chlorobenzene	ND	1.0 µg/L
2 Chloromethane	ND	2.0 µg/L	46 Ethylbenzene	14	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	47 m,p-Xylene	44	0.50 µg/L
4 Chloroethane	ND	1.0 µg/L	48 Bromoform	ND	1.0 µg/L
5 Bromomethane	ND	2.0 µg/L	49 Xylenes, Total	65	0.50 µg/L
6 Trichlorofluoromethane	ND	10 µg/L	50 Styrene	ND	1.0 µg/L
7 Acetone	ND	10 µg/L	51 o-Xylene	21	0.50 µg/L
8 1,1-Dichloroethene	ND	1.0 µg/L	52 1,1,2,2-Tetrachloroethane	ND	1.0 µg/L
9 Tertiary Butyl Alcohol (TBA)	340	10 µg/L	53 1,2,3-Trichloropropane	ND	2.0 µg/L
10 Dichloromethane	ND	5.0 µg/L	54 Isopropylbenzene	ND	1.0 µg/L
11 Freon-113	ND	10 µg/L	55 Bromobenzene	ND	1.0 µg/L
12 Carbon disulfide	ND	2.5 µg/L	56 n-Propylbenzene	1.8	1.0 µg/L
13 trans-1,2-Dichloroethene	ND	1.0 µg/L	57 4-Chlorotoluene	ND	1.0 µg/L
14 Methyl tert-butyl ether (MTBE)	2.1	0.50 µg/L	58 2-Chlorotoluene	ND	1.0 µg/L
15 1,1-Dichloroethane	ND	1.0 µg/L	59 1,3,5-Trimethylbenzene	5.6	1.0 µg/L
16 Vinyl acetate	ND	50 µg/L	60 tert-Butylbenzene	ND	1.0 µg/L
17 2-Butanone (MEK)	ND	10 µg/L	61 1,2,4-Trimethylbenzene	8.2	1.0 µg/L
18 Di-isopropyl Ether (DIPE)	ND	1.0 µg/L	62 sec-Butylbenzene	ND	1.0 µg/L
19 cis-1,2-Dichloroethene	ND	1.0 µg/L	63 1,3-Dichlorobenzene	ND	1.0 µg/L
20 Bromochloromethane	ND	1.0 µg/L	64 1,4-Dichlorobenzene	ND	1.0 µg/L
21 Chloroform	ND	1.0 µg/L	65 4-Isopropyltoluene	ND	1.0 µg/L
22 Ethyl Tertiary Butyl Ether (ETBE)	ND	1.0 µg/L	66 1,2-Dichlorobenzene	ND	1.0 µg/L
23 2,2-Dichloropropane	ND	1.0 µg/L	67 n-Butylbenzene	ND	1.0 µg/L
24 1,2-Dichloroethane	ND	0.50 µg/L	68 1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0 µg/L
25 1,1,1-Trichloroethane	ND	1.0 µg/L	69 1,2,4-Trichlorobenzene	ND	2.0 µg/L
26 1,1-Dichloropropene	ND	1.0 µg/L	70 Naphthalene	ND	10 µg/L
27 Carbon tetrachloride	ND	1.0 µg/L	71 1,2,3-Trichlorobenzene	ND	2.0 µg/L
28 Benzene	59	0.50 µg/L	72 Surr: 1,2-Dichloroethane-d4	97	(70-130) %REC
29 Tertiary Amyl Methyl Ether (TAME)	ND	1.0 µg/L	73 Surr: Toluene-d8	98	(70-130) %REC
30 Dibromomethane	ND	1.0 µg/L	74 Surr: 4-Bromofluorobenzene	99	(70-130) %REC
31 1,2-Dichloropropane	ND	1.0 µg/L			
32 Trichloroethene	ND	1.0 µg/L			
33 Bromodichloromethane	ND	1.0 µg/L			
34 4-Methyl-2-pentanone (MIBK)	ND	10 µg/L			
35 cis-1,3-Dichloropropene	ND	0.50 µg/L			
36 trans-1,3-Dichloropropene	ND	0.50 µg/L			
37 1,1,2-Trichloroethane	ND	1.0 µg/L			
38 Toluene	55	0.50 µg/L			
39 1,3-Dichloropropane	ND	1.0 µg/L			
40 2-Hexanone	ND	5.0 µg/L			
41 Dibromochloromethane	ND	1.0 µg/L			
42 1,2-Dibromoethane (EDB)	ND	2.0 µg/L			
43 Tetrachloroethene	ND	1.0 µg/L			
44 1,1,1,2-Tetrachloroethane	ND	1.0 µg/L			

ND = Not Detected

Roger Scholl

Randy Gardner

Walter Hinchman

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Alpha Analytical, Inc.

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ANALYTICAL REPORT

CH2M Hill
1000 Wilshire Boulevard
Los Angeles, CA 90017
Job: KMEP Norwalk

Attn: Daniel Jablonski
Phone: (213) 228-8271
Fax: (714) 424-2135

Alpha Analytical Number: CHH1122340-06A
Client I.D. Number: PZ-5

Sampled: 12/21/11 10:40
Received: 12/23/11
Extracted: 12/29/11
Analyzed: 12/29/11

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	20 µg/L	45 Chlorobenzene	ND	20 µg/L
2 Chloromethane	ND	80 µg/L	46 Ethylbenzene	160	10 µg/L
3 Vinyl chloride	ND	20 µg/L	47 m,p-Xylene	210	10 µg/L
4 Chloroethane	ND	20 µg/L	48 Bromoform	ND	20 µg/L
5 Bromomethane	ND	80 µg/L	49 Xylenes, Total	390	10 µg/L
6 Trichlorofluoromethane	ND	20 µg/L	50 Styrene	ND	20 µg/L
7 Acetone	ND	400 µg/L	51 o-Xylene	180	10 µg/L
8 1,1-Dichloroethene	ND	20 µg/L	52 1,1,2,2-Tetrachloroethane	ND	20 µg/L
9 Tertiary Butyl Alcohol (TBA)	61,000	1,000 µg/L	53 1,2,3-Trichloropropane	ND	80 µg/L
10 Dichloromethane	ND	80 µg/L	54 Isopropylbenzene	ND	20 µg/L
11 Freon-113	ND	20 µg/L	55 Bromobenzene	ND	20 µg/L
12 Carbon disulfide	ND	100 µg/L	56 n-Propylbenzene	ND	20 µg/L
13 trans-1,2-Dichloroethene	ND	20 µg/L	57 4-Chlorotoluene	ND	20 µg/L
14 Methyl tert-butyl ether (MTBE)	190	10 µg/L	58 2-Chlorotoluene	ND	20 µg/L
15 1,1-Dichloroethane	ND	20 µg/L	59 1,3,5-Trimethylbenzene	ND	20 µg/L
16 Vinyl acetate	ND	2,000 µg/L	60 tert-Butylbenzene	ND	20 µg/L
17 2-Butanone (MEK)	ND	400 µg/L	61 1,2,4-Trimethylbenzene	76	20 µg/L
18 Di-isopropyl Ether (DIPE)	ND	20 µg/L	62 sec-Butylbenzene	ND	20 µg/L
19 cis-1,2-Dichloroethene	ND	20 µg/L	63 1,3-Dichlorobenzene	ND	20 µg/L
20 Bromochloromethane	ND	20 µg/L	64 1,4-Dichlorobenzene	ND	20 µg/L
21 Chloroform	ND	20 µg/L	65 4-Isopropyltoluene	ND	20 µg/L
22 Ethyl Tertiary Butyl Ether (ETBE)	ND	20 µg/L	66 1,2-Dichlorobenzene	ND	20 µg/L
23 2,2-Dichloropropane	ND	20 µg/L	67 n-Butylbenzene	ND	20 µg/L
24 1,2-Dichloroethane	ND	20 µg/L	68 1,2-Dibromo-3-chloropropane (DBCP)	ND	120 µg/L
25 1,1,1-Trichloroethane	ND	20 µg/L	69 1,2,4-Trichlorobenzene	ND	80 µg/L
26 1,1-Dichloropropene	ND	20 µg/L	70 Naphthalene	ND	80 µg/L
27 Carbon tetrachloride	ND	20 µg/L	71 1,2,3-Trichlorobenzene	ND	80 µg/L
28 Benzene	2,200	10 µg/L	72 Surr: 1,2-Dichloroethane-d4	95	(70-130) %REC
29 Tertiary Amyl Methyl Ether (TAME)	ND	20 µg/L	73 Surr: Toluene-d8	99	(70-130) %REC
30 Dibromomethane	ND	20 µg/L	74 Surr: 4-Bromofluorobenzene	99	(70-130) %REC
31 1,2-Dichloropropane	ND	20 µg/L			
32 Trichloroethene	ND	20 µg/L			
33 Bromodichloromethane	ND	20 µg/L			
34 4-Methyl-2-pentanone (MIBK)	ND	100 µg/L			
35 cis-1,3-Dichloropropene	ND	20 µg/L			
36 trans-1,3-Dichloropropene	ND	20 µg/L			
37 1,1,2-Trichloroethane	ND	20 µg/L			
38 Toluene	57	10 µg/L			
39 1,3-Dichloropropane	ND	20 µg/L			
40 2-Hexanone	ND	200 µg/L			
41 Dibromochloromethane	ND	20 µg/L			
42 1,2-Dibromoethane (EDB)	ND	40 µg/L			
43 Tetrachloroethene	ND	20 µg/L			
44 1,1,1,2-Tetrachloroethane	ND	20 µg/L			

*This analyte was analyzed separately on 12/29/2011 in order to achieve lower reporting limits for the other analytes.

Reporting Limits were increased due to high concentrations of target analytes.

ND = Not Detected

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1/4/12

Report Date

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Alpha Analytical, Inc.

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(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ANALYTICAL REPORT

CH2M Hill
1000 Wilshire Boulevard
Los Angeles, CA 90017
Job: KMEP Norwalk

Attn: Daniel Jablonski
Phone: (213) 228-8271
Fax: (714) 424-2135

Alpha Analytical Number: CHH1122340-07A
Client I.D. Number: DUP-1

Sampled: 12/21/11 00:00
Received: 12/23/11
Extracted: 12/29/11
Analyzed: 12/29/11

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	20 µg/L	45 Chlorobenzene	ND	20 µg/L
2 Chloromethane	ND	80 µg/L	46 Ethylbenzene	150	10 µg/L
3 Vinyl chloride	ND	20 µg/L	47 m,p-Xylene	200	10 µg/L
4 Chloroethane	ND	20 µg/L	48 Bromoform	ND	20 µg/L
5 Bromomethane	ND	80 µg/L	49 Xylenes, Total	370	10 µg/L
6 Trichlorofluoromethane	ND	20 µg/L	50 Styrene	ND	20 µg/L
7 Acetone	ND	400 µg/L	51 o-Xylene	170	10 µg/L
8 1,1-Dichloroethene	ND	20 µg/L	52 1,1,2,2-Tetrachloroethane	ND	20 µg/L
9 Tertiary Butyl Alcohol (TBA)	56,000	1,000 µg/L	53 1,2,3-Trichloropropane	ND	80 µg/L
10 Dichloromethane	ND	80 µg/L	54 Isopropylbenzene	ND	20 µg/L
11 Freon-113	ND	20 µg/L	55 Bromobenzene	ND	20 µg/L
12 Carbon disulfide	ND	20 µg/L	56 n-Propylbenzene	ND	20 µg/L
13 trans-1,2-Dichloroethene	ND	100 µg/L	57 4-Chlorotoluene	ND	20 µg/L
14 Methyl tert-butyl ether (MTBE)	190	20 µg/L	58 2-Chlorotoluene	ND	20 µg/L
15 1,1-Dichloroethane	ND	10 µg/L	59 1,3,5-Trimethylbenzene	ND	20 µg/L
16 Vinyl acetate	ND	2,000 µg/L	60 tert-Butylbenzene	ND	20 µg/L
17 2-Butanone (MEK)	ND	400 µg/L	61 1,2,4-Trimethylbenzene	72	20 µg/L
18 Di-isopropyl Ether (DIPE)	ND	20 µg/L	62 sec-Butylbenzene	ND	20 µg/L
19 cis-1,2-Dichloroethene	ND	20 µg/L	63 1,3-Dichlorobenzene	ND	20 µg/L
20 Bromochloromethane	ND	20 µg/L	64 1,4-Dichlorobenzene	ND	20 µg/L
21 Chloroform	ND	20 µg/L	65 4-Isopropyltoluene	ND	20 µg/L
22 Ethyl Tertiary Butyl Ether (ETBE)	ND	20 µg/L	66 1,2-Dichlorobenzene	ND	20 µg/L
23 2,2-Dichloropropane	ND	20 µg/L	67 n-Butylbenzene	ND	20 µg/L
24 1,2-Dichloroethane	ND	20 µg/L	68 1,2-Dibromo-3-chloropropane (DBCP)	ND	120 µg/L
25 1,1,1-Trichloroethane	ND	20 µg/L	69 1,2,4-Trichlorobenzene	ND	80 µg/L
26 1,1-Dichloropropene	ND	20 µg/L	70 Naphthalene	ND	80 µg/L
27 Carbon tetrachloride	ND	20 µg/L	71 1,2,3-Trichlorobenzene	ND	80 µg/L
28 Benzene	2,100	10 µg/L	72 Surr: 1,2-Dichloroethane-d4	93	(70-130) %REC
29 Tertiary Amyl Methyl Ether (TAME)	ND	20 µg/L	73 Surr: Toluene-d8	99	(70-130) %REC
30 Dibromomethane	ND	20 µg/L	74 Surr: 4-Bromofluorobenzene	99	(70-130) %REC
31 1,2-Dichloropropane	ND	20 µg/L			
32 Trichloroethene	ND	20 µg/L			
33 Bromodichloromethane	ND	20 µg/L			
34 4-Methyl-2-pentanone (MIBK)	ND	100 µg/L			
35 cis-1,3-Dichloropropene	ND	20 µg/L			
36 trans-1,3-Dichloropropene	ND	20 µg/L			
37 1,1,2-Trichloroethane	ND	20 µg/L			
38 Toluene	54	10 µg/L			
39 1,3-Dichloropropane	ND	20 µg/L			
40 2-Hexanone	ND	200 µg/L			
41 Dibromochloromethane	ND	20 µg/L			
42 1,2-Dibromoethane (EDB)	ND	40 µg/L			
43 Tetrachloroethene	ND	20 µg/L			
44 1,1,1,2-Tetrachloroethane	ND	20 µg/L			

*This analyte was analyzed separately on 12/29/2011 in order to achieve lower reporting limits for the other analytes.

Reporting Limits were increased due to high concentrations of target analytes.

ND = Not Detected

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Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
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ANALYTICAL REPORT

CH2M Hill
1000 Wilshire Boulevard
Los Angeles, CA 90017
Job: KMEP Norwalk

Attn: Daniel Jablonski
Phone: (213) 228-8271
Fax: (714) 424-2135

Alpha Analytical Number: CHH1122340-08A
Client I.D. Number: EB-1

Sampled: 12/21/11 07:30
Received: 12/23/11
Extracted: 12/30/11
Analyzed: 12/30/11

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	1.0 µg/L	45 Chlorobenzene	ND	1.0 µg/L
2 Chloromethane	ND	2.0 µg/L	46 Ethylbenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	47 m,p-Xylene	ND	0.50 µg/L
4 Chloroethane	ND	1.0 µg/L	48 Bromoform	ND	1.0 µg/L
5 Bromomethane	ND	2.0 µg/L	49 Xylenes, Total	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	10 µg/L	50 Styrene	ND	1.0 µg/L
7 Acetone	ND	10 µg/L	51 o-Xylene	ND	0.50 µg/L
8 1,1-Dichloroethene	ND	1.0 µg/L	52 1,1,2,2-Tetrachloroethane	ND	1.0 µg/L
9 Tertiary Butyl Alcohol (TBA)	ND	10 µg/L	53 1,2,3-Trichloropropane	ND	2.0 µg/L
10 Dichloromethane	ND	5.0 µg/L	54 Isopropylbenzene	ND	1.0 µg/L
11 Freon-113	ND	10 µg/L	55 Bromobenzene	ND	1.0 µg/L
12 Carbon disulfide	ND	2.5 µg/L	56 n-Propylbenzene	ND	1.0 µg/L
13 trans-1,2-Dichloroethene	ND	1.0 µg/L	57 4-Chlorotoluene	ND	1.0 µg/L
14 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	58 2-Chlorotoluene	ND	1.0 µg/L
15 1,1-Dichloroethane	ND	1.0 µg/L	59 1,3,5-Trimethylbenzene	ND	1.0 µg/L
16 Vinyl acetate	ND	50 µg/L	60 tert-Butylbenzene	ND	1.0 µg/L
17 2-Butanone (MEK)	ND	10 µg/L	61 1,2,4-Trimethylbenzene	ND	1.0 µg/L
18 Di-isopropyl Ether (DIPE)	ND	1.0 µg/L	62 sec-Butylbenzene	ND	1.0 µg/L
19 cis-1,2-Dichloroethene	ND	1.0 µg/L	63 1,3-Dichlorobenzene	ND	1.0 µg/L
20 Bromochloromethane	ND	1.0 µg/L	64 1,4-Dichlorobenzene	ND	1.0 µg/L
21 Chloroform	ND	1.0 µg/L	65 4-Isopropyltoluene	ND	1.0 µg/L
22 Ethyl Tertiary Butyl Ether (ETBE)	ND	1.0 µg/L	66 1,2-Dichlorobenzene	ND	1.0 µg/L
23 2,2-Dichloropropane	ND	1.0 µg/L	67 n-Butylbenzene	ND	1.0 µg/L
24 1,2-Dichloroethane	ND	0.50 µg/L	68 1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0 µg/L
25 1,1,1-Trichloroethane	ND	1.0 µg/L	69 1,2,4-Trichlorobenzene	ND	2.0 µg/L
26 1,1-Dichloropropene	ND	1.0 µg/L	70 Naphthalene	ND	10 µg/L
27 Carbon tetrachloride	ND	1.0 µg/L	71 1,2,3-Trichlorobenzene	ND	2.0 µg/L
28 Benzene	ND	0.50 µg/L	72 Surr: 1,2-Dichloroethane-d4	116	(70-130) %REC
29 Tertiary Amyl Methyl Ether (TAME)	ND	1.0 µg/L	73 Surr: Toluene-d8	96	(70-130) %REC
30 Dibromomethane	ND	1.0 µg/L	74 Surr: 4-Bromofluorobenzene	93	(70-130) %REC
31 1,2-Dichloropropane	ND	1.0 µg/L			
32 Trichloroethene	ND	1.0 µg/L			
33 Bromodichloromethane	ND	1.0 µg/L			
34 4-Methyl-2-pentanone (MIBK)	ND	10 µg/L			
35 cis-1,3-Dichloropropene	ND	0.50 µg/L			
36 trans-1,3-Dichloropropene	ND	0.50 µg/L			
37 1,1,2-Trichloroethane	ND	1.0 µg/L			
38 Toluene	ND	0.50 µg/L			
39 1,3-Dichloropropane	ND	1.0 µg/L			
40 2-Hexanone	ND	5.0 µg/L			
41 Dibromochloromethane	ND	1.0 µg/L			
42 1,2-Dibromoethane (EDB)	ND	2.0 µg/L			
43 Tetrachloroethene	ND	1.0 µg/L			
44 1,1,1,2-Tetrachloroethane	ND	1.0 µg/L			

ND = Not Detected

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ANALYTICAL REPORT

CH2M Hill
1000 Wilshire Boulevard
Los Angeles, CA 90017
Job: KMEP Norwalk

Attn: Daniel Jablonski
Phone: (213) 228-8271
Fax: (714) 424-2135

Alpha Analytical Number: CHH11122340-09A
Client I.D. Number: TB-1

Sampled: 12/21/11 07:00
Received: 12/23/11
Extracted: 12/29/11
Analyzed: 12/29/11

Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	1.0 µg/L	45 Chlorobenzene	ND	1.0 µg/L
2 Chloromethane	ND	2.0 µg/L	46 Ethylbenzene	ND	0.50 µg/L
3 Vinyl chloride	ND	0.50 µg/L	47 m,p-Xylene	ND	0.50 µg/L
4 Chloroethane	ND	1.0 µg/L	48 Bromoform	ND	1.0 µg/L
5 Bromomethane	ND	2.0 µg/L	49 Xylenes, Total	ND	0.50 µg/L
6 Trichlorofluoromethane	ND	10 µg/L	50 Styrene	ND	1.0 µg/L
7 Acetone	ND	10 µg/L	51 o-Xylene	ND	0.50 µg/L
8 1,1-Dichloroethene	ND	1.0 µg/L	52 1,1,2,2-Tetrachloroethane	ND	1.0 µg/L
9 Tertiary Butyl Alcohol (TBA)	ND	10 µg/L	53 1,2,3-Trichloropropane	ND	2.0 µg/L
10 Dichloromethane	ND	5.0 µg/L	54 Isopropylbenzene	ND	1.0 µg/L
11 Freon-113	ND	10 µg/L	55 Bromobenzene	ND	1.0 µg/L
12 Carbon disulfide	ND	2.5 µg/L	56 n-Propylbenzene	ND	1.0 µg/L
13 trans-1,2-Dichloroethene	ND	1.0 µg/L	57 4-Chlorotoluene	ND	1.0 µg/L
14 Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	58 2-Chlorotoluene	ND	1.0 µg/L
15 1,1-Dichloroethane	ND	1.0 µg/L	59 1,3,5-Trimethylbenzene	ND	1.0 µg/L
16 Vinyl acetate	ND	50 µg/L	60 tert-Butylbenzene	ND	1.0 µg/L
17 2-Butanone (MEK)	ND	10 µg/L	61 1,2,4-Trimethylbenzene	ND	1.0 µg/L
18 Di-isopropyl Ether (DIPE)	ND	1.0 µg/L	62 sec-Butylbenzene	ND	1.0 µg/L
19 cis-1,2-Dichloroethene	ND	1.0 µg/L	63 1,3-Dichlorobenzene	ND	1.0 µg/L
20 Bromochloromethane	ND	1.0 µg/L	64 1,4-Dichlorobenzene	ND	1.0 µg/L
21 Chloroform	ND	1.0 µg/L	65 4-Isopropyltoluene	ND	1.0 µg/L
22 Ethyl Tertiary Butyl Ether (ETBE)	ND	1.0 µg/L	66 1,2-Dichlorobenzene	ND	1.0 µg/L
23 2,2-Dichloropropane	ND	1.0 µg/L	67 n-Butylbenzene	ND	1.0 µg/L
24 1,2-Dichloroethane	ND	0.50 µg/L	68 1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0 µg/L
25 1,1,1-Trichloroethane	ND	1.0 µg/L	69 1,2,4-Trichlorobenzene	ND	2.0 µg/L
26 1,1-Dichloropropene	ND	1.0 µg/L	70 Naphthalene	ND	10 µg/L
27 Carbon tetrachloride	ND	1.0 µg/L	71 1,2,3-Trichlorobenzene	ND	2.0 µg/L
28 Benzene	ND	0.50 µg/L	72 Surr: 1,2-Dichloroethane-d4	88	(70-130) %REC
29 Tertiary Amyl Methyl Ether (TAME)	ND	1.0 µg/L	73 Surr: Toluene-d8	104	(70-130) %REC
30 Dibromomethane	ND	1.0 µg/L	74 Surr: 4-Bromofluorobenzene	99	(70-130) %REC
31 1,2-Dichloropropane	ND	1.0 µg/L			
32 Trichloroethene	ND	1.0 µg/L			
33 Bromodichloromethane	ND	1.0 µg/L			
34 4-Methyl-2-pentanone (MIBK)	ND	10 µg/L			
35 cis-1,3-Dichloropropene	ND	0.50 µg/L			
36 trans-1,3-Dichloropropene	ND	0.50 µg/L			
37 1,1,2-Trichloroethane	ND	1.0 µg/L			
38 Toluene	ND	0.50 µg/L			
39 1,3-Dichloropropane	ND	1.0 µg/L			
40 2-Hexanone	ND	5.0 µg/L			
41 Dibromochloromethane	ND	1.0 µg/L			
42 1,2-Dibromoethane (EDB)	ND	2.0 µg/L			
43 Tetrachloroethene	ND	1.0 µg/L			
44 1,1,1,2-Tetrachloroethane	ND	1.0 µg/L			

ND = Not Detected

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Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

VOC Sample Preservation Report

Work Order: CHH1122340

Job: KMEP Norwalk

Alpha's Sample ID	Client's Sample ID	Matrix	pH
11122340-01A	GMW-O-15	Aqueous	2
11122340-02A	GMW-O-16	Aqueous	2
11122340-03A	GMW-O-18	Aqueous	2
11122340-04A	GMW-O-19	Aqueous	2
11122340-05A	GMW-36	Aqueous	2
11122340-06A	PZ-5	Aqueous	6
11122340-07A	DUP-1	Aqueous	6
11122340-08A	EB-1	Aqueous	2
11122340-09A	TB-1	Aqueous	2

1/4/12
Report Date



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:
04-Jan-12

QC Summary Report

Work Order:
11122340

Method Blank

Method Blank		Type: MBLK	Test Code: EPA Method SW8015B/C Ext							
File ID: 7A12201183.D		Batch ID: 27955		Analysis Date: 12/29/2011 16:55						
Sample ID: MBLK-27955	Units : mg/L	Run ID: FID_7_111229A		Prep Date: 12/29/2011 13:20						
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-E (Fuel Product)	ND	0.1								
Surr: Nonane	0.163		0.15		109	49	145			

Laboratory Control Spike

Laboratory Control Spike		Type: LCS	Test Code: EPA Method SW8015B/C Ext							
File ID: 7A12201182.D		Batch ID: 27955		Analysis Date: 12/29/2011 16:28						
Sample ID: LCS-27955	Units : mg/L	Run ID: FID_7_111229A		Prep Date: 12/29/2011 13:20						
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-E (DRO)	2.51	0.05	2.5		100	70	130			
Surr: Nonane	0.162		0.15		108	49	145			

Sample Matrix Spike

Sample Matrix Spike		Type: MS	Test Code: EPA Method SW8015B/C Ext							
File ID: 7A12201205.D		Batch ID: 27955		Analysis Date: 12/30/2011 02:44						
Sample ID: 11122340-08AMS	Units : mg/L	Run ID: FID_7_111229A		Prep Date: 12/29/2011 13:20						
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-E (DRO)	2.87	0.05	2.5	0	115	53	150			
Surr: Nonane	0.147		0.15		98	49	145			

Sample Matrix Spike Duplicate

Sample Matrix Spike Duplicate		Type: MSD	Test Code: EPA Method SW8015B/C Ext							
File ID: 7A12201206.D		Batch ID: 27955		Analysis Date: 12/30/2011 03:11						
Sample ID: 11122340-08AMSD	Units : mg/L	Run ID: FID_7_111229A		Prep Date: 12/29/2011 13:20						
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-E (DRO)	3.12	0.05	2.5	0	125	53	150	2.866	8.6(47)	
Surr: Nonane	0.154		0.15		103	49	145			

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



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Date:
04-Jan-12

QC Summary Report

Work Order:
11122340

Method Blank

File ID: 11122905.D

Type: MBLK Test Code: EPA Method SW8015B/C

Batch ID: MS15W1229B

Analysis Date: 12/29/2011 11:33

Sample ID: MBLK MS15W1229B

Units : mg/L

Run ID: MSD_15_121229A

Prep Date: 12/29/2011 11:33

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	ND	0.05								
Surr: 1,2-Dichloroethane-d4	0.00955		0.01		96	70	130			
Surr: Toluene-d8	0.01		0.01		100	70	130			
Surr: 4-Bromofluorobenzene	0.00971		0.01		97	70	130			

Laboratory Control Spike

File ID: 11122904.D

Type: LCS Test Code: EPA Method SW8015B/C

Batch ID: MS15W1229B

Analysis Date: 12/29/2011 11:11

Sample ID: GLCS MS15A1229B

Units : mg/L

Run ID: MSD_15_121229A

Prep Date: 12/29/2011 11:11

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	0.423	0.05	0.4		106	70	130			
Surr: 1,2-Dichloroethane-d4	0.00946		0.01		95	70	130			
Surr: Toluene-d8	0.0101		0.01		101	70	130			
Surr: 4-Bromofluorobenzene	0.00994		0.01		99	70	130			

Sample Matrix Spike

File ID: 11122929.D

Type: MS Test Code: EPA Method SW8015B/C

Batch ID: MS15W1229B

Analysis Date: 12/29/2011 20:41

Sample ID: 11122340-04AGS

Units : mg/L

Run ID: MSD_15_121229A

Prep Date: 12/29/2011 20:41

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	2.36	0.25	2	0	118	51	144			
Surr: 1,2-Dichloroethane-d4	0.0477		0.05		95	70	130			
Surr: Toluene-d8	0.049		0.05		98	70	130			
Surr: 4-Bromofluorobenzene	0.0505		0.05		101	70	130			

Sample Matrix Spike Duplicate

File ID: 11122930.D

Type: MSD Test Code: EPA Method SW8015B/C

Batch ID: MS15W1229B

Analysis Date: 12/29/2011 21:03

Sample ID: 11122340-04AGSD

Units : mg/L

Run ID: MSD_15_121229A

Prep Date: 12/29/2011 21:03

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	2.24	0.25	2	0	112	51	144	2.358	5.0(29)	
Surr: 1,2-Dichloroethane-d4	0.0472		0.05		94	70	130			
Surr: Toluene-d8	0.0492		0.05		98	70	130			
Surr: 4-Bromofluorobenzene	0.0489		0.05		98	70	130			

Comments:

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QC Summary Report

Work Order:

11122340

n-Butylbenzene	ND	1				
1,2-Dibromo-3-chloropropane (DBCP)	ND	5				
1,2,4-Trichlorobenzene	ND	2				
Naphthalene	ND	10				
1,2,3-Trichlorobenzene	ND	2				
Xylenes, Total	ND	0.5				
Surr: 1,2-Dichloroethane-d4	9.55		10	96	70	130
Surr: Toluene-d8	10		10	100	70	130
Surr: 4-Bromofluorobenzene	9.71		10	97	70	130



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QC Summary Report

Work Order:

11122340

Laboratory Control Spike

Type: LCS Test Code: EPA Method SW8260B

File ID: 11122903.D

Batch ID: MS15W1229A

Analysis Date: 12/29/2011 10:49

Sample ID: LCS MS15A1229A M

Units: µg/L

Run ID: MSD_15_121229A

Prep Date: 12/29/2011 10:49

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	7.25	1	10		73	37	137			
Chloromethane	11.7	2	10		117	43	140			
Vinyl chloride	8.92	1	10		89	80	120			
Chloroethane	9.37	1	10		94	43	141			
Bromomethane	9.83	2	10		98	11	160			
Trichlorofluoromethane	10.3	1	10		103	40	148			
Acetone	203	10	200		101	36	171			
1,1-Dichloroethene	9.98	1	10		99.8	80	120			
Tertiary Butyl Alcohol (TBA)	70	10	100		70	44	156			
Dichloromethane	9.14	2	10		91	69	130			
Freon-113	9.86	1	10		99	70	137			
trans-1,2-Dichloroethene	9.97	1	10		99.7	70	130			
Methyl tert-butyl ether (MTBE)	9.84	0.5	10		98	65	140			
1,1-Dichloroethane	9.7	1	10		97	70	130			
2-Butanone (MEK)	191	10	200		95	23	182			
Di-isopropyl Ether (DIPE)	9.7	1	10		97	70	130			
cis-1,2-Dichloroethene	10.1	1	10		101	70	130			
Bromochloromethane	9.6	1	10		96	70	132			
Chloroform	8.77	1	10		88	80	120			
Ethyl Tertiary Butyl Ether (ETBE)	9.52	1	10		95	65	139			
2,2-Dichloropropane	9.93	1	10		99	68	154			
1,2-Dichloroethane	9.04	1	10		90	70	132			
1,1,1-Trichloroethane	9.71	1	10		97	70	135			
1,1-Dichloropropene	10.1	1	10		101	70	130			
Carbon tetrachloride	8.3	1	10		83	61	148			
Benzene	9.72	0.5	10		97	70	130			
Tertiary Amyl Methyl Ether (TAME)	9.41	1	10		94	68	134			
Dibromomethane	9.63	1	10		96	70	130			
1,2-Dichloropropane	9.98	1	10		99.8	80	120			
Trichloroethene	9.83	1	10		98	65	144			
Bromodichloromethane	8.62	1	10		86	50	157			
4-Methyl-2-pentanone (MIBK)	22.3	2.5	25		89	20	182			
cis-1,3-Dichloropropene	9.05	1	10		91	70	131			
trans-1,3-Dichloropropene	8.71	1	10		87	70	136			
1,1,2-Trichloroethane	9.96	1	10		99.6	70	130			
Toluene	9.99	0.5	10		99.9	80	120			
1,3-Dichloropropane	10.3	1	10		103	70	130			
2-Hexanone	92.1	5	100		92	20	182			
Dibromochloromethane	8.36	1	10		84	42	155			
1,2-Dibromoethane (EDB)	19.8	2	20		99	70	130			
Tetrachloroethene	9.56	1	10		96	70	130			
1,1,1,2-Tetrachloroethane	9.08	1	10		91	70	130			
Chlorobenzene	9.85	1	10		99	70	130			
Ethylbenzene	10.1	0.5	10		101	80	120			
m,p-Xylene	10.1	0.5	10		101	70	130			
Bromoform	7.81	1	10		78	68	143			
Styrene	9.79	1	10		98	64	153			
o-Xylene	10.1	0.5	10		101	70	130			
1,1,2,2-Tetrachloroethane	10.4	1	10		104	70	130			
1,2,3-Trichloropropane	19.9	2	20		99	70	130			
Isopropylbenzene	10.4	1	10		104	68	138			
Bromobenzene	10.1	1	10		101	70	130			
n-Propylbenzene	10.4	1	10		104	70	133			
4-Chlorotoluene	11	1	10		110	70	130			
2-Chlorotoluene	10.3	1	10		103	70	130			
1,3,5-Trimethylbenzene	10.5	1	10		105	70	134			
tert-Butylbenzene	10.2	1	10		102	55	147			
1,2,4-Trimethylbenzene	10.7	1	10		107	70	134			
sec-Butylbenzene	10.2	1	10		102	70	135			
1,3-Dichlorobenzene	10.4	1	10		104	70	130			
1,4-Dichlorobenzene	9.94	1	10		99	70	130			
4-Isopropyltoluene	10.5	1	10		105	70	132			
1,2-Dichlorobenzene	9.7	1	10		97	70	130			
n-Butylbenzene	10.8	1	10		108	70	134			
1,2-Dibromo-3-chloropropane (DBCP)	42.3	3	50		85	67	130			



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1,2,4-Trichlorobenzene	8.68	2	10	87	67	132
Naphthalene	7.83	2	10	78	38	154
1,2,3-Trichlorobenzene	7.54	2	10	75	56	137
Xylenes, Total	20.3	0.5	20	101	70	130
Surr: 1,2-Dichloroethane-d4	9.36		10	94	70	130
Surr: Toluene-d8	10		10	100	70	130
Surr: 4-Bromofluorobenzene	10.6		10	106	70	130



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QC Summary Report

Work Order:

11122340

Sample Matrix Spike

Type: **MS** Test Code: **EPA Method SW8260B**

File ID: **11122927.D**

Batch ID: **MS15W1229A**

Analysis Date: **12/29/2011 19:58**

Sample ID: **11122042-01AMS**

Units : **µg/L**

Run ID: **MSD_15_121229A**

Prep Date: **12/29/2011 19:58**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	21.2	5	50	0	42	21	138			
Chloromethane	52.1	10	50	0	104	23	144			
Vinyl chloride	43.3	5	50	0	87	49	136			
Chloroethane	50.1	5	50	0	100	21	159			
Bromomethane	51.4	10	50	0	103	10	174			
Trichlorofluoromethane	53.8	5	50	0	108	32	154			
Acetone	552	50	1000	0	55	10	171			
1,1-Dichloroethene	55.4	5	50	0	111	64	130			
Tertiary Butyl Alcohol (TBA)	497	50	500	0	99	41	157			
Dichloromethane	57	10	50	0	114	69	130			
Freon-113	55.2	5	50	0	110	55	141			
trans-1,2-Dichloroethene	55.9	5	50	0	112	63	130			
Methyl tert-butyl ether (MTBE)	59.5	2.5	50	0	119	47	150			
1,1-Dichloroethane	55.8	5	50	0	112	66	130			
2-Butanone (MEK)	772	50	1000	0	77	23	182			
Di-isopropyl Ether (DIPE)	56.5	5	50	0	113	59	139			
cis-1,2-Dichloroethene	57.9	5	50	0	116	70	130			
Bromochloromethane	57.2	5	50	0	114	70	132			
Chloroform	50.5	5	50	0	101	70	130			
Ethyl Tertiary Butyl Ether (ETBE)	56.9	5	50	0	114	59	182			
2,2-Dichloropropane	55.2	5	50	0	110	38	154			
1,2-Dichloroethane	54	5	50	0	108	65	134			
1,1,1-Trichloroethane	56.4	5	50	0	113	65	136			
1,1-Dichloropropene	56.5	5	50	0	113	68	132			
Carbon tetrachloride	48.1	5	50	0	96	58	148			
Benzene	55.6	2.5	50	0	111	59	138			
Tertiary Amyl Methyl Ether (TAME)	55.5	5	50	0	111	63	135			
Dibromomethane	57.5	5	50	0	115	70	130			
1,2-Dichloropropane	57.8	5	50	0	116	70	131			
Trichloroethene	55.5	5	50	0	111	65	144			
Bromodichloromethane	50.3	5	50	0	101	50	157			
4-Methyl-2-pentanone (MIBK)	127	13	125	0	102	20	182			
cis-1,3-Dichloropropene	51.4	5	50	0	103	63	131			
trans-1,3-Dichloropropene	50.7	5	50	0	101	65	136			
1,1,2-Trichloroethane	59	5	50	0	118	70	131			
Toluene	56.1	2.5	50	0	112	68	130			
1,3-Dichloropropane	60.5	5	50	0	121	70	130			
2-Hexanone	358	25	500	0	72	20	182			
Dibromochloromethane	48.4	5	50	0	97	42	155			
1,2-Dibromoethane (EDB)	116	10	100	0	116	70	130			
Tetrachloroethene	53.5	5	50	0	107	65	130			
1,1,1,2-Tetrachloroethane	52.3	5	50	0	105	70	130			
Chlorobenzene	55.1	5	50	0	110	70	130			
Ethylbenzene	56.4	2.5	50	0	113	68	130			
m,p-Xylene	56.4	2.5	50	0	113	68	131			
Bromoform	46.7	5	50	0	93	65	143			
Styrene	55.7	5	50	0	111	59	153			
o-Xylene	57.1	2.5	50	0	114	70	130			
1,1,2,2-Tetrachloroethane	62.9	5	50	0	126	67	130			
1,2,3-Trichloropropane	118	10	100	0	118	70	130			
Isopropylbenzene	56.4	5	50	0	113	55	138			
Bromobenzene	56.2	5	50	0	112	70	130			
n-Propylbenzene	55.9	5	50	0	112	67	133			
4-Chlorotoluene	59.1	5	50	0	118	70	130			
2-Chlorotoluene	56	5	50	0	112	70	130			
1,3,5-Trimethylbenzene	56.9	5	50	0	114	67	134			
tert-Butylbenzene	55.2	5	50	0	110	55	147			
1,2,4-Trimethylbenzene	58.1	5	50	0	116	65	135			
sec-Butylbenzene	54.6	5	50	0	109	68	135			
1,3-Dichlorobenzene	58.2	5	50	0	116	70	130			
1,4-Dichlorobenzene	55.4	5	50	0	111	70	130			
4-Isopropyltoluene	56	5	50	0	112	68	132			
1,2-Dichlorobenzene	54.7	5	50	0	109	70	130			
n-Butylbenzene	58.1	5	50	0	116	62	134			
1,2-Dibromo-3-chloropropane (DBCP)	258	15	250	0	103	64	130			



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1,2,4-Trichlorobenzene	52.8	10	50	0	106	62	133
Naphthalene	51.5	10	50	0	103	32	166
1,2,3-Trichlorobenzene	48.6	10	50	0	97	55	138
Xylenes, Total	114	2.5	100	0	114	70	130
Surr: 1,2-Dichloroethane-d4	53.4		50		107	70	130
Surr: Toluene-d8	49.2		50		98	70	130
Surr: 4-Bromofluorobenzene	52.1		50		104	70	130



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Date:
04-Jan-12

QC Summary Report

Work Order:
11122340

Sample Matrix Spike Duplicate

Type: MSD Test Code: EPA Method SW8260B

File ID: 11122928.D

Batch ID: MS15W1229A

Analysis Date: 12/29/2011 20:19

Sample ID: 11122042-01AMSD

Units: µg/L

Run ID: MSD_15_121229A

Prep Date: 12/29/2011 20:19

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	19.7	2.5	50	0	39	21	138	21.15	7.4(33)	
Chloromethane	48	10	50	0	96	23	144	52.06	8.1(27)	
Vinyl chloride	40	2.5	50	0	80	49	136	43.25	7.9(21)	
Chloroethane	46	2.5	50	0	92	21	159	50.08	8.6(40)	
Bromomethane	48.7	10	50	0	97	10	174	51.42	5.4(40)	
Trichlorofluoromethane	50	2.5	50	0	100	32	154	53.78	7.2(37)	
Acetone	513	50	1000	0	51	10	171	551.8	7.4(23)	
1,1-Dichloroethene	52.5	2.5	50	0	105	64	130	55.4	5.4(21)	
Tertiary Butyl Alcohol (TBA)	463	25	500	0	93	41	157	497.1	7.0(30)	
Dichloromethane	50.8	10	50	0	102	69	130	56.96	11.5(20)	
Freon-113	52	2.5	50	0	104	55	141	55.16	5.9(40)	
trans-1,2-Dichloroethene	52.9	2.5	50	0	106	63	130	55.87	5.5(20)	
Methyl tert-butyl ether (MTBE)	56.4	1.3	50	0	113	47	150	59.45	5.2(40)	
1,1-Dichloroethane	52.4	2.5	50	0	105	66	130	55.79	6.3(20)	
2-Butanone (MEK)	730	50	1000	0	73	23	182	771.8	5.6(22)	
Di-isopropyl Ether (DIPE)	53.5	2.5	50	0	107	59	139	56.48	5.4(20)	
cis-1,2-Dichloroethene	53	2.5	50	0	106	70	130	57.85	8.8(20)	
Bromochloromethane	53.7	2.5	50	0	107	70	132	57.18	6.3(20)	
Chloroform	47.5	2.5	50	0	95	70	130	50.51	6.1(20)	
Ethyl Tertiary Butyl Ether (ETBE)	53.8	2.5	50	0	108	59	182	56.86	5.5(40)	
2,2-Dichloropropane	51.5	2.5	50	0	103	38	154	55.21	7.0(22)	
1,2-Dichloroethane	50.1	2.5	50	0	100	65	134	54	7.6(20)	
1,1,1-Trichloroethane	52.2	2.5	50	0	104	65	136	56.44	7.8(20)	
1,1-Dichloropropene	53.7	2.5	50	0	107	68	132	56.5	5.0(20)	
Carbon tetrachloride	45.4	2.5	50	0	91	58	148	48.11	5.8(20)	
Benzene	52.5	1.3	50	0	105	59	138	55.61	5.9(21)	
Tertiary Amyl Methyl Ether (TAME)	52	2.5	50	0	104	63	135	55.46	6.4(40)	
Dibromomethane	52.7	2.5	50	0	105	70	130	57.46	8.7(20)	
1,2-Dichloropropane	54.6	2.5	50	0	109	70	131	57.77	5.6(20)	
Trichloroethene	52.3	2.5	50	0	105	65	144	55.46	5.9(20)	
Bromodichloromethane	47.4	2.5	50	0	95	50	157	50.25	5.9(20)	
4-Methyl-2-pentanone (MIBK)	116	13	125	0	93	20	182	127.1	8.7(20)	
cis-1,3-Dichloropropene	48.1	2.5	50	0	96	63	131	51.38	6.6(20)	
trans-1,3-Dichloropropene	46.7	2.5	50	0	93	65	136	50.72	8.3(20)	
1,1,2-Trichloroethane	54.8	2.5	50	0	110	70	131	58.96	7.2(20)	
Toluene	53.7	1.3	50	0	107	68	130	56.09	4.4(20)	
1,3-Dichloropropane	57.2	2.5	50	0	114	70	130	60.47	5.6(20)	
2-Hexanone	338	25	500	0	68	20	182	357.9	5.7(20)	
Dibromochloromethane	46.4	2.5	50	0	93	42	155	48.39	4.2(20)	
1,2-Dibromoethane (EDB)	110	5	100	0	110	70	130	115.9	5.5(20)	
Tetrachloroethene	51	2.5	50	0	102	65	130	53.53	4.8(20)	
1,1,1,2-Tetrachloroethane	49.8	2.5	50	0	100	70	130	52.27	4.9(20)	
Chlorobenzene	52.7	2.5	50	0	105	70	130	55.12	4.4(20)	
Ethylbenzene	54.2	1.3	50	0	108	68	130	56.43	4.0(20)	
m,p-Xylene	54.6	1.3	50	0	109	68	131	56.43	3.4(20)	
Bromoform	44	2.5	50	0	88	65	143	46.69	5.9(20)	
Styrene	53.1	2.5	50	0	106	59	153	55.68	4.8(37)	
o-Xylene	54.7	1.3	50	0	109	70	130	57.09	4.3(20)	
1,1,2,2-Tetrachloroethane	58.5	2.5	50	0	117	67	130	62.85	7.1(20)	
1,2,3-Trichloropropane	111	10	100	0	111	70	130	117.9	5.9(20)	
Isopropylbenzene	54.7	2.5	50	0	109	55	138	56.42	3.2(20)	
Bromobenzene	53.5	2.5	50	0	107	70	130	56.19	4.9(20)	
n-Propylbenzene	53.5	2.5	50	0	107	67	133	55.9	4.4(30)	
4-Chlorotoluene	56.7	2.5	50	0	113	70	130	59.07	4.1(20)	
2-Chlorotoluene	54	2.5	50	0	108	70	130	55.98	3.6(20)	
1,3,5-Trimethylbenzene	54.5	2.5	50	0	109	67	134	56.92	4.3(21)	
tert-Butylbenzene	53.7	2.5	50	0	107	55	147	55.15	2.7(20)	
1,2,4-Trimethylbenzene	55.6	2.5	50	0	111	65	135	58.09	4.5(25)	
sec-Butylbenzene	53.3	2.5	50	0	107	68	135	54.63	2.5(20)	
1,3-Dichlorobenzene	54.8	2.5	50	0	110	70	130	58.23	6.2(20)	
1,4-Dichlorobenzene	52.6	2.5	50	0	105	70	130	55.44	5.2(20)	
4-Isopropyltoluene	54.7	2.5	50	0	109	68	132	55.96	2.2(20)	
1,2-Dichlorobenzene	52.2	2.5	50	0	104	70	130	54.67	4.6(20)	
n-Butylbenzene	56.6	2.5	50	0	113	62	134	58.06	2.5(21)	
1,2-Dibromo-3-chloropropane (DBCP)	245	15	250	0	98	64	130	257.9	5.0(20)	



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date: 04-Jan-12 QC Summary Report Work Order: 11122340

1,2,4-Trichlorobenzene	49.7	10	50	0	99	62	133	52.84	6.1(29)
Naphthalene	49.6	10	50	0	99	32	166	51.46	3.6(40)
1,2,3-Trichlorobenzene	47.2	10	50	0	94	55	138	48.64	2.9(36)
Xylenes, Total	109	1.3	100	0	109	70	130	113.5	3.8(20)
Surr: 1,2-Dichloroethane-d4	48.1		50		96	70	130		
Surr: Toluene-d8	49.8		50		99.5	70	130		
Surr: 4-Bromofluorobenzene	52		50		104	70	130		

Comments:
Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

CHAIN-OF-CUSTODY RECORD

CA

Alpha Analytical, Inc.
 255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778
 TEL: (775) 355-1044 FAX: (775) 355-0406

WorkOrder : CHHL1122340
Report Due By : 5:00 PM On : 05-Jan-12

Client: CH2M Hill
 1000 Wilshire Boulevard
 21st Floor
 Los Angeles, CA 90017

Report Attention: Daniel Jablonski (213) 228-8271 x
 Mathew Mayry (213) 228-8271 x

Phone Number: daniel.jablonski@ch2m.com
 mathew.mayry@ch2m.com

Job : KMEP Norwalk
 QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD With Surrogates

Sampled by : Danny Rice
 Cooler Temp 0 °C Samples Received 23-Dec-11 Date Printed 23-Dec-11

Alpha Sample ID	Client Sample ID	Collection Matrix Date	No. of Bottles Alpha Sub	TAT	Requested Tests			Sample Remarks	
					TPHE_W +Vmyl acetate	TPHP_W +Vmyl acetate	VOC_W +Vmyl acetate		
CHH1122340-01A	GMW-O-15	AQ 12/21/11 09:23	6	0	7	TPHE(0.10) +Vmyl acetate	TPHP(0.10) +Vmyl acetate	TPHE(0.10) +Vmyl acetate	
CHH1122340-02A	GMW-O-16	AQ 12/21/11 08:14	6	0	7	TPHE(0.10) +Vmyl acetate	TPHP(0.10) +Vmyl acetate	TPHE(0.10) +Vmyl acetate	
CHH1122340-03A	GMW-O-18	AQ 12/21/11 11:18	6	0	7	TPHE(0.10) +Vmyl acetate	TPHP(0.10) +Vmyl acetate	TPHE(0.10) +Vmyl acetate	
CHH1122340-04A	GMW-O-19	AQ 12/21/11 08:48	6	0	7	TPHE(0.10) +Vmyl acetate	TPHP(0.10) +Vmyl acetate	TPHE(0.10) +Vmyl acetate	
CHH1122340-05A	GMW-36	AQ 12/21/11 09:57	6	0	7	TPHE(0.10) +Vmyl acetate	TPHP(0.10) +Vmyl acetate	TPHE(0.10) +Vmyl acetate	
CHH1122340-06A	PZ-5	AQ 12/21/11 10:40	6	0	7	TPHE(0.10) +Vmyl acetate	TPHP(0.10) +Vmyl acetate	TPHE(0.10) +Vmyl acetate	
CHH1122340-07A	DUP-1	AQ 12/21/11 00:00	5	0	7	TPHE(0.10) +Vmyl acetate	TPHP(0.10) +Vmyl acetate	TPHE(0.10) +Vmyl acetate	1 VOA received broken.
CHH1122340-08A	EB-1	AQ 12/21/11 07:30	6	0	7	TPHE(0.10) +Vmyl acetate	TPHP(0.10) +Vmyl acetate	TPHE(0.10) +Vmyl acetate	

Comments: Security seals intact. Frozen Ice. Analysis: Run two analyses in order to achieve lower reporting limits for all other analytes due to high TBA values.

Logged in by: [Signature] [Print Name] [Company] [Date/Time]
 [Signature] Sara Lofee Alpha Analytical, Inc. 12/23/11 11:20

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.
 The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report.
 Matrix Type: AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedar B-Brass P-Plastic OT-Other

CHAIN-OF-CUSTODY RECORD

CA

Alpha Analytical, Inc.
 255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778
 TEL: (775) 355-1044 FAX: (775) 355-0406

WorkOrder : CHHL11122340
Report Due By : 5:00 PM On : 05-Jan-12

Client:
 CH2M Hill
 1000 W/ishire Boulevard
 21st Floor
 Los Angeles, CA 90017

Report Attention Phone Number Email Address
 Daniel Jablonski (213) 228-8271 x daniel.jablonski@ch2m.com
 Matthew Mayry (213) 228-8271 x matthew.mayry@ch2m.com

EDD Required : Yes
 Sampled by : Danny Rice

Client's COC # : none Job : KMEP Norwalk

Cooler Temp 0 °C Samples Received 23-Dec-11 Date Printed 23-Dec-11

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD With Surrogates

Alpha Sample ID	Client Sample ID	Collection Matrix Date	No. of Bottles Alpha Sub	TAT	Requested Tests			Sample Remarks
					TPHE_W	TPHP_W	VOC_W	
CHH11122340-09A	TB-1	AQ 12/21/11 07:00	2	0	7	TPHE(0.10) +Vmpyl acetate		Reno Trip Blank 5/31/11. 1 VOA received broken.

Comments: Security seals intact. Frozen Ice. Analysis: Run two analyses in order to achieve lower reporting limits for all other analytes due to high TBA values.

Logged in by: Wendee Cooper Signature Sara Lofee Print Name Alpha Analytical, Inc. Company 12/23/11 11:20 Date/Time

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.
 The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report.
 Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

BLAINE

TECH SERVICES, INC.

1680 ROGERS AVENUE
 SAN JOSE, CALIFORNIA 95112-1105
 FAX (408) 573-7771
 PHONE (408) 573-0555

Alpha Analytical COC 1 of 1

CHAIN OF CUSTODY

CLIENT: Kinder Morgan
 SITE: DFSP Norwalk
 15306 Norwalk Blvd, Norwalk

LAB Billing Information:
 Kinder Morgan
 1100 Town and Country Rd.
 Orange CA 95112
 Kinder Morgan Norwalk
 Report to:
 Dan Jablonski
 CH2MHILL
 1000 Wilshire Blvd 21st floor
 Los Angeles, CA 90017

SAMPLE ID	DATE	TIME	MATRIX	#	Preservation	Type	CONDUCT ANALYSIS TO DETECT		ADDL INFORMATION	STATUS	CONDITION	LAB SAMPLE #
							TPHg, TPHfp (EPA 8015M)	VOC's & Oxygenates (EPA 8260B)				
6NW-0-15	12/21/11	0923	A&W	6	HCl	UcA	X	X				CH1112340-0
6NW-0-16		0814		6			X	X				-02A
6NW-0-18		1118		6			X	X				-03A
6NW-0-19		0848		6			X	X				-04A
6NW-3L		0857		6			X	X				-05A
PZ-5		1040		6			X	X				-06A
DUP-1		-		6			X	X				-07A
EB-1		0730		6			X	X				-08A
TB-1		0700		3			X	X				-09A

SAMPLING COMPLETED: 12/21/11 1130
 RELEASED BY: [Signature] TIME: 12-21-11 1645
 RECEIVED BY: Nicole (see) DATE: 12/21/11 TIME: 1645
 RELEASED BY: [Signature] TIME: 1600
 RECEIVED BY: [Signature] DATE: 12/21/11 TIME: 1600
 SHIPPED VIA: [Signature] DATE: 12/23/11 TIME: 9:55
 RECEIVED BY: [Signature] DATE: 12/23/11 TIME: 9:55
 RESULTS NEEDED NO LATER THAN: Standard