A YARD WELL INSTALLATION REPORT

Kinder Morgan Harbor Island Terminal

2720 13th Avenue Southwest, Seattle, Washington

Antea™Group Project No. STKM-W-0003
December 2011

Prepared for:
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EXECUTIVE SUMMARY

On October 3rd and 4th, 2011, Antea Group personnel directed the drilling and installation of one groundwater monitoring well (MW-26) at the property (Figure 2). Boring MW-26 was advanced to an approximate depth of 15 feet below ground surface (bgs) and completed as a monitoring well. Where recovered, soil samples were collected continuously from 5 to 15 feet bgs. Three samples from MW-26 were selected for laboratory analysis of petroleum hydrocarbons. All soil samples collected were field screened using a photo-ionization detector (PID).

Concentrations of total petroleum hydrocarbons (TPH) and benzene, toluene, ethylbenzene, and xylenes (BTEX) were not detected above the laboratory method reporting limits (MRLs) in all three soil samples collected from MW-26, and are below the 10,000 mg/kg TPH cleanup level established under Consent Decree Number 00-2-07760-2SEA. Additionally, concentrations of TPH and BTEX in the groundwater sample were below MRLs, and are below the respective established cleanup levels for TPH-G, TPH-D, TPH-O, and benzene.

A Yard Well Installation Report

Kinder Morgan Harbor Island Terminal
2720 13th Ave SW, Seattle, Washington
Antea™Group Project No. STKM-W-0003

Antea™Group has prepared this report to summarize well installation activities performed at the Kinder Morgan Liquids Terminals (KMLT) bulk facility located at 2720 13th Avenue Southwest, Seattle, Washington (the property, Figure 1). The purpose of this investigation is to respond to EPA's concerns regarding further evaluation of the 13th Avenue Southwest contamination. Specifically, in their 5-Year Review Report, EPA recommended evaluating the extent and potential migration pathway outside the TF-OU2 boundary. The intent of the well installation is to delineate the downgradient hydrocarbon impacts within the 13th Avenue corridor.

1.0 BACKGROUND

The KMLT Terminal is a bulk petroleum fuel storage facility which has been operating since 1944. KMLT purchased the terminal from GATX Terminals Corporation in February 2001. GATX previously owned and operated the facility since December 1994. Shell Oil Company owned and operated the terminal from 1944 through 1994. The facility is approximately 14 acres in area, and is situated on relatively flat topography in the north central portion of Harbor Island, a highly industrialized area located at the mouth of the Duwamish Waterway and Elliot Bay (Figure 1). The site is situated approximately 900 feet from the East Waterway and approximately 1,400 feet from the West Waterway with surface elevations (relative to NAVD 1988 vertical datum) ranging between approximately 9 to 17 feet above mean sea level (msl).

The Harbor Island Terminal has been divided into five distinct areas segregated on the basis of use, designated as the A, B, C, D, and E Yards (Figure 2). The B and C Yards contain bulk storage tanks. The B and C yards are each surrounded by concrete walls approximately 15 feet in height. Within the B and C Yards, the ground surface is unpaved gravel and silty sand.

The paved A Yard contains the facility office as well as the loading facilities for petroleum distribution. The D Yard consists of a driveway between the B and C Yards, and contains general repair and storage facilities. The E Yard is presently leased by another party and consists of an office building and vehicle storage facilities.

1.1 Historic Groundwater Gradient

Historic quarterly groundwater monitoring indicates that the groundwater gradient is generally flat across the majority of the site, with a slight trend towards the south starting from the south boundary of the C yard and

towards the north starting on the south boundary of the C yard. Groundwater levels throughout the southern portion of the site are generally slightly lower than levels observed throughout the northern portion of the site.

2.0 SCOPE OF WORK

The scope of work performed by Antea Group included the following tasks:

- Developed a site-specific Health and Safety Plan;
- Contracted One-Call and a private underground utility locater to delineate the location and marking of underground utilities and other potential subsurface obstructions in the vicinity of the proposed boring locations;
- Cleared for utilities to a minimum depth of 5 feet bgs using an air knife/vacuum rig;
- Drilled and installed one groundwater monitoring well (MW-26);
- Collected soil samples continuously from 5 to 15 feet bgs using acetate sleeve samplers driven ahead of the drill bit into the undisturbed formation;
- Performed examination and description of each sample using the Unified Soil Classification System (USCS) and standard geologic techniques;
- Submitted soil samples for quantitative chemical analysis from each boring interval;
- Developed and sampled the newly installed groundwater monitoring well;
- Performed profiling, removal, and proper disposal of investigative derived waste, and;
- Prepared a report summarizing the findings of the investigation.

3.0 GROUNDWATER MONITORING WELL INSTALLATION

On October 3rd and 4th, 2011, Antea Group personnel directed the drilling and installation of one groundwater monitoring well (MW-26) at the property. Prior to the drilling activities, Antea Group coordinated the location and marking of underground utilities in the vicinity of the proposed boring locations. The utilities survey included contacting the local utility locating service and contracting with a private locating service.

Prior to drilling, the boring location was cleared to a final depth of 5 feet bgs with an air-knife and vacuum truck. Following air-knifing, the boring was advanced using hydraulic direct-push drilling equipment operated by Cascade Drilling, Inc. The boring was advanced to an approximate depth of 15 feet bgs. Where recovered, soil samples were collected continuously from 5 to 15 feet bgs using acetate sleeve samplers advanced into the undisturbed formation ahead of the drill bit. Groundwater was encountered at an approximate depth of 10 feet bgs. Boring MW-26 was completed as a 2-inch groundwater monitoring well to a depth of 15 feet consisting of Schedule 40 (SCH 40) polyvinyl chloride (PVC) casing with 10 feet of 0.010-inch slotted screen. The annular space in the well consisted of #2/12 filter sand to 2 feet above the screened interval, followed by a 1 foot seal of bentonite chips.

Cement was placed in the remaining annular space and a flush-mount surface monument was installed over each well head.

Soil encountered during the drilling activities primarily consisted of fine grained sand and silty-sand with periodic thin lenses of silt to the maximum drilled depth of 15 feet bgs. Boring logs, soil sampling intervals, lithology descriptions, and well completion details are included in Appendix A.

Well MW-26 was developed on October 4, 2011. Development activities were completed by purging the well with a submersible pump until the amount of suspended sediment in the purge water decreased significantly and the water appeared clear. Approximately 10-gallons of water were purged from the monitoring well.

4.0 WASTE MANAGEMENT

Soil cuttings, decontamination fluids and purge water generated during drilling and sampling were temporarily stored in properly labeled 55-gallon DOT drums. Analytical data for soil and water samples were used for disposal profiling. The drums were removed by Filter Recycling Services on October 12, 2011 for off site treatment and disposal.

5.0 SAMPLE COLLECTION AND ANALYSIS

5.1 Soil Sampling

Soil samples were field screened using a PID for volatile petroleum hydrocarbons. Three soil samples were submitted for quantitative chemical analysis for petroleum hydrocarbons. The soil samples were individually labeled, registered on a Chain-of-Custody form, and placed in a chilled cooler pending delivery to a certified analytical laboratory. Soil analytical results are presented in Table 1 and on Figure 3.

5.2 Groundwater Sampling

On October 25, 2011, Antea Group personnel collected groundwater samples from MW-26. Tasks performed and associated with groundwater monitoring included:

- Water level measurement;
- Groundwater sample collection; and
- Sample shipping to the analytical laboratory.

Low flow techniques were used to collect the groundwater samples. New, dedicated polyethylene tubing was used. Geochemical parameters were collected with a YSI multi-meter. Groundwater samples were collected in laboratory-supplied containers and individually labeled, registered on a Chain-of-Custody form, and placed in

chilled coolers pending delivery to a certified analytical laboratory. A summary of groundwater analytical results is presented in Table 2 and Figures 4 and 5.

5.3 Laboratory Analysis

Soil samples were submitted to Alpha Analytical of Sparks, Nevada for quantitative chemical analysis. One or more soil samples were analyzed for the following parameters:

- Total petroleum hydrocarbons in the gasoline (TPH-G) range using Northwest Method NWTPH-Gx;
- Total petroleum hydrocarbons in the diesel (TPH-D) and oil (TPH-O) ranges using Northwest Method NWTPH-Dx with Silica Gel cleanup; and,
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) using EPA Method SW8260B.

Groundwater samples were also submitted to Alpha Analytical of Sparks, Nevada for quantitative chemical analysis. One or more samples were analyzed for the following parameters:

- TPH-G range using Northwest Method NWTPH-Gx;
- TPH-D and TPH-O ranges using Northwest Method NWTPH-Dx with Silica Gel cleanup; and,
- BTEX using EPA Method SW8260B.

6.0 ANALYTICAL RESULTS

6.1 Soil

Concentrations of total petroleum hydrocarbons (TPH) and benzene, toluene, ethylbenzene, and xylenes (BTEX) were not detected above the laboratory method reporting limits (MRLs) in all three soil samples collected from MW-26, and are below the 10,000 mg/kg TPH cleanup level established under Consent Decree Number 00-2-07760-2SEA. Soil analytical results are presented in Table 1. A map showing TPH soil analytical results from MW-26 as well as historic soil analytical results is shown on Figure 3. Soil analytical reports are included in Appendix C.

6.2 Groundwater

A groundwater sample was collected from MW-26 on October 25, 2011. Concentrations of TPH and BTEX in the groundwater sample were below MRLs, and are below the respective established cleanup levels for TPH-G, TPH-D, TPH-O, and benzene. Groundwater analytical results are presented in Table 2. A map showing TPH and benzene groundwater analytical results from MW-26 as well as recent groundwater results from A Yard monitoring wells is shown on Figures 4 and 5, respectively. Groundwater analytical reports are included in Appendix C.

7.0 CONCLUSIONS

Antea Group directed the drilling and installation of one groundwater monitoring well at the property on October 3rd and 4th, 2011. Concentrations of total petroleum hydrocarbons (TPH) and benzene, toluene, ethylbenzene, and xylenes (BTEX) were not detected above the laboratory method reporting limits (MRLs) in all three soil samples collected from MW-26, and are below the 10,000 mg/kg TPH cleanup level established under Consent Decree Number 00-2-07760-2SEA. Additionally, concentrations of TPH and BTEX in the groundwater sample were below MRLs, and are below the respective established cleanup levels for TPH-G, TPH-D, TPH-O, and benzene.

The purpose of this investigation is to respond to EPA's concerns regarding further evaluation of the 13th Avenue Southwest contamination. Specifically, in their 5-Year Review Report, EPA recommended evaluating the extent and potential migration pathway outside the TF-OU2 boundary. This investigation has demonstrated that down-gradient hydrocarbon impacts within the 13th Avenue Southwest corridor does not extend to the KMLT Harbor Island Terminal's southern boundary.

8.0 REMARKS

The recommendations contained in this report represent Antea USA, Inc.'s professional opinions based upon the currently available information and are arrived at in accordance with currently accepted professional standards. This report is based upon a specific scope of work requested by the client. The contract between Antea USA, Inc. and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this report were performed. This report is intended only for the use of Antea USA, Inc.'s client and anyone else specifically identified in writing by Antea USA, Inc. as a user of this report. Antea USA, Inc. will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Antea USA, Inc. makes no express or implied warranty as to the contents of this report.

Prepared by:

Date: December 2011

Megan MacDonald
Project Professional

Reviewed by:

Date: December 2011

Dawna Leong, PE
Consultant

Tables

TABLE 1
SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS
Kinder Morgan Liquids Terminal, LLC
Harbor Island Terminal
2720 13th Avenue Southwest
Seattle, Washington

Sample ID	Sample Date	Depth BGS (feet)	Analysis							
			Gasoline Range (mg/kg)	Diesel Range (mg/kg)	Heavy Range (mg/kg)	Total TPH (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)
MW-26-6	10/04/11	6	<5.0	<5.0	<10	<20	<0.01	<0.01	<0.01	<0.01
MW-26-10	10/04/11	10	<5.0	<5.0	<10	<20	<0.0087	<0.0087	<0.0087	<0.0087
MW-26-15	10/04/11	15	<5.0	<5.0	<10	<20	<0.0081	<0.0081	<0.0081	<0.0081
Cleanup Levels[a]			**--**	**--**	**--**	**10,000**	**--**	**--**	**--**	**--**

NOTES:

All concentrations are in mg/kg (ppm).

< = Less than the stated laboratory reporting limit

NA = not applicable

TPH = Total Petroleum Hydrocarbons

Gasoline range = Gasoline range hydrocarbons by Ecology Method NWTPH-Gx

Diesel and Heavy range hydrocarbons, respectively, by Ecology Method NWTPH-Dx with Acid Silica Gel Cleanup

Benzene, Ethylbenzene, Toluene, and Total Xylenes by Ecology Method SW8260B.

[a] Cleanup Levels established under Consent Decree 00-2-07760-2SEA

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
Kinder Morgan Liquids Terminal, LLC
Harbor Island Terminal
2720 13th Avenue Southwest
Seattle, Washington

Sample ID	Sample Date	TPH-G (mg/L)	TPH-D (mg/L)	TPH-O (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethyl-benzene (mg/L)	Total Xylenes (mg/L)
MW-26	10/25/11	<0.25	<0.25	<0.50	<0.0005	<0.0005	<0.0005	<0.0005
Cleanup Level[1]		**1.0**	**10**	**10**	**0.071**	**--**	**29.0**	**--**

NOTES:

[1] Cleanup level established under Consent Decree 00-2-07760-2SEA

Bold values indicate concentrations which exceed MTCA cleanup levels

mg/kg = milligrams per kilogram

NA = Not analyzed in the laboratory.

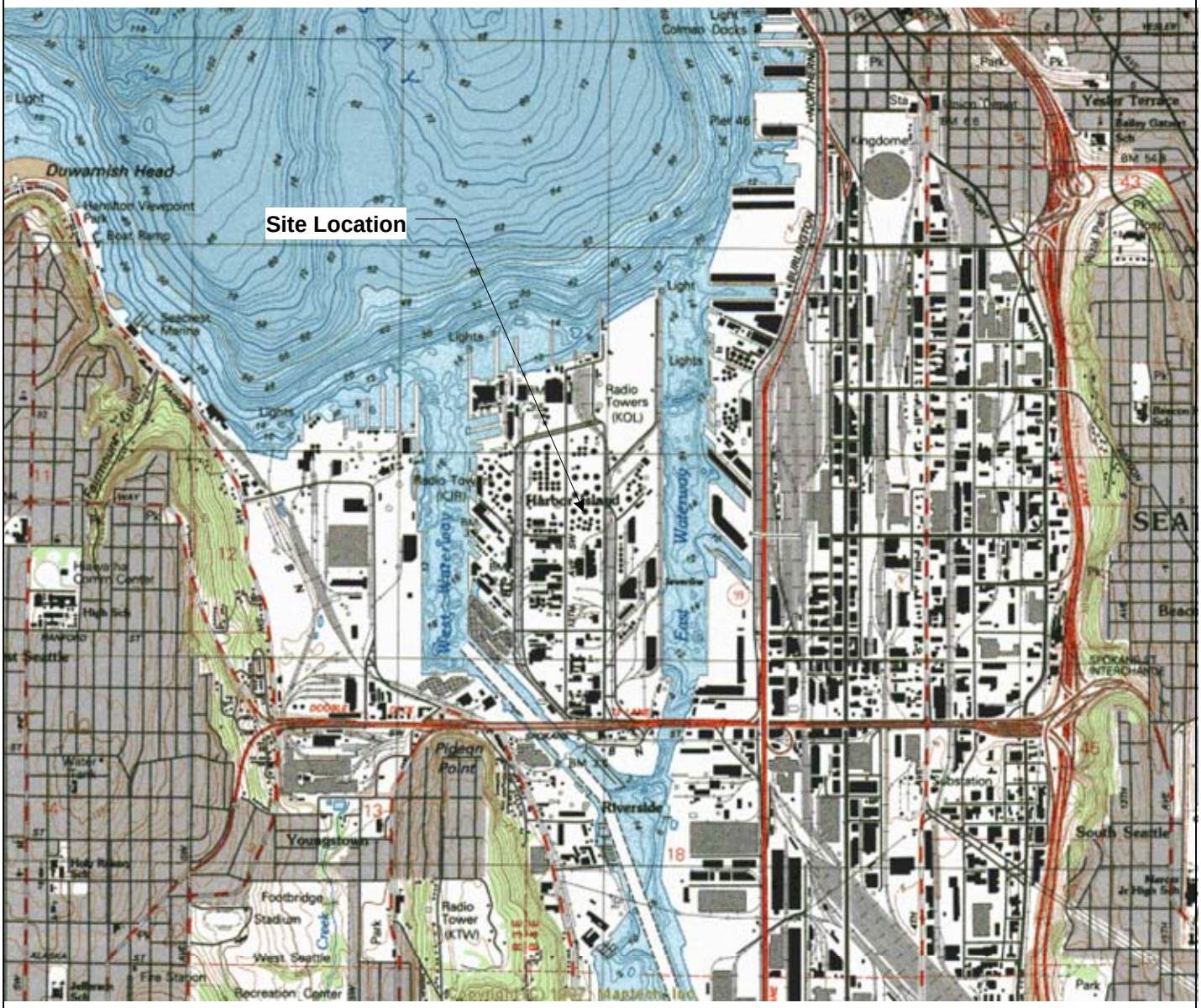
TPH-G = Total Petroleum Hydrocarbon as Gasoline; analyzed using Northwest Method NWTPH-Gx.

Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX) analyzed using EPA Method 8021B

TPH-D = Total Petroleum Hydrocarbon as Diesel; TPH-O = Total Petroleum Hydrocarbons as Oil.

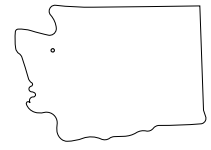
TPH-D and TPH-O analyzed using Northwest Method NWTPH-Dx w/ silica gel cleanup.

Figures



GENERAL NOTES:

BASE MAP USGS 7.5-MINUTE TOPOGRAPHIC MAP
SEATTLE SOUTH, WASHINGTON
1983



QUADRANGLE LOCATION

APPROX. SCALE

FIGURE 1

SITE LOCATION MAP

KINDER MORGAN LIQUID TERMINALS, LLC
HARBOR ISLAND TERMINAL
2720 13TH AVENUE SOUTHWEST
SEATTLE, WASHINGTON

PROJECT NO. STKM-001-W.0001	DRAWN BY RG
FILE NO. STKM001W.0001	PREPARED BY MM
REVISION NO.	REVIEWED BY DL

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North

RAILROAD TRACKS

11th AVENUE S.W.

MW-13 MW-13R MW-12 MW-12R

GATE

MW-4 SH-02 SH-02R MW-07 MW-07R SH-05 SH-05R

MW-1 MW-15 MW-10D

Tank 43 Tank 44 Tank 42 Tank 37 Tank 39 Tank 35 Tank 18 Tank 19 Tank 22 Tank 20 Tank 23 Tank 29 Tank 24 Tank 21 Tank 27 Tank 28 Tank 32 Tank 31 Tank 25 Tank 33 Tank 26

WAREHOUSE

MAINTENANCE BUILDINGS

BBL STORAGE

RAMP

'E' YARD 'C' YARD 'D' YARD 'B' YARD 'A' YARD

OLYMPIC PIPELINE LEASE AREA

E-1

MW-20 MW-14 MW-5 MW-3 MW-19 MW-7 MW-21 MW-8 MW-11D MW-9 MW-11

TRUCK LOADING RACK

FENCE

SF-01 SF-01R

FORMER PROPERTY LINE

RE-ESTABLISHED PROPERTY LINE (APPROXIMATE)

MW-25 MW-26

GARAGE OFFICE BUILDING PARKING VAULT

GATE

PROPERTY LINE

TMW-E3 TMW-E2 TMW-E1 MW-2 MW-22 MW-6 MW-24 MW-23 MW-26

13th AVENUE S.W.

TMW-E4 MW-18 MW-17 MW-16 SH-04 MW-28R MW-23 MW-24

LEGEND

- SH-02 — GROUNDWATER MONITORING WELL (INSTALLED BEFORE 1993)
- MW-7 — GROUNDWATER MONITORING WELL (INSTALLED AFTER 1993)
- MW-12R — REPLACEMENT GROUNDWATER MONITORING WELL (INSTALLED BETWEEN JANUARY 31 AND FEBRUARY 21, 2002)
- MW-23 — MONITORING WELLS INSTALLED SEPTEMBER 30, 2003
- MW-26 — MONITORING WELL INSTALLED OCTOBER 4, 2011
- A-13 — DESTROYED, DAMAGED OR DECOMMISSIONED DUE TO CONSTRUCTION ACTIVITIES
- 3 — ABANDONED GROUNDWATER MONITORING WELL, JUNE 2003
- ✳ — WELL INACCESSIBLE OR DAMAGED

0 100 FT

APPROX. SCALE

FIGURE 2

SITE MAP

KINDER MORGAN LIQUID TERMINALS, LLC
HARBOR ISLAND TERMINAL
2720 13TH AVENUE SOUTHWEST
SEATTLE, WASHINGTON

PROJECT NO. STKM-001-W.0005	DRAWN BY SB April 2005
FILE NO. STKM001W	PREPARED BY MM OCT 2011
REVISION NO.	REVIEWED BY WC

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MW-10D

North

CONFIRMATION SOIL SAMPLES AUGUST 2009

CB-A-1 8': 800/470/120 15':9/ND/ND	CB-A-2 8': 56/420/290 15': ND/ND/ND	CB-A-3 8': 1,800/320/270 15': 22/ND/ND
CB-A-4 8': 1,800/320/270 15': 22/ND/ND 20': 74/ND/ND	CB-A-5 8': 310/880/150 15': ND/ND/ND	CB-A-6 8': 1,500/1,400/140 15': ND/ND/ND
	CB-A-7 8': 2,500/1,700/230 15': 9.7/ND/ND	

LEGEND

- SH-02 — GROUNDWATER MONITORING WELL (INSTALLED BEFORE 1992)
- MW-12R — REPLACEMENT GROUNDWATER MONITORING WELL (INSTALLED BETWEEN JANUARY 31 AND FEBRUARY 21, 2002)
- MW-25 — MONITORING WELLS INSTALLED SEPTEMBER 30, 2003
- MW-26 — MONITORING WELL INSTALLED OCTOBER 2011
- A-13 — DESTROYED, DAMAGED OR DECOMMISSIONED DUE TO CONSTRUCTION ACTIVITIES
- ND/4.8/ND — DISSOLVED TPH-GASOLINE/TPH-DIESEL/TPH-OIL CONCENTRATIONS IN SOIL (mg/kg)
- NA — NOT ANALYZED
- CB-A-3 — CONFIRMATION SOIL BORING (ADVANCED AUGUST 11, 2009)

MW-11
A-8
A-17
6.5-8.0': ND/ND/NA
10-11.5':ND/ND/NA
15-16.5':ND/ND/NA
10/1991
A-6
SF-01
SF-01R
RE-ESTABLISHED PROPERTY LINE (APPROXIMATE)
FORMER PROPERTY LINE
FENCE
A-4
A-5
TRUCK LOADING RACK
3
2
1
'A' YARD
A-1
A-2
A-7
CB-A-7
MW-25
A-15
A-10
A-13
A-11
A-29R
7.5-9': 32000/15000/NA
01/1992
A-16
6.5-8.0': ND/ND/NA
15-16.5':ND/ND/NA
10/1991
A-12
A-14
A-25
CB-A-5
CB-A-6
A-29
GARAGE
7.5-9':6500/3600/NA
1/1992
OFFICE BUILDING
PARKING
A-18
5.0-6.5': ND/ND/NA
8.5-10':ND/ND/NA
10/1991
A-14R
A-3
A-9
7.5-9':500/1990/NA
1/1992
7.5-9': 3000/2210/NA
01/1992
GATE
A-26
A-22
5-6.5': ND/ND/NA
7.5-9':37,000/13,000/NA
10/1991
CB-A-2
A-20
A-21
6.5-8': ND/ND/NA
10-11.5':ND/ND/NA
10/1991
PARKING
SF-07
SF-06
A-27
A-22R
A-19
6.5-8.0': 4700/970/NA
11-12.5':ND/ND/NA
15-16.5':140J/75NA
10/1991
6.5-8.0': 4600/1900/NA
15-16.5':810/310/NA
10/1991
A-26R
CB-A-4
CB-A-3
VAULT
CB-A-1
GATE
MW-26
6': ND/ND/ND
10': ND/ND/ND
15': ND/ND/ND
10/2011
13th Avenue Southwest
MW-24
5.0': 24/ND/ND
9/2003
MW-23
5.0': ND/ND/ND
9/2003
A-23R
A-23
A-24
5-6.5': ND/ND/NA
7.5-9':ND/ND/NA
11/1991
5-6.5': ND/ND/NA
7.5-9':470/ND/NA
11/1991
A-28
7.5-9': 1400/650/NA
01/1992
A-28R

0 100 FT

APPROX. SCALE

FIGURE 3

A YARD SOIL CONCENTRATIONS

KINDER MORGAN LIQUID TERMINALS, LLC
HARBOR ISLAND TERMINAL
2720 13TH AVENUE SOUTHWEST
SEATTLE, WASHINGTON

PROJECT NO. STKM-001-W.0003	DRAWN BY MM NOV 2011
FILE NO. STKM-001-W-0003	PREPARED BY DL
REVISION NO. 0	REVIEWED BY DL

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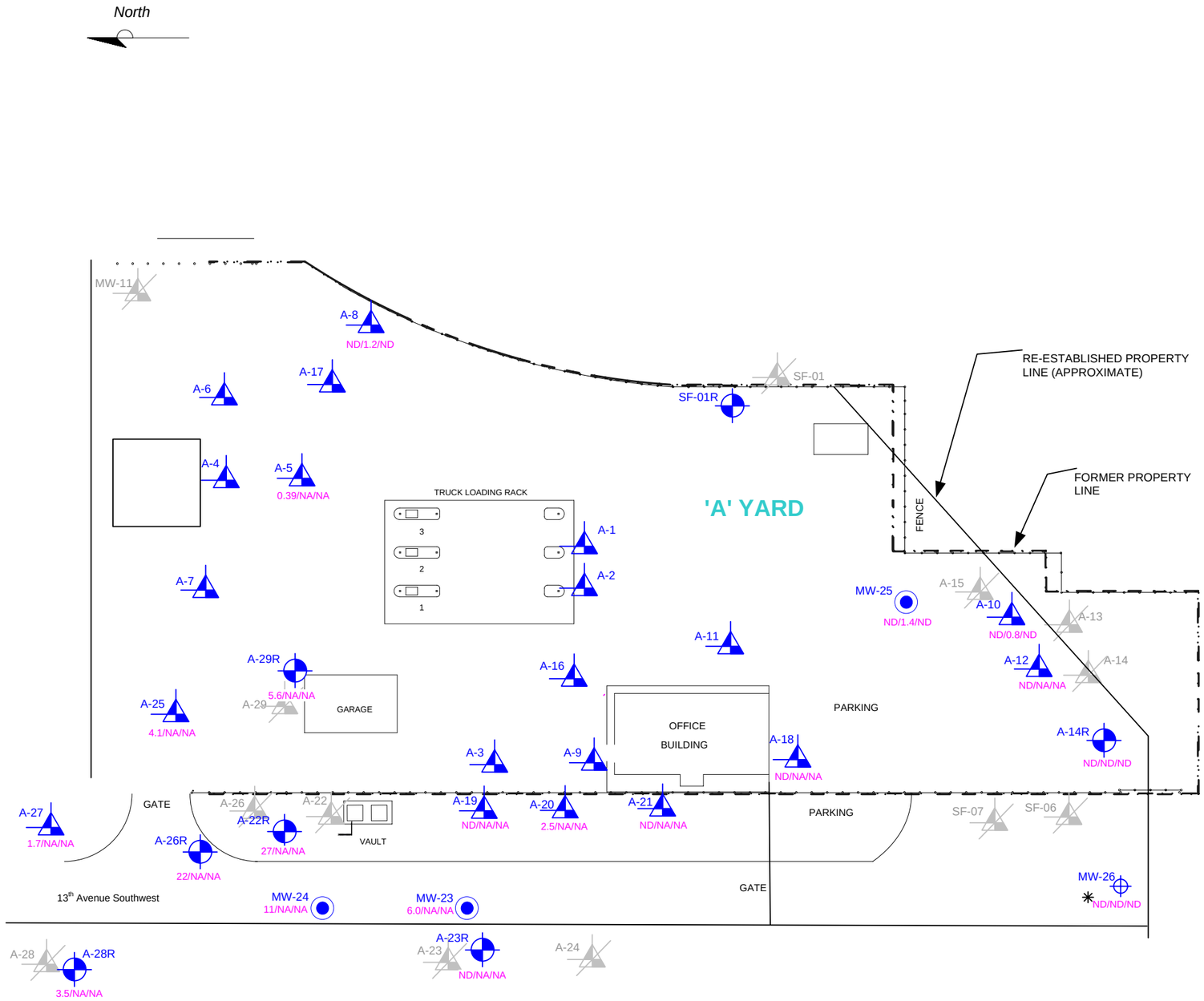

LEGEND

SH-02	GROUNDWATER MONITORING WELL (INSTALLED BEFORE 1992)
MW-12R	REPLACEMENT GROUNDWATER MONITORING WELL (INSTALLED BETWEEN JANUARY 31 AND FEBRUARY 21, 2002)
MW-25	MONITORING WELLS INSTALLED SEPTEMBER 30, 2003
MW-26	MONITORING WELL INSTALLED OCTOBER 2011
A-13	DESTROYED, DAMAGED OR DECOMMISSIONED DUE TO CONSTRUCTION ACTIVITIES
ND/4.8/ND	DISSOLVED TPH-GASOLINE/TPH-DIESEL/TPH-OIL CONCENTRATIONS IN GROUNDWATER (mg/L). SAMPLED MAY 2011.
NA	NOT ANALYZED
ND	NOT DETECTED ABOVE LABORATORY METHOD REPORTING LIMITS
✳	SAMPLED OCTOBER 25, 2011.

FIGURE 4

A YARD CONCENTRATIONS OF TPH IN GROUNDWATER

KINDER MORGAN LIQUID TERMINALS, LLC
HARBOR ISLAND TERMINAL
2720 13TH AVENUE SOUTHWEST
SEATTLE, WASHINGTON

PROJECT NO. STKM-001-W.0003	DRAWN BY MM NOV 2011
FILE NO. STKM-001-W-0003	PREPARED BY DL
REVISION NO. 0	REVIEWED BY DL

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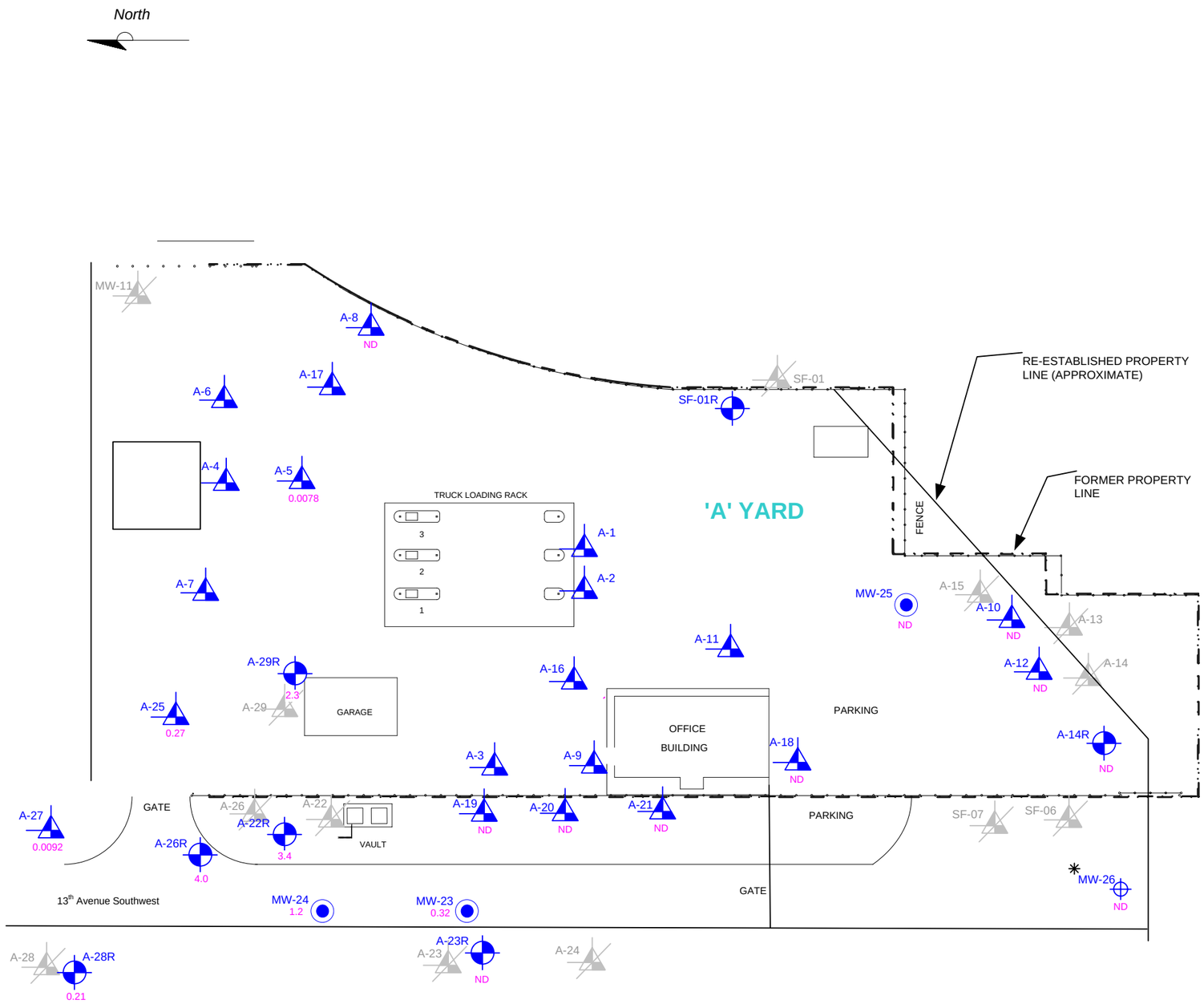
MW-10D



LEGEND

- SH-02 — GROUNDWATER MONITORING WELL (INSTALLED BEFORE 1992)
- MW-12R — REPLACEMENT GROUNDWATER MONITORING WELL (INSTALLED BETWEEN JANUARY 31 AND FEBRUARY 21, 2002)
- MW-25 — MONITORING WELLS INSTALLED SEPTEMBER 30, 2003
- MW-26 — MONITORING WELL INSTALLED OCTOBER 2011
- A-13 — DESTROYED, DAMAGED OR DECOMMISSIONED DUE TO CONSTRUCTION ACTIVITIES
- 0.32 — DISSOLVED BENZENE CONCENTRATIONS IN GROUNDWATER (mg/L). SAMPLED MAY 2011.
- NA — NOT ANALYZED
- ND — NOT DETECTED ABOVE LABORATORY METHOD REPORTING LIMITS
- ✳ — SAMPLED OCTOBER 25, 2011.

FIGURE 5

A YARD CONCENTRATIONS OF BENZENE IN GROUNDWATER

KINDER MORGAN LIQUID TERMINALS, LLC
HARBOR ISLAND TERMINAL
2720 13TH AVENUE SOUTHWEST
SEATTLE, WASHINGTON

PROJECT NO. STKM-001-W.0003	DRAWN BY MM NOV 2011
FILE NO. STKM-001-W-0003	PREPARED BY DL
REVISION NO. 0	REVIEWED BY DL

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Appendix A

Boring Logs

WELL/BORING LOCATION MAP

Antea Group

WELL/BORING: MW-26

INSTALLATION DATE: 10/4/2011	DRILLING METHOD: Geoprobe
PROJECT: Harbor Island Terminal	SAMPLING METHOD: Acetate Sleeve
CLIENT: Kinder Morgan	BORING DIAMETER: 2.5"
LOCATION: 2720 13th Ave SW	BORING DEPTH 15 feet
CITY: Seattle	WELL CASING: SCH 40 PVC 2"
STATE: WA	WELL SCREEN: 5 – 15 feet (0.010")
DRILLER: Cascade Drilling, Inc.	SAND PACK: 3 – 15 (2x12)

CASING ELEVATION	-
SURVEY DATE:	-
DTW:	-

WELL/BORING COMPLETION	FIRST ▽	STABILIZED ▼	MOISTURE	PID (ppm)	DENSITY BLOWS / 6"	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	USCS SYMBOL	GRAPHIC	DESCRIPTION/LOGGED BY: Megan MacDonald
Concrete; Bentonite; Sand			MST	3.2	NA	6			SP		Fine SAND; dark brown; loose; moist; no odor.
						8			SM		Silty-SAND; dark brown; moist; no odor.
						9			ML		Thin lens of sandy-SILT; dark brown; rust band; moist; no odor.
			WET	9.0	NA	10			SM		Silty-SAND; dark brown; wet.
						11			ML		Thin lens of SILT; wet; no odor.
						12			SP		
						13			ML		Thin lens of SILT; wet; no odor.
			WET	21.5	NA	15			SP		Fine SAND; dark brown-black; loose; wet; no odor.

11/16/2011

Appendix B

Field Data Sheets

GROUNDWATER SAMPLING FIELD SHEET

PROJECT NUMBER: STKM-001W-0003 CLIENT: Kinder Morgan

SITE No./JOB No.: PAGE 1 of 1

SITE ADDRESS/LOCATION: 2720 13TH Ave SW. DATE: 10-25-11

FIELD PERSONNEL: MM WEATHER: Cloudy ~50°F

Well ID	Time	Well Diameter (in.)	Depth to Bottom (feet)	Depth to Water (feet)	Depth to LPH (feet)	LPH Thickness (feet)	Calc. Purge (gal)	Actual Purge (gal)	Purge Method (B/LF/P)	Dissolved Oxygen (mg/l)	Sample Appearance/ Comments
MW-26	8:30	2	—	8.11	—	—	—	2	LF	.	

System Instructions:		
	Remedial System On-Site (Y / N)?	Comments:
	Operational Upon Arrival (Y / N)?	Comments:
	Shut Down System 1 / 24 hours before gauging (Y / N)?	Time/Date Downed:
	Re-Start System (Y / N)?	Time/Date Restarted:
	Purge Method:	Comments:

Purge Water Disposal Method:

- ☐ Treated through mobile carbon treatment unit and discharged on-site
- ☑ Placed in drums on site — No. of drums: 1
- ☐ Transported off-site for treatment — Facility/Location: D Yard

Measuring Device(s):

GROUNDWATER SAMPLING FIELD SHEET

DELTA PROJECT NUMBER:	STKM-001-W	**CLIENT:**	Kinder Morgan
SITE No./JOB No.:	Harbor Island, Seattle, WA	**PAGE:**	1 of 1
SITE ADDRESS/LOCATION:	2720 13th Ave SW	**DATE:**	10-25-11
FIELD TECHNICIAN(S):	M. MacDonald	**WEATHER:**	Clouds 50°F

Bioparameter / Water Quality Measurements: (Pre-Purge / Post- Purge / **Low-flow Cell**)

Well ID	TEMP (°C)	COND (ms/cm)	TDS (g/L)	DO (mg/L)	pH	ORP (mV)	Comments
MW-26	16.16	3.188	2.502	1.02	6.32	47.3	
	16.18	3.214	2.513	1.02	6.32	46.2	
	16.19	3.226	2.523	1.02	6.31	45.3	
	16.20	3.236	2.529	1.02	6.31	44.0	

System Instructions:	Remedial System On-Site (Y/N)?	Comments:
	Operational Upon Arrival (Y/N)?	Comments:
	Shut Down System 1 / 24 hours before Gauging (Y/N)? N/A	Time/Date Downed:
	Re-Start System (Y/N)?	Time/Date Restarted:

Purge Water Disposal Method:

- ☐ Treated through Mobile Carbon System
- ☒ Placed in drums on site — No. of drums:
- ☐ Transported off-site for treatment (Attach Bill of Lading) — Facility/Location: / Hauler:

Instrument Callibration: Note: Use DO Meter and YSI for Field Measurements.

YSI (Calibration Check): pH (4.00 ref.) Cond. (4.49 ref.) Turb. (0.0 ref.)

DO Meter: mg/L % Saturation Temp

PID: ppm (100 ppm Isobutylene Callibration Gas)

Appendix C

Analytical Laboratory Reports and Chain-of-Custody Documentation

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

Antea Group
4006 148TH AVE NE
Redmond, WA 98052
Job: STKM-W-003/ Kinder Morgan-HI

Attn: Dawna Leong
Phone: (425) 498-7726
Fax: (425) 869-1892

Northwest Total Petroleum Hydrocarbons - Diesel Extended (NWTPH-Dx)
Northwest Total Petroleum Hydrocarbons - Gasoline Extended (NWTPH-Gx)

		Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID :	**MW-26**					
Lab ID :	ALS11102746-01A	TPH-E (DRO), Silica Gel	ND	0.25 mg/L	10/28/11	10/29/11
Date Sampled	10/25/11 08:30	TPH-E (ORO), Silica Gel	ND	0.50 mg/L	10/28/11	10/29/11
		TPH-P (GRO)	ND	0.25 mg/L	10/30/11	10/30/11
Client ID :	**Trip Blanks**					
Lab ID :	ALS11102746-02A	TPH-P (GRO)	ND	0.25 mg/L	10/30/11	10/30/11
Date Sampled	10/25/11 00:00					

Diesel Range Organics (DRO) C13-C22
Gasoline Range Organics (GRO) C4-C13
Oil Range Organics (ORO) C22-C40+
ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

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

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

11/7/11
Report Date

Alpha Analytical, Inc.

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

ANALYTICAL REPORT

Antea Group
4006 148TH AVE NE
Redmond, WA 98052

Attn: Dawna Leong
Phone: (425) 498-7726
Fax: (425) 869-1892
Date Received : 10/27/11

Job: STKM-W-003/ Kinder Morgan-HI

Volatile Organic Compounds (VOCs) EPA Method SW8260B

		Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID :	**MW-26**					
Lab ID :	ALS11102746-01A	Benzene	ND	0.50 µg/L	10/30/11	10/30/11
Date Sampled	10/25/11 08:30	Toluene	ND	0.50 µg/L	10/30/11	10/30/11
		Ethylbenzene	ND	0.50 µg/L	10/30/11	10/30/11
		Xylenes, Total	ND	0.50 µg/L	10/30/11	10/30/11
Client ID :	**Trip Blanks**					
Lab ID :	ALS11102746-02A	Benzene	ND	0.50 µg/L	10/30/11	10/30/11
Date Sampled	10/25/11 00:00	Toluene	ND	0.50 µg/L	10/30/11	10/30/11
		Ethylbenzene	ND	0.50 µg/L	10/30/11	10/30/11
		Xylenes, Total	ND	0.50 µg/L	10/30/11	10/30/11

ND = Not Detected

Roger Scholl Randy Gardner Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com
Alpha certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

11/7/11
Report Date

Alpha Analytical, Inc.

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

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

VOC Sample Preservation Report

Work Order: ALS11102746 **Job:** STKM-W-003/ Kinder Morgan-HI

Alpha's Sample ID	Client's Sample ID	Matrix	pH
11102746-01A	MW-26	Aqueous	2
11102746-02A	Trip Blanks	Aqueous	2

11/7/11

Report Date

Alpha Analytical, Inc.

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

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

Date: *07-Nov-11*

QC Summary Report

Work Order: 11102746

Method Blank

Type: **MBLK** Test Code: **EPA Method SW8015B / E / SG**

File ID: **2A10281105.D** Batch ID: **27561SG** Analysis Date: **10/28/2011 16:26**

Sample ID: **MBLK-27561** Units : **mg/L** Run ID: **FID_1_111028C** Prep Date: **10/28/2011 10:09**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-E (DRO), Silica Gel	ND	0.25								
TPH-E (ORO), Silica Gel	ND	0.5								
Surr: Nonane, Silica Gel	0.174		0.15		116	49	145			

Laboratory Control Spike

Type: **LCS** Test Code: **EPA Method SW8015B / E / SG**

File ID: **2A10281107.D** Batch ID: **27561SG** Analysis Date: **10/28/2011 17:19**

Sample ID: **LCS-27561** Units : **mg/L** Run ID: **FID_1_111028C** Prep Date: **10/28/2011 10:09**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-E (DRO), Silica Gel	2.54	0.05	2.5		101	70	130			
Surr: Nonane, Silica Gel	0.155		0.15		103	49	145			

Sample Matrix Spike

Type: **MS** Test Code: **EPA Method SW8015B / E / SG**

File ID: **2A10281109.D** Batch ID: **27561SG** Analysis Date: **10/28/2011 18:10**

Sample ID: **11102528-11AMS** Units : **mg/L** Run ID: **FID_1_111028C** Prep Date: **10/28/2011 10:09**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-E (DRO), Silica Gel	2.49	0.05	2.5	0	99.6	53	150			
Surr: Nonane, Silica Gel	0.183		0.15		122	49	145			

Sample Matrix Spike Duplicate

Type: **MSD** Test Code: **EPA Method SW8015B / E / SG**

File ID: **2A11011164.D** Batch ID: **27561SG** Analysis Date: **11/02/2011 13:45**

Sample ID: **11102528-11AMSD** Units : **mg/L** Run ID: **FID_1_111028C** Prep Date: **10/28/2011 10:09**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-E (DRO), Silica Gel	2.58	0.05	2.5	0	103	53	150	2.489	3.5(47)	
Surr: Nonane, Silica Gel	0.185		0.15		123	49	145			

Comments:

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

Alpha Analytical, Inc.

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

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

Date: *07-Nov-11*

QC Summary Report

Work Order: 11102746

Method Blank

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

File ID: **11100307.D** Batch ID: **MS15W1003B** Analysis Date: **10/03/2011 10:28**

Sample ID: **MBLK MS15W1003B** Units : **mg/L** Run ID: **MSD_15_111003A** Prep Date: **10/03/2011 10:28**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	ND	0.25								
Surr: 1,2-Dichloroethane-d4	0.0112		0.01		112	70	130			
Surr: Toluene-d8	0.00979		0.01		98	70	130			
Surr: 4-Bromofluorobenzene	0.00891		0.01		89	70	130			

Laboratory Control Spike

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

File ID: **11100303.D** Batch ID: **MS15W1003B** Analysis Date: **10/03/2011 08:53**

Sample ID: **GLCS MS15W1003B** Units : **mg/L** Run ID: **MSD_15_111003A** Prep Date: **10/03/2011 08:53**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	0.428	0.05	0.4		107	70	130			
Surr: 1,2-Dichloroethane-d4	0.0106		0.01		106	70	130			
Surr: Toluene-d8	0.0096		0.01		96	70	130			
Surr: 4-Bromofluorobenzene	0.00926		0.01		93	70	130			

Sample Matrix Spike

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

File ID: **11100310.D** Batch ID: **MS15W1003B** Analysis Date: **10/03/2011 11:33**

Sample ID: **11093023-01AGS** Units : **mg/L** Run ID: **MSD_15_111003A** Prep Date: **10/03/2011 11:33**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	2.4	0.25	2	0	120	51	144			
Surr: 1,2-Dichloroethane-d4	0.0559		0.05		112	70	130			
Surr: Toluene-d8	0.0475		0.05		95	70	130			
Surr: 4-Bromofluorobenzene	0.0448		0.05		90	70	130			

Sample Matrix Spike Duplicate

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

File ID: **11100311.D** Batch ID: **MS15W1003B** Analysis Date: **10/03/2011 11:54**

Sample ID: **11093023-01AGSD** Units : **mg/L** Run ID: **MSD_15_111003A** Prep Date: **10/03/2011 11:54**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	2.17	0.25	2	0	109	51	144	2.403	10.0(29)	
Surr: 1,2-Dichloroethane-d4	0.0557		0.05		111	70	130			
Surr: Toluene-d8	0.048		0.05		96	70	130			
Surr: 4-Bromofluorobenzene	0.0456		0.05		91	70	130			

Comments:

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

Alpha Analytical, Inc.

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

Date: *07-Nov-11*

QC Summary Report

Work Order: 11102746

Method Blank

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

File ID: **11103005.D** Batch ID: **MS15W1030A** Analysis Date: **10/30/2011 13:32**

Sample ID: **MBLK MS15W1030A** Units : **µg/L** Run ID: **MSD_15_111030A** Prep Date: **10/30/2011 13:32**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Benzene	ND	0.5								
Toluene	ND	0.5								
Ethylbenzene	ND	0.5								
Xylenes, Total	ND	0.5								
Surr: 1,2-Dichloroethane-d4	9.86		10		99	70	130			
Surr: Toluene-d8	10.1		10		101	70	130			
Surr: 4-Bromofluorobenzene	9.77		10		98	70	130			

Laboratory Control Spike

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

File ID: **11103004.D** Batch ID: **MS15W1030A** Analysis Date: **10/30/2011 13:10**

Sample ID: **LCS MS15W1030A** Units : **µg/L** Run ID: **MSD_15_111030A** Prep Date: **10/30/2011 13:10**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Benzene	9.87	0.5	10		99	70	130			
Toluene	9.57	0.5	10		96	80	120			
Ethylbenzene	9.95	0.5	10		100	80	120			
Xylenes, Total	19.5	0.5	20		97	70	130			
Surr: 1,2-Dichloroethane-d4	9.78		10		98	70	130			
Surr: Toluene-d8	10.1		10		101	70	130			
Surr: 4-Bromofluorobenzene	10.2		10		102	70	130			

Sample Matrix Spike

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

File ID: **11103006.D** Batch ID: **MS15W1030A** Analysis Date: **10/30/2011 13:54**

Sample ID: **11102521-01AMS** Units : **µg/L** Run ID: **MSD_15_111030A** Prep Date: **10/30/2011 13:54**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Benzene	49.1	1.3	50	0	98	59	138			
Toluene	46.9	1.3	50	0	94	68	130			
Ethylbenzene	50	1.3	50	0	99.9	68	130			
Xylenes, Total	96.9	1.3	100	0	97	70	130			
Surr: 1,2-Dichloroethane-d4	48.6		50		97	70	130			
Surr: Toluene-d8	50		50		100	70	130			
Surr: 4-Bromofluorobenzene	51.1		50		102	70	130			

Sample Matrix Spike Duplicate

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

File ID: **11103007.D** Batch ID: **MS15W1030A** Analysis Date: **10/30/2011 14:15**

Sample ID: **11102521-01AMSD** Units : **µg/L** Run ID: **MSD_15_111030A** Prep Date: **10/30/2011 14:15**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Benzene	50.6	1.3	50	0	101	59	138	49.11	3.0(21)	
Toluene	47.6	1.3	50	0	95	68	130	46.88	1.5(20)	
Ethylbenzene	50.8	1.3	50	0	102	68	130	49.95	1.6(20)	
Xylenes, Total	99.4	1.3	100	0	99	70	130	96.92	2.6(20)	
Surr: 1,2-Dichloroethane-d4	48.4		50		97	70	130			
Surr: Toluene-d8	49.3		50		99	70	130			
Surr: 4-Bromofluorobenzene	51		50		102	70	130			

Comments:

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

Billing Information :

CHAIN-OF-CUSTODY RECORD

AMENDED

WA

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

WorkOrder : ALS11102746

Report Due By : 5:00 PM On : 07-Nov-11

Client:
Antea Group
4006 148TH AVE NE

Redmond, WA 98052

Report Attention	Phone Number	EMail Address
Dawna Leong	(425) 498-7726 x	dawna.leong@anteagroup.com
Megan MacDonald	(425) 301-2741 x	megan.macdonald@anteagroup.com

EDD Required : **No**

Sampled by : Megan MacDonald

PO :

Client's COC # : 56791 Job : STKM-W-003/ Kinder Morgan-HI

Cooler Temp	Samples Received	Date Printed
5 °C	27-Oct-11	**07-Nov-11**

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

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests TPH/E_SG_W	TPH/P_W	VOC_W						Sample Remarks
ALS11102746-01A	MW-26	AQ	10/25/11 08:30	6	0	10	NWTPH-Dx Silica Gel	NWTPH-Gx	BTXE_C						
ALS11102746-02A	Trip Blanks	AQ	10/25/11 00:00	2	0	10		NWTPH-Gx	BTXE_C						

Comments: No security seals. Blue Ice. Client provided temp blank. Total Xylenes. Amended 11/7/11 @ 8:48 to change TAT from standard to 7 day per email from Dawna, :

	Signature	Print Name	Company	Date/Time
Logged in by:	Dana Caffee	Sara Coffee	Alpha Analytical, Inc.	11/7/11 8:50

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report.

Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

Billing Information :

CHAIN-OF-CUSTODY RECORD

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

WA

WorkOrder : ALS11102746

Report Due By : 5:00 PM On : 10-Nov-11

Client:
Antea Group
4006 148TH AVE NE

Redmond, WA 98052

Report Attention	Phone Number	EMail Address
Dawna Leong	(425) 498-7726 x	dawna.leong@anteagroup.com
Megan MacDonald	(425) 301-2741 x	megan.macdonald@anteagroup.com

EDD Required : **No**

Sampled by : Megan MacDonald

PO :

Client's COC # : 56791 Job : STKM-W-003/ Kinder Morgan-HI

Cooler Temp	Samples Received	Date Printed
5 °C	27-Oct-11	27-Oct-11

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

Alpha Sample ID	Client Sample ID	Matrix	Collection Date	No. of Bottles Alpha	Sub	TAT	Requested Tests TPH/E_SG_W	TPH/P_W	VOC_W	Sample Remarks
ALS11102746-01A	MW-26	AQ	10/25/11 08:30	6	0	10	NWTPH-Dx Silica Gel	NWTPH-Gx	BTXE_C	
ALS11102746-02A	Trip Blanks	AQ	10/25/11 00:00	2	0	10		NWTPH-Gx	BTXE_C	

Comments: No security seals. Blue Ice. Client provided temp blank. Total Xylenes. :

	Signature	Print Name	Company	Date/Time
Logged in by:	Sara Coffee	Sara Coffee	Alpha Analytical, Inc.	10/27/11 13:42

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

56791

Billing Information:
Company Name Antea Group
Attn: Dawna Leong
Address 4006 148th Ave NE
City, State, Zip Redmond, WA 98052
Phone Number 425-498-7726 Fax 425-869-1842

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

Samples Collected From Which State?
AZ ___ CA ___ NV ___ WA X DOD Site ___
ID ___ OR ___ OTHER ___ Page # ___ of ___

Consultant / Client Name: Antea Group
Address: 4006 148th Ave NE
City, State, Zip: Redmond, WA 98052

Job # STKM-W-0003 Job Name: Linder Morgan HI

Report Attention / Project Manager
Name: Dawna Leong
Email: dawna.leong@anteagroup.com
Phone: 425-498-7726 Mobile: 425-869-1842

Analyses Required

Time Sampled	Date Sampled	Matrix* See Key Below	P.O. # / Lab ID Number (Office Use Only)	Sample Description	TAT	Field Filtered	# Containers**	BTEX 8260	NWTPH-Gx	NWTPH-Dx gel/silica gel					Data Validation Level: III or IV / REMARKS
9:30	10-25-11	AQ	ALS 1102746-01A	MW-26	Stand.	N	6V	X	X	X					
—	—	—	02A	Trip Blanks	Stand.	N		X	X						

FOR LAB USE ONLY

EDD / EDF? YES ___ NO ___
Global ID # ___

ADDITIONAL INSTRUCTIONS:

Please issue 1 report per COC.

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Sampled By: Megan MacDonald

To Fed Ex.

Relinquished by: (Signature/Affiliation)	Received by: (Signature/Affiliation)	Date:	Time:
[signature] - Antea		10-26-11	15:00
Relinquished by: (Signature/Affiliation)	Received by: (Signature/Affiliation) [signature]	Date: 10/27/11	Time: 13:41
Relinquished by: (Signature/Affiliation)	Received by: (Signature/Affiliation)	Date:	Time:

*Key: AQ - Aqueous SO - Soil WA - Waste OT - Other AR - Air **: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this coc. The liability of the laboratory is limited to the amount paid for the report.