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15 July 2009

ERM

Mr. Mark Leonard
16427 115th Avenue Southwest
Vashon, Washington 98070

Subject: June 2009 Groundwater Monitoring Report
Vashon Athletic Club Facility
Vashon, Washington

Dear Mr. Leonard:

This report summarizes the results of groundwater monitoring completed on 4 June 2009 by ERM-West, Inc. (ERM) at the Vashon Athletic Club facility located at 19120 Vashon Highway Southwest in Vashon, Washington (the "site"). A site map showing pertinent site features is included on Figure 1. Site investigation and remediation activities completed since 1999 have identified gasoline-range petroleum hydrocarbons (TPH-G) and associated constituents at concentrations greater than applicable regulatory cleanup levels in soil and groundwater. Remedial action completed in 2000 and 2001 included removal of accessible contaminated soils from the area between the current underground storage tanks and the service station building. During that period, an underground storage tank at the site failed a tightness test, was emptied, and removed from service.

The groundwater quality data from monitoring events completed in January 2006 and March 2007 indicate that concentrations of TPH-G and related compounds were greater than the respective Washington State Model Toxics Control Act Regulation (MTCA) Method A cleanup levels in groundwater samples collected from wells VI-MW2 and VI-MW3.

The objective of the June 2009 groundwater monitoring was to monitor current groundwater conditions to evaluate the distribution of TPH-G, benzene, toluene, ethylbenzene, and xylenes (BTEX).

FIELD ACTIVITIES

On 4 June 2009, groundwater monitoring was completed at the three monitoring wells (VI-MW1, VI-MW2, and VI-MW3) shown on Figure 1. Monitoring activities included measurement of static water levels in each well and collection of groundwater samples from each well for analysis of TPH-G and BTEX. Monitoring well construction details are included in Table 1.

Before beginning sampling activities, groundwater levels in each well were measured to the nearest 0.01 foot using an electronic oil/water interface indicator probe. During measurement activities, ERM personnel noted that the probe unit was malfunctioning, and was not providing reliable or accurate fluid level information. As a result, fluid level data from the wells are not available for this monitoring event.

In preparation for sample collection, groundwater was purged from each well using a peristaltic pump equipped with new disposable tubing. At least three well casing volumes were purged from each of the three wells prior to sample collection. Samples were collected from the discharge tubing of the peristaltic pump. The groundwater samples were placed in a cooler with ice and transported under chain-of-custody procedures to ALS Laboratories, Inc. in Everett, Washington, for analysis of TPH-G by Washington State Department of Ecology Method NWTPH-Gx, and BTEX by United States Environmental Protection Agency Method 8021B. Water generated during sampling activities was stored on site in a 55-gallon steel drum pending characterization for disposal.

RESULTS

Due to the faulty oil/water interface probe, ERM was unable to evaluate groundwater potentiometric conditions and confirm previous observations of an easterly groundwater flow across the site.

The groundwater sample analytical results are summarized in Table 2. The laboratory analytical report for the samples is included in Attachment A.

TPH-G and BTEX were detected in the groundwater samples collected from monitoring wells VI-MW2 and VI-MW3, but not in the sample collected from well VI-MW1. TPH-G was detected at well VI-MW2 at a concentration of 20,000 micrograms per liter (µg/L) and at VI-MW3 at a concentration of 4,700 µg/L, which are greater than the applicable MTCA Method A groundwater

cleanup level for gasoline of 800 µg/L. Benzene, ethylbenzene, and total xylenes were detected at concentrations greater than their respective MTCA Method A cleanup levels in the groundwater sample collected from well VI-MW2. Benzene was detected at a concentration greater than the MTCA Method A cleanup level in the groundwater sample collected from well VI-MW3. Toluene, ethylbenzene, and total xylenes were detected at concentrations less than the respective MTCA Method A cleanup levels in the groundwater sample collected from well VI-MW3, as was toluene in the groundwater sample collected from well VI-MW2.

CONCLUSIONS

The June 2009 data indicate that concentrations of gasoline-related compounds remain above applicable cleanup standards at wells VI-MW2 and VI-MW3, which are located immediately downgradient of the remedial excavation area. TPH-G and BTEX concentrations at well VI-MW2 are similar to those related to the March 2007 groundwater sampling event, and are less than the 2007 levels at well VI-MW3.

ERM appreciates the opportunity to work with you toward the successful completion of this project. If you have questions regarding this report, please call either of us at (425) 462-8591.

Sincerely,

A. Michael Arnold, R.G.
Senior Project Manager

David P. Edwards
Principal

AMA/DPE/jjr/00102235.01

Attachments

cc: Mr. Larry Setchell, Helsell Fetterman
Ms. Anita Amador, Argo Pro
Mr. John North, Delta Environmental
Toxics Cleanup Program, Washington State Department of Ecology, Northwest Region Office

Figure

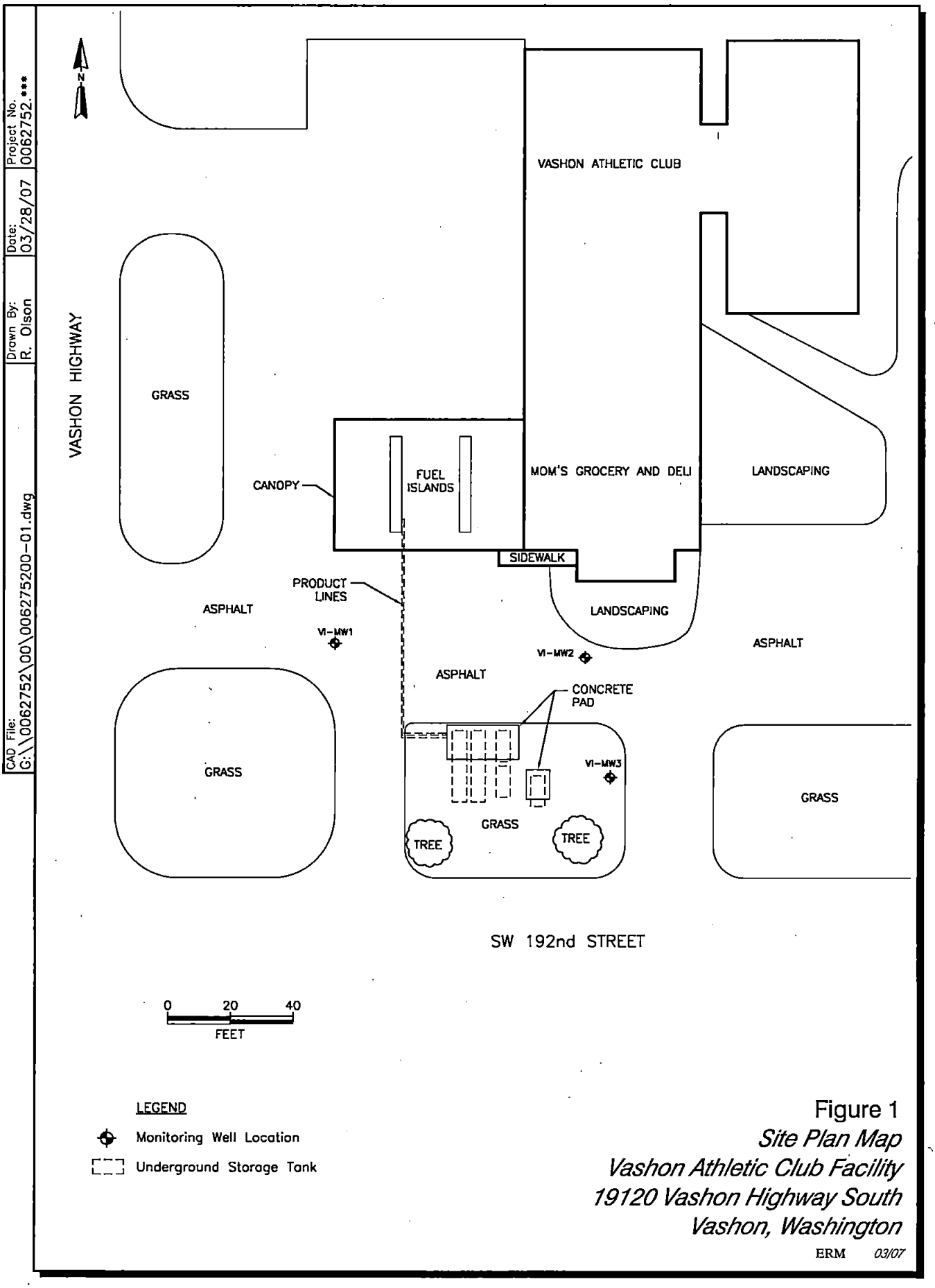

Figure 1
Site Plan Map
Vashon Athletic Club Facility
19120 Vashon Highway South
Vashon, Washington
ERM 03/07

Tables

Table 1

Monitoring Well Construction Details
Vashon Athletic Club Facility
Vashon, Washington

Monitoring Well	Well Installed By	Installation Date	Diameter of Well *inches*	Well Construction Material	Top of Casing Elevation *feet amsl*	Top of Filter Pack *feet bgs*	Screened Interval *feet bgs*	Total Depth of Borehole *feet bgs*	Well Depth *feet bgs*
VI-MW1	Herrera	5/18/2001	2.00	PVC	97.55	3.0	5.0-15.0	15.0	14.99
VI-MW2	Herrera	5/18/2001	2.00	PVC	97.03	3.0	5.0-15.0	15.0	12.93
VI-MW3	Herrera	5/18/2001	2.00	PVC	97.01	3.0	5.0-15.0	15.0	14.18

Notes:

amsl = Above mean sea level
bgs = Below ground surface
Herrera = Herrera Environmental Consultants, Inc.
PVC = Polyvinyl chloride

Table 2

Summary of Petroleum Hydrocarbon Concentrations Detected in Groundwater
Vashon Athletic Club Facility
Vashon, Washington

Sample Location	Sample Collected By	Date Collected	TPH-G[1]	Volatile Organic Compounds[2]			
				Benzene	Ethylbenzene	Toluene	Total Xylenes
VI-MW1	Herrera	5/29/2001	ND	ND	ND	ND	ND
VI-MW1	ERM	1/19/2006	ND	ND	ND	ND	ND
VI-MW1	ERM	3/9/2007	ND	ND	ND	ND	ND
VI-MW1	ERM	6/4/2009	<50	<1	<1	<1	<3
VI-MW2	Herrera	5/29/2001	5,000	ND	2,900	130	6,300
VI-MW2	ERM	1/19/2006	18,000	130	920	ND	1,400
VI-MW2	ERM	3/9/2007	26,000	150	1,400	27	2,600
VI-MW2	ERM	6/4/2009	20,000	130	1,400	20	2,600
VI-MW3	Herrera	5/29/2001	11,000	100	860	10	740
VI-MW3	ERM	1/19/2006	380	1	25	ND	3
VI-MW3	ERM	3/9/2007	12,000	40	700	6	1,000
VI-MW3	ERM	6/4/2009	4,700	13	410	3	390
MTCA Method A Cleanup Level[3]			800	5	700	1,000	1,000

Notes:

Concentrations reported in micrograms per liter.

Shaded cells indicate concentrations that exceed MTCA Method A Cleanup Levels.

ERM = ERM-West, Inc.

Herrera = Herrera Environmental Consultants, Inc.

MTCA = Model Toxics Control Act

ND = Not Detected

TPH-G = Gasoline-range petroleum hydrocarbons

[1]TPH-G by Washington State Department of Ecology Method NWTPH-Gx

[2]By United States Environmental Protection Agency Method 8021 or 8021B

[3]MTCA Method A Ground Water Cleanup Level (Chapter 173-340-900 Washington Administrative Code)

Attachment A
Laboratory Data Report

ALS Laboratory Group
ANALYTICAL CHEMISTRY AND TESTING SERVICES

CERTIFICATE OF ANALYSIS

CLIENT: ERM
915 118TH AVENUE SE SUITE 130
BELLEVUE, WA 98005

DATE: 6/11/2009
ALS JOB #: 0906036
DATE RECEIVED: 6/5/2009
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: CYRUS GORMAN
CLIENT PROJECT ID: 102235
CLIENT SAMPLE ID: 6/4/2009 10:46 VI-MW1
ALS SAMPLE #: -01

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	ND(<50)	UG/L	6/8/2009	DLC
Benzene	EPA-8021	ND(<1)	UG/L	6/8/2009	DLC
Toluene	EPA-8021	ND(<1)	UG/L	6/8/2009	DLC
Ethylbenzene	EPA-8021	ND(<1)	UG/L	6/8/2009	DLC
Xylenes	EPA-8021	ND(<3)	UG/L	6/8/2009	DLC

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES.

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY:

8620 Holly Drive Suite 100 Everett, WA 98208 425 356-2600 FAX 425 356-2626 Seattle 206 292-9059

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WDOE ACCREDITATION #: C1336

CLIENT CONTACT: CYRUS GORMAN
CLIENT PROJECT ID: 102235
CLIENT SAMPLE ID: 6/4/2009 11:43 VI-MW2
ALS SAMPLE #: -02

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	20000	UG/L	6/8/2009	DLC
Benzene	EPA-8021	130	UG/L	6/8/2009	DLC
Toluene	EPA-8021	20	UG/L	6/8/2009	DLC
Ethylbenzene	EPA-8021	1400	UG/L	6/8/2009	DLC
Xylenes	EPA-8021	2600	UG/L	6/8/2009	DLC

NOTE: CHROMATOGRAM INDICATES SAMPLE CONTAINS PRODUCT WHICH IS LIKELY WEATHERED GASOLINE.

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CLIENT CONTACT: CYRUS GORMAN
CLIENT PROJECT ID: 102235
CLIENT SAMPLE ID: 6/4/2009 12:43 VI-MW3
ALS SAMPLE #: -03

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	4700	UG/L	6/8/2009	DLC
Benzene	EPA-8021	13	UG/L	6/8/2009	DLC
Toluene	EPA-8021	3	UG/L	6/8/2009	DLC
Ethylbenzene	EPA-8021	410	UG/L	6/8/2009	DLC
Xylenes	EPA-8021	390	UG/L	6/8/2009	DLC

NOTE: CHROMATOGRAM INDICATES SAMPLE CONTAINS PRODUCT WHICH IS LIKELY WEATHERED GASOLINE.

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** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

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CLIENT PROJECT ID: 102235

QUALITY CONTROL RESULTS

SURROGATE RECOVERY

CCIL SAMPLE ID		METHOD	SUR ID	% RECV
0906036-01		NWTPH-GX	TFT	88
0906036-01		EPA-8021	TFT	95
0906036-02		NWTPH-GX	TFT	93
0906036-02		EPA-8021	TFT	97
0906036-03		NWTPH-GX	TFT	90
0906036-03		EPA-8021	TFT	103
0906036-03	DILUTION	EPA-8021	TFT	99

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QUALITY CONTROL RESULTS

BLANK RESULTS

METHOD	MATRIX	QC BATCH ID	ASSOCIATED SAMPLES	ANALYTE	RESULT	UNITS
NWTPH-GX	Water	GW060509	0906036-01 to 03	TPH-Volatile Range	ND(<50)	UG/L
EPA-8021	Water	GW060509	0906036-01 to 03	Benzene	ND(<1)	UG/L
EPA-8021	Water	GW060509	0906036-01 to 03	Toluene	ND(<1)	UG/L
EPA-8021	Water	GW060509	0906036-01 to 03	Ethylbenzene	ND(<1)	UG/L
EPA-8021	Water	GW060509	0906036-01 to 03	Xylenes	ND(<3)	UG/L

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CLIENT CONTACT: CYRUS GORMAN
CLIENT PROJECT ID: 102235

QUALITY CONTROL RESULTS

BLANK SPIKE/BLANK SPIKE DUPLICATE RESULTS

METHOD	MATRIX	QC BATCH ID	ASSOCIATED SAMPLES	ANALYTE	BLANK SPIKE RECOVERY	BLANK SPIKE DUP RECOVERY	RPD
NWTPH-GX	Water	GW060509	0906036-01 to 03	TPH-Volatile Range	92 %	86 %	7
EPA-8021	Water	GW060509	0906036-01 to 03	Benzene	103 %	97 %	6
EPA-8021	Water	GW060509	0906036-01 to 03	Toluene	102 %	96 %	6
EPA-8021	Water	GW060509	0906036-01 to 03	Ethylbenzene	101 %	96 %	5
EPA-8021	Water	GW060509	0906036-01 to 03	Xylenes	102 %	96 %	6

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