

Circle K Station #1461
Release ID #: 1548
Seattle



EA Engineering, Science, and Technology, Inc.

12011 N.E. 1st St, Suite 100
Bellevue, Washington 98005
Telephone: 425-451-7400
Fax: 425-451-7800
www.eaest.com

14 August 2006
61994.01 LN0023

Mr. Roger Nye
Washington Department of Ecology
Toxics Cleanup Program
3190 – 160th Avenue Southeast
Bellevue, Washington 98008-5452

RECEIVED

AUG 15 2006

DEPT OF ECOLOGY

RE: Circle K Station #1461 Groundwater Monitoring Data Summary for May 2006
Work Order #17079, Contract Number: 30700

Dear Mr. Nye:

This letter provides a short summary of the results from the groundwater sampling event conducted on 18 May 2006 at Circle K Station #1461, in the Montlake area of Seattle.

1.0 FIELD ACTIVITIES

On 18 May 2006, EA Engineering, Science and Technology, Inc. (EA) personnel gauged all monitoring wells at the site for the presence of free product. Free product was measured in well MW-4 at a thickness of 0.14 ft and in MW-8 at a thickness of 0.05 ft. Less than 0.01 ft of product (trace) was measured in wells MW-9 and MW-13. "Trace" product measurements are not reliable, and may or may not be an indicator of free product in wells. Free product was not observed in MW-6, MW-7, MW-10, MW-11, MW-12, MW-14, MW-15 or MW-16.

EA collected groundwater samples from MW-6, MW-9, MW-10, MW-13, and MW-15 in accordance with the Sampling and Analysis Plan (SAP)¹, using a peristaltic pump and low-flow sampling procedures. Wells with 0.02 ft or more of free product were not sampled. The tubing intake was placed approximately five feet off the bottom of the well during sampling.

Groundwater was purged at a rate of 300-500 milliliters per minute. Groundwater quality parameters were measured every three minutes during purging until parameters stabilized. Groundwater samples were then collected. A duplicate sample was collected from MW-6 (CK-MW6D). Table 1 summarizes monitoring well construction information, water level measurements, and field parameter measurements obtained after the readings stabilized. A site map with monitoring well locations is attached as Figure 1.

In accordance with the SAP, groundwater samples were submitted for laboratory analysis of diesel range organics (DRO); lube oil range organics (LRO); gasoline range organics (GRO); benzene, toluene, ethylbenzene, and xylenes (BTEX); and lead. Groundwater purged during monitoring well sampling was contained in a 55-gallon drum within the fenced enclosure at the rear of the Jays Cleaners/Mont's Market building.

¹ EA Engineering, Science, and Technology, Inc. 2006. Sampling and Analysis Plan for Amendment No. 2, Revision 1, Work Order #17079, Contract Number: 30700. March.



2.0 GROUNDWATER MONITORING RESULTS

Laboratory results for monitoring well groundwater samples are attached and are summarized in Table 2, along with prior sampling results. GRO, DRO, LRO and benzene concentrations for the May 2006 sampling event are also listed on Figure 1. Following is a general discussion of the findings.

- Results for the sample and duplicate sample collected from MW-6 were below the laboratory reporting limits for all analytes except benzene at 0.514 micrograms per liter ($\mu\text{g/L}$) and ethylbenzene at 1.48 $\mu\text{g/L}$.
- Analytical results for the groundwater sample collected from MW-9 were above the laboratory reporting limits for GRO, DRO and BTEX. Constituents detected at concentrations above the MTCA Method A criteria were: benzene (535 $\mu\text{g/L}$), toluene (2,300 $\mu\text{g/L}$), ethylbenzene (1,730 $\mu\text{g/L}$), xylenes (8,390 $\mu\text{g/L}$), GRO (52,200 $\mu\text{g/L}$), and DRO (2,530 $\mu\text{g/L}$).
- Analytical results for the groundwater samples from MW-10 were below the laboratory reporting limits for all analytes.
- Analytical results for the groundwater sample collected from MW-13 were above the laboratory reporting limits for GRO, DRO and BTEX. Constituents detected at concentrations above the MTCA Method A criteria were: benzene (7,260 $\mu\text{g/L}$), toluene (14,700 $\mu\text{g/L}$), ethylbenzene (1,810 $\mu\text{g/L}$), xylenes (15,500 $\mu\text{g/L}$), GRO (109,000 $\mu\text{g/L}$), and DRO (4,650 $\mu\text{g/L}$).
- Results for MW-15 were below MTCA Method A cleanup criteria for all constituents analyzed. DRO and LRO were not detected above laboratory reporting limits. Constituents detected in the sample from MW-15 were: benzene (0.791 $\mu\text{g/L}$), toluene (1.69 $\mu\text{g/L}$), ethylbenzene (0.816 $\mu\text{g/L}$), xylenes (5.82 $\mu\text{g/L}$), and GRO (381 $\mu\text{g/L}$).

3.0 DISCUSSION AND CONCLUSIONS

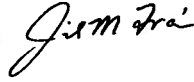
Results of the May 2006 sampling event are generally consistent with previous results.

During the May sampling event, analytical results for samples collected from MW-6 and MW-10 were below MTCA cleanup levels, defining the contaminant plume on the east. DRO and GRO contamination exceeding the MTCA Method A cleanup limits was found in wells MW-9 and MW-13. Additionally, free product was detected in MW-4 and MW-8. It should be noted that all DRO detections were described by the laboratory as primarily due to overlap from a gasoline-range product. The benzene and toluene concentrations in MW-13, observed to decline slightly during the February 2006 sampling event, have rebounded to levels observed in June 2005.

A groundwater contour map for May 2006 is provided on Figure 1. No dominant groundwater flow direction is apparent at the site.

Please feel free to contact me at (425) 451-7400 if you have any questions about the enclosed.

Sincerely,
EA ENGINEERING, SCIENCE,
AND TECHNOLOGY, INC.

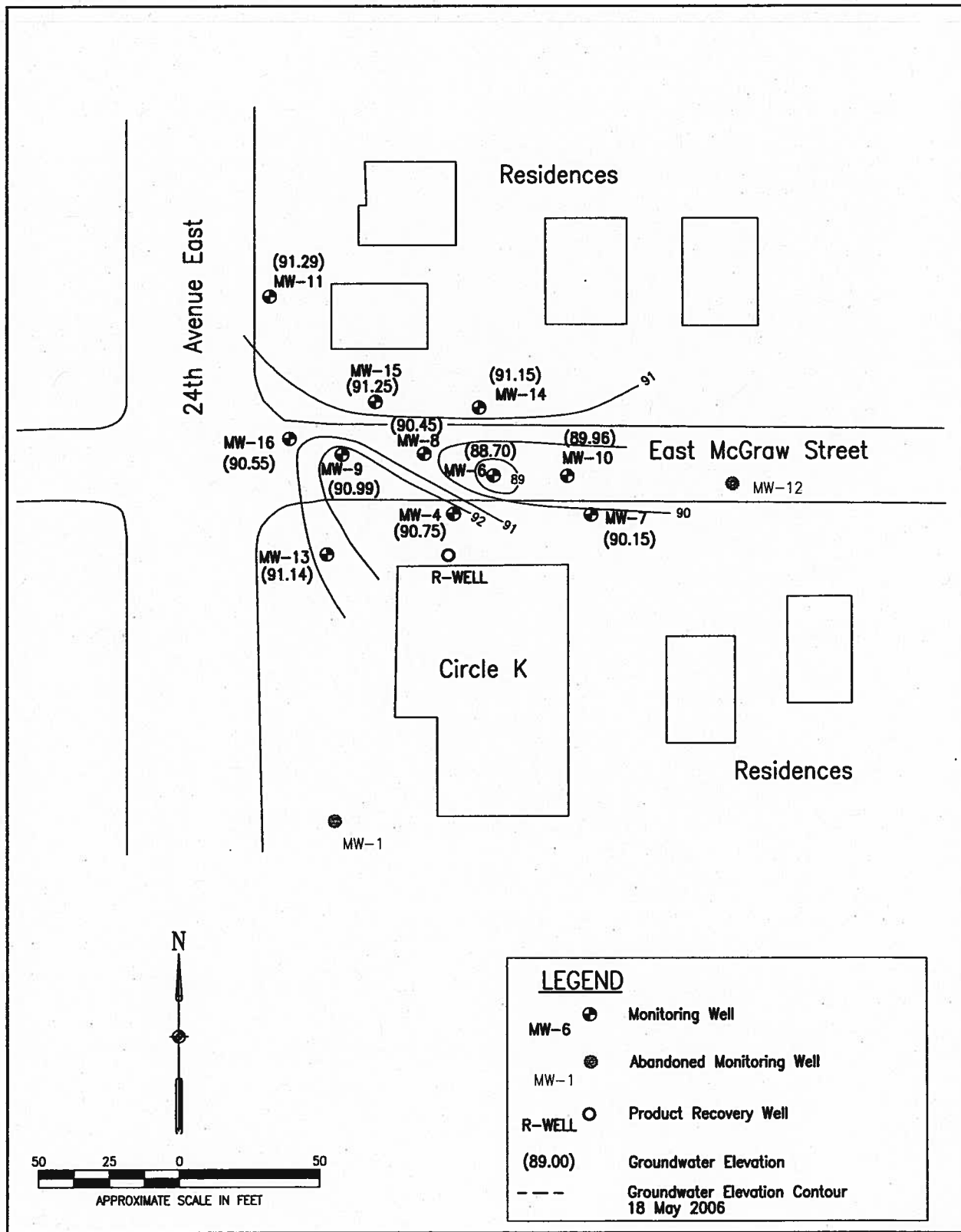


Jil Frain, P.E.
Project Manager
jfrain@eaest.com

Attachments:

- Figure 1 – Site Map with Groundwater Elevations and Contour Lines – Circle K Station #1461
- Figure 2 – Site Map with Groundwater Monitoring Results – Circle K Station #1461
- Table 1 – Monitoring Well Construction and Field Measurement Data – Circle K Station #1461
- Table 2 – Summary of Groundwater Analytical Data – Circle K Station #1461
- Appendix A – Purge and Sampling Forms
- Appendix B – Laboratory Reports

Figures



G:\Projects\61994.01_2006_2007 Ecology LUST Sites\Circle K\May 2006 GW Report\Fig1 May06 GW Elevations.dwg, Model, 8/14/2006 10:30:59 AM

Figure 1. Site Map with Groundwater Elevations and Contour Lines – Circle K Station #1461



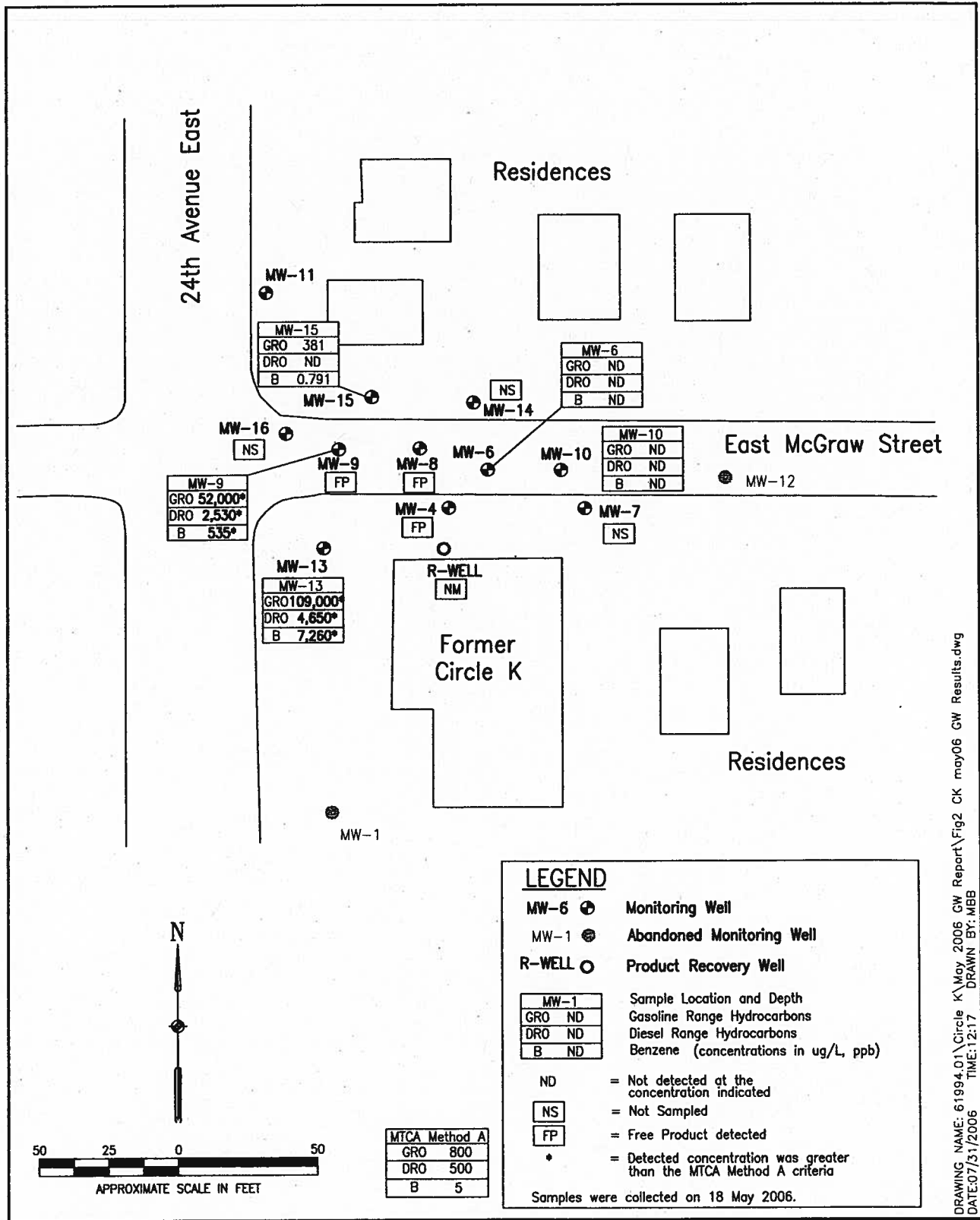


Figure 2. Site Map with Groundwater Monitoring Results – Circle K Station #1461



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11

Tables

**TABLE 1. MONITORING WELL CONSTRUCTION AND FIELD MEASUREMENT DATA
CIRCLE K STATION #1461**

Well ID	Date Installed	Well Diameter (inches)	Reported Screen Depth (ft bgs)	Total Depth (ft btoc)	Top of Casing Elevation (ft)	Depth to Water 18-May-06 (ft btoc)	Depth to Product 18-May-06 (ft btoc)	Groundwater Elevation 18-May-06 (ft)
MW-4	9/12/1989	2	4 - 18.5	17.90	100.73	10.12	9.98	90.75
MW-6	10/2/1989	2	5 - 20	20.43	100.24	11.54	NA	88.70
MW-7	10/2/1989	2	5 - 20	20.49	99.75	9.6	NA	90.15
MW-8	10/3/1989	2	5 - 20	19.45	100.70	10.25	10.20	90.45
MW-9	10/3/1989	2	5 - 21	20.35	101.41	10.42	trace	90.99
MW-10	10/3/1989	2	5 - 20	20.47	99.96	10.00	NA	89.96
MW-11	10/4/1989	2	5 - 20	20.31	100.89	9.6	NA	91.29
MW-12	10/4/1989	2	5 - 20	abandoned	abandoned	NA	NA	NA
MW-13	12/20/1989	2	4 - 19	18.81	102.19	11.05	trace	91.14
MW-14	12/20/1989	2	4 - 19	18.87	100.40	9.25	NA	91.15
MW-15	12/21/1989	2	4 - 18.5	16.81	101.29	10.04	NA	91.25
MW-16	12/21/1989	2	4 - 19	18.94	101.15	10.60	NA	90.55

Well ID	Date Measured	Water Quality Parameters					
		pH	Conductivity (mS/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/L)	Temperature (°C)	Oxidation-Reduction Potential (mV)
MW-6	5/18/2006	7.13	58.9	15.7	0.50	14.9	-112
MW-9	5/18/2006	6.58	61.8	75.6	0.20	16.0	-132
MW-10	5/18/2006	6.95	51.0	13.8	0.40	16.2	30
MW-13	5/18/2006	6.57	57.2	4.0	0.30	15.7	-125
MW-15	5/18/2006	5.62	18.4	2.5	0.20	15.3	-110

NOTES:

°C = degrees Celsius.

ft bgs = feet below ground surface.

ft btoc = feet below top of casing.

Top-of-casing elevation data are from INCA Engineers (22 March 2006).

NA = Not applicable.

NTUs = Nephelometric turbidity units.

mS/cm = milliSiemens per centimeter.

mg/L = milligrams per liter.

mV = milliVolts

**TABLE 2. SUMMARY OF GROUNDWATER ANALYTICAL DATA
CIRCLE K STATION #1461**

Well ID	Date Sampled	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (total) (ug/L)	GRO (ug/L)	DRO (ug/L)	LRO (ug/L)	MTBE (ug/L)	Lead (mg/L)	Free Product
CK-MW4	4/11/2001	7,370	28,000	2,680	17,100	117,000	NA	NA	NA	NA	Yes
	6/23/2005	240	3,750	1,640	10,700	65,600	1,870 D-08	500 U	50.0 U	NA	?
	2/14/2006	Not Sampled - Free product measured in well									
CK-MW6	5/18/2006	Not Sampled - Free product measured in well									
	4/11/2001	0.5 U	0.5 U	0.5 U	1.0 U	0.05 U	NA	NA	1.0 U	NA	No
	6/16/2003	0.5 U	0.5 U	0.5 U	1.0 U	1.0 U	NA	NA	NA	NA	No
CK-MW8	2/14/2006	0.982	0.5 U	3.84	7.13	67.5	243 U	485 U	NA	0.001 U	No
	5/18/2006	0.514	0.5 U	1.48	1.00 U	50.0 U	243 U	485 U	NA	NA	No
	5/18/2006*	0.500 U	0.5 U	1.28	1.00 U	50.0 U	240 U	481 U	NA	NA	No
CK-MW9	4/11/2001	802	9,770	1,520	7,030	166,400	NA	NA	NA	NA	Yes
	2/14/2006	342	143,000	2,670	14,800	102,000	2,390 D-08	472 U	NA	NA	Yes
	5/18/2006	452	14,000	2,770	14,900	89,000	2,230 D-08	472 U	NA	NA	Yes
CK-MW10	4/11/2001	420	2,310	1,500	7,350	35,400	NA	NA	NA	NA	Yes
	6/23/2005	1,820	6,140	1,820	9,350	71,300	1,810 D-08	500 U	200 U	NA	?
	2/14/2006	Not Sampled - Free product measured in well									
CK-MW11	5/18/2006	535	2,300	1,730	8,390	52,200	2,530 D-08	485 U	NA	NA	?
	4/11/2001	0.5 U	0.5 U	0.5 U	1.0 U	0.05 U	NA	NA	NA	NA	No
	6/16/2003	0.5 U	0.5 U	0.5 U	1.0 U	0.05 U	NA	NA	1.0 U	NA	No
CK-MW13	5/18/2006	0.5 U	0.5 U	0.5 U	1.0 U	50.0 U	236 U	472 U	NA	NA	No
	4/11/2001	0.5 U	0.5 U	0.5 U	1.0 U	0.05 U	NA	NA	1.0 U	NA	No
	6/16/2003	0.5 U	0.5 U	0.5 U	1.0 U	0.05 U	NA	NA	NA	NA	No
CK-MW14	2/14/2006	0.5 U	0.5 U	0.5 U	1.0 U	0.05 U	240 U	481 U	NA	0.01580	No
	4/11/2001	Not Sampled									
	6/16/2003	Not Sampled - Free product measured in well									
CK-MW15	6/23/2005	8,560	16,800	1,920	12,900	115,000	3,720 D-08	500 U	50.0 U	NA	Yes
	6/23/2005*	8,560	16,900	1,880	12,700	121,000	3,010 D-08	500 U	50.0 U	NA	No
	2/14/2006	2,270	6,660	1,530	14,100	74,700	3,010 D-08	472 U	NA	NA	?
CK-MW16	5/18/2006	7,260	14,700	1,810	15,500	109,000	4,650 D-08	481 U	NA	NA	?
	4/11/2001	0.5 U	0.5 U	0.5 U	1.0 U	0.05 U	NA	NA	1.0 U	NA	No
	6/16/2003	0.5 U	0.5 U	0.5 U	1.0 U	1.0 U	NA	NA	NA	NA	No
MTC A Method A	2/14/2006	58.4	310.0	526.0	2,920.0	23,800	243 U	485 U	NA	0.001 U	?
	4/11/2001	6.2	83.3	12.6	199.0	3,150	NA	NA	NA	NA	No
	6/16/2003	1.26	0.500 U	2.60 I-06	3.39 I-06	878	NA	NA	15.5	NA	No
MTC A Method A	5/31/2005	2.01	3.18	2.48	6.34	950	749 D-08	500 U	1.00 U	0.001 U	No
	6/23/2005	0.5 U	0.5 U	0.5 U	1.0 U	137	552	472 U	NA	0.001 U	No
	2/14/2006	0.791	1.69	0.816	5.82	381	236 U	472 U	NA	NA	No
MTC A Method A	5/18/2006	0.5 U	0.5 U	0.5 U	1.0 U	0.05 U	NA	NA	NA	NA	No
	4/11/2001	0.5 U	0.5 U	0.5 U	1.0 U	0.05 U	NA	NA	NA	NA	No
	6/16/2003	0.5 U	0.5 U	0.5 U	1.0 U	0.05 U	NA	NA	1.0 U	NA	No
MTC A Method A	2/14/2006	0.5 U	0.5 U	0.5 U	1.0 U	50.00 U	236 U	472 U	NA	0.001 U	?
	5	1,000	700	1,000	800/1,000	500	500	20	0.015		

NOTES:
 Sample results from 2001 and 2003 provided by Washington Department of Ecology
 Shaded cells indicate the results exceed the cleanup criteria.
 * Duplicate sample.
 MTC A Method A cleanup level for gasoline is 800 ug/L instead of 1,000 ug/L when benzene is present.
 U = Not detected at or above the specified reporting limit.
 D-08 = Results in the diesel organics range are primarily due to overlap from a gasoline range product.
 I-06 = The analyte concentration may be artificially elevated due to coeluting compounds or components.

DRO = Diesel range organics.
 GRO = Gasoline range organics.
 LRO = Lubricant range organics.
 ug/L = micrograms per liter.
 mg/L = milligrams per liter
 NA = not analyzed
 ? = "trace" product <0.01 ft free product in well

Appendix A

Purge and Sampling Forms



Ground Water Purge and Sampling Form

Well Identification	MW-6		Site Location:	Circle K		Date:	5/18/06	
Well Diameter (inches)	2"		Project Number:	61994.01		Personnel:	MBB	
Well Monument Locked and Good Condition?	<input type="checkbox"/>		Purge Method:	<input checked="" type="checkbox"/> Low Flow		<input type="checkbox"/> Conventional	<input type="checkbox"/> None	
Inside Well Head and Outside Well Casing (D=dry), (WAC=Water above Casing), WBC=Water Below Casing)	1.1 ft		Purge Equipment:	<input checked="" type="checkbox"/> Peristaltic Pump		<input type="checkbox"/> Redi-flo Pump	<input type="checkbox"/> Other	
Well Casing Plug Locked and Good Condition?	slip cap		Sampling Equipment:	<input checked="" type="checkbox"/> Peristaltic Pump		<input type="checkbox"/> Redi-flo Pump	<input type="checkbox"/> Bailer	
Depth to Ground water (ft btoC)	11.54		Weather Conditions:	clear ~ 60°F				
Well Total Depth (ft btoC)	20.15 + .28 = 7		Well Volume Calculation: 2"=.16, 4"=.64, 6"=1.44 gallons					
Time	10:05	10:08	10:11	10:14	10:17	10:20		
Depth to Ground water (ft btoC)	—	—	11.95	11.99	12.71	12.83		
Total Groundwater Purged (gallons, liters, other)	—	—	—	1	—	1.75		
Purge Rate (gpm, ft ³ /min, ml/min, other)	350	—	—	—	—	—		
pH	6.97	6.82	6.80	6.88	7.07	7.13		
Conductivity (µS/cm)	60.3	60.0	59.9	59.9	59.3	58.9		
Turbidity (NTU)	19.0	16.0	10.6	8.9	16	15.7		
Dissolved Oxygen (mg/L)	2.8	2.1	2.0	0.8	0.5	0.5		
Temperature (°C)	15.0	14.8	14.8	14.8	14.8	14.9		
ORP/eH (mV)	-87	-84	-81	-87	-108	-112		
Color of Purged Water (gray, brown, red, clear)	W/Orange	clear	—	—	—	—		
Sample Identification:	CK-MW6/CK-MW6D Analysis		Comments: casing 5' off bottom.					
Time Sampled:	(1020)		X NWTPH-G/BTEX by 8021b		___ MTBE/EDC by 8260			
Purge water disposed To:	Drum (inite)		X NWTPH-Dx		___ EDB by 8011			
	Total Lead							



Ground Water Purge and Sampling Form

Well Identification	Site Location: <u>Credle K</u> Date: <u>5/18/06</u>									
Well Diameter (inches)	<u>4 1/2 - 9</u>		Project Number: <u>61994.01</u>		Personnel: <u>MBB</u>					
Well Monument Locked and Good Condition?	<u>yes</u>		Purge Method: <input checked="" type="checkbox"/> Low Flow <input type="checkbox"/> Conventional <input type="checkbox"/> None							
Inside Well Head and Outside Well Casing (D=dry), (WAC=Water above Casing), WBC=Water Below Casing)	<u>WBC</u>		Purge Equipment: <input checked="" type="checkbox"/> Peristaltic Pump <input type="checkbox"/> Redi-flo Pump <input type="checkbox"/> Other							
Well Casing Plug Locked and Good Condition?	<u>sp cap</u>		Sampling Equipment: <input checked="" type="checkbox"/> Peristaltic Pump <input type="checkbox"/> Redi-flo Pump <input type="checkbox"/> Bailer							
Depth to Ground water (ft btoc)	<u>10.42</u>		Weather Conditions: <u>Sunny ~ 70°F</u>							
Well Total Depth (ft btoc)			Well Volume Calculation: 2"=.16, 4"=.64, 6"=1.44 gallons							
Time	<u>12:08</u>	<u>12:11</u>	<u>12:14</u>	<u>12:17</u>	<u>12:20</u>					
Depth to Ground water (ft btoc)	<u>10.42</u>	<u>10.90</u>	<u>10.97</u>	<u>10.97</u>	<u>10.95</u>					
Total Groundwater Purged (gallons, liters, other)	<u>10.42</u>	<u>10.97</u>	<u>10.97</u>	<u>10.97</u>	<u>10.95</u>					
Purge Rate (gpm, ft ³ /min, ml/min, other)	<u>350</u>	<u>350</u>	<u>350</u>	<u>350</u>	<u>350</u>					
pH	<u>6.28</u>	<u>6.32</u>	<u>6.51</u>	<u>6.55</u>	<u>6.58</u>					
Conductivity (<u>µS/cm</u>)	<u>63.4</u>	<u>62.7</u>	<u>62.3</u>	<u>61.9</u>	<u>61.8</u>					
Turbidity (NTU)	<u>33.6</u>	<u>43.3</u>	<u>76.2</u>	<u>82.6</u>	<u>75.6</u>					
Dissolved Oxygen (mg/L)	<u>1.1</u>	<u>0.6</u>	<u>0.3</u>	<u>0.2</u>	<u>0.2</u>					
Temperature (°C)	<u>16.4</u>	<u>16.1</u>	<u>15.8</u>	<u>16.3</u>	<u>16.0</u>					
ORP/eH (mV)	<u>-98</u>	<u>-114</u>	<u>-129</u>	<u>-131</u>	<u>-132</u>					
Color of Purged Water (gray, brown, red, clear)	<u>gray</u>	<u>cloudy</u>	<u>cloudy</u>	<u>clear</u>	<u>clear</u>					
Sample Identification: <u>CK-MW9</u>	Comments: <u>Tubing pulled 55' off</u>									
Time Sampled: <u>(12:30)</u>	Analysis		<input checked="" type="checkbox"/> NWTPH-G/BTEX by 8021b		<input type="checkbox"/> MTBE/EDC by 8260		<u>h₂ + fm</u>			
Purge water disposed To: <u>Drum Onsite</u>	<input checked="" type="checkbox"/> NWTPH-Dx		<input type="checkbox"/> EDB by 8011		<u>2.01' Free Product Trace</u>					
Total Lead										



Ground Water Purge and Sampling Form

Well Identification	MW-10	Site Location:	Date: 5/18/06
Well Diameter (inches)	2 1/2	Project Number: 61994.01	Personnel: MBB
Well Monument Locked and Good Condition?	<input checked="" type="checkbox"/>	Purge Method: <input checked="" type="checkbox"/> Low Flow	<input type="checkbox"/> Conventional <input type="checkbox"/> None
Inside Well Head and Outside Well Casing (D=dry), (WAC=Water above Casing), WBC=Water Below Casing)	<input type="checkbox"/>	Purge Equipment: <input checked="" type="checkbox"/> Peristaltic Pump	<input type="checkbox"/> Redi-flo Pump <input type="checkbox"/> Other
Well Casing Plug Locked and Good Condition?	<input checked="" type="checkbox"/>	Sampling Equipment: <input checked="" type="checkbox"/> Peristaltic Pump	<input type="checkbox"/> Redi-flo Pump <input type="checkbox"/> Bailor
Depth to Ground water (ft btoc)	0915	Weather Conditions: clear, breeze, ~52°F @ 8:30am	
Well Total Depth (ft btoc)		Well Volume Calculation: 2"=, 16, 4"=64, 6"=1.44 gallons	

Time	0920	0923	0926	0929	0932				
Depth to Ground water (ft btoc)									
Total Groundwater Purged (gallons, liters, other)			1		1.8				
Purge Rate (gpm, ft ³ /min, ml/min, other)	300								
pH	6.60	6.73	6.82	6.99	6.95				
Conductivity (µS/cm)	55.8	55.2	53.9	57.0	57.0				
Turbidity (NTU)	5.6	5.1	4.3	2.17	13.8				
Dissolved Oxygen (mg/L)	0.8	0.5	0.6	0.3	0.4				
Temperature (°C)	15.9	15.9	16.2	15.9	16.2				
ORP/eH (mV)	8	14	27	41	30				
Color of Purged Water (gray, brown, red, clear)	colorless	w/floaters	colorless						

Sample Identification: CK-MW10

Time Sampled: 0935

Purge water disposed To: Drum onsite

Analysis: NWTPH-G/BTEX by 8021b MTBE/EDC by 8260

NWTPH-Dx EDB by 8011

Total Lead

Comments: Tubing pulled up 5' off bottom of well.



Ground Water Purge and Sampling Form

Well Identification	Site Location: Circle K			Date: 5/18/06
Well Diameter (inches)	Project Number: 61994.01			Personnel: MBB
Well Monument Locked and Good Condition?	Purge Method: <input checked="" type="checkbox"/> Low Flow <input type="checkbox"/> Conventional <input type="checkbox"/> None			
Inside Well Head and Outside Well Casing (D=dry), (WAC=Water above Casing), WBC=Water Below Casing)	Purge Equipment: <input checked="" type="checkbox"/> Peristaltic Pump <input type="checkbox"/> Redi-flo Pump <input type="checkbox"/> Other			
Well Casing Plug Locked and Good Condition?	Sampling Equipment: <input checked="" type="checkbox"/> Peristaltic Pump <input type="checkbox"/> Redi-flo Pump <input type="checkbox"/> Bailer			
Depth to Ground water (ft btoc)	Weather Conditions: Sunny, ~78°F			
Well Total Depth (ft btoc)	Well Volume Calculation: 2"=16, 4"=64, 6"=1.44 gallons			

Time	1345	1348	1351	1354	1357	1400			
Depth to Ground water (ft btoc)	11.87	—	12.60	—	—	—			
Total Groundwater Purged (gallons, liters, other)	—	—	—	1	—	1.5			
Purge Rate (gpm, ft ³ /min, ml/min, other)	350	→							
pH	6.48	6.18	6.22	6.53	6.55	6.57			
Conductivity (mS/cm)	58.3	57.7	57.2	56.8	57.4	57.2			
Turbidity (NTU)	4.3	3.3	7.2	4.9	4.7	4.0			
Dissolved Oxygen (mg/L)	1.0	0.5	0.3	0.3	0.3	0.3			
Temperature (°C)	15.5	15.5	15.3	15.8	15.8	15.7			
ORP/eH (mV)	-91	-90	-98	-119	-122	-125			
Color of Purged Water (gray, brown, red, clear)	clear	→							

Sample Identification: C1 - MW13	Analysis	Comments: Taking pulled 5' off bottom of well.
Time Sampled: 1405	<input checked="" type="checkbox"/> NWTPH-G/BTEX by 8021b	MTBE/EDC by 8260
Purge water disposed To: Drum Onsite	<input checked="" type="checkbox"/> NWTPH-Dx	EDB by 8011
	Total Lead	



Ground Water Purge and Sampling Form

Well Identification	MW-15		Site Location: Circle K	Date: 5/12/06					
Well Diameter (inches)	2"		Project Number: 61994.01	Personnel: MBB					
Well Monument Locked and Good Condition?	yes		Purge Method: <input checked="" type="checkbox"/> Low Flow	<input type="checkbox"/> Conventional <input type="checkbox"/> None					
Inside Well Head and Outside Well Casing (D=dry), (WAC=Water above Casing), WBC=Water Below Casing)	WBC		Purge Equipment: <input checked="" type="checkbox"/> Peristaltic Pump	<input type="checkbox"/> Redi-flo Pump <input type="checkbox"/> Other					
Well Casing Plug Locked and Good Condition?	slip cap		Sampling Equipment: <input checked="" type="checkbox"/> Peristaltic Pump	<input type="checkbox"/> Redi-flo Pump <input type="checkbox"/> Bailor					
Depth to Ground water (ft btoC)	110.5		Weather Conditions: Clear ~ 62°F						
Well Total Depth (ft btoC)	16.56 + .28 = 16.84		Well Volume Calculation: 2"= .16, 4"=.64, 6"=1.44 gallons						
Time	1113	1116	1119	1122	1125	1128	1131	1134	1137
Depth to Ground water (ft btoC)	10.38	--	10.54	--	10.67	--	10.75	--	10.81
Total Groundwater Purged (gallons, liters, other)	--	--	1	--	--	--	--	--	--
Purge Rate (gpm, ft ³ /min, m ³ /min, other)	350	--	--	--	--	--	--	--	--
pH	5.21	5.13	5.17	5.27	5.34	5.42	5.51	5.59	5.62
Conductivity (µS/cm)	18.8	18.8	18.7	19.1	18.9	18.8	18.5	18.3	18.4
Turbidity (NTU)	6.1	5.3	2.8	2.1	2.0	1.9	2.6	2.6	2.5
Dissolved Oxygen (mg/L)	1.2	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.2
Temperature (°C)	14.7	15.1	15.0	14.9	14.9	15.1	15.1	15.5	15.3
ORP/eH (mV)	-18	-44	-60	-76	-83	-95	-101	-105	-110
Color of Purged Water (gray, brown, red, clear)	clear	--	--	--	--	--	--	--	--
Sample Identification: CK-NW 15	Analysis <input checked="" type="checkbox"/> NWTPH-G/BTEX by 8021b <input checked="" type="checkbox"/> NWTPH-Dx Total Lead Comments: Tubing pulled 5' off bottom.								
Time Sampled: (1140)									
Purge water disposed To: Drum onsite									

Appendix B

Laboratory Reports

May 25, 2006

Jill Frain
EA Engineering, Science and Technology
12011 NE 1st Street, Suite 100
Bellevue, WA/USA 98005

RE: Circle K

Enclosed are the results of analyses for samples received by the laboratory on 05/18/06 15:26.
The following list is a summary of the Work Orders contained in this report, generated on 05/25/06
19:05.

If you have any questions concerning this report, please feel free to contact me.

<u>Work Order</u>	<u>Project</u>	<u>ProjectNumber</u>
BPE0607	Circle K	61994.016000 B

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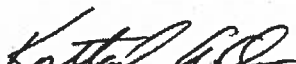
EA Engineering, Science and Technology 12011 NE 1st Street, Suite 100 Bellevue, WA/USA 98005	Project Name: Circle K Project Number: 61994.016000 B Project Manager: Jill Frain	Report Created: 05/25/06 19:05
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ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
CK-MW10	BPE0607-01	Water	05/18/06 09:35	05/18/06 15:26
CK-MW6	BPE0607-02	Water	05/18/06 10:20	05/18/06 15:26
CK-MW6D	BPE0607-03	Water	05/18/06 10:25	05/18/06 15:26
CK-MW15	BPE0607-04	Water	05/18/06 11:40	05/18/06 15:26
CK-MW9	BPE0607-05	Water	05/18/06 12:30	05/18/06 15:26
CK-13	BPE0607-06	Water	05/18/06 14:05	05/18/06 15:26
CK-MW-TB	BPE0607-07	Water	05/18/06 12:00	05/18/06 15:26

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EA Engineering, Science and Technology 12011 NE 1st Street, Suite 100 Bellevue, WA/USA 98005	Project Name: Circle K Project Number: 61994.016000 B Project Manager: Jill Frain	Report Created: 05/25/06 19:05
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Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B
 TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BPE0607-01 (CK-MW10)		Water				Sampled: 05/18/06 09:35				
Gasoline Range Hydrocarbons	NWTPH-Gx/802 1B	ND	----	50.0	ug/l	1x	6E22023	05/22/06 11:15	05/22/06 21:35	
Benzene	"	ND	----	0.500	"	"	"	"	"	"
Toluene	"	ND	----	0.500	"	"	"	"	"	"
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	"
Xylenes (total)	"	ND	----	1.00	"	"	"	"	"	"
<i>Surrogate(s): 4-BFB (FID)</i>		88.5%		58 - 144 %		"		"		
<i>4-BFB (PID)</i>		100%		68 - 140 %		"		"		
BPE0607-02 (CK-MW6)		Water				Sampled: 05/18/06 10:20				
Gasoline Range Hydrocarbons	NWTPH-Gx/802 1B	ND	----	50.0	ug/l	1x	6E22023	05/22/06 11:15	05/22/06 14:46	
Benzene	"	0.514	----	0.500	"	"	"	"	"	"
Toluene	"	ND	----	0.500	"	"	"	"	"	"
Ethylbenzene	"	1.48	----	0.500	"	"	"	"	"	"
Xylenes (total)	"	ND	----	1.00	"	"	"	"	"	"
<i>Surrogate(s): 4-BFB (FID)</i>		88.2%		58 - 144 %		"		"		
<i>4-BFB (PID)</i>		100%		68 - 140 %		"		"		
BPE0607-03 (CK-MW6D)		Water				Sampled: 05/18/06 10:25				
Gasoline Range Hydrocarbons	NWTPH-Gx/802 1B	ND	----	50.0	ug/l	1x	6E22023	05/22/06 11:15	05/22/06 23:08	
Benzene	"	ND	----	0.500	"	"	"	"	"	"
Toluene	"	ND	----	0.500	"	"	"	"	"	"
Ethylbenzene	"	1.28	----	0.500	"	"	"	"	"	"
Xylenes (total)	"	ND	----	1.00	"	"	"	"	"	"
<i>Surrogate(s): 4-BFB (FID)</i>		89.2%		58 - 144 %		"		"		
<i>4-BFB (PID)</i>		99.8%		68 - 140 %		"		"		
BPE0607-04 (CK-MW15)		Water				Sampled: 05/18/06 11:40				
Gasoline Range Hydrocarbons	NWTPH-Gx/802 1B	381	----	50.0	ug/l	1x	6E22023	05/22/06 11:15	05/22/06 23:38	
Benzene	"	0.791	----	0.500	"	"	"	"	"	"
Toluene	"	1.69	----	0.500	"	"	"	"	"	"
Ethylbenzene	"	0.816	----	0.500	"	"	"	"	"	"
Xylenes (total)	"	5.82	----	1.00	"	"	"	"	"	"
<i>Surrogate(s): 4-BFB (FID)</i>		96.2%		58 - 144 %		"		"		
<i>4-BFB (PID)</i>		99.3%		68 - 140 %		"		"		

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EA Engineering, Science and Technology 12011 NE 1st Street, Suite 100 Bellevue, WA/USA 98005	Project Name: Circle K Project Number: 61994.016000 B Project Manager: Jill Frain	Report Created: 05/25/06 19:05
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Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B
 TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	DII	Batch	Prepared	Analyzed	Notes
BPE0607-05 (CK-MW9)		Water			Sampled: 05/18/06 12:30					
Gasoline Range Hydrocarbons	NWTPH-Gx/802 1B	52200	----	1000	ug/l	20x	6E22023	05/22/06 11:15	05/22/06 16:41	
Benzene	"	535	----	10.0	"	"	"	"	"	
Ethylbenzene	"	1730	----	10.0	"	"	"	"	"	
<i>Surrogate(s): 4-BFB (FID)</i>				<i>100%</i>		<i>58 - 144 %</i>	<i>1x</i>			"
<i>4-BFB (PID)</i>				<i>98.5%</i>		<i>68 - 140 %</i>	"			"
BPE0607-05RE1 (CK-MW9)		Water			Sampled: 05/18/06 12:30					
Toluene	NWTPH-Gx/802 1B	2300	----	25.0	ug/l	50x	6E22023	05/22/06 11:15	05/23/06 01:42	
Xylenes (total)	"	8390	----	50.0	"	"	"	"	"	
<i>Surrogate(s): 4-BFB (PID)</i>				<i>100%</i>		<i>68 - 140 %</i>	<i>1x</i>			"
BPE0607-06 (CK-13)		Water			Sampled: 05/18/06 14:05					
Gasoline Range Hydrocarbons	NWTPH-Gx/802 1B	109000	----	2500	ug/l	50x	6E22023	05/22/06 11:15	05/22/06 17:12	
Ethylbenzene	"	1810	----	25.0	"	"	"	"	"	
<i>Surrogate(s): 4-BFB (FID)</i>				<i>92.0%</i>		<i>58 - 144 %</i>	<i>1x</i>			"
<i>4-BFB (PID)</i>				<i>98.8%</i>		<i>68 - 140 %</i>	"			"
BPE0607-06RE1 (CK-13)		Water			Sampled: 05/18/06 14:05					
Benzene	NWTPH-Gx/802 1B	7260	----	250	ug/l	500x	6E22023	05/22/06 11:15	05/23/06 07:52	
Toluene	"	14700	----	250	"	"	"	"	"	
Xylenes (total)	"	15500	----	500	"	"	"	"	"	
<i>Surrogate(s): 4-BFB (PID)</i>				<i>100%</i>		<i>68 - 140 %</i>	<i>1x</i>			"
BPE0607-07 (CK-MW-TB)		Water			Sampled: 05/18/06 12:00					
Gasoline Range Hydrocarbons	NWTPH-Gx/802 1B	ND	----	50.0	ug/l	1x	6E22023	05/22/06 11:15	05/22/06 21:04	
Benzene	"	ND	----	0.500	"	"	"	"	"	
Toluene	"	ND	----	0.500	"	"	"	"	"	
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	
Xylenes (total)	"	ND	----	1.00	"	"	"	"	"	
<i>Surrogate(s): 4-BFB (FID)</i>				<i>86.8%</i>		<i>58 - 144 %</i>	"			"
<i>4-BFB (PID)</i>				<i>101%</i>		<i>68 - 140 %</i>	"			"

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Semivolatile Petroleum Products by NWTPH-Dx (w/o Acid/Silica Gel Clean-up)
 TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BPE0607-01 (CK-MW10)		Water			Sampled: 05/18/06 09:35					
Diesel Range Hydrocarbons	NWTPH-Dx	ND	----	0.236	mg/l	1x	6E20016	05/20/06 13:14	05/24/06 03:12	
Lube Oil Range Hydrocarbons	"	ND	----	0.472	"	"	"	"	"	
<i>Surrogate(s): 2-FBP</i>			74.6%		50 - 150 %	"				"
<i>Octacosane</i>			83.5%		50 - 150 %	"				"
BPE0607-02 (CK-MW6)		Water			Sampled: 05/18/06 10:20					
Diesel Range Hydrocarbons	NWTPH-Dx	ND	----	0.243	mg/l	1x	6E20016	05/20/06 13:14	05/24/06 03:27	
Lube Oil Range Hydrocarbons	"	ND	----	0.485	"	"	"	"	"	
<i>Surrogate(s): 2-FBP</i>			63.8%		50 - 150 %	"				"
<i>Octacosane</i>			83.1%		50 - 150 %	"				"
BPE0607-03 (CK-MW6D)		Water			Sampled: 05/18/06 10:25					
Diesel Range Hydrocarbons	NWTPH-Dx	ND	----	0.240	mg/l	1x	6E20016	05/20/06 13:14	05/24/06 03:57	
Lube Oil Range Hydrocarbons	"	ND	----	0.481	"	"	"	"	"	
<i>Surrogate(s): 2-FBP</i>			65.0%		50 - 150 %	"				"
<i>Octacosane</i>			89.6%		50 - 150 %	"				"
BPE0607-04 (CK-MW15)		Water			Sampled: 05/18/06 11:40					
Diesel Range Hydrocarbons	NWTPH-Dx	0.552	----	0.236	mg/l	1x	6E20016	05/20/06 13:14	05/24/06 04:24	
Lube Oil Range Hydrocarbons	"	ND	----	0.472	"	"	"	"	"	
<i>Surrogate(s): 2-FBP</i>			83.1%		50 - 150 %	"				"
<i>Octacosane</i>			85.2%		50 - 150 %	"				"
BPE0607-05 (CK-MW9)		Water			Sampled: 05/18/06 12:30					
Diesel Range Hydrocarbons	NWTPH-Dx	2.53	----	0.243	mg/l	1x	6E20016	05/20/06 13:14	05/24/06 04:39	D-08
Lube Oil Range Hydrocarbons	"	ND	----	0.485	"	"	"	"	"	
<i>Surrogate(s): 2-FBP</i>			98.4%		50 - 150 %	"				"
<i>Octacosane</i>			90.1%		50 - 150 %	"				"
BPE0607-06 (CK-13)		Water			Sampled: 05/18/06 14:05					
Diesel Range Hydrocarbons	NWTPH-Dx	4.65	----	0.240	mg/l	1x	6E20016	05/20/06 13:14	05/24/06 05:08	D-08
Lube Oil Range Hydrocarbons	"	ND	----	0.481	"	"	"	"	"	
<i>Surrogate(s): 2-FBP</i>			99.2%		50 - 150 %	"				"
<i>Octacosane</i>			93.8%		50 - 150 %	"				"

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Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B - Laboratory Quality Control Results
 TestAmerica - Seattle, WA

QC Batch: 6E22023 Water Preparation Method: EPA 5030B (P/T)

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	---------------	-----------	-------	----------	-------	----------	----------	-------

Blank (6E22023-BLK1) Extracted: 05/22/06 11:15

Gasoline Range Hydrocarbons	NWTPH-Gx/8021B	ND	---	50.0	ug/l	1x	--	--	--	--	--	--	05/22/06 12:22	
Benzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 86.5%</i>		<i>Limits: 58-144%</i>										05/22/06 12:22
<i>4-BFB (PID)</i>		<i>99.2%</i>		<i>68-140%</i>										"

LCS (6E22023-BS1) Extracted: 05/22/06 11:15

Gasoline Range Hydrocarbons	NWTPH-Gx/8021B	955	---	50.0	ug/l	1x	--	1000	95.5%	(80-120)	--	--	05/22/06 15:21	
Benzene	"	11.1	---	0.500	"	"	--	9.65	115%	"	--	--	"	
Toluene	"	69.9	---	0.500	"	"	--	83.5	83.7%	"	--	--	"	
Ethylbenzene	"	14.8	---	0.500	"	"	--	16.7	88.6%	"	--	--	"	
Xylenes (total)	"	81.4	---	1.00	"	"	--	96.3	84.5%	"	--	--	"	
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 94.3%</i>		<i>Limits: 58-144%</i>										05/22/06 15:21
<i>4-BFB (PID)</i>		<i>92.8%</i>		<i>68-140%</i>										"

Duplicate (6E22023-DUP1) QC Source: BPE0607-01 Extracted: 05/22/06 11:15

Gasoline Range Hydrocarbons	NWTPH-Gx/8021B	ND	---	50.0	ug/l	1x	ND	--	--	--	NR (25)		05/22/06 13:28	
Benzene	"	ND	---	0.500	"	"	ND	--	--	--	NR	"	"	
Toluene	"	ND	---	0.500	"	"	ND	--	--	--	NR	"	"	
Ethylbenzene	"	ND	---	0.500	"	"	ND	--	--	--	NR	"	"	
Xylenes (total)	"	ND	---	1.00	"	"	ND	--	--	--	NR	"	"	
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 87.3%</i>		<i>Limits: 58-144%</i>										05/22/06 13:28
<i>4-BFB (PID)</i>		<i>99.2%</i>		<i>68-140%</i>										"

Duplicate (6E22023-DUP2) QC Source: BPE0634-01 Extracted: 05/22/06 11:15

Gasoline Range Hydrocarbons	NWTPH-Gx/8021B	363	---	50.0	ug/l	1x	360	--	--	--	0.830% (25)		05/22/06 22:06	
Benzene	"	13.9	---	0.500	"	"	13.7	--	--	--	1.45%	"	"	
Toluene	"	0.589	---	0.500	"	"	0.562	--	--	--	4.69%	"	"	
Ethylbenzene	"	3.62	---	0.500	"	"	3.59	--	--	--	0.832%	"	"	
Xylenes (total)	"	3.04	---	1.00	"	"	3.02	--	--	--	0.660%	"	"	
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 95.3%</i>		<i>Limits: 58-144%</i>										05/22/06 22:06
<i>4-BFB (PID)</i>		<i>99.2%</i>		<i>68-140%</i>										"

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EA Engineering, Science and Technology	Project Name: Circle K	Report Created:
12011 NE 1st Street, Suite 100	Project Number: 61994.016000 B	05/25/06 19:05
Bellevue, WA/USA 98005	Project Manager: Jill Frain	

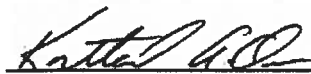
Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B - Laboratory Quality Control Results
 TestAmerica - Seattle, WA

QC Batch: 6E22023 Water Preparation Method: EPA 5030B (P/T)

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Matrix Spike (6E22023-MS1)			QC Source: BPE0607-01				Extracted: 05/22/06 11:15							
Gasoline Range Hydrocarbons	NWTPH-Gx/ 8021B	1100	---	50.0	ug/l	1x	ND	1000	110%	(75-131)	--	--	05/22/06 18:16	
Benzene	"	11.7	---	0.500	"	"	ND	9.65	121%	(46-130)	--	--	"	
Toluene	"	73.8	---	0.500	"	"	ND	83.5	88.4%	(60-124)	--	--	"	
Ethylbenzene	"	15.6	---	0.500	"	"	ND	16.7	93.4%	(56-141)	--	--	"	
Xylenes (total)	"	86.3	---	1.00	"	"	ND	96.3	89.6%	(66-132)	--	--	"	
Surrogate(s): 4-BFB (FID)		Recovery: 97.8%		Limits: 58-144%		"						05/22/06 18:16		
4-BFB (PID)		91.3%		68-140%		"						"		

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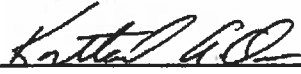


EA Engineering, Science and Technology 12011 NE 1st Street, Suite 100 Bellevue, WA/USA 98005	Project Name: Circle K Project Number: 61994.016000 B Project Manager: Jill Frain	Report Created: 05/25/06 19:05
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Semivolatile Petroleum Products by NWTPH-Dx (w/o Acid/Silica Gel Clean-up) - Laboratory Quality Control Results
 TestAmerica - Seattle, WA

QC Batch: 6E20016 **Water Preparation Method: EPA 3520C**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (6E20016-BLK1)													Extracted: 05/20/06 13:14	
Diesel Range Hydrocarbons	NWTPH-Dx	ND	---	0.250	mg/l	1x	--	--	--	--	--	--	05/24/06 00:05	
Lube Oil Range Hydrocarbons	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
<i>Surrogate(s): 2-FBP</i>		<i>Recovery: 76.8%</i>		<i>Limits: 50-150%</i>								<i>05/24/06 00:05</i>		
<i>Octacosane</i>		<i>81.6%</i>		<i>50-150%</i>								<i>"</i>		
LCS (6E20016-BS1)													Extracted: 05/20/06 13:14	
Diesel Range Hydrocarbons	NWTPH-Dx	1.65	---	0.250	mg/l	1x	--	2.00	82.5%	(58-125)	--	--	05/24/06 00:35	
Lube Oil Range Hydrocarbons	"	1.63	---	0.500	"	"	--	"	81.5%	(60-140)	--	--	"	
<i>Surrogate(s): 2-FBP</i>		<i>Recovery: 74.0%</i>		<i>Limits: 50-150%</i>								<i>05/24/06 00:35</i>		
<i>Octacosane</i>		<i>80.4%</i>		<i>50-150%</i>								<i>"</i>		
LCS Dup (6E20016-BSD1)													Extracted: 05/20/06 13:14	
Diesel Range Hydrocarbons	NWTPH-Dx	1.75	---	0.250	mg/l	1x	--	2.00	87.5%	(58-125)	5.88%	(40)	05/24/06 00:50	
Lube Oil Range Hydrocarbons	"	1.60	---	0.500	"	"	--	"	80.0%	(60-140)	1.86%	"	"	
<i>Surrogate(s): 2-FBP</i>		<i>Recovery: 81.2%</i>		<i>Limits: 50-150%</i>								<i>05/24/06 00:50</i>		
<i>Octacosane</i>		<i>80.0%</i>		<i>50-150%</i>								<i>"</i>		


 Kortland Orr, PM



EA Engineering, Science and Technology 12011 NE 1st Street, Suite 100 Bellevue, WA/USA 98005	Project Name: Circle K Project Number: 61994.016000 B Project Manager: Jill Frain	Report Created: 05/25/06 19:05
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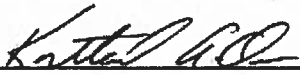
Notes and Definitions

Report Specific Notes:

- D-08 - Results in the diesel organics range are primarily due to overlap from a gasoline range product.

Laboratory Reporting Conventions:

- DET - Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.
- ND - Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).
- NR/NA - Not Reported / Not Available
- dry - Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.
- wet - Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.
- RPD - RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).
- MRL - METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.
- MDL* - METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. *MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.
- Dil - Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.
- Reporting Limits - Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.
- Electronic Signature - Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy*. Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.


Kortland Orr, PM





11720 North Creek Pkwy N Suite 400, Bothell, WA 98011-8244
 11922 E 1st Ave, Spokane, WA 99206-5302
 9405 SW Nimbus Ave, Beaverton, OR 97008-7145
 20332 Emplere Ave, Ste F1, Bend, OR 97701-5712
 2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119

425-420-9200 FAX 420-9210
 509-924-9200 FAX 924-9280
 503-906-9200 FAX 906-9210
 541-383-9310 FAX 382-7588
 907-563-9200 FAX 563-9210

CHAIN OF CUSTODY REPORT

Work Order #: **BPE2607**

NCA CLIENT: **WA Dept of Ecology**
 REPORT TO: **Jil Fraim - EA Engineering**
 ADDRESS: **12011 NE 1st St, Suite 100**
Bellevue, WA 98005
 PHONE: **425-457-7460** FAX: **~ 7810**
 PROJECT NAME: **Crake K**
 PROJECT NUMBER: **6100401 6000 B**
 SAMPLED BY: **103**

INVOICE TO: **WA Dept of Ecology - MWRO**
3190 160th Ave SE
Bellevue, WA 98008
Attn: Roger Nye
 P.O. NUMBER: **Field Order # 13 190**

TURNAROUND REQUEST
 in Business Days*
 Organic & Inorganic Analyses
 Petroleum Hydrocarbon Analyses

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	ANALYSES	MATRIX (W, S, O)	# OF CONT.	LOCATION / COMMENTS	NCA WORD
1 CK-MW1D	5/18/06 0935	X	W	5		-01
2 CK-MW6	1020	X		5		-02
3 CK-MW6D	1025	X		5		-03
4 CK-MW1S	1140	X		5		-04
5 CK-MW9	1230	X		5		-05
6 CK-13	1405	X		5		-06
7 CK-MW-7B	—	X	↓	2		-07
8						
9						
10						

RECEIVED BY: **Collette weaver** DATE: **05-18-06**
 PRINT NAME: **Collette Weaver** FIRM: **FA** TIME: **1526**
 RECEIVED BY: DATE: TIME:
 PRINT NAME: FIRM: TIME:
 ADDITIONAL REMARKS:
 COC REV 09/04