Tiki Car Wash
Bellevue
LUST#: 2916

EA Engineering, Science, and Technology, Inc.

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19 April 2007
61994.01 LN0042

RECEIVED
APR 23 2007
DEPT OF ECOLOGY

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

RE: Tiki Car Wash, Summary of Monitoring Well Installation and Development
Work Order #17079, Contract Number: 30700

Dear Mr. Nye:

EA Engineering, Science, and Technology, Inc. (EA) has prepared this summary of well installation activities performed during February and March 2007 at the Tiki Car Wash.

1.0 FIELD ACTIVITIES

WELL INSTALLATION

On 22 and 23 February 2007, seven monitoring wells were installed at the Tiki Car Wash site (Figure 1). Drilling and well installation was performed by Cascade Drilling, Inc. using Hollow Stem Auger (HSA) drilling methods. The well locations were vacuum cleared to at least 6 feet below ground surface (ft bgs) the day prior to drilling, to assure no utilities were present at the drilling locations. Well locations were identified in the Sampling and Analysis Plan (SAP) Revision 4 and are also presented on Figure 2. A brief description of the well locations follows:

- MW-30 was installed in the planter area, south of the Tiki convenience store.
- MW-31 was installed approximately 6 feet off the southeast corner of the underground storage tank (UST) pit, approximately 40 feet east of existing well MW-29.
- MW-32 was installed approximately 8 feet northwest of the northeastern fuel dispenser.
- MW-33 was installed west of the fuel dispensing islands, approximately 6 feet from the western property line. The well is located approximately 50 feet north of MW-29.
- MW-34 was installed at the northern portion of the site between the property entrance and the car wash exit to NE 8th Street.
- MW-35 was installed in the planter area at the southwest corner of the Tiki property, approximately 3 feet south of the fenced in garbage enclosure.
- MW-36 was installed in the former Larry's Market parking lot to the southwest of the Tiki site. The well is located in the driveway in front of the store building, and not in parking space.

Three of the seven monitoring wells (MW-30, MW-34, and MW-36) were constructed of 2-inch schedule 40 PVC casing. The remaining four wells were constructed of 4-inch schedule 40 PVC casing. All wells were installed to a depth of approximately 13 ft bgs and were constructed with 10 ft of .010-in. slotted PVC screen. Monitoring well construction details are included in Table 1.

Split spoon samples were collected at 10 and 15 ft bgs for logging of the borehole. Subsurface soil encountered during drilling was predominantly silty sand with gravel and cobbles. Boring logs are attached. Hydrocarbon odors were observed while drilling wells MW-30 and MW-32.

One soil sample was collected from 15 ft bgs from each drilling location. One duplicate sample was collected from the MW-31 borehole. Samples were submitted to TestAmerica laboratory in Bothell, Washington for Gasoline Range Organics (GRO) by Northwest Total Petroleum Hydrocarbon – Gasoline (NWTPH-G) and Diesel Range Organics (DRO) by Northwest Total Petroleum Hydrocarbons - Diesel extended range (NWTPH-Dx), and also benzene, toluene, ethylbenzene, and xylenes (BTEX) analysis. Drums of soil cuttings and decontamination water were stored in the fenced remediation compound at the site. Disposal of this investigative derived waste is pending.

WELL DEVELOPMENT

On 28 February 2007 EA began developing the monitoring wells. Depth to water and total depth measurements were recorded prior to initiating development. A non-dedicated 4-foot bailer was used to initially remove sediment from, and surge each of the seven new wells. The bailer was decontaminated between wells by scrubbing with a water and liquinox solution followed by a rinse with deionized water. Following bailing and surging of the wells, a 12 volt electric submersible pump was used to purge the well until the turbidity of the purged water improved. In accordance with the SAP, a maximum of two hours per well was spent on each well for development. MW-33 was the only well which reached the turbidity goal of less than 20 Nephelometric Turbidity Units (NTU's) on this day without dewatering.

Well development for all wells except MW-33 continued on 2 March 2007. Purged groundwater from MW-35 reached less than 20 NTU's. The remaining wells (MW-30, MW-31, MW-32, MW-34, MW-36) did not clear to below 20 NTU's during development after two hours of pumping. Development water was contained in drums within the fenced in remediation compound onsite. Well development information and final turbidity readings for the new wells are included in Table 1.

GROUNDWATER SAMPLING

On 15 March 2007, EA sampled 3 of the 7 new wells at the request of Ecology, to assess the potential off-site migration of contaminants. Monitoring wells MW-30, MW-35, and MW-36 were sampled using a peristaltic pump with low-flow sampling procedures. Monitoring wells were opened, a photoionization detector (PID) reading was taken at the wellhead, the well was checked for the presence of light non-aqueous phase liquid (LNAPL), and water level measurements were obtained and recorded before installing dedicated polyethylene tubing in the well and purging the wells. PID readings at the wellheads were as follows: approximately 1,300 parts per million (ppm) at MW-30, 1,000 ppm at MW-35, and 0 ppm at MW-6. No measurable free product was detected in MW-30, MW-35, or MW-36.

During purging, groundwater quality parameters were measured at three minute intervals until stabilization was observed. Groundwater samples were then collected. A duplicate sample was collected from monitoring well MW-30. Table 2 summarizes monitoring well construction information and water level readings for the newly installed wells. The elevations of the monitoring well top of casings have not

yet been surveyed; therefore elevations, groundwater gradients, and flow direction are not included in this report. Table 3 summarizes water quality measurements recorded during sampling.

In accordance with the SAP for this site, groundwater samples from the monitoring wells were submitted for analysis of DRO, GRO, and BTEX. Samples were analyzed by TestAmerica Laboratory, in Bothell, Washington.

2.0 ANALYTICAL RESULTS

Analytical results for soil samples collected during well installation are presented in Table 4 and results for groundwater samples are summarized in Table 5. Laboratory reports are provided as an attachment to this report. Following are the general findings.

SOIL RESULTS

GRO

- Chemical analysis of the soil samples collected from the MW-30 and MW-32 boreholes at 15 ft bgs detected GRO at a concentrations exceeding the MTCA Method A cleanup criteria of 30 mg/kg.
- GRO was not detected above the laboratory detection limit in samples collected at 15 ft bgs from the MW-34 and MW-36 boreholes.

BTEX

- Benzene was detected above the MTCA Method A cleanup criteria of 0.03 mg/kg in samples from MW-30, MW-31D, MW-32, MW-33, and MW-35.
- Detections of toluene, ethylbenzene, and total xylenes were below MTCA Method A cleanup criteria in all samples, with the exception of total xylenes in the sample from MW-32.

DRO

- Diesel range hydrocarbons were not detected in any of the soil samples submitted for analysis.

GROUNDWATER RESULTS

GRO

- GRO was detected in groundwater samples collected from wells MW-30 and MW-35 at concentrations greater than the MTCA Method A criteria of 800 µg/L.
- GRO was not detected in the sample collected from MW-36.

BTEX

- BTEX constituents were detected above the MTCA Method A cleanup criteria in the samples collected from MW-30 and MW-35.

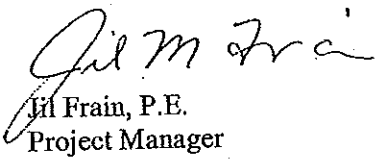
4.0 RECOMMENDATIONS

Based on the analytical results presented above, the following actions are recommended.

- Survey the top of casing elevations of all wells associated with this property and conduct a site wide water level survey to verify flow direction and gradient.
- Collect baseline groundwater samples from monitoring wells MW-31, MW-32, MW-33, and MW-34. Analyze the groundwater samples and evaluate chromatograms to determine if groundwater contamination is from "fresh" gasoline. A positive result would indicate an ongoing release.
- Conduct an Enhanced Fluid Recovery (EFR) pilot test on MW-29 and new monitoring wells in the vicinity of the pump islands and UST pit.

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.

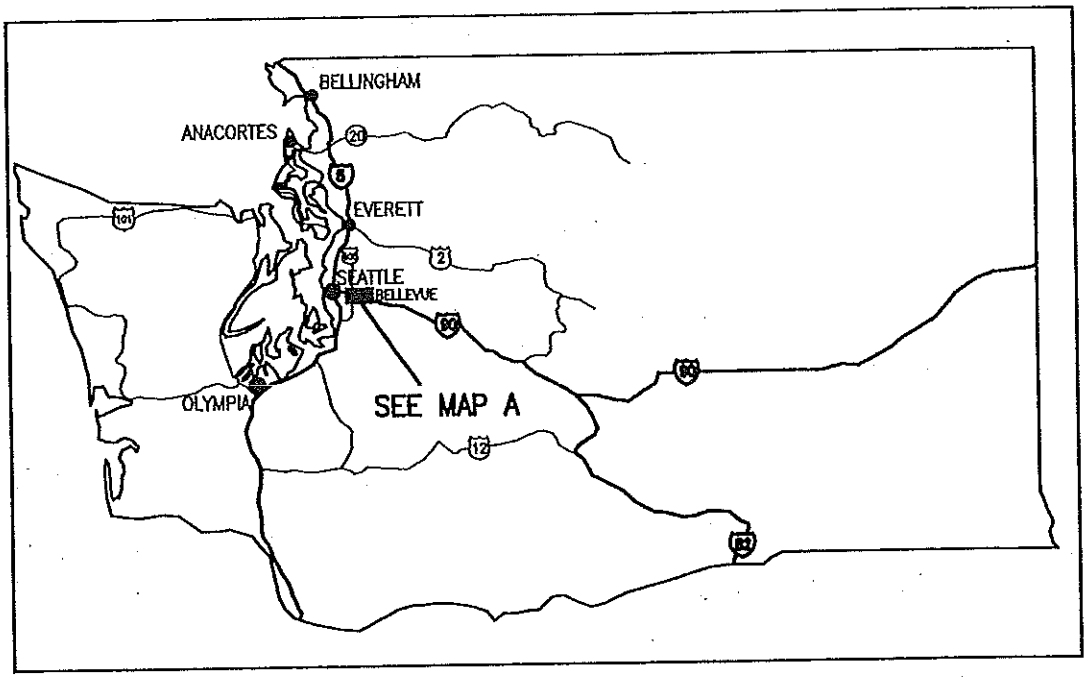


Jil Frain, P.E.
Project Manager
jfrain@eaest.com

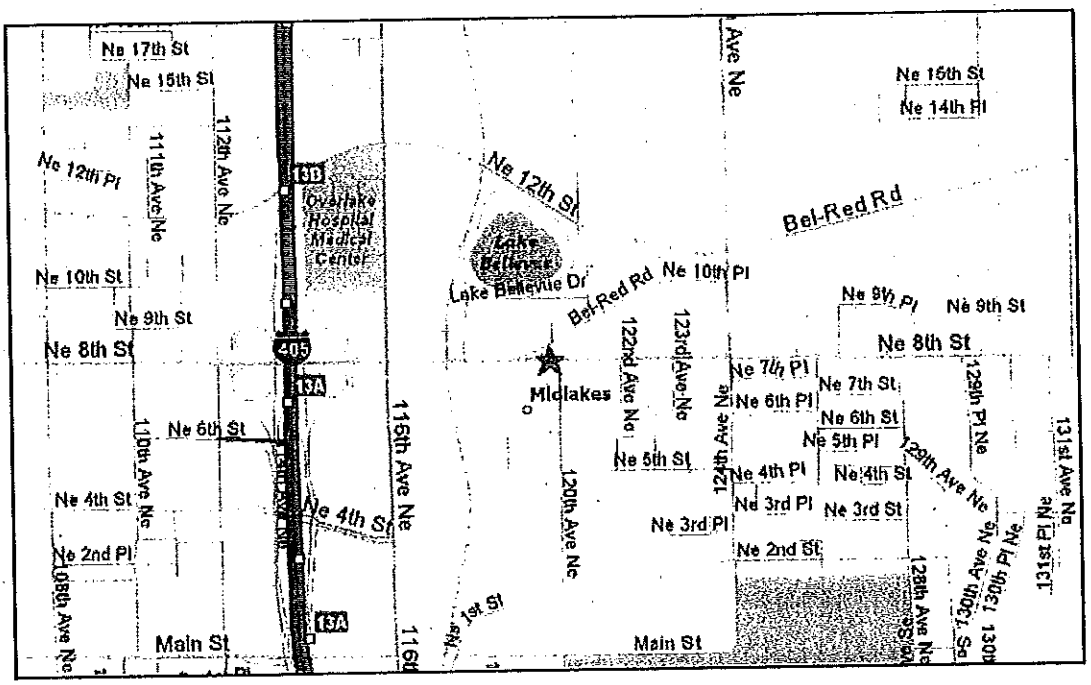
Attachments:

Figure 1 – Site Location Map – Tiki Car Wash
Figure 2 – Site Map with Soil Sample Analytical Results – Tiki Car Wash
Figure 3 – Site Map with Groundwater Monitoring Results – Tiki Car Wash
Table 1 – Monitoring Well Construction Data
Table 2 – Measured Water Levels, Tiki Car Wash
Table 3 – Monitoring Well Field Measurement Data, Tiki Car Wash
Table 4 – Summary of Soil Analytical Data
Table 5 – Summary of Groundwater Analytical Data
Attachment A – Well Logs
Attachment B – Purge and Sampling Forms
Attachment C – Laboratory Reports

FIGURES



WASHINGTON



MAP A

Figure 1. Site Location Map, Tiki Car Wash, Bellevue, Washington

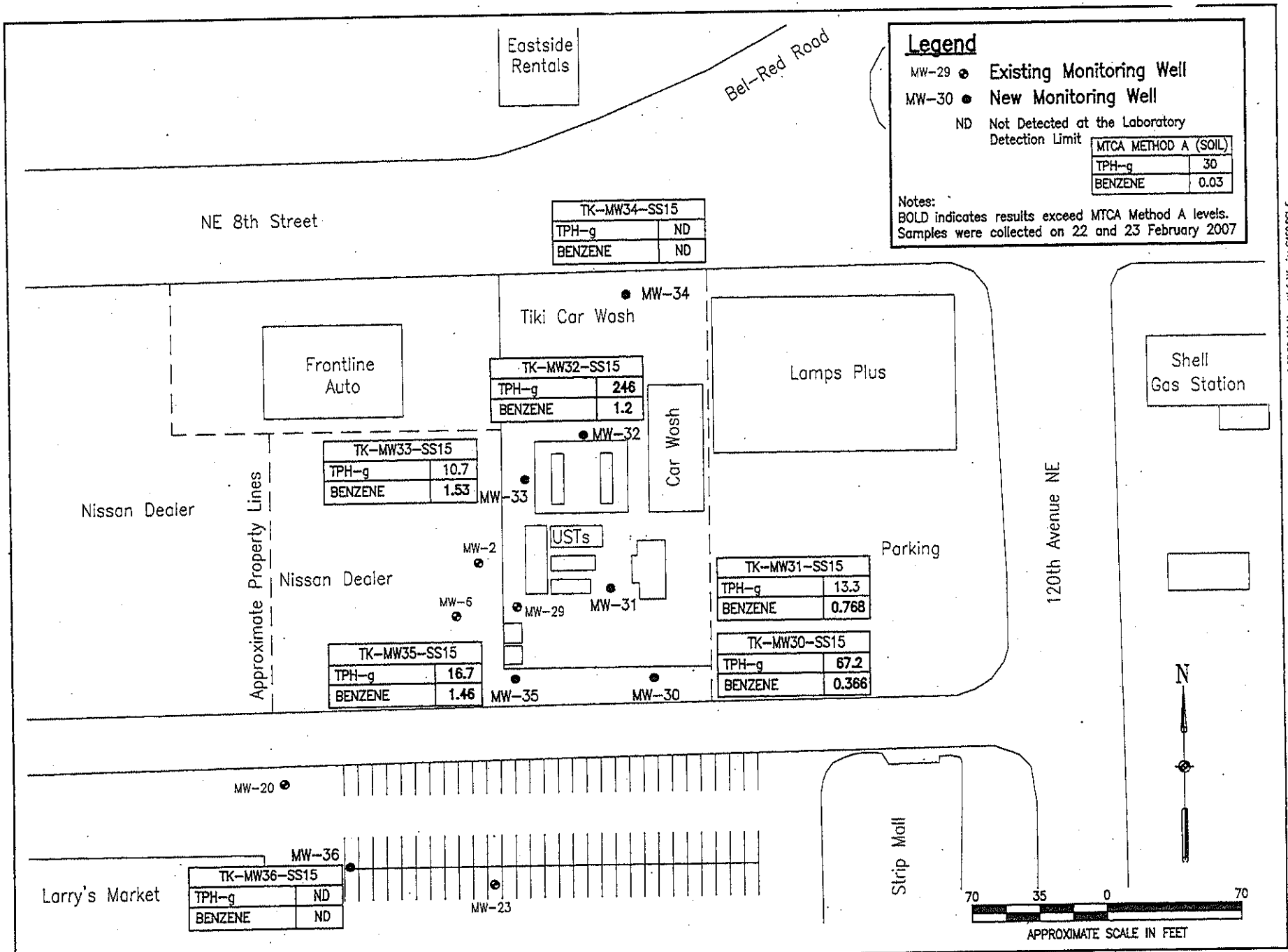


Figure 2. Site Map with New Well Locations and Soil Analytical Results for GRO and Benzene – Tiki Car Wash

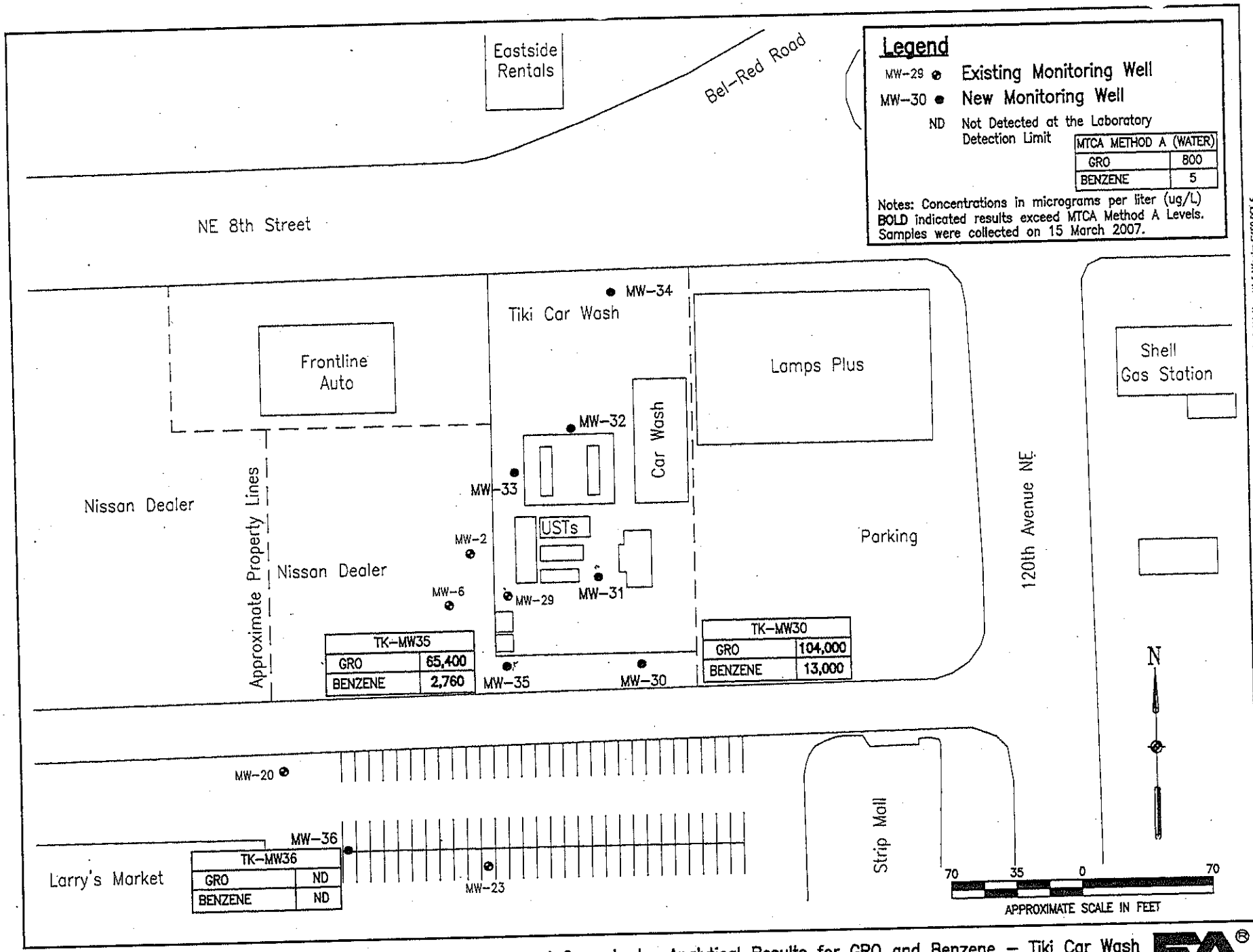


Figure 3. Site Map with New Well Locations and Groundwater Analytical Results for GRO and Benzene – Tiki Car Wash

TABLES

TABLE 1. MONITORING WELL CONSTRUCTION AND DEVELOPMENT DATA, TIKI CAR WASH

Well ID	Date Installed	Well Diameter (inches)	Total Depth (feet btoc)	Screen Length (feet)	Screened Interval (feet btoc)	Water Added During Installation (gallons)	Gallons Purged During Development (gallons)	Turbidity Achieved (NTUs)
MW-30	2/22/2007	2	13.30	10	2.97-12.97	0	25.4	52
MW-31	2/23/2007	4	13.56	10	3.17-13.17	0	17.5	118
MW-32	2/23/2007	4	13.28	10	2.95-12.95	0	31	38
MW-33	2/23/2007	4	13.19	10	2.86-12.86	0	30	15
MW-34	2/22/2007	2	13.73	10	3.40-13.40	0	30.9	18
MW-35	2/22/2007	4	13.00	10	2.67-12.67	0	35	5
MW-36	2/22/2007	2	13.78	10	3.45-13.45	0	18	17

NOTES:

btoc = below top of PVC casing.

Total depth measurements were performed following well development on 28 February and 2 March 2007.

Screened interval was determined by subtracting .33 feet (well sump) from the total depth.

TD = Total depth of well below top of PVC casing.

NTUs = Nephelometric Turbidity Units

TABLE 2. MEASURED WATER LEVELS, TIKI CAR WASH

Well ID	Well Diameter (inches)	Total Depth (feet btoc)	Screen Length (feet)	Screened Interval (feet btoc)	Top of Casing Elevation (feet)[1,2]	Depth To Water 2 March 2007 (feet btoc)	Water Level Elevation 20-21 April 2006 (feet)
MW-30	2	13.30	10	2.97-12.97	NA	4.44	NA
MW-31	4	13.56	10	3.17-13.17	NA	5.68	NA
MW-32	4	13.28	10	2.95-12.95	NA	5.64	NA
MW-33	4	13.19	10	2.86-12.86	NA	5.29	NA
MW-34	2	13.73	10	3.40-13.40	NA	6.34	NA
MW-35	4	13.00	10	2.67-12.67	NA	2.93	NA
MW-36	2	13.78	10	3.45-13.45	NA	6.88	NA

NOTES:
btoc = Below top of PVC casing.
Depth to water and total depth measurements were performed on 2 March 2007.
Screened interval was determined by subtracting .33 feet (well sump) from the total depth.
NA = Data Not Available.
TD = Total depth of well.

TABLE 3. MONITORING WELL FIELD MEASUREMENT DATA, TIKI CAR WASH

Well	Water Quality Parameters recorded on 3/15/07					
	pH	Conductivity (mS/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/L)	Temperature (°C)	Oxidation-Reduction Potential (mV)
MW-30	6.16	0.734	1	0.14	11.1	-74
MW-35	6.40	0.677	11	0.11	11.0	58
MW-36	6.29	0.55	0	2.60	11.1	151

NOTES:
°C = degrees Celsius.
mg/L - milligrams per liter
mS/cm = milliSiemans per centimeter.
mV = milliVolts
NTUs = Nephelometric turbidity units.

TABLE 4. SOIL SAMPLING ANALYTICAL RESULTS, TIKI CAR WASH

Sample Name	Sample Depth (ft bgs)	Date	NWTPH-G mg/kg	Benzene mg/kg	Toluene mg/kg	Ethylbenzenes mg/kg	Total Xylenes mg/kg	NWTPH-D mg/kg
TK-MW30-SS15	15	2/22/07	67.2	0.366	0.54	0.644	3.23	ND
TK-MW31-SS15	15	2/23/07	13.3	0.757	0.46	0.172	0.89	ND
TK-MW31-SS15D	15	2/23/07	9.8	0.768	0.51	0.19	0.97	ND
TK-MW32-SS15	15	2/23/07	246.0	1.2	3.40	2.5	14.00	ND
TK-MW33-SS15	15	2/23/07	10.7	1.58	0.25	0.39	1.34	ND
TK-MW34-SS15	15	2/22/07	ND	ND	ND	ND	0.14	ND
TK-MW35-SS15	15	2/22/07	16.7	1.46	0.41	0.263	1.00	ND
TK-MW36-SS15	15	2/22/07	ND	ND	ND	ND	ND	ND
TK-SS-TB	--	2/22/07	ND	ND	ND	ND	ND	--
MTCA Method A Cleanup Levels			**30/100[1]**	**0.03**	7	6	9	**2000**

Notes:
MTCA = Model Toxics Control Act.
NWTPH-G = Northwest Total Petroleum Hydrocarbon – Gasoline.
NWTPH-Dx = Northwest Total Petroleum Hydrocarbons – Diesel Extended Range.
Shading = Indicates the detected concentration exceeds MTCA Method A cleanup levels.
mg/kg = Milligrams per kilogram (ppm).
ft bgs = feet below ground surface
-- = Sample not analyzed
[1] = The cleanup level is 30 mg/kg when benzene is present at the site, otherwise it is 100 mg/kg.

TABLE 5. SUMMARY OF GROUNDWATER ANALYTICAL DATA, TIKI CAR WASH

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)	EDB (ug/L)	EDC (ug/L)	Lead (mg/L)
TK-MW-2	6/6/2006	2.16	0.5 U	13.4	6.32	1,410	268 D-08	485 U	NA	NA	NA	0.00100 U
TK-MW-2	9/6/2006	21.4	18.3	188	394	6,550	508 D-08	495 U	NA	NA	NA	0.01190
TK-MW6	6/6/2006	3,120	16,600	2,980	17,800	116,000	2,060 D-08	500 U	NA	NA	NA	0.01000
TK-MW6D*	6/6/2006	3,040	16,100	2,770	16,700	103,000	1,790 D-08	472 U	NA	NA	NA	0.01440
TK-MW6	9/6/2006	3,600	15,000	2,960	18,500	102,000	2,650 D-08	495 U	NA	NA	NA	0.01440
TK-MW6D*	9/6/2006	3,800	15,200	2,820	16,900	91,800	2,570 D-08	495 U	NA	NA	NA	0.00100 U
TK-MW-20	5/31/2005	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	250 U	500 U	1.00 U	0.010 U	0.200 U	0.00100 U
TK-MW20	2/13/2006	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	240 U	481 U	NA	NA	NA	0.00100 U
TK-MW20	6/6/2006	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	236 U	472 U	NA	NA	NA	0.00106
TK-MW20	9/6/2006	0.500 U	2.000 U	1.000 U	1.50 U	100.0 U	236 U	472 U	NA	NA	NA	0.00100 U
TK-MW-23	5/31/2005	0.500 U	0.806	0.500 U	1.44	50.0 U	250 U	500 U	1.00 U	0.010 U	2.00 U	0.00100 U, E
TK-MW23	2/13/2006	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	238 U	476 U	NA	NA	NA	0.00100 U
TK-MW23D*	2/13/2006	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	238 U	476 U	NA	NA	NA	0.00100 U
TK-MW23	6/6/2006	0.500 U	0.500 U, Q-41	0.500 U	1.00 U, Q-41	50.0 U, Q-41	240 U	481 U	NA	NA	NA	0.00220
TK-MW23	9/6/2006	0.500 U	2.000 U	1.000 U	1.50 U	100.0 U	243 U	485 U	NA	NA	NA	0.00100 U
TK-MW-29	5/31/2005	14,100	21,500	3,370	20,400	123,000	2,380 D-08	250 U	1.00 U	0.207 P-03	166 E	0.03240
TK-MW-29D*	5/31/2005	14,800	22,800	3,430	20,600	131,000	2,280 D-08	250 U	1.00 U	0.242 P-03	141 E	0.03310
TK-MW29	2/13/2006	8,750	17,900 E	3,450	20,400	145,000	2,630 D-08	1,660	NA	NA	NA	0.02270
TK-MW29	6/6/2006	11,300	20,600	3,690	22,300	143,000	7,370 D-08	10,900	NA	NA	NA	0.03960
TK-MW29	9/6/2006	9,030	15,200	2,650	17,100	121,000	2,680 D-08	4,850 U	NA	NA	NA	0.04940
TK-MW-30	3/15/2007	14,000	11,700	2,500	12,100	90,600	3,160 Q5	716	NA	NA	NA	NA
TK-MW30D*	3/15/2007	13,600	10,500	2,430	11,200	104,000	3,360 Q5	956	NA	NA	NA	NA
TK-MW35	3/15/2007	2,760	7,030	1,450	12,900	65,400	1,910 Q5	485 U	NA	NA	NA	NA
TK-MW36	3/15/2007	1 U	1 U	1 U	1 U	50 U	238 U	476 U	NA	NA	NA	NA
MTCA Method A Cleanup Criteria		5	1,000	700	1,000	800/1,000	500	500	20	0.01	5	0.015

NOTES:

NA = Not Analyzed.

ug/L = micrograms per liter.

* = Duplicate Sample.

DRO = Diesel Range organics.

EDB = 1,2-Dibromoethane.

EDC = 1,2-Dichloroethane.

GRO = Gasoline range organics.

Shaded cells indicate the results exceed the cleanup criteria.

MTCA Method A cleanup level for gasoline if 800 ug/L instead of 1,000 ug/L when benzene is present.

P-03 = Greater than 40 percent difference between two dissimilar columns. After evaluation, the lower result has been reported.

D-08 or Q5 = Results in the diesel organics range are primarily due to overlap from a gasoline range product.

Q-41 = The analyte had a high bias in the associated calibration verification standard.

E = Estimated value. The reported value exceeds the calibration range of the analysis. For TK-MW-23 lead, the analysis was performed on an unpreserved sample.

U = Not detected at or above the specified reporting limit.

ATTACHMENT A

WELL LOGS

EA Engineering, Science, And Technology, Inc.

Client	Project Number	Location
Ecology	619904.01	In planter Tiki - S. of Food Mart

Drilling/Sampling Methods: Hollow Stem Auger — Limited Access Rig 4.25" ID Auger

LOG OF SOIL BORING: MW-30

Elevation From Top of Casing (TOC):

Water Level	4.9'	4.56'	
Time	0956	1313	
Date	2-22-07	2-27-07	
Reference	bgs	~~btoc~~ bgs JK+M	

DRILLING

Start		Finsih	
Time	0956	Time	1100
Date	2-22-07	Date	2-22-07

Surface Conditions: Back Planter

Description by: JK+M

Well Completion: 2" PVC

INCHES Driven	INCHES Recov.	Blows/6"	PID @ 4A Reading	WELL DETAIL	DEPTH (Ft)	USCS SYMBOL	
				2" PVC; 3/8" Bentonite chips; Monterey 2/12 sand	0		
					1		
					2		
					3		
					4		
					5		Water level prior to drilling — grey silty sand w/ slight hydrocarbon odor
					6		
					7		Vacuum cleared to 7' on 2/21/07.
					8		
					9		
5"	7"	55	28		10	SM	grey silty sand/sandy silt w/ ~~pebbles~~ fine gravel, slight hydrocarbon odor, wet, dense, SM
					11		
					12		
					13		
					14		
4"	4"	50	8		15	SM	grey ~~San~~ silty-sand with fine gravel, moist, dense
					16		End of boring @ 15' Sample collected @ 15'
					17		
					18		
					19		
					20		

EA Engineering, Science, And Technology, Inc.

Client	Project Number	Location
Ecology	119904.01	In front of Tiki Convient Store

Drilling/Sampling Methods: Hollow Stem Auger: Limited Access Rig 6.5" ID Auger

Water Level	6' bc		
Time	0905		
Date	2-23-07		
Reference	bgs		

DRILLING

Start	Finish
Time 0905	Time 1035
Date 2-23-07	Date 2-23-07

LOG OF SOIL BORING: MW-31

Elevation From Top of Casing (TOC):

Surface Conditions: Pavement / Asphalt

Description by: JRM

Well Completion: 4" PVC

INCHES Driven	INCHES Recov.	Blows/6"	PID (ppm) Reading	WELL DETAIL	DEPTH (Ft)	USCS SYMBOL	
				4" PVC; 3/8" bentonite chips	0		
					1		
					2		
					3		
					4		
			65		5		slight HC odor
					6	▽	water level prior to drilling
					7		
					8		vacuum cleared to 8' bgs
					9		
6"	6"	60	15		10	SM	dense moist medium grey silty sand with fine to coarse gravel SM
					11		
					12		
					13		
				2/12 Monterey Sand	14		
12"	8"	70/70	10		15	SM	dense wet/moist medium grey silty sand w/ fine gravel SM collected sample
					16		
					17		End of boring
					18		
					19		
					20		

EA Engineering, Science, And Technology, Inc.

LOG OF SOIL BORING: MW-32

Elevation From Top of Casing (TOC):

Client	Project Number	Location
Ecology	619904.01	TIKI – North of Pump Islands.

Drilling/Sampling Methods: Hollow Stem Auger – Limited Access Rig : 6.5 ID Auger

Water Level			
Time			
Date			
Reference			

DRILLING

Start	Finish
Time 0759	Time 0930
Date 2-23-07	Date 2-23-07

Surface Conditions: Asphalt

Description by: JKM

Well Completion: 4" PVC

INCHES Driven	INCHES Recov.	Blows/6"	PID (ppm) Reading	WELL DETAIL	DEPTH (Ft)	USCS SYMBOL	
				4" PVC; 5/8" bentonite chips	0		
					1		
					2		
					3		
					4		
					5		
					6		
					7		▽ vacuum cleared to 7.5 bgs
					8		
					9		
3"	2"	10	739		10	SM	brown and grey silty sand with coarse gravel, dense, dry SM Hc odor
				2/12 Monterey Sand	11		
					12		
					13		
					14		medium grey dense silty sand w/m coarse and fine gravels, dry SM no odors Sample collected
2"	2"	55	16		15		End of boring @ 14.5' bgs
					16		
					17		
					18		
					19		
					20		

EA Engineering, Science, And Technology, Inc.

LOG OF SOIL BORING: MW-33

Elevation From Top of Casing (TOC):

Client	Project Number	Location
Ecology	019904.01	TIKI - W. of pump Island

Drilling/Sampling Methods: Hollow Stem Auger. Limited Access Rig 6.5" ID Auger

Water Level	6'		
Time	1045		
Date	2-23-07		
Reference	bgs		

DRILLING

Start	Finish
Time: 1035	Time: 1230
Date: 2-23-07	Date: 2/23/07

Surface Conditions: Asphalt

Description by: JKM

Well Completion: 4" PVC

INCHES Driven	INCHES Recov.	Blows/6"	PID (ppm) Reading	WELL DETAIL	DEPTH (Ft)	USCS SYMBOL	
				4" PVC; 3/8" bentonite chips	0		
					1		
					2		
					3		
					4		
					5		
					6	▽	Water @ 6' bgs prior to drilling
					7		vacuum cleared to 7.5' bgs
					8		
					9		
2"	0	50	0		10	SM	dense, wet medium brown silty sand SM
					11		
					12		
					13		
				2/12 Monterey Sand	14		
6"	5"	70	124		15	SM	dense dry medium grey silty sand with fine to coarse gravel SM; Collected sample @ 15' bgs; end of boring @ 15' bgs
					16		
					17		
					18		
					19		
					20		

EA Engineering, Science, And Technology, Inc.

LOG OF SOIL BORING: MW-34

Elevation From Top of Casing (TOC):

Client	Project Number	Location
Ecology	619904.01	Not TIKI Car Wash

Drilling/Sampling Methods: Hollow Stem Auger — Limited Access Rig 4.25" ID Auger

Water Level	6.95'		
Time	1520		
Date	2-22-07		
Reference	~~bgs~~ TOC JKM		

DRILLING

Start		Finish	
Time	1338	Time	1435
Date	2-22-07	Date	2-22-07

Surface Conditions: Asphalt

Description by: JKM

Well Completion: 2" PVC

INCHES Driven	INCHES Recov.	Blows/6"	PID (ppm) Reading	WELL DETAIL	DEPTH (Ft)	USCS SYMBOL	
				2" PVC; 3/8" bentonite chips	0		
					1		
					2		
					3		grey silty sand with fine gravel
					4		
					5		
					6		
					7		vacuum cleared to 7.5' ft bgs
					8		
					9		
5"	5"	60	29 0 JKM		10	SW	dense silty sand grey moist wi fine gravel. No odors SW
					11		
					12		
					13		
				2/12 Monterey Sand	14		
6"	2"	100	0		15	SW	limited recovery - rock stuck in shoe re-sampling for adequate sample volume
6"	3"	100	0		16		dense silty sand wi coarse ~~pebble~~ gravel wet, no odors SW
					17		
					18		
					19		End of boring @ 15.5' sample @ 15.5
					20		

EA Engineering, Science, And Technology, Inc.

LOG OF SOIL BORING:

Elevation From Top of Casing (TOC): MW-35

Client	Project Number	Location
Ecology	619904.01	In planter TIKI - S. of dumpst

Drilling/Sampling Methods: Hollow Stem Auger - 6.5" ID Auger — Limited Access Rig

Water Level	9.29'		
Time	1456		
Date	2-22-07		
Reference	btoc		

DRILLING

Start		Finsih	
Time	1115	Time	1325
Date	2-22-07	Date	2-22-07

Surface Conditions: Bark Planter

Description by: JKM

Well Completion: 4" PVC

INCHES Driven	INCHES Recov.	Blows/6"	OVA/PID Reading	WELL DETAIL	DEPTH (Ft)	USCS SYMBOL	
				4" PVC, 3/8" Bentonite chips	0		
					1		
					2		▽ 2.5 bgs water level prior to drilling
					3		grey silty sand w/ gravel
					4		
					5		
					6		vacuum cleared to 6'
					7		
					8		
					9		
5"	4"	50	33 / 2.5	JKM	10	SM	dense grey silty sand with fine gravel, SM dry
					11		
					12		
					13		
				2/12 Monterey Sand	14		
2"	2"	50			15	SM	dense wet grey silty sand with gravel and ~~and~~ fine to coarse, SM
					16		End of boring @ 15'
					17		Sample collected @ 15'
					18		
					19		
					20		

EA Engineering, Science, And Technology, Inc.

Client	Project Number	Location
Ecology	61944.01	Tiki – GI JOE Parking lot (Old borings)

Drilling/Sampling Methods: Hollow stem Auger – limited Access Rig 4.25" ID Auger

LOG OF SOIL BORING: MW-36

Elevation From Top of Casing (TOC):

				DRILLING Start	DRILLING Finsih
Water Level	NM				
Time				Time 0830	Time 0930
Date				Date 2/22/07	Date 2/22/07
Reference					

Surface Conditions: Asphalt

Description by: MSB

Well Completion: 2" PVC.

INCHES Driven	INCHES Recov.	Blows/6"	PID Reading	WELL DETAIL	DEPTH (Ft)	USCS SYMBOL	
				2" PVC. 3/8" Bentonite chips Monterey 2/12 Sand	0		Sand w/ gravels + cobbles, medium brown, dry.
			1		1		
					2		
					3		
					4		
					5		
					6		Vacuum cleared to 6' on 2/21/07. Dense.
					7		
					8		
					9		
2"	4"	50	0		10	SM	silty sand with gravel, med gray, dry. No odors.
					11		
					12		
					13		Moist cuttings noted by ~~client~~ driller, MSB
					14		
3"	4"	50	0		15		silty sand, coarse sand, med gray, dry. End of Boring, Collect soil sample. (2' of water observed in well after installation)
					16		
					17		
					18		
					19		
					20		

ATTACHMENT B

PURGE AND SAMPLING FORMS

Ground Water Purge and Sampling Form

Well Identification	MW30
Well Diameter (inches)	2"
Well Monument Locked and Good Condition?	Yes
Inside Well Head and Outside Well Casing (D=dry), (WAC=Water above Casing), WBC=Water Below Casing)	D
Well Casing Plug Locked and Good Condition?	Yes
Initial Depth to Water (ft btoc)	4.34
Well Total Depth (ft btoc)	13.3

Site Location: Ecology - Tiki Car Wash Date: 3/15/07

Project Number: 6199401 5000 B Personnel: MBB, JMiller

Purge Method: X Low Flow ___Conventional ___None

Purge Equipment: X Peristaltic Pump ___Bailer ___Grundfos submersible

Sampling Equipment: X Peristaltic Pump ___Bailer ___Grundfos submersible

Weather Conditions: Overcast ~40°F

Well Volume Calculation: 2"=.16, 4"=.64, 6"=1.44 gallons

Time	1143	1156	1159	1202	1205	1206				
Depth to Ground water (ft btoc)	4.34	4.99	4.97	5.09	5.18	5.20				
Total Groundwater Purged (gallons)		-	-	-						
Purge Rate (gpm, ml/min, other)		400	400	400	350	350				
pH		5.90	6.10	6.15	6.16	6.16				
Conductivity (mS/cm)		.761	.760	.756	.746	.734				
Turbidity (NTU)		1	1	2	2	1				
Disssolved Oxygen (mg/L)		0.04	+0.09	-6.11	-0.13	+0.14				
Temperature (°C)		11.3	11.2	11.2	11.1	11.1				
ORP/eH (mV)		-72	-75	-76	-75	-74				
Color of Purged Water (gray, brown, red, clear)		clear yellow	clear yellow	clear yellow	clear yellow	clear yellow				

Sample Identification: TK-MW30

Time Sampled: 1214 MW30

1216 MW30D

Purge water disposed To: Drum Onsite

Analysis	# of Bottles
X NWTPH-Gasoline	3
X BTEX (8021B)	
X NWTPH-Dx	2

Comments:

Slight H2O odor

Tubing pulled 5' off bottom.

Ground Water Purge and Sampling Form

Well Identification	MW35
Well Diameter (inches)	4"
Well Monument Locked and Good Condition?	YES
Inside Well Head and Outside Well Casing (D=dry), (WAC=Water above Casing), WBC=Water Below Casing)	D
Well Casing Plug Locked and Good Condition?	YES
Initial Depth to Water (ft btoc)	2.57
Well Total Depth (ft btoc)	13.00

Site Location: Ecology - Tiki Car Wash Date: 3/15/07

Project Number: 6199401 5000 B Personnel: MBB, JMiller

Purge Method: X Low Flow ___Conventional ___None

Purge Equipment: X Peristaltic Pump ___Bailer ___Grundfos submersible

Sampling Equipment: X Peristaltic Pump ___Bailer ___Grundfos submersible

Weather Conditions: Overcast ~45°F

Well Volume Calculation: 2"=.16, 4"=.64, 6"=1.44 gallons

Time	1312	1315	1319	1321	1324					
Depth to Ground water (ft btoc)	3.03	3.21	3.36	3.45	3.60					
Total Groundwater Purged (gallons)										
Purge Rate (gpm, ml/min, other)	350	350	350	350	350					
pH	6.49	6.32	6.39	6.39	6.40					
Conductivity (mS/cm)	.072	.073	.075	.075	.077					
Turbidity (NTU)	5	5	9	9	11					
Disssolved Oxygen (mg/L)	0.01	-0.05	-0.10	-0.10	-0.11					
Temperature (°C)	11.1	11.1	11.0	11.0	11.0					
ORP/cH (mV)	24	37	48	52	58					
Color of Purged Water (gray, brown, red, clear)	clear	clear	clear	clear	clear					

Sample Identification: TK-MW35

Time Sampled: 1328

Purge water disposed To: Drum Onsite

Analysis	# of Bottles
X NWTPH-Gasoline	3
X BTEX (8021B)	
X NWTPH-Dx	2

Comments: Slight sheen on top of water in well. Tubing pulled 8' off bottom.

Ground Water Purge and Sampling Form

Well Identification	MW-36
Well Diameter (inches)	2"
Well Monument Locked and Good Condition?	Yes
Inside Well Head and Outside Well Casing (D=dry), (WAC=Water above Casing), WBC=Water Below Casing)	D
Well Casing Plug Locked and Good Condition?	Yes
Initial Depth to Water (ft btoc)	6.82
Well Total Depth (ft btoc)	13.77

Site Location: Ecology - Tiki Car Wash Date: 3/15/07

Project Number: 6199401 5000 B Personnel: MBB, JMiller

Purge Method: √ Low Flow ___Conventional ___None

Purge Equipment: X Peristaltic Pump ___Bailer ___Grundfos submersible

Sampling Equipment: X Peristaltic Pump ___Bailer ___Grundfos submersible

Weather Conditions: Overcast, ~40°F

Well Volume Calculation: 2"=.16, 4"=.64, 6"=1.44 gallons

Time	1101	1104	1107	1110	1113	1116	1119	1122		
Depth to Ground water (ft btoc)	-		-	-	7.97	8.07	8.13	8.16		
Total Groundwater Purged (gallons)		-	-	-	-	-	2.5	2.8		
Purge Rate (gpm, ml/min, other)	~400	~400	~400	~400	~400	~400	~400	~400		
pH	6.23	6.13	5.99	5.97	6.14	6.22	6.27	6.29		
Conductivity (mS/cm)	0.627	0.593	0.560	0.542	0.536	0.549	0.552	0.550		
Turbidity (NTU)	2	1	1	0	0	2	0	0		
Disssolved Oxygen (mg/L)	3.17	2.86	2.75	2.70	2.75	2.78	2.67	2.60		
Temperature (°C)	11.3	11.3	11.3	11.2	11.2	11.2	11.1	11.1		
ORP/eH (mV)	190	176	167	162	156	157	153	151		
Color of Purged Water (gray, brown, red, clear)	clear	clear	clear	clear	clear	clear	clear	clear		

Sample Identification: TK-MW 36

Time Sampled: 1126

Purge water disposed To: Drum Onsite

Analysis	# of Bottles
√ NWTPH-Gasoline	3
√ BTEX (8021B)	↓
√ NWTPH-Dx	2

Comments: Additional tubing installed. Tubing 5 ft off bottom of the well

no product measured

ATTACHMENT C

LABORATORY REPORTS

TestAmerica
ANALYTICAL TESTING CORPORATION

SEATTLE, WA 11720 NORTH CREEK PKWY N, SUITE 400
BOTHELL, WA 98011-8244
PH: (425) 420.9200 FAX: (425) 420.9210

March 16, 2007

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

RE: Tiki Carwash

Enclosed are the results of analyses for samples received by the laboratory on 02/23/07 16:50. The following list is a summary of the Work Orders contained in this report, generated on 03/16/07 16:10.

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

Work Order	Project	ProjectNumber
BQB0478	Tiki Carwash	61994.01

Kate Haney

Kate Haney, Project Manager

TestAmerica
ANALYTICAL TESTING CORPORATION

SEATTLE, WA 11720 NORTH CREEK PKWY N, SUITE 400
BOTHELL, WA 98011-8244
PH: (425) 420.9200 FAX: (425) 420.9210

EA Engineering, Science and Technology	Project Name:	**Tiki Carwash**	
12011 NE 1st Street, Suite 100	Project Number:	61994.01	Report Created:
Bellevue, WA/USA 98005	Project Manager:	Jil Frain	03/16/07 16:10

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TK-MW36-SS15	BQB0478-01	Soil	02/22/07 08:58	02/23/07 16:50
TK-MW30-SS15	BQB0478-02	Soil	02/22/07 10:25	02/23/07 16:50
TK-MW35-SS15	BQB0478-03	Soil	02/22/07 11:40	02/23/07 16:50
TK-MW34-SS15	BQB0478-04	Soil	02/22/07 14:05	02/23/07 16:50
TK-MW32-SS15	BQB0478-05	Soil	02/23/07 08:42	02/23/07 16:50
TK-MW31-SS15	BQB0478-06	Soil	02/23/07 09:40	02/23/07 16:50
TK-MW31-SS15D	BQB0478-07	Soil	02/23/07 09:45	02/23/07 16:50
TK-MW33-SS15	BQB0478-08	Soil	02/23/07 11:30	02/23/07 16:50
TK-SS-TB	BQB0478-09	Soil	02/22/07 17:00	02/23/07 16:50

TestAmerica - Seattle, WA

Kate Haney

Kate Haney, Project Manager

TestAmerica
ANALYTICAL TESTING CORPORATION

SEATTLE, WA 11720 NORTH CREEK PKWY N, SUITE 400
BOTHELL, WA 98011-8244
PH: (425) 420.9200 FAX: (425) 420.9210

EA Engineering, Science and Technology	Project Name:	Tiki Carwash	
12011 NE 1st Street, Suite 100	Project Number:	61994.01	Report Created:
Bellevue, WA/USA 98005	Project Manager:	Jil Frain	03/16/07 16:10

Analytical Case Narrative
TestAmerica - Seattle, WA

BQB0478

SAMPLE RECIEPT

The samples were received February 23rd, 2007 by TestAmerica - Seattle. The temperature of the samples at the time of receipt was 9.1 degrees Celsius. The samples were received by the TestAmerica courier within four hours of the last sampled time.

PREPARATIONS AND ANALYSIS

Semivolatile Petroleum Products by NWTPH-Dx (w/o Acid/Silica Gel Clean-up): No additional anomalies, discrepancies, or issues were associated with sample preparation, analysis and quality control other than those already qualified in the data and described in the Notes and Definitions page at the end of the report.

Gasoline Hydrocarbons by NWTPH-Gx and BTEX by EPA Method 8021B: No additional anomalies, discrepancies, or issues were associated with sample preparation, analysis and quality control other than those already qualified in the data and described in the Notes and Definitions page at the end of the report.

TestAmerica - Seattle, WA

Kate Haney

Kate Haney, Project Manager

TestAmerica
ANALYTICAL TESTING CORPORATION

SEATTLE, WA 11720 NORTH CREEK PKWY N, SUITE 400
BOTHELL, WA 98011-8244
PH: (425) 420.9200 FAX: (425) 420.9210

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

Project Name: Tiki Carwash
Project Number: 61994.01
Project Manager: Jil Frain

Report Created: 03/16/07 16:10

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
BQB0478-01 (TK-MW36-SS15)		Soil			Sampled: 02/22/07 08:58					
Gasoline Range Hydrocarbons	NWTPH-Gx/802 1B	ND	---	3.92	mg/kg dry	1x	7B27040	02/27/07 12:40	02/28/07 14:22	
Benzene	"	ND	---	0.0235	"	"	"	"	"	
Toluene	"	ND	---	0.0392	"	"	"	"	"	
Ethylbenzene	"	ND	---	0.0392	"	"	"	"	"	
Xylenes (total)	"	ND	---	0.0783	"	"	"	"	"	
Surrogate(s): 4-BFB (FID)		*91.1%*			*50 - 150 %*	"			"	
4-BFB (PID)		*99.6%*			*53 - 142 %*	"			"	
BQB0478-02 (TK-MW30-SS15)		Soil			Sampled: 02/22/07 10:25					
Gasoline Range Hydrocarbons	NWTPH-Gx/802 1B	67.2	---	3.78	mg/kg dry	1x	7B27040	02/27/07 12:40	02/28/07 21:14	
Surrogate(s): 4-BFB (FID)		*112%*			*50 - 150 %*	"			"	
BQB0478-02RE1 (TK-MW30-SS15)		Soil			Sampled: 02/22/07 10:25					
Benzene	NWTPH-Gx/802 1B	0.366	---	0.0454	mg/kg dry	2x	7C01017	03/01/07 11:00	03/02/07 00:23	
Toluene	"	0.543	---	0.0757	"	"	"	"	"	
Ethylbenzene	"	0.644	---	0.0757	"	"	"	"	"	
Xylenes (total)	"	3.23	---	0.151	"	"	"	"	"	
Surrogate(s): 4-BFB (PID)		*80.6%*			*53 - 142 %*	*1x*			"	
BQB0478-03 (TK-MW35-SS15)		Soil			Sampled: 02/22/07 11:40					
Gasoline Range Hydrocarbons	NWTPH-Gx/802 1B	16.7	---	3.82	mg/kg dry	1x	7B27040	02/27/07 12:40	02/28/07 18:47	
Benzene	"	1.46	---	0.0229	"	"	"	"	"	
Toluene	"	0.410	---	0.0382	"	"	"	"	"	
Ethylbenzene	"	0.263	---	0.0382	"	"	"	"	"	
Xylenes (total)	"	1.00	---	0.0765	"	"	"	"	"	
Surrogate(s): 4-BFB (FID)		*93.4%*			*50 - 150 %*	"			"	
4-BFB (PID)		*90.8%*			*53 - 142 %*	"			"	
BQB0478-04 (TK-MW34-SS15)		Soil			Sampled: 02/22/07 14:05					
Gasoline Range Hydrocarbons	NWTPH-Gx/802 1B	ND	---	5.30	mg/kg dry	1x	7B27040	02/27/07 12:40	02/28/07 19:17	
Benzene	"	ND	---	0.0318	"	"	"	"	"	
Toluene	"	ND	---	0.0530	"	"	"	"	"	
Ethylbenzene	"	ND	---	0.0530	"	"	"	"	"	
Xylenes (total)	"	0.138	---	0.106	"	"	"	"	"	

TestAmerica - Seattle, WA

Kate Haney, Project Manager

TestAmerica
ANALYTICAL TESTING CORPORATION

SEATTLE, WA 11720 NORTH CREEK PKWY N, SUITE 400
BOTHELL, WA 98011-8244
PH: (425) 420.9200 FAX: (425) 420.9210

EA Engineering, Science and Technology	Project Name: Tiki Carwash	
12011 NE 1st Street, Suite 100	Project Number: 61994.01	Report Created:
Bellevue, WA/USA 98005	Project Manager: Jil Frain	03/16/07 16:10

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B

TestAmerica - Seattle, WA

Analyte	Method	Result	MDL[A]	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BQB0478-04 (TK-MW34-SS15)		Soil			Sampled: 02/22/07 14:05					
Surrogate(s): 4-BFB (FID)		*89.6%*			*50 - 150 %*	*1x*			*02/28/07 19:17*	
4-BFB (PID)		*98.4%*			*53 - 142 %*	*"*			*"*	
BQB0478-05 (TK-MW32-SS15)		Soil			Sampled: 02/23/07 08:42					
Gasoline Range Hydrocarbons	NWTPH-Gx/802 1B	246	—	19.2	mg/kg dry	5x	7B27040	02/27/07 12:40	02/28/07 21:44	
Benzene	"	1.20	—	0.115	"	"	"	"	"	
Toluene	"	3.40	—	0.192	"	"	"	"	"	
Ethylbenzene	"	2.50	—	0.192	"	"	"	"	"	
Xylenes (total)	"	14.0	—	0.385	"	"	"	"	"	
Surrogate(s): 4-BFB (FID)		*126%*			*50 - 150 %*	*1x*			*"*	
4-BFB (PID)		*87.0%*			*53 - 142 %*	*"*			*"*	
BQB0478-06 (TK-MW31-SS15)		Soil			Sampled: 02/23/07 09:40					
Gasoline Range Hydrocarbons	NWTPH-Gx/802 1B	13.3	—	4.23	mg/kg dry	1x	7B27040	02/27/07 12:40	02/28/07 19:46	
Benzene	"	0.757	—	0.0254	"	"	"	"	"	
Toluene	"	0.464	—	0.0423	"	"	"	"	"	
Ethylbenzene	"	0.172	—	0.0423	"	"	"	"	"	
Xylenes (total)	"	0.888	—	0.0847	"	"	"	"	"	
Surrogate(s): 4-BFB (FID)		*95.7%*			*50 - 150 %*	*"*			*"*	
4-BFB (PID)		*94.5%*			*53 - 142 %*	*"*			*"*	
BQB0478-07 (TK-MW31-SS15D)		Soil			Sampled: 02/23/07 09:45					
Gasoline Range Hydrocarbons	NWTPH-Gx/802 1B	9.78	—	3.65	mg/kg dry	1x	7B27040	02/27/07 12:40	02/28/07 20:16	
Benzene	"	0.768	—	0.0219	"	"	"	"	"	
Toluene	"	0.511	—	0.0365	"	"	"	"	"	
Ethylbenzene	"	0.190	—	0.0365	"	"	"	"	"	
Xylenes (total)	"	0.971	—	0.0729	"	"	"	"	"	
Surrogate(s): 4-BFB (FID)		*82.6%*			*50 - 150 %*	*"*			*"*	
4-BFB (PID)		*90.4%*			*53 - 142 %*	*"*			*"*	

TestAmerica - Seattle, WA

Kate Haney, Project Manager

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SEATTLE, WA 11720 NORTH CREEK PKWY N, SUITE 400
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EA Engineering, Science and Technology	Project Name: Tiki Carwash	
12011 NE 1st Street, Suite 100	Project Number: 61994.01	Report Created:
Bellevue, WA/USA 98005	Project Manager: Jil Frain	03/16/07 16:10

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
BQB0478-08 (TK-MW33-SS15)		Soil			Sampled: 02/23/07 11:30					
Gasoline Range Hydrocarbons	NWTPH-Gx/802 1B	10.7	---	3.82	mg/kg dry	1x	7B27040	02/27/07 12:40	02/28/07 20:45	
Benzene	"	1.53	---	0.0229	"	"	"	"	"	
Toluene	"	0.245	---	0.0382	"	"	"	"	"	
Ethylbenzene	"	0.390	---	0.0382	"	"	"	"	"	
Xylenes (total)	"	1.34	---	0.0765	"	"	"	"	"	
Surrogate(s): 4-BFB (FID)			*90.8%*		*50 - 150 %*	"			"	
4-BFB (PID)			*93.9%*		*53 - 142 %*	"			"	
BQB0478-09 (TK-SS-TB)		Soil			Sampled: 02/22/07 17:00					
Gasoline Range Hydrocarbons	NWTPH-Gx/802 1B	ND	---	5.00	mg/kg wet	1x	7B27040	02/27/07 12:40	02/28/07 18:17	
Benzene	"	ND	---	0.0300	"	"	"	"	"	
Toluene	"	ND	---	0.0500	"	"	"	"	"	
Ethylbenzene	"	ND	---	0.0500	"	"	"	"	"	
Xylenes (total)	"	ND	---	0.100	"	"	"	"	"	
Surrogate(s): 4-BFB (FID)			*91.3%*		*50 - 150 %*	"			"	
4-BFB (PID)			*103%*		*53 - 142 %*	"			"	

TestAmerica - Seattle, WA

Kate Haney, Project Manager

TestAmerica
ANALYTICAL TESTING CORPORATION

SEATTLE, WA 11720 NORTH CREEK PKWY N, SUITE 400
BOTHELL, WA 98011-8244
PH: (425) 420.9200 FAX: (425) 420.9210

EA Engineering, Science and Technology	Project Name: Tiki Carwash	
12011 NE 1st Street, Suite 100	Project Number: 61994.01	Report Created:
Bellevue, WA/USA 98005	Project Manager: Jil Frain	03/16/07 16:10

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
BQB0478-01 (TK-MW36-SS15)		Soil			Sampled: 02/22/07 08:58					
Diesel Range Hydrocarbons	NWTPH-Dx	ND	—	11.1	mg/kg dry	1x	7B27048	02/27/07 13:51	02/28/07 01:44	
Lube Oil Range Hydrocarbons	"	ND	—	27.7	"	"	"	"	"	
Surrogate(s): 2-FBP		*81.3%*			*54 - 148 %*	"			"	
Octacosane		*96.5%*			*62 - 142 %*	"			"	
BQB0478-02 (TK-MW30-SS15)		Soil			Sampled: 02/22/07 10:25					
Diesel Range Hydrocarbons	NWTPH-Dx	ND	—	11.3	mg/kg dry	1x	7B27048	02/27/07 13:51	02/28/07 02:14	
Lube Oil Range Hydrocarbons	"	ND	—	28.2	"	"	"	"	"	
Surrogate(s): 2-FBP		*89.2%*			*54 - 148 %*	"			"	
Octacosane		*101%*			*62 - 142 %*	"			"	
BQB0478-03 (TK-MW35-SS15)		Soil			Sampled: 02/22/07 11:40					
Diesel Range Hydrocarbons	NWTPH-Dx	ND	—	11.4	mg/kg dry	1x	7B27048	02/27/07 13:51	02/28/07 02:43	
Lube Oil Range Hydrocarbons	"	ND	—	28.4	"	"	"	"	"	
Surrogate(s): 2-FBP		*82.2%*			*54 - 148 %*	"			"	
Octacosane		*99.7%*			*62 - 142 %*	"			"	
BQB0478-04 (TK-MW34-SS15)		Soil			Sampled: 02/22/07 14:05					
Diesel Range Hydrocarbons	NWTPH-Dx	ND	—	11.6	mg/kg dry	1x	7B27048	02/27/07 13:51	02/28/07 03:12	
Lube Oil Range Hydrocarbons	"	ND	—	29.0	"	"	"	"	"	
Surrogate(s): 2-FBP		*81.1%*			*54 - 148 %*	"			"	
Octacosane		*101%*			*62 - 142 %*	"			"	
BQB0478-05 (TK-MW32-SS15)		Soil			Sampled: 02/23/07 08:42					
Diesel Range Hydrocarbons	NWTPH-Dx	ND	—	11.1	mg/kg dry	1x	7B27048	02/27/07 13:51	02/28/07 03:42	
Lube Oil Range Hydrocarbons	"	ND	—	27.8	"	"	"	"	"	
Surrogate(s): 2-FBP		*92.4%*			*54 - 148 %*	"			"	
Octacosane		*103%*			*62 - 142 %*	"			"	
BQB0478-06 (TK-MW31-SS15)		Soil			Sampled: 02/23/07 09:40					
Diesel Range Hydrocarbons	NWTPH-Dx	ND	—	11.1	mg/kg dry	1x	7B27048	02/27/07 13:51	02/28/07 06:10	
Lube Oil Range Hydrocarbons	"	ND	—	27.7	"	"	"	"	"	
Surrogate(s): 2-FBP		*84.5%*			*54 - 148 %*	"			"	
Octacosane		*101%*			*62 - 142 %*	"			"	

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Kate Haney

Kate Haney, Project Manager

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EA Engineering, Science and Technology	Project Name:	Tiki Carwash	Report Created:
12011 NE 1st Street, Suite 100	Project Number:	61994.01	03/16/07 16:10
Bellevue, WA/USA 98005	Project Manager:	Jil Frain	

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

TestAmerica - Seattle, WA

Analyte	Method	Result	MDL[A]	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BQB0478-07 (TK-MW31-SS15D)		**Soil**			**Sampled: 02/23/07 09:45**					
Diesel Range Hydrocarbons	NWTPH-Dx	ND	—	11.1	mg/kg dry	1x	7B27048	02/27/07 13:51	02/28/07 06:39	
Lube Oil Range Hydrocarbons	"	ND	—	27.8	"	"	"	"	"	
Surrogate(s): 2-FBP		*82.8%*			*54 - 148 %*	"			"	
Octacosane		*99.0%*			*62 - 142 %*	"			"	
BQB0478-08 (TK-MW33-SS15)		**Soil**			**Sampled: 02/23/07 11:30**					
Diesel Range Hydrocarbons	NWTPH-Dx	ND	—	11.5	mg/kg dry	1x	7B27048	02/27/07 13:51	02/28/07 07:09	
Lube Oil Range Hydrocarbons	"	ND	—	28.7	"	"	"	"	"	
Surrogate(s): 2-FBP		*82.2%*			*54 - 148 %*	"			"	
Octacosane		*96.6%*			*62 - 142 %*	"			"	

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EA Engineering, Science and Technology	Project Name: Tiki Carwash	Report Created:
12011 NE 1st Street, Suite 100	Project Number: 61994.01	03/16/07 16:10
Bellevue, WA/USA 98005	Project Manager: Jil Frain	

Physical Parameters by APHA/ASTM/EPA Methods

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Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BQB0478-01 (TK-MW36-SS15)		Soil				Sampled: 02/22/07 08:58				
Dry Weight	BSOPSPL003R0 8	91.6	—	1.00	%	1x	7B27028	02/27/07 10:47	02/28/07 00:00	
BQB0478-02 (TK-MW30-SS15)		Soil				Sampled: 02/22/07 10:25				
Dry Weight	BSOPSPL003R0 8	89.5	—	1.00	%	1x	7B27028	02/27/07 10:47	02/28/07 00:00	
BQB0478-03 (TK-MW35-SS15)		Soil				Sampled: 02/22/07 11:40				
Dry Weight	BSOPSPL003R0 8	88.4	—	1.00	%	1x	7B27028	02/27/07 10:47	02/28/07 00:00	
BQB0478-04 (TK-MW34-SS15)		Soil				Sampled: 02/22/07 14:05				
Dry Weight	BSOPSPL003R0 8	86.8	—	1.00	%	1x	7B27028	02/27/07 10:47	02/28/07 00:00	
BQB0478-05 (TK-MW32-SS15)		Soil				Sampled: 02/23/07 08:42				
Dry Weight	BSOPSPL003R0 8	90.9	—	1.00	%	1x	7B27028	02/27/07 10:47	02/28/07 00:00	
BQB0478-06 (TK-MW31-SS15)		Soil				Sampled: 02/23/07 09:40				
Dry Weight	BSOPSPL003R0 8	91.2	—	1.00	%	1x	7B27028	02/27/07 10:47	02/28/07 00:00	
BQB0478-07 (TK-MW31-SS15D)		Soil				Sampled: 02/23/07 09:45				
Dry Weight	BSOPSPL003R0 8	90.5	—	1.00	%	1x	7B27028	02/27/07 10:47	02/28/07 00:00	
BQB0478-08 (TK-MW33-SS15)		Soil				Sampled: 02/23/07 11:30				
Dry Weight	BSOPSPL003R0 8	88.7	—	1.00	%	1x	7B27028	02/27/07 10:47	02/28/07 00:00	

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EA Engineering, Science and Technology	Project Name: Tiki Carwash	
12011 NE 1st Street, Suite 100	Project Number: 61994.01	Report Created:
Bellevue, WA/USA 98005	Project Manager: Jil Frain	03/16/07 16:10

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

TestAmerica - Seattle, WA

QC Batch: 7B27040 **Soil Preparation Method: EPA 5030B (MeOH)**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (7B27040-BLK1)								Extracted: 02/27/07 12:40						
Gasoline Range Hydrocarbons	NWTPH-Gx/ 8021B	ND	---	5.00	mg/kg wet	1x	--	--	--	--	--	--	02/28/07 11:28	
Benzene	"	ND	---	0.0300	"	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	0.0500	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.0500	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (FID)		*Recovery: 88.3%*			*Limits: 50-150%*	"							*02/28/07 11:28*	
4-BFB (PID)		*100%*			*53-142%*	"							"	
LCS (7B27040-BS1)								Extracted: 02/27/07 12:40						
Gasoline Range Hydrocarbons	NWTPH-Gx/ 8021B	40.3	---	5.00	mg/kg wet	1x	--	50.0	80.6%	(75-125)	--	--	02/28/07 11:58	
Surrogate(s): 4-BFB (FID)		*Recovery: 80.3%*			*Limits: 50-150%*	"							*02/28/07 11:58*	
LCS (7B27040-BS2)								Extracted: 02/27/07 12:40						
Benzene	NWTPH-Gx/ 8021B	1.37	---	0.0300	mg/kg wet	1x	--	1.50	91.3%	(75-125)	--	--	02/28/07 12:27	
Toluene	"	1.32	---	0.0500	"	"	--	"	88.0%	"	--	--	"	
Ethylbenzene	"	1.33	---	0.0500	"	"	--	"	88.7%	"	--	--	"	
Xylenes (total)	"	3.97	---	0.100	"	"	--	4.50	88.2%	"	--	--	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 102%*			*Limits: 53-142%*	"							*02/28/07 12:27*	
Duplicate (7B27040-DUP1)					QC Source: BQB0433-01			Extracted: 02/27/07 12:40						
Gasoline Range Hydrocarbons	NWTPH-Gx/ 8021B	ND	---	4.56	mg/kg dry	1x	ND	--	--	--	59.9%	(40)	02/28/07 13:23	R4
Benzene	"	ND	---	0.0273	"	"	ND	--	--	--	NR	(35)	"	
Toluene	"	ND	---	0.0456	"	"	ND	--	--	--	108%	"	"	R4
Ethylbenzene	"	ND	---	0.0456	"	"	ND	--	--	--		"	"	R4
Xylenes (total)	"	0.120	---	0.0911	"	"	ND	--	--	--		"	"	R4
Surrogate(s): 4-BFB (FID)		*Recovery: 87.9%*			*Limits: 50-150%*	"							*02/28/07 13:23*	
4-BFB (PID)		*92.3%*			*53-142%*	"							"	
Duplicate (7B27040-DUP2)					QC Source: BQB0478-01			Extracted: 02/27/07 12:40						
Gasoline Range Hydrocarbons	NWTPH-Gx/ 8021B	ND	---	3.92	mg/kg dry	1x	ND	--	--	--	20.6%	(40)	02/28/07 14:51	R4
Benzene	"	ND	---	0.0235	"	"	ND	--	--	--	NR	(35)	"	
Toluene	"	ND	---	0.0392	"	"	ND	--	--	--	NR	"	"	
Ethylbenzene	"	ND	---	0.0392	"	"	ND	--	--	--	NR	"	"	
Xylenes (total)	"	ND	---	0.0783	"	"	ND	--	--	--	NR	"	"	
Surrogate(s): 4-BFB (FID)		*Recovery: 90.2%*			*Limits: 50-150%*	"							*02/28/07 14:51*	
4-BFB (PID)		*102%*			*53-142%*	"							"	

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

Project Name: Tiki Carwash
Project Number: 61994.01
Project Manager: Jil Frain

Report Created: 03/16/07 16:10

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

TestAmerica - Seattle, WA

QC Batch: 7B27040 **Soil Preparation Method: EPA 5030B (MeOH)**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Matrix Spike (7B27040-MS1)				QC Source: BQB0433-01				Extracted: 02/27/07 12:40						
Gasoline Range Hydrocarbons	NWTPH-Gx/ 8021B	45.3	---	4.56	mg/kg dry	1x	1.72	45.6	95.6%	(42-125)	--	--	02/28/07 15:50	
Surrogate(s): 4-BFB (FID)		*Recovery: 101%*		*Limits: 50-150%*	"								*02/28/07 15:50*	
Matrix Spike (7B27040-MS2)				QC Source: BQB0478-01				Extracted: 02/27/07 12:40						
Benzene	NWTPH-Gx/ 8021B	1.06	---	0.0235	mg/kg dry	1x	ND	1.17	90.6%	(45-125)	--	--	02/28/07 16:19	
Toluene	"	1.02	---	0.0392	"	"	ND	"	87.2%	(55-125)	--	--	"	
Ethylbenzene	"	1.03	---	0.0392	"	"	ND	"	88.0%	(53-132)	--	--	"	
Xylenes (total)	"	3.08	---	0.0783	"	"	ND	3.52	87.5%	(59-125)	--	--	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 99.6%*		*Limits: 53-142%*	"								*02/28/07 16:19*	

QC Batch: 7C01017 **Soil Preparation Method: EPA 5030B (MeOH)**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (7C01017-BLK1)								Extracted: 03/01/07 11:00						
Benzene	NWTPH-Gx/ 8021B	ND	---	0.0300	mg/kg wet	1x	--	--	--	--	--	--	03/01/07 15:00	
Toluene	"	ND	---	0.0500	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.0500	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 99.7%*		*Limits: 53-142%*	"								*03/01/07 15:00*	
Blank (7C01017-BLK2)								Extracted: 03/01/07 11:00						
Gasoline Range Hydrocarbons	NWTPH-Gx/ 8021B	ND	---	5.00	mg/kg wet	1x	--	--	--	--	--	--	03/01/07 21:55	
Surrogate(s): 4-BFB (FID)		*Recovery: 90.3%*		*Limits: 50-150%*	"								*03/01/07 21:55*	
LCS (7C01017-BS1)								Extracted: 03/01/07 11:00						
Gasoline Range Hydrocarbons	NWTPH-Gx/ 8021B	44.4	---	5.00	mg/kg wet	1x	--	50.0	88.8%	(75-125)	--	--	03/01/07 22:25	
Surrogate(s): 4-BFB (FID)		*Recovery: 101%*		*Limits: 50-150%*	"								*03/01/07 22:25*	
LCS (7C01017-BS2)								Extracted: 03/01/07 11:00						
Benzene	NWTPH-Gx/ 8021B	1.38	---	0.0300	mg/kg wet	1x	--	1.50	92.0%	(75-125)	--	--	03/01/07 15:30	
Toluene	"	1.33	---	0.0500	"	"	--	"	88.7%	"	--	--	"	
Ethylbenzene	"	1.34	---	0.0500	"	"	--	"	89.3%	"	--	--	"	
Xylenes (total)	"	3.99	---	0.100	"	"	--	4.50	88.7%	"	--	--	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 100%*		*Limits: 53-142%*	"								*03/01/07 15:30*	

TestAmerica - Seattle, WA

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EA Engineering, Science and Technology	Project Name:	Tiki Carwash	Report Created:
12011 NE 1st Street, Suite 100	Project Number:	61994.01	03/16/07 16:10
Bellevue, WA/USA 98005	Project Manager:	Jil Frain	

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

TestAmerica - Seattle, WA

QC Batch: 7C01017 **Soil Preparation Method: EPA 5030B (MeOH)**

Analyte	Method	Result	MDL[A]	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
LCS Dup (7C01017-BSD2)								Extracted: 03/01/07 11:00						
Benzene	NWTPH-Gx/ 8021B	1.40	---	0.0300	mg/kg wet	1x	--	1.50	93.3%	(75-125)	1.44%	(25)	03/01/07 15:59	
Toluene	"	1.35	---	0.0500	"	"	--	"	90.0%	"	1.49%	"	"	
Ethylbenzene	"	1.35	---	0.0500	"	"	--	"	90.0%	"	0.743%	"	"	
Xylenes (total)	"	4.01	---	0.100	"	"	--	4.50	89.1%	"	0.500%	"	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 100%*			*Limits: 53-142%*	"							*03/01/07 15:59*	
Duplicate (7C01017-DUP1)					QC Source: BQB0538-05			Extracted: 03/01/07 11:00						
Gasoline Range Hydrocarbons	NWTPH-Gx/ 8021B	ND	---	4.70	mg/kg dry	1x	ND	--	--	--	NR	(40)	03/01/07 23:24	
Benzene	"	ND	---	0.0282	"	"	ND	--	--	--	NR	(35)	"	
Toluene	"	ND	---	0.0470	"	"	ND	--	--	--	NR	"	"	
Ethylbenzene	"	ND	---	0.0470	"	"	ND	--	--	--	NR	"	"	
Xylenes (total)	"	ND	---	0.0939	"	"	ND	--	--	--	NR	"	"	
Surrogate(s): 4-BFB (FID)		*Recovery: 90.4%*			*Limits: 50-150%*	"							*03/01/07 23:24*	
4-BFB (PID)		*104%*			*53-142%*	"							"	
Matrix Spike (7C01017-MS1)					QC Source: BQB0538-05			Extracted: 03/01/07 11:00						
Gasoline Range Hydrocarbons	NWTPH-Gx/ 8021B	42.0	---	4.70	mg/kg dry	1x	0.392	93.9	44.3%	(42-125)	--	--	03/02/07 00:52	
Surrogate(s): 4-BFB (FID)		*Recovery: 98.6%*			*Limits: 50-150%*	"							*03/02/07 00:52*	
Matrix Spike (7C01017-MS2)					QC Source: BQB0538-05			Extracted: 03/01/07 11:00						
Benzene	NWTPH-Gx/ 8021B	1.25	---	0.0282	mg/kg dry	1x	ND	1.41	88.7%	(45-125)	--	--	03/02/07 01:22	
Toluene	"	1.20	---	0.0470	"	"	ND	"	85.1%	(55-125)	--	--	"	
Ethylbenzene	"	1.20	---	0.0470	"	"	ND	"	85.1%	(53-132)	--	--	"	
Xylenes (total)	"	3.57	---	0.0939	"	"	ND	4.23	84.4%	(59-125)	--	--	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 99.3%*			*Limits: 53-142%*	"							*03/02/07 01:22*	

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EA Engineering, Science and Technology	Project Name: **Tiki Carwash**	
12011 NE 1st Street, Suite 100	Project Number: 61994.01	Report Created:
Bellevue, WA/USA 98005	Project Manager: Jil Frain	03/16/07 16:10

Semivolatile Petroleum Products by NWTPH-Dx (w/o Acid/Silica Gel Clean-up) - Laboratory Quality Control Results

TestAmerica - Seattle, WA

QC Batch: 7B27048. **Soil Preparation Method: EPA 3550B**

Analyte	Method	Result	MDL[A]	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (7B27048-BLK1)								Extracted: 02/27/07 13:51						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	---	10.0	mg/kg wet	1x	--	--	--	--	--	--	02/27/07 23:16	
Lube Oil Range Hydrocarbons	"	ND	---	25.0	"	"	--	--	--	--	--	--	"	
Surrogate(s): 2-FBP		*Recovery: 88.5%*			*Limits: 54-148%*	"							*02/27/07 23:16*	
Octacosane		*101%*			*62-142%*	"							"	
LCS (7B27048-BS1)								Extracted: 02/27/07 13:51						
Diesel Range Hydrocarbons	NWTPH-Dx	67.8	---	10.0	mg/kg wet	1x	--	66.7	102%	(78-129)	--	--	02/27/07 23:46	
Surrogate(s): 2-FBP		*Recovery: 101%*			*Limits: 54-148%*	"							*02/27/07 23:46*	
Octacosane		*98.7%*			*62-142%*	"							"	
Duplicate (7B27048-DUP1)					QC Source: BQB0478-04			Extracted: 02/27/07 13:51						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	---	11.4	mg/kg dry	1x	ND	--	--	--	NR	(40)	02/28/07 00:15	
Lube Oil Range Hydrocarbons	"	ND	---	28.4	"	"	ND	--	--	--	48.1%	"	"	R4
Surrogate(s): 2-FBP		*Recovery: 90.8%*			*Limits: 54-148%*	"							*02/28/07 00:15*	
Octacosane		*105%*			*62-142%*	"							"	
Matrix Spike (7B27048-MS1)					QC Source: BQB0478-04			Extracted: 02/27/07 13:51						
Diesel Range Hydrocarbons	NWTPH-Dx	78.4	---	11.3	mg/kg dry	1x	3.33	75.5	99.4%	(46-155)	--	--	02/28/07 00:45	
Surrogate(s): 2-FBP		*Recovery: 98.4%*			*Limits: 54-148%*	"							*02/28/07 00:45*	
Octacosane		*98.9%*			*62-142%*	"							"	

TestAmerica - Seattle, WA

Kate Haney, Project Manager

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EA Engineering, Science and Technology	Project Name:	**Tiki Carwash**	
12011 NE 1st Street, Suite 100	Project Number:	61994.01	Report Created:
Bellevue, WA/USA 98005	Project Manager:	Jil Frain	03/16/07 16:10

Physical Parameters by APHA/ASTM/EPA Methods - Laboratory Quality Control Results

TestAmerica - Seattle, WA

QC Batch: 7B27028 **Soil Preparation Method: Dry Weight**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (7B27028-BLK1)									Extracted: 02/27/07 10:47					
Dry Weight	BSOPSPL00 3R08	99.9	---	1.00	%	1x	--	--	--	--	--	--	02/28/07 00:00	

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Kate Haney, Project Manager

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12011 NE 1st Street, Suite 100	Project Number:	61994.01	Report Created:
Bellevue, WA/USA 98005	Project Manager:	Jil Frain	03/16/07 16:10

Notes and Definitions

Report Specific Notes:

R4 - Due to the low levels of analyte in the sample, the duplicate RPD calculation does not provide useful information.

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.

Kate Haney

Kate Haney, Project Manager

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March 27, 2007

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

RE: Tiki Carwash

Enclosed are the results of analyses for samples received by the laboratory on 03/16/07 15:50. The following list is a summary of the Work Orders contained in this report, generated on 03/27/07 14:23.

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

Work Order	Project	ProjectNumber
BQC0388	Tiki Carwash	61994.01 5000 C

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Kate Haney, Project Manager

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EA Engineering, Science and Technology	Project Name:	**Tiki Carwash**	
12011 NE 1st Street, Suite 100	Project Number:	61994.01 5000 C	Report Created:
Bellevue, WA/USA 98005	Project Manager:	Jil Frain	03/27/07 14:23

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TK-MW30	BQC0388-01	Water	03/15/07 12:14	03/16/07 15:50
TK-MW30D	BQC0388-02	Water	03/15/07 12:16	03/16/07 15:50
TK-MW35	BQC0388-03	Water	03/15/07 13:28	03/16/07 15:50
TK-MW36	BQC0388-04	Water	03/15/07 11:26	03/16/07 15:50
TK-MW-TB	BQC0388-05	Water	03/15/07 17:00	03/16/07 15:50

TestAmerica - Seattle, WA

Kate Haney, Project Manager

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EA Engineering, Science and Technology	Project Name:	**Tiki Carwash**	
12011 NE 1st Street, Suite 100	Project Number:	61994.01 5000 C	Report Created:
Bellevue, WA/USA 98005	Project Manager:	Jil Frain	03/27/07 14:23

Analytical Case Narrative
TestAmerica - Seattle, WA

BQC0388

SAMPLE RECIEPT

The samples were received March 16th, 2007 by TestAmerica - Seattle. The temperature of the samples at the time of receipt was 0.8 degrees Celsius.

PREPARATIONS AND ANALYSIS

Semivolatile Petroleum Products by NWTPH-Dx (w/o Acid/Silica Gel Clean-up): No additional anomalies, discrepancies, or issues were associated with sample preparation, analysis and quality control other than those already qualified in the data and described in the Notes and Definitions page at the end of the report.

Gasoline Hydrocarbons by NWTPH-Gx and BTEX by EPA Method 8021B: Due to an IS failure during the initial analysis for the BTEX compounds, the sample was re-analyzed and reported as RE1. The results from the re-analysis did not match the initial analysis. The sample was logged in for 8260 BTEX analysis for confirmation, which matched the re-analysis results. Both the re-analysis (RE1) and confirmation analysis have been reported. No additional anomalies, discrepancies, or issues were associated with sample preparation, analysis and quality control other than those already qualified in the data and described in the Notes and Definitions page at the end of the report.

Volatile Organic Compounds by EPA Method 8260B (Confirmation Analysis): No additional anomalies, discrepancies, or issues were associated with sample preparation, analysis and quality control other than those already qualified in the data and described in the Notes and Definitions page at the end of the report.

TestAmerica - Seattle, WA

Kate Haney, Project Manager

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EA Engineering, Science and Technology	Project Name: Tiki Carwash	Report Created:
12011 NE 1st Street, Suite 100	Project Number: 61994.01 5000 C	03/27/07 14:23
Bellevue, WA/USA 98005	Project Manager: Jil Frain	

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
BQC0388-01 (TK-MW30)		Water			Sampled: 03/15/07 12:14					
Gasoline Range Hydrocarbons	NWTPH-Gx/802 1B	90600	—	2500	ug/l	50x	7C20024	03/20/07 10:15	03/21/07 10:05	
Surrogate(s): 4-BFB (FID)		*97.3%*		*58 - 144 %*		*1x*				
BQC0388-01RE1 (TK-MW30)		Water			Sampled: 03/15/07 12:14					
Benzene	NWTPH-Gx/802 1B	14000	—	100	ug/l	200x	7C21061	03/21/07 18:16	03/22/07 11:25	
Toluene	"	11700	—	100	"	"	"	"	"	
Ethylbenzene	"	2500	—	100	"	"	"	"	"	
Xylenes (total)	"	12100	—	200	"	"	"	"	"	
Surrogate(s): 4-BFB (PID)		*103%*		*68 - 140 %*		*1x*				
BQC0388-02 (TK-MW30D)		Water			Sampled: 03/15/07 12:16					
Gasoline Range Hydrocarbons	NWTPH-Gx/802 1B	104000	—	2500	ug/l	50x	7C20024	03/20/07 10:15	03/21/07 01:13	
Surrogate(s): 4-BFB (FID)		*99.7%*		*58 - 144 %*		*1x*				
BQC0388-02RE1 (TK-MW30D)		Water			Sampled: 03/15/07 12:16					
Benzene	NWTPH-Gx/802 1B	13600	—	100	ug/l	200x	7C21061	03/21/07 18:16	03/22/07 11:58	
Toluene	"	10500	—	100	"	"	"	"	"	
Ethylbenzene	"	2430	—	100	"	"	"	"	"	
Xylenes (total)	"	11200	—	200	"	"	"	"	"	
Surrogate(s): 4-BFB (PID)		*102%*		*68 - 140 %*		*1x*				
BQC0388-03 (TK-MW35)		Water			Sampled: 03/15/07 13:28					
Gasoline Range Hydrocarbons	NWTPH-Gx/802 1B	65400	—	1000	ug/l	20x	7C20024	03/20/07 10:15	03/21/07 08:01	
Surrogate(s): 4-BFB (FID)		*95.0%*		*58 - 144 %*		*1x*				
BQC0388-03RE1 (TK-MW35)		Water			Sampled: 03/15/07 13:28					
Benzene	NWTPH-Gx/802 1B	2760	—	50.0	ug/l	100x	7C21061	03/21/07 18:16	03/22/07 10:47	
Toluene	"	7030	—	50.0	"	"	"	"	"	
Ethylbenzene	"	1450	—	50.0	"	"	"	"	"	
Xylenes (total)	"	12900	—	100	"	"	"	"	"	
Surrogate(s): 4-BFB (PID)		*106%*		*68 - 140 %*		*1x*				

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EA Engineering, Science and Technology	Project Name:	Tiki Carwash	Report Created:
12011 NE 1st Street, Suite 100	Project Number:	61994.01 5000 C	03/27/07 14:23
Bellevue, WA/USA 98005	Project Manager:	Jil Frain	

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
BQC0388-04 (TK-MW36)		**Water**			**Sampled: 03/15/07 11:26**					
Gasoline Range Hydrocarbons	NWTPH-Gx/802 1B	ND	----	50.0	ug/l	1x	7C20024	03/20/07 10:15	03/21/07 06:28	
Surrogate(s): 4-BFB (FID)		*92.2%*			*58 - 144 %*	"			"	
BQC0388-04RE1 (TK-MW36)		**Water**			**Sampled: 03/15/07 11:26**					
Benzene	NWTPH-Gx/802 1B	ND	----	0.500	ug/l	1x	7C21061	03/21/07 18:16	03/22/07 02:11	
Toluene	"	ND	----	0.500	"	"	"	"	"	
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	
Xylenes (total)	"	ND	----	1.00	"	"	"	"	"	
Surrogate(s): 4-BFB (PID)		*103%*			*68 - 140 %*	"			"	
BQC0388-05 (TK-MW-TB)		**Water**			**Sampled: 03/15/07 17:00**					
Gasoline Range Hydrocarbons	NWTPH-Gx/802 1B	ND	----	50.0	ug/l	1x	7C20024	03/20/07 10:15	03/21/07 03:19	
Surrogate(s): 4-BFB (FID)		*92.5%*			*58 - 144 %*	"			"	
BQC0388-05RE1 (TK-MW-TB)		**Water**			**Sampled: 03/15/07 17:00**					
Benzene	NWTPH-Gx/802 1B	ND	----	0.500	ug/l	1x	7C21061	03/21/07 18:16	03/22/07 06:29	
Toluene	"	ND	----	0.500	"	"	"	"	"	
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	
Xylenes (total)	"	ND	----	1.00	"	"	"	"	"	
Surrogate(s): 4-BFB (PID)		*102%*			*68 - 140 %*	"			"	

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EA Engineering, Science and Technology	Project Name:	Tiki Carwash	Report Created:
12011 NE 1st Street, Suite 100	Project Number:	61994.01 5000 C	03/27/07 14:23
Bellevue, WA/USA 98005	Project Manager:	Jil Frain	

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
BQC0388-01 (TK-MW30)		**Water**			**Sampled: 03/15/07 12:14**					
Diesel Range Hydrocarbons	NWTPH-Dx	3.16	—	0.260	mg/l	1x	7C20013	03/20/07 09:28	03/21/07 22:00	Q5
Lube Oil Range Hydrocarbons	"	0.716	—	0.521	"	"	"	"	"	
Surrogate(s): 2-FBP			*101%*		*53 - 125 %*	"			"	
Octacosane			*90.0%*		*68 - 125 %*	"			"	
BQC0388-02 (TK-MW30D)		**Water**			**Sampled: 03/15/07 12:16**					
Diesel Range Hydrocarbons	NWTPH-Dx	3.36	—	0.236	mg/l	1x	7C20013	03/20/07 09:28	03/21/07 22:26	Q5
Lube Oil Range Hydrocarbons	"	0.956	—	0.472	"	"	"	"	"	
Surrogate(s): 2-FBP			*108%*		*53 - 125 %*	"			"	
Octacosane			*89.4%*		*68 - 125 %*	"			"	
BQC0388-03 (TK-MW35)		**Water**			**Sampled: 03/15/07 13:28**					
Diesel Range Hydrocarbons	NWTPH-Dx	1.91	—	0.243	mg/l	1x	7C20013	03/20/07 09:28	03/21/07 22:52	Q5
Lube Oil Range Hydrocarbons	"	ND	—	0.485	"	"	"	"	"	
Surrogate(s): 2-FBP			*76.1%*		*53 - 125 %*	"			"	
Octacosane			*99.2%*		*68 - 125 %*	"			"	
BQC0388-04 (TK-MW36)		**Water**			**Sampled: 03/15/07 11:26**					
Diesel Range Hydrocarbons	NWTPH-Dx	ND	—	0.238	mg/l	1x	7C20013	03/20/07 09:28	03/21/07 23:19	
Lube Oil Range Hydrocarbons	"	ND	—	0.476	"	"	"	"	"	
Surrogate(s): 2-FBP			*73.9%*		*53 - 125 %*	"			"	
Octacosane			*100%*		*68 - 125 %*	"			"	

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EA Engineering, Science and Technology	Project Name:	**Tiki Carwash**
12011 NE 1st Street, Suite 100	Project Number:	61994.01 5000 C
Bellevue, WA/USA 98005	Project Manager:	Jil Frain
		Report Created: 03/27/07 14:23

Volatile Organic Compounds by EPA Method 8260B

TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BQC0388-04 (TK-MW36)		**Water**			**Sampled: 03/15/07 11:26**					**P-HS, A-01**
Benzene	EPA 8260B	ND	----	0.500	ug/l	1x	7C24011	03/24/07 12:13	03/24/07 17:44	
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	
Toluene	"	0.540	----	0.500	"	"	"	"	"	
Total Xylenes	"	ND	----	3.00	"	"	"	"	"	
Surrogate(s): 1,2-DCA-d4		*96.0%*			*70 - 130 %*	"			"	
Toluene-d8		*99.0%*			*75 - 125 %*	"			"	
4-BFB		*102%*			*75 - 125 %*	"			"	

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EA Engineering, Science and Technology	Project Name:	Tiki Carwash	Report Created:
12011 NE 1st Street, Suite 100	Project Number:	61994.01 5000 C	03/27/07 14:23
Bellevue, WA/USA 98005	Project Manager:	Jil Frain	

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

TestAmerica - Seattle, WA

QC Batch: 7C20024 **Water Preparation Method: EPA 5030B (MeOH)**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (7C20024-BLK1)								Extracted: 03/20/07 10:15						
Gasoline Range Hydrocarbons	NWTPH-Gx/ 8021B	ND	---	50.0	ug/l	1x	--	--	--	--	--	--	03/20/07 12:02	
Surrogate(s): 4-BFB (FID)		*Recovery: 81.5%*		*Limits: 58-144%*	"								*03/20/07 12:02*	
LCS (7C20024-BS1)								Extracted: 03/20/07 10:15						
Gasoline Range Hydrocarbons	NWTPH-Gx/ 8021B	980	---	50.0	ug/l	1x	--	1000	98.0%	(80-120)	--	--	03/20/07 12:35	
Surrogate(s): 4-BFB (FID)		*Recovery: 100%*		*Limits: 58-144%*	"								*03/20/07 12:35*	
Duplicate (7C20024-DUP1)					QC Source: BQC0379-01			Extracted: 03/20/07 10:15						
Gasoline Range Hydrocarbons	NWTPH-Gx/ 8021B	2530	---	50.0	ug/l	1x	2730	--	--	--	7.60%	(25)	03/20/07 14:10	
Surrogate(s): 4-BFB (FID)		*Recovery: 99.0%*		*Limits: 58-144%*	"								*03/20/07 14:10*	
Duplicate (7C20024-DUP2)					QC Source: BQC0379-02			Extracted: 03/20/07 10:15						
Gasoline Range Hydrocarbons	NWTPH-Gx/ 8021B	61.8	---	50.0	ug/l	1x	59.1	--	--	--	4.47%	(25)	03/21/07 05:56	
Surrogate(s): 4-BFB (FID)		*Recovery: 92.8%*		*Limits: 58-144%*	"								*03/21/07 05:56*	
Matrix Spike (7C20024-MS1)					QC Source: BQC0379-01			Extracted: 03/20/07 10:15						
Gasoline Range Hydrocarbons	NWTPH-Gx/ 8021B	3520	---	50.0	ug/l	1x	2730	1000	79.0%	(75-131)	--	--	03/20/07 17:18	
Surrogate(s): 4-BFB (FID)		*Recovery: 110%*		*Limits: 58-144%*	"								*03/20/07 17:18*	

QC Batch: 7C21022 **Water Preparation Method: EPA 5030B (MeOH)**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (7C21022-BLK1)								Extracted: 03/21/07 11:00						
Gasoline Range Hydrocarbons	NWTPH-Gx/ 8021B	ND	---	50.0	ug/l	1x	--	--	--	--	--	--	03/22/07 13:28	
Benzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (FID)		*Recovery: 83.2%*		*Limits: 58-144%*	"								*03/22/07 13:28*	
4-BFB (PID)		*101%*		*68-140%*	"								"	
LCS (7C21022-BS1)								Extracted: 03/21/07 11:00						
Gasoline Range Hydrocarbons	NWTPH-Gx/ 8021B	894	---	50.0	ug/l	1x	--	1000	89.4%	(80-120)	--	--	03/22/07 14:00	
Surrogate(s): 4-BFB (FID)		*Recovery: 92.3%*		*Limits: 58-144%*	"								*03/22/07 14:00*	

TestAmerica - Seattle, WA

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EA Engineering, Science and Technology	Project Name:	Tiki Carwash	
12011 NE 1st Street, Suite 100	Project Number:	61994.01 5000 C	Report Created:
Bellevue, WA/USA 98005	Project Manager:	Jil Frain	03/27/07 14:23

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

TestAmerica - Seattle, WA

QC Batch: 7C21022 **Water Preparation Method: EPA 5030B (MeOH)**

Analyte	Method	Result	MDL[A]	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
LCS (7C21022-BS2)								Extracted: 03/21/07 11:00						
Benzene	NWTPH-Gx/ 8021B	27.8	---	0.500	ug/l	1x	--	30.0	92.7%	(80-120)	--	--	03/22/07 14:32	
Toluene	"	27.6	---	0.500	"	"	--	"	92.0%	"	--	--	"	
Ethylbenzene	"	28.0	---	0.500	"	"	--	"	93.3%	"	--	--	"	
Xylenes (total)	"	84.2	---	1.00	"	"	--	90.0	93.6%	"	--	--	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 100%*			*Limits: 68-140%*	"							*03/22/07 14:32*	
Duplicate (7C21022-DUP1)					QC Source: BQC0323-03			Extracted: 03/21/07 11:00						
Gasoline Range Hydrocarbons	NWTPH-Gx/ 8021B	232	---	50.0	ug/l	1x	241	--	--	--	3.81%	(25)	03/22/07 15:37	
Benzene	"	4.24	---	0.500	"	"	4.43	--	--	--	4.38%	"	"	
Toluene	"	ND	---	0.500	"	"	ND	--	--	--	24.9%	"	"	R4
Ethylbenzene	"	9.88	---	0.500	"	"	10.2	--	--	--	3.19%	"	"	
Xylenes (total)	"	ND	---	1.00	"	"	ND	--	--	--	29.9%	"	"	R4
Surrogate(s): 4-BFB (FID)		*Recovery: 119%*			*Limits: 58-144%*	"							*03/22/07 15:37*	
4-BFB (PID)		*116%*			*68-140%*	"							"	
Duplicate (7C21022-DUP2)					QC Source: BQC0254-05			Extracted: 03/21/07 11:00						
Gasoline Range Hydrocarbons	NWTPH-Gx/ 8021B	ND	---	50.0	ug/l	1x	ND	--	--	--	NR	(25)	03/22/07 22:33	
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	"	"	
Surrogate(s): 4-BFB (FID)		*Recovery: 84.2%*			*Limits: 58-144%*	"							*03/22/07 22:33*	
4-BFB (PID)		*100%*			*68-140%*	"							"	
Matrix Spike (7C21022-MS1)					QC Source: BQC0323-03			Extracted: 03/21/07 11:00						
Gasoline Range Hydrocarbons	NWTPH-Gx/ 8021B	1210	---	50.0	ug/l	1x	241	1000	96.9%	(75-131)	--	--	03/22/07 17:44	
Surrogate(s): 4-BFB (FID)		*Recovery: 131%*			*Limits: 58-144%*	"							*03/22/07 17:44*	
Matrix Spike (7C21022-MS2)					QC Source: BQC0323-03			Extracted: 03/21/07 11:00						
Benzene	NWTPH-Gx/ 8021B	34.9	---	0.500	ug/l	1x	4.43	30.0	102%	(46-130)	--	--	03/23/07 05:56	
Toluene	"	30.2	---	0.500	"	"	0.158	"	100%	(60-124)	--	--	"	
Ethylbenzene	"	40.0	---	0.500	"	"	10.2	"	99.3%	(56-141)	--	--	"	
Xylenes (total)	"	91.2	---	1.00	"	"	0.685	90.0	101%	(66-132)	--	--	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 116%*			*Limits: 68-140%*	"							*03/23/07 05:56*	

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EA Engineering, Science and Technology	Project Name: **Tiki Carwash**	
12011 NE 1st Street, Suite 100	Project Number: 61994.01 5000 C	Report Created:
Bellevue, WA/USA 98005	Project Manager: Jil Frain	03/27/07 14:23

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

TestAmerica - Seattle, WA

QC Batch: 7C21022 **Water Preparation Method: EPA 5030B (MeOH)**

Analyte	Method	Result	MDL[A]	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Matrix Spike Dup (7C21022-MSD1)					QC Source: BQC0323-03			Extracted: 03/21/07 11:00						
Gasoline Range Hydrocarbons	NWTPH-Gx/ 8021B	1160	---	50.0	ug/l	1x	241	1000	91.9%	(75-131)	4.22%	(25)	03/22/07 18:16	
Surrogate(s): 4-BFB (FID)		*Recovery: 129%*		*Limits: 58-144%*	"								*03/22/07 18:16*	
Matrix Spike Dup (7C21022-MSD2)					QC Source: BQC0323-03			Extracted: 03/21/07 11:00						
Benzene	NWTPH-Gx/ 8021B	33.7	---	0.500	ug/l	1x	4.43	30.0	97.6%	(46-130)	3.50%	(40)	03/23/07 06:28	
Toluene	"	29.1	---	0.500	"	"	0.158	"	96.5%	(60-124)	3.71%	"	"	
Ethylbenzene	"	38.3	---	0.500	"	"	10.2	"	93.7%	(56-141)	4.34%	"	"	
Xylenes (total)	"	87.3	---	1.00	"	"	0.685	90.0	96.2%	(66-132)	4.37%	"	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 115%*		*Limits: 68-140%*	"								*03/23/07 06:28*	

QC Batch: 7C21061 **Water Preparation Method: EPA 5030B (MeOH)**

Analyte	Method	Result	MDL[A]	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (7C21061-BLK1)								Extracted: 03/21/07 18:16						
Benzene	NWTPH-Gx/ 8021B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	03/22/07 00:03	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 102%*		*Limits: 68-140%*	"								*03/22/07 00:03*	
LCS (7C21061-BS1)								Extracted: 03/21/07 18:16						
Benzene	NWTPH-Gx/ 8021B	32.2	---	0.500	ug/l	1x	--	30.0	107%	(80-120)	--	--	03/22/07 00:35	
Toluene	"	30.5	---	0.500	"	"	--	"	102%	"	--	--	"	
Ethylbenzene	"	31.4	---	0.500	"	"	--	"	105%	"	--	--	"	
Xylenes (total)	"	93.3	---	1.00	"	"	--	90.0	104%	"	--	--	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 103%*		*Limits: 68-140%*	"								*03/22/07 00:35*	
Duplicate (7C21061-DUP1)					QC Source: BQC0380-01RE1			Extracted: 03/21/07 18:16						
Benzene	NWTPH-Gx/ 8021B	ND	---	0.500	ug/l	1x	ND	--	--	--	NR	(25)	03/22/07 01:39	
Toluene	"	ND	---	0.500	"	"	ND	--	--	--	NR	"	"	
Ethylbenzene	"	ND	---	0.500	"	"	ND	--	--	--	NR	"	"	
Xylenes (total)	"	ND	---	1.00	"	"	ND	--	--	--	NR	"	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 101%*		*Limits: 68-140%*	"								*03/22/07 01:39*	

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EA Engineering, Science and Technology	Project Name: **Tiki Carwash**	
12011 NE 1st Street, Suite 100	Project Number: 61994.01 5000 C	Report Created:
Bellevue, WA/USA 98005	Project Manager: Jil Frain	03/27/07 14:23

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

TestAmerica - Seattle, WA

QC Batch: 7C21061 **Water Preparation Method: EPA 5030B (MeOH)**

Analyte	Method	Result	MDL[A]	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Duplicate (7C21061-DUP2)					QC Source: BQC0388-04RE1			Extracted: 03/21/07 18:16						
Benzene	NWTPH-Gx/ 8021B	ND	---	0.500	ug/l	1x	ND	--	--	--	NR	(25)	03/22/07 02:43	
Toluene	"	ND	---	0.500	"	"	ND	--	--	--	7.79%	"	"	R4
Ethylbenzene	"	ND	---	0.500	"	"	ND	--	--	--	NR	"	"	
Xylenes (total)	"	ND	---	1.00	"	"	ND	--	--	--	NR	"	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 102%*			*Limits: 68-140%*	"							*03/22/07 02:43*	
Matrix Spike (7C21061-MS1)					QC Source: BQC0380-01RE1			Extracted: 03/21/07 18:16						
Benzene	NWTPH-Gx/ 8021B	35.1	---	0.500	ug/l	1x	ND	30.0	117%	(46-130)	--	--	03/22/07 04:22	
Toluene	"	32.8	---	0.500	"	"	0.157	"	109%	(60-124)	--	--	"	
Ethylbenzene	"	33.3	---	0.500	"	"	0.142	"	111%	(56-141)	--	--	"	
Xylenes (total)	"	98.2	---	1.00	"	"	0.453	90.0	109%	(66-132)	--	--	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 102%*			*Limits: 68-140%*	"							*03/22/07 04:22*	
Matrix Spike Dup (7C21061-MSD1)					QC Source: BQC0380-01RE1			Extracted: 03/21/07 18:16						
Benzene	NWTPH-Gx/ 8021B	33.9	---	0.500	ug/l	1x	ND	30.0	113%	(46-130)	3.48%	(40)	03/22/07 04:54	
Toluene	"	31.8	---	0.500	"	"	0.157	"	105%	(60-124)	3.10%	"	"	
Ethylbenzene	"	32.2	---	0.500	"	"	0.142	"	107%	(56-141)	3.36%	"	"	
Xylenes (total)	"	95.0	---	1.00	"	"	0.453	90.0	105%	(66-132)	3.31%	"	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 101%*			*Limits: 68-140%*	"							*03/22/07 04:54*	

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EA Engineering, Science and Technology	Project Name:	Tiki Carwash	
12011 NE 1st Street, Suite 100	Project Number:	61994.01 5000 C	Report Created:
Bellevue, WA/USA 98005	Project Manager:	Jil Frain	03/27/07 14:23

Semivolatile Petroleum Products by NWTPH-Dx (w/o Acid/Silica Gel Clean-up) - Laboratory Quality Control Results

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QC Batch: 7C20013 **Water Preparation Method: EPA 3520C**

Analyte	Method	Result	MDL[A]	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (7C20013-BLK1)								Extracted: 03/20/07 09:28						
Diesel Range Hydrocarbons	NWTPH-Dx	ND	---	0.250	mg/l	1x	--	--	--	--	--	--	03/21/07 20:42	
Lube Oil Range Hydrocarbons	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Surrogate(s): 2-FBP		*Recovery: 76.4%*			*Limits: 53-125%*	"							*03/21/07 20:42*	
Octacosane		*96.8%*			*68-125%*	"							"	
LCS (7C20013-BS1)								Extracted: 03/20/07 09:28						
Diesel Range Hydrocarbons	NWTPH-Dx	1.95	---	0.250	mg/l	1x	--	2.00	97.5%	(61-132)	--	--	03/21/07 21:08	
Surrogate(s): 2-FBP		*Recovery: 87.6%*			*Limits: 53-125%*	"							*03/21/07 21:08*	
Octacosane		*101%*			*68-125%*	"							"	
LCS Dup (7C20013-BSD1)								Extracted: 03/20/07 09:28						
Diesel Range Hydrocarbons	NWTPH-Dx	1.93	---	0.250	mg/l	1x	--	2.00	96.5%	(61-132)	1.03%	(40)	03/21/07 21:34	
Surrogate(s): 2-FBP		*Recovery: 90.4%*			*Limits: 53-125%*	"							*03/21/07 21:34*	
Octacosane		*100%*			*68-125%*	"							"	

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EA Engineering, Science and Technology	Project Name: **Tiki Carwash**	
12011 NE 1st Street, Suite 100	Project Number: 61994.01 5000 C	Report Created:
Bellevue, WA/USA 98005	Project Manager: Jil Frain	03/27/07 14:23

Volatile Organic Compounds by EPA Method 8260B - Laboratory Quality Control Results

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QC Batch: 7C24011 **Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (7C24011-BLK1)								Extracted: 03/24/07 11:13						
Benzene	EPA 8260B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	03/24/07 16:05	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Total Xylenes	"	ND	---	3.00	"	"	--	--	--	--	--	--	"	
Surrogate(s): 1,2-DCA-d4		*Recovery: 95.5%*		*Limits: 70-130%*	"								*03/24/07 16:05*	
Toluene-d8		*99.0%*		*75-125%*	"								"	
4-BFB		*106%*		*75-125%*	"								"	
LCS (7C24011-BS1)								Extracted: 03/24/07 11:13						
Benzene	EPA 8260B	19.4	---	0.500	ug/l	1x	--	20.0	97.0%	(80-120)	--	--	03/24/07 13:52	
Ethylbenzene	"	19.7	---	0.500	"	"	--	"	98.5%	(75-125)	--	--	"	
Toluene	"	20.2	---	0.500	"	"	--	"	101%	"	--	--	"	
Total Xylenes	"	60.2	---	3.00	"	"	--	60.0	100%	"	--	--	"	
Surrogate(s): 1,2-DCA-d4		*Recovery: 93.0%*		*Limits: 70-130%*	"								*03/24/07 13:52*	
Toluene-d8		*99.5%*		*75-125%*	"								"	
4-BFB		*102%*		*75-125%*	"								"	
Matrix Spike (7C24011-MS1)							QC Source: BQC0546-04	Extracted: 03/24/07 11:13						
Benzene	EPA 8260B	18.4	---	0.500	ug/l	1x	ND	20.0	92.0%	(80-124)	--	--	03/24/07 14:28	
Ethylbenzene	"	18.6	---	0.500	"	"	ND	"	93.0%	(62-151)	--	--	"	
Toluene	"	19.2	---	0.500	"	"	ND	"	96.0%	(75-125)	--	--	"	
Total Xylenes	"	54.8	---	3.00	"	"	ND	60.0	91.3%	"	--	--	"	
Surrogate(s): 1,2-DCA-d4		*Recovery: 95.5%*		*Limits: 70-130%*	"								*03/24/07 14:28*	
Toluene-d8		*98.5%*		*75-125%*	"								"	
4-BFB		*104%*		*75-125%*	"								"	
Matrix Spike Dup (7C24011-MSD1)							QC Source: BQC0546-04	Extracted: 03/24/07 11:13						
Benzene	EPA 8260B	19.6	---	0.500	ug/l	1x	ND	20.0	98.0%	(80-124)	6.32%	(30)	03/24/07 15:29	
Ethylbenzene	"	19.6	---	0.500	"	"	ND	"	98.0%	(62-151)	5.24%	"	"	
Toluene	"	20.3	---	0.500	"	"	ND	"	102%	(75-125)	5.57%	"	"	
Total Xylenes	"	56.1	---	3.00	"	"	ND	60.0	93.5%	"	2.34%	"	"	
Surrogate(s): 1,2-DCA-d4		*Recovery: 95.0%*		*Limits: 70-130%*	"								*03/24/07 15:29*	
Toluene-d8		*99.0%*		*75-125%*	"								"	
4-BFB		*108%*		*75-125%*	"								"	

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12011 NE 1st Street, Suite 100	Project Number:	61994.01 5000 C	Report Created:
Bellevue, WA/USA 98005	Project Manager:	Jil Frain	03/27/07 14:23

Notes and Definitions

Report Specific Notes:

A-01	-	Confirmation analysis.
P-HS	-	Sample container contained headspace.
Q5	-	Results in the diesel organics range are primarily due to overlap from a gasoline range product.
R4	-	Due to the low levels of analyte in the sample, the duplicate RPD calculation does not provide useful information.

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.

Kate Haney, Project Manager