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By Alameda County Environmental Health at 2:15 pm, May 08, 2014

April 25, 2014

Mr. Mark Detterman  
Alameda County Environmental Health  
1131 Harbor Bay Parkway  
Alameda, CA 94502

**Re: Kerry & Associates – Palace Garage  
14336 Washington Avenue  
San Leandro, California  
ACEH Case No. RO0000208**

Dear Mr. Detterman,

I declare, under penalty of perjury, that the information and/or recommendations contained in the **First Semi Annual 2014 Groundwater Monitoring Report** are true and correct to the best of my knowledge.

Sincerely,

  
Mr. Jeffrey Kerry



April 25, 2014

Mr. Mark Detterman  
Alameda County Environmental Health  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502

**RE: FIRST SEMI-ANNUAL 2014 GROUNDWATER MONITORING REPORT**  
**Palace Garage**  
**14336 Washington Boulevard**  
**San Leandro, California**  
**ACEH Case # RO0000208**  
**SFRWQCB Case # 01-1133**

Dear Mr. Detterman:

On behalf of Kerry & Associates, INNOVEX Environmental Management Inc., (INNOVEX) has prepared this First Semi-Annual 2014 Groundwater Monitoring Report (Report) for the Palace Garage facility (the Site), located at 14336 Washington Avenue, in San Leandro, California (Figure 1).

## **1.0 SITE BACKGROUND SUMMARY**

A 550-gallon gasoline underground storage tank (UST) was removed from the Site in 1991. Subsequent investigations included the installation of three monitoring wells (MW-1 through MW-3) and the drilling of 15 borings (B-1 through B-15). Based on data obtained from the wells and borings, impacted unsaturated-zone soil is confined to the area of the former dispenser pad and UST. The primary groundwater flow direction is toward the southwest.

In December 2002, Professional Service Industries, Inc. (PSI) conducted a soil and groundwater investigation to evaluate the lateral extent of petroleum hydrocarbons in the soil and groundwater at the Site. Borings B-16 and B-17 were advanced to between 20 and 24 feet below ground surface (bgs). Boring B-16 was converted into monitoring well MW-4. Concentrations of total petroleum hydrocarbons as gasoline (TPHg) and gasoline related contaminants were detected only in soil from boring B-17 and groundwater from wells MW-1 and MW-2. The locations of the monitoring wells and soil borings are presented on Figure 2.

Closure Solutions, Inc. (Closure Solutions) conducted a Sensitive Receptor Survey to identify all water supply wells and sensitive receptors within a 2,000-foot radius of the Site. The closest water supply wells are two industrial wells approximately 450 feet northwest (cross-gradient) of the Site. The closest domestic well is approximately 1,500 feet southeast (cross-gradient) of the Site. The closest down-gradient well is an irrigation well approximately 1,400 feet southwest of the Site. No surface water bodies were identified within a 2,000 foot radius of the Site. Results of the Sensitive Receptor Survey are presented in the Sensitive Receptor Survey report dated August 27, 2008.

Closure Solutions prepared and submitted a Site Conceptual Model (SCM) dated September 30, 2008 for the Site. The preparation of the SCM was requested by ACEH in their letter dated September 2, 2008.

In an email dated June 12, 2009, Mr. Steve Plunkett with the ACEH approved the reduction of groundwater monitoring to a semi-annual basis conducted in second and fourth quarters. Mr. Plunkett also approved the recommendation to eliminate fuel oxygenates from the suite of laboratory analytes.

On October 15, 2009, Closure Solutions discussed the Site status with ACEH. Data gaps presented in the SCM and other information that ACEH would require for site closure were identified. Closure Solutions submitted the Soil Vapor Probe and Additional Assessment Work Plan on November 13, 2009 to address the work necessary to move the Site toward closure.

On May 14, 2010, Closure Solutions submitted a letter to the ACEH stating that Closure Solutions intended to proceed with the proposed scope of work pursuant to CCR Title 23, Division 3, Chapter 16, Section 2722 (e) which states "Implementation of the proposed workplan may begin sixty (60) calendar days after submittal, unless the responsible party is otherwise directed in writing by the regulatory agency". On May 21, 2010, the ACEH responded to Closure Solutions' letter of intent via email explaining that the ACEH has been largely precluded from generating letters on cases due to the work load imposed by SWRCB Resolution 2009-0042 and they will attempt to raise the review interval for the Site.

On July 26, 2010, a representative from Closure Solutions was on site to oversee the installation and sampling of three temporary soil vapor probes (SV-1 through SV-3) and advancement of one down-gradient soil boring (SB-18). A Soil Vapor Testing and Additional Assessment Report describing field activities and discussing analytical soil and soil vapor results was submitted to the ACEH on August 30, 2010.

On January 24, 2012, Closure Solutions supervised the advancement of two soil borings, collection of additional soil and groundwater data, and installation of wells MW-5 and MW-6. The work was completed in order undertake further corrective actions at the site. Collected soil and groundwater samples were analyzed for gasoline range organics (GRO), benzene, toluene, ethylbenzene, and xylenes (BTEX compounds). Additionally, bio-attenuation parameters were analyzed for groundwater collected from well MW-5. A discussion of analytical results is presented in the Groundwater Monitoring Well Installation Report submitted on March 30, 2012

After completing the monitoring well installation, a dual-phase extraction (DPE) pilot test was performed from February 21 through 25, 2012. The pilot test was conducted to evaluate whether DPE would be a viable technology to remediate soil and groundwater beneath the Site. High groundwater extraction rates were encountered during pilot testing conducted from MW-1. As a result, subsurface soils could not be effectively dewatered to allow remediation via vapor extraction. Pilot testing from well MW-6 produced average groundwater extraction rates that were roughly two-thirds less than those observed during testing from MW-1. Subsequently, the technology was successful in lowering the groundwater table in the vicinity of well MW-6 and exposing the capillary fringe or "smear" zone. Based on the results of testing performed from MW-6, DPE appears to be a viable option for Site remediation.

On October 9, 2012 the well boxes for monitoring wells MW-1, MW-2, MW-5 and MW-6 were re-set as part of repaving activities conducted in the alley between the Site building and adjacent building. Boxes for MW-1, MW-2, and MW-6 were elevated an average of 1.5 inches to assure the boxes were above the new grade elevations. Well box MW-5 had to be lowered approximately 3 inches. Because of the elevation drop, the well casing had to be cut down 3 inches for it to fit inside the repositioned well box. The well top-of-casing elevation was re-surveyed on October 11, 2012 to assure future measured groundwater elevations are consistent with historical data.

On April 10, 2013 Closure Solutions submitted a Revised Draft Corrective Action Plan Addendum (Draft CAP Addendum) to the ACEH that presented an evaluation of hydrocarbon impacts to soil and groundwater beneath the site and evaluated and compared remedial alternatives to address cleanup of the impacts. Dual-phase extraction (DPE) was selected as the most effective remedial alternative, for which, details and procedures for the installation, operation and evaluation of a temporary system were included in the Draft CAP Addendum.

On May 29, 2013 the ACEH issued a letter requesting a Data Gap Investigation Work Plan and Focused Site Conceptual Model (Work Plan) be prepared. The work plan was directed to address data gaps identified during an ACEH review of the environmental case under the State Water Resource Control Board's Low Threat Underground Storage Tank Case Closure Policy (LTCP). On June 28, 2013 Closure Solutions submitted the Work Plan as directed. Closure Solutions proposed advancing four soil borings within the source area to collect shallow soil and soil vapor samples. Field work for the proposed investigation was completed in early October 2013.

On November 22, 2013 INNOVEX submitted a Data Gap Investigation Report which described investigation activities, evaluated data, and provided conclusions and recommendations. Based on soil data collected from 0 to 10 feet bgs, concentrations of TPHg/GRO and naphthalene in the vicinity of the former dispenser island appear to increase with depth; however, BTEX concentrations are consistently low. A review of benzene, ethylbenzene, and naphthalene concentrations against LTCP criteria for vapor intrusion to indoor air indicated the constituents exceed their associated screening criteria for a commercial land use scenario with no bioattenuation zone. Additionally, soil data from 0 to 10 feet bgs indicated benzene, ethylbenzene, and naphthalene are below the LTCP established criteria for direct contact and volatilization to outdoor air in commercial/industrial land use and utility worker scenarios.

On January 21, 2014, the ACEH issued a letter directing preparation of a revised Draft Corrective Action Plan (CAP) and Fact Sheet for public notification of the Draft CAP based on results of the November 2013 investigation. A completion date of March 28, 2014 for submittal of the Draft CAP was established by ACEH. However, due to budget constraints and the denial of a budget increase change order request for fiscal year 2013/2014 by the State Underground Storage Tank Cleanup Fund, the ACEH approved an extension on the Draft CAP submittal date. The new submittal date is September 2, 2014. A copy of the e-mail approving the extension is presented in Attachment A.

## **2.0 WORK PERFORMED AND WORK PROPOSED**

Following is a summary of work performed this semi-annual period and work proposed for the next semi-annual period:

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**WORK PERFORMED/PROPOSED THIS SEMI-ANNUAL PERIOD:**

1. Performed first semi-annual groundwater monitoring event on February 7, 2014.
2. Prepared and Submitted First Semi-Annual 2014 Groundwater Monitoring Report.

**WORK PROPOSED FOR NEXT SEMI-ANNUAL PERIOD:**

1. The second semi-annual 2014 groundwater monitoring event is scheduled for Third Quarter 2014 .
2. Prepare and submit a revised Draft CAP and Fact Sheet for public notification by September 2, 2014.

**3.0 DISCUSSION OF RECENT ACTIVITIES**

INNOVEX performed this semi-annual groundwater monitoring and sampling event at the Site on February 7, 2014. Gauging, purging and sampling were conducted in accordance with INNOVEX's Standard Operating Procedures (included in Attachment B). The collected groundwater samples were submitted to SunStar Laboratories of Lake Forest, California (SunStar) for laboratory analysis under Chain-of-Custody protocols. The samples were analyzed for diesel range organics (DRO) and motor oil range organics (MORO) by U.S. EPA Method 8015C; and gasoline range organics (GRO), BTEX, and the fuel oxygenates MTBE, TAME, di-isopropyl ether (DIPE), ethyl tert butyl ether (ETBE), and TBA by U.S. EPA Method 8260B. As requested by ACEH in their January 24, 2013 letter, analysis for naphthalene by EPA Method 8260 has been added to the monitoring program.

Following is a summary of the current status of the environmental program at the Site:

Current Phase of Project:	Monitoring
Groundwater Monitoring & Sampling:	Quarterly: MW-5, MW-6 Semi-Annual: MW-1 through MW-6
Is Free Product (FP) Present On-Site:	No
Current Remediation Techniques:	None

Following is a summary of this period's field and analytical data:

Average Depth to GW (in feet below top of casing):	16.66
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Groundwater Elevation (in feet above mean sea level) [MSL]:	20.26 (MW-5) to 20.84 (MW-1)
Groundwater Gradient (direction):	Southeast
Groundwater Gradient (magnitude):	0.005 feet per foot
Reported GRO concentration range:	740 micrograms per liter [ $\mu\text{g/L}$ ] (MW-1) to 13,000 $\mu\text{g/L}$ (MW-6)
Reported benzene concentration range:	3.0 $\mu\text{g/L}$ (MW-1) to 78 $\mu\text{g/L}$ (MW-2)
Reported toluene concentrations:	1.2 $\mu\text{g/L}$ (MW-2) and 13 $\mu\text{g/L}$ (MW-6)
Reported ethylbenzene concentration range:	19 $\mu\text{g/L}$ (MW-1) to 550 $\mu\text{g/L}$ (MW-6)
Reported xylene concentration range:	30 $\mu\text{g/L}$ (MW-2) to 224 $\mu\text{g/L}$ (MW-6)
Reported Naphthalene concentration range:	3.7 $\mu\text{g/L}$ (MW-1) to 290 $\mu\text{g/L}$ (MW-6)

Laboratory procedures, chain of custody records, and the certified analytical reports are included as Attachment C. Groundwater elevation and analytical data are summarized on Tables 1 and 2.

Purge water generated during the monitoring and sampling event was stored onsite in a plastic 55 gallon drum pending characterization and disposal. Water will be removed by a licensed waste transporter and disposed of at an appropriate treatment facility.

#### **4.0 CONCLUSIONS AND RECOMMENDATIONS**

Depth to water measurements collected from all wells during this event are within historical ranges, as are reported concentrations of dissolved hydrocarbons.

INNOVEX anticipates preparing and submitting a revised Draft CAP and Fact Sheet for public review to ACEH by September 2, 2014. No additional activities are anticipated for the duration of the 2013/2014 fiscal year. INNOVEX will continue to conduct groundwater monitoring and sampling on a semi-annual basis.

#### **5.0 LIMITATIONS**

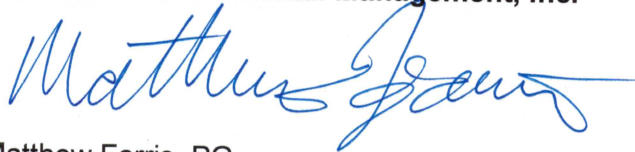
This report is based on Site conditions, data, and other information available as of the date of the report, and the conclusions and recommendations herein are applicable only to the time frame in which the report was prepared. Background information used to prepare this report including, but not limited to, previous field measurements, analytical results, Site plans and other data have been furnished to INNOVEX by Kerry & Associates and as available on the GeoTracker database.

INNOVEX has relied on this information as furnished, and is neither responsible for nor has confirmed the accuracy of this information.

If you have any questions regarding this submission, please feel free to contact the undersigned at (916) 760-7579 or Matt.Farris@innovex.net.

Sincerely,

**INNOVEX Environmental Management, Inc.**



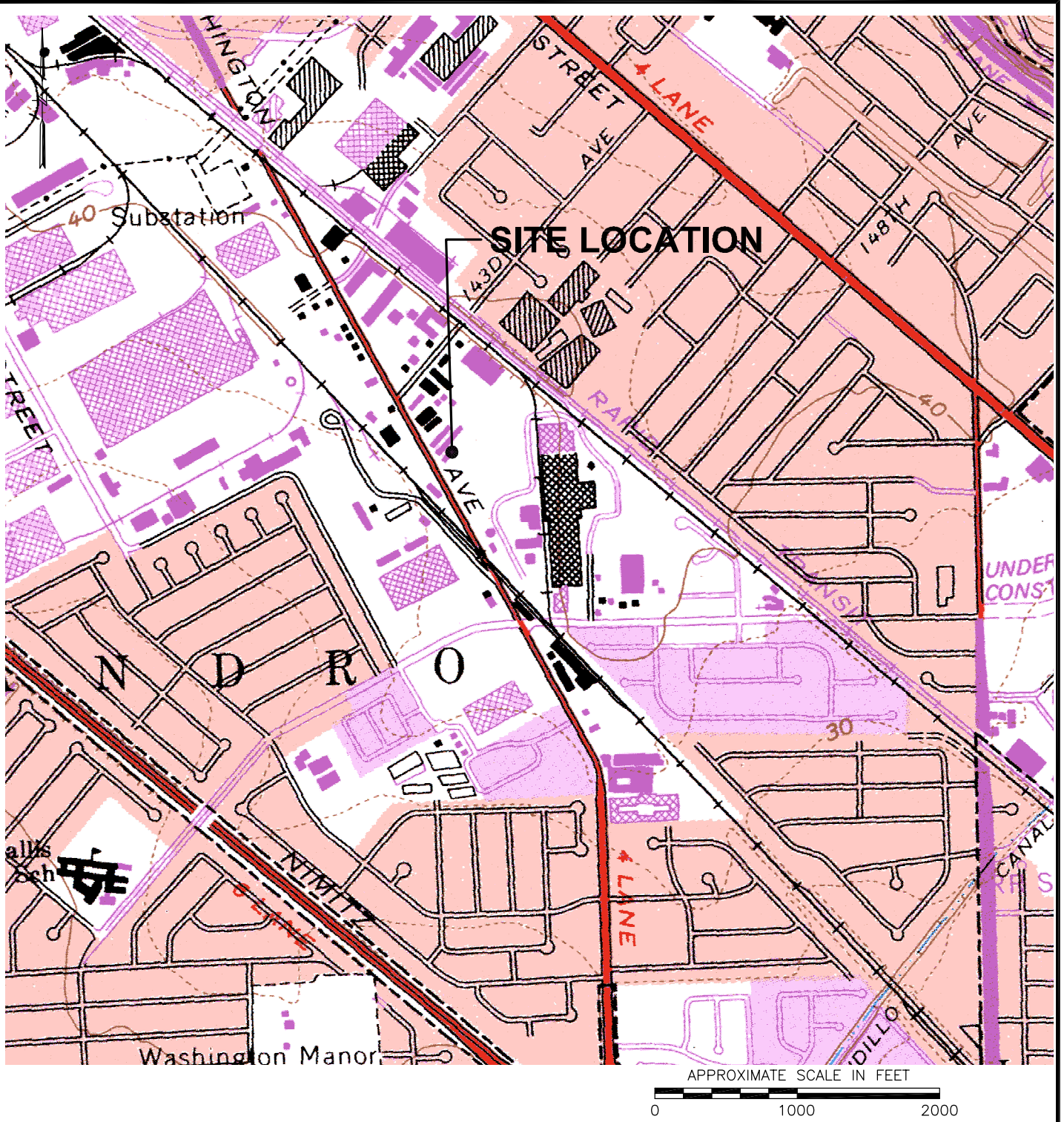
Matthew Farris, PG  
Senior Project Geologist



Attachments:

Figure 1	Site Location Map
Figure 2	First Semi-Annual 2014 Groundwater Monitoring & Sampling Results – Groundwater Contour Map – February 7, 2014
Table 1	Groundwater Elevation and Analytical Data
Table 2	Fuel Oxygenate And Lead Scavenger Analytical Data
Attachment A	ACEH Correspondence
Attachment B	Field Procedures and Field Data Sheets
Attachment C	Laboratory Procedures, Certified Analytical Reports and Chain-of-Custody Records

cc: Mr. Jeff Kerry, Kerry & Associates  
Mr. Gerald Donnelly.



20140404.1.1433951 \\The-server\pocher\Client Drawings\innovex\palace garage\_1601\PALACE GARAGE VICINITY MAP.dwg

REFERENCE:  
USGS 7.5 MIN QUAD MAP TITLED: SAN LEANDRO, CALIFORNIA DATED: 1959 REV: 1980

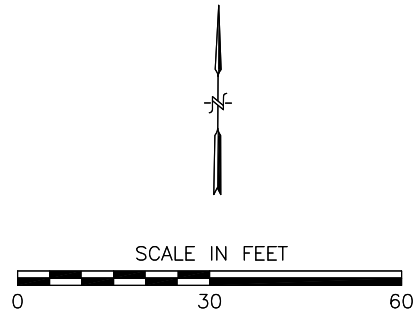
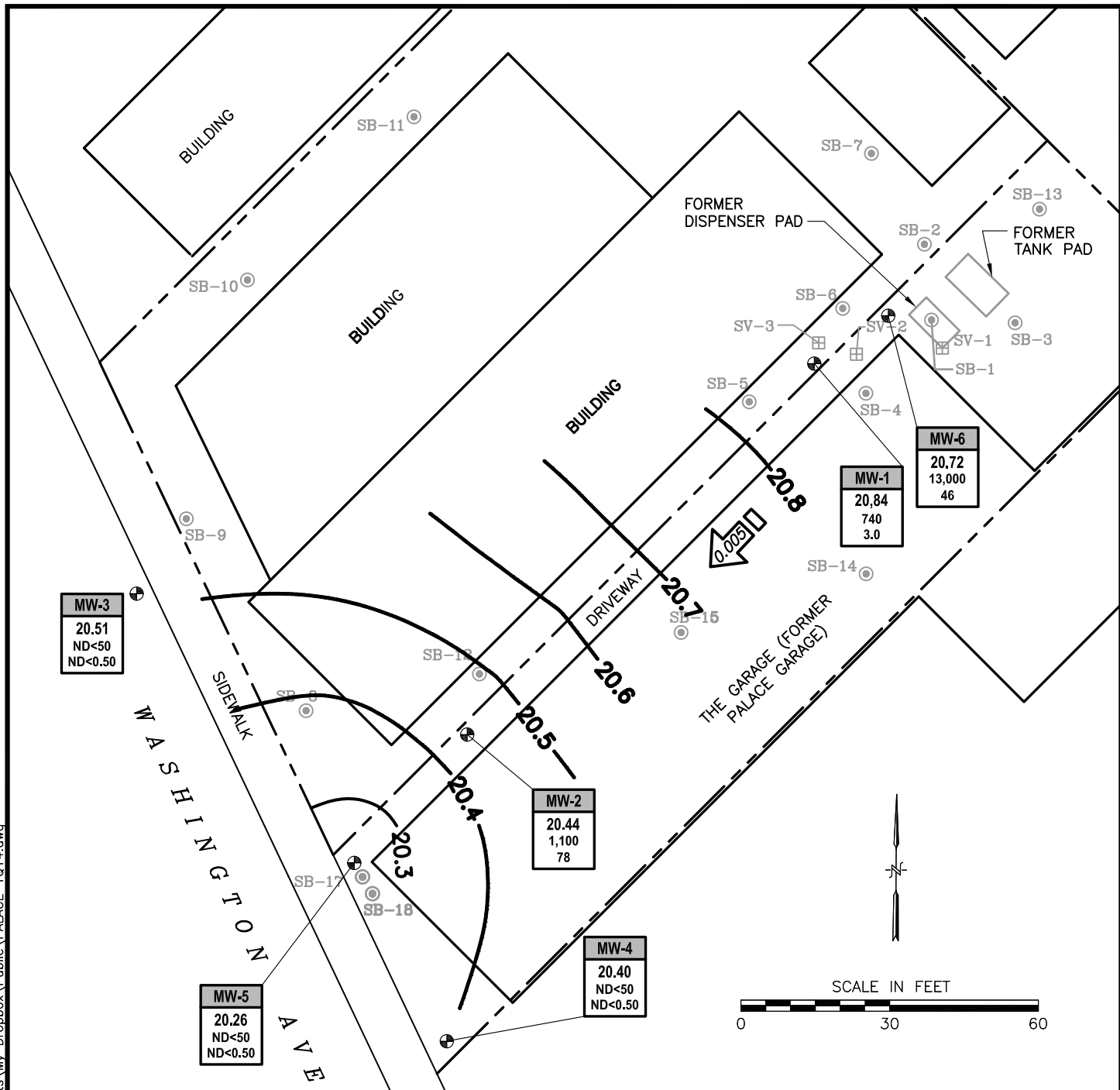
## FIGURE 1 SITE LOCATION MAP

PALACE GARAGE  
14336 WASHINGTON AVENUE  
SAN LEANDRO, CALIFORNIA

 **INNOVEX**  
ENVIRONMENTAL MANAGEMENT, INC.  
3900 Lennane Drive • Suite 130  
Sacramento • California • 95834  
Phone: (800) 988-7880



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**LEGEND:**

- GROUNDWATER MONITORING WELL LOCATION
- SOIL VAPOR PROBE
- SOIL BORING LOCATION LOCATION
- PROPERTY LINE
- |         |
|---------|
| WELL    |
| ELEV    |
| GRO     |
| BENZENE |

 WELL DESIGNATION
- |         |
|---------|
| ELEV    |
| GRO     |
| BENZENE |

 GROUNDWATER ELEVATION (FT ABOVE MSL)
- |         |
|---------|
| ELEV    |
| GRO     |
| BENZENE |

 GRO and BENZENE CONCENTRATIONS (µg/L)
- GROUNDWATER ELEVATION CONTOURS (FEET ABOVE MEAN SEA LEVEL- NAVD 88)
- GROUNDWATER FLOW DIRECTION AND GRADIENT (FT/FT)

**NOTES:**

1. BASEMAP SOURCE: MORROW SURVEYING, 2/05/03

**FIGURE 2**  
**FIRST QUARTER 2014**  
**GROUNDWATER MONITORING**  
**& SAMPLING RESULTS**  
**GROUNDWATER CONTOUR MAP**  
**FEBRUARY 7, 2014**

PALACE GARAGE  
 14336 WASHINGTON AVENUE  
 SAN LEANDRO, CALIFORNIA

**INNOVEX**  
 ENVIRONMENTAL MANAGEMENT, INC.  
 3900 Lennane Drive • Suite 230  
 Sacramento • California • 95834  
 Phone: (800) 988-7880

**Table 1**  
**Groundwater Elevation and Analytical Data**  
Palace Garage  
14336 Washington Avenue  
San Leandro, California

Well ID	Date Sampled	Casing Elevation (Feet MSL)	Depth To Water (Feet)	Groundwater Elevation (Feet)	TPHg/ GRO (mg/L)	B (mg/L)	T (mg/L)	E (mg/L)	X (mg/L)	Naphthalene (mg/L)
MW-1	12/31/2002	37.59	13.62	23.97	48,000	1,030	2,380	1,690	9,220	---
	9/22/2006		13.33	24.26	44,000	870	2,200	720	9,700	---
	12/21/2006		13.94	23.65	17,000	240	980	180	5,000	---
	3/29/2007		13.71	23.88	2,000	30	85	23	550	---
	9/27/2007		15.53	22.06	540	14	3.9	44	87	---
	12/20/2007		15.69	21.90	280	4.3	1.3	15	37	---
	2/21/2008		13.72	23.87	19,000	300	150	1,100	4,900	---
	5/15/2008		14.60	22.99	7,200	140	50	370	2,040	---
	8/7/2008		15.62	21.97	820	13	3.1	44	100	---
	11/13/2008		16.14	21.45	670	10	2.1	31	110	---
	6/19/2009		15.15	22.44	1,490	85.8	13.4	164	310	---
	11/3/2009		15.98	21.61	75	6.0	0.70	12	40.5	---
	5/4/2010		13.40	24.19	18,000	300	61	880	4,070	---
	11/8/2010		15.83	21.76	170	4.9	ND<0.50	7.7	24	---
	4/22/2011		12.34	25.25	3,800	250	48	810	3,260	---
	12/15/2011		14.77	22.82	1,500	21	0.88	29	4.6	---
	5/9/2012		13.56	24.03	20,000	190	27	810	3,150	---
	11/8/2012		15.68	21.91	630	2.8	1.4	30	51.9	---
	2/7/2013		13.99	23.60	---	---	---	---	---	---
	5/2/2013		14.65	22.94	2,000	79	13	580	1,780	180
	9/6/2013		15.96	21.63	---	---	---	---	---	---
	<b>2/7/2014</b>		<b>16.75</b>	<b>20.84</b>	<b>740</b>	<b>3.0</b>	<b>ND&lt;0.50</b>	<b>19</b>	<b>31</b>	<b>3.7</b>

**Table 1**  
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Palace Garage  
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San Leandro, California

Well ID	Date Sampled	Casing Elevation (Feet MSL)	Depth To Water (Feet)	Groundwater Elevation (Feet)	TPHg/ GRO (mg/L)	B (mg/L)	T (mg/L)	E (mg/L)	X (mg/L)	Naphthalene (mg/L)
MW-2	12/31/2002	37.12	13.38	23.74	1,670	1,030	11.00	23	16.4	---
	9/22/2006		13.25	23.87	1,800	53	1.40	14	7.5	---
	12/21/2006		13.89	23.23	--	--	--	--	--	---
	3/29/2007		13.57	23.55	2,100	51	1.30	--	4.5	---
	9/27/2007		15.37	21.75	1,600	58	0.99	12	3.7	---
	12/20/2007		15.40	21.72	1,500	63	1.1	16	4.9	---
	2/21/2008		13.60	23.52	710	23	ND<0.50	6.2	1.1	---
	5/15/2008		14.47	22.65	1,600	84	1.4	28	9.8	---
	8/7/2008		15.48	21.64	2,100	86	1.6	22	9.0	---
	11/13/2008		15.99	21.13	2,300	46	1.1	15	4.5	---
	6/19/2009		15.03	22.09	931	60.1	ND<2.0	30	3.1	---
	11/3/2009		15.87	21.25	220	22	0.55	9.4	5.05	---
	5/4/2010		12.92	24.20	950	14	0.57	9.1	13.2	---
	11/8/2010		15.71	21.41	1,900	45	1.6	44	9.28	---
	4/22/2011		12.27	24.85	1,400	30	1.2	29	5.78	---
	12/15/2011		14.86	22.26	4,300	160	26	480	790	---
	5/9/2012		13.44	23.68	4,300	21	0.65	23	7.77	---
	11/8/2012		15.54	21.58	1,700	68	2.6	63	14.4	---
	2/7/2013		13.90	23.22	---	---	---	---	---	---
	5/2/2013		14.55	22.57	2,700	140	2.9	130	9.34	790
	9/6/2013		15.81	21.31	---	---	---	---	---	---
	<b>2/7/2014</b>		<b>16.68</b>	<b>20.44</b>	<b>1,100</b>	<b>78</b>	<b>1.2</b>	<b>28</b>	<b>30</b>	<b>190</b>

**Table 1**  
**Groundwater Elevation and Analytical Data**

Palace Garage  
14336 Washington Avenue  
San Leandro, California

Well ID	Date Sampled	Casing Elevation (Feet MSL)	Depth To Water (Feet)	Groundwater Elevation (Feet)	TPHg/ GRO (mg/L)	B (mg/L)	T (mg/L)	E (mg/L)	X (mg/L)	Naphthalene (mg/L)
MW-3	12/31/2002	37.01	13.29	23.72	<50	<0.5	<0.5	<0.5	<1.0	---
	9/22/2006		13.14	23.87	<50	<0.5	<0.5	<0.5	<1.5	---
	12/21/2006		--	--	--	--	--	--	--	---
	3/29/2007		13.47	23.54	<50	<0.5	<0.5	<0.5	<1.5	---
	9/27/2007		15.29	21.72	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	---
	12/20/2007		15.30	21.71	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	---
	2/21/2008		---	---	---	---	---	---	---	---
	5/15/2008		14.35	22.66	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---
	8/7/2008		15.39	21.62	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	---
	11/13/2008		15.90	21.11	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	---
	6/19/2009		14.94	22.07	ND<50	ND<1.0	ND<1.0	ND<1.0	ND<2.0	---
	11/3/2009		15.76	21.25	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---
	5/4/2010		13.20	23.81	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.5	---
	11/8/2010		15.62	21.39	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.5	---
	4/22/2011		12.17	24.84	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.5	---
	12/15/2011		14.63	22.38	150	1.5	ND<0.50	3.0	12.2	---
	5/9/2012		13.36	23.65	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.5	---
	11/8/2012		15.48	21.53	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.5	---
	2/7/2013		13.79	23.22	---	---	---	---	---	---
	5/2/2013		14.41	22.60	75	ND<0.50	ND<0.50	ND<0.50	ND<1.50	ND<1.0
	9/6/2013		15.74	21.27	---	---	---	---	---	---
	<b>2/7/2014</b>		<b>16.50</b>	<b>20.51</b>	<b>ND&lt;50</b>	<b>ND&lt;0.50</b>	<b>ND&lt;0.50</b>	<b>ND&lt;0.50</b>	<b>ND&lt;1.5</b>	<b>ND&lt;1.0</b>

**Table 1**  
**Groundwater Elevation and Analytical Data**

Palace Garage  
14336 Washington Avenue  
San Leandro, California

Well ID	Date Sampled	Casing Elevation (Feet MSL)	Depth To Water (Feet)	Groundwater Elevation (Feet)	TPHg/ GRO (mg/L)	B (mg/L)	T (mg/L)	E (mg/L)	X (mg/L)	Naphthalene (mg/L)
MW-4	12/31/2002	37.09	13.45	23.64	<50	<0.5	<0.5	<0.5	<1.0	---
	9/22/2006		13.40	23.69	<50	<0.5	<0.5	<0.5	<1.5	---
	12/21/2006		13.86	23.23	<50	<0.5	<0.5	<0.5	<1.5	---
	3/29/2007		13.69	23.40	<50	<0.5	<0.5	<0.5	<1.5	---
	9/27/2007		15.48	21.61	ND<50	1.5	ND<0.50	0.71	0.74	---
	12/20/2007		15.28	21.81	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	---
	2/21/2008		13.56	23.53	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---
	5/15/2008		14.58	22.51	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---
	8/7/2008		15.57	21.52	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	---
	11/13/2008		16.09	21.00	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	---
	6/19/2009		15.15	21.94	ND<50	ND<1.0	ND<1.0	ND<1.0	ND<2.0	---
	11/3/2009		16.03	21.06	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---
	5/4/2010		13.11	23.98	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.5	---
	11/8/2010		15.89	21.20	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.5	---
	4/22/2011		12.40	24.69	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.5	---
	12/15/2011		15.03	22.06	86	ND<0.50	ND<0.50	ND<0.50	1.3	---
	5/9/2012		13.51	23.58	ND<50	ND<0.50	0.84	ND<0.50	ND<1.5	---
	11/8/2012		15.64	21.45	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.5	---
	2/7/2013		13.98	23.11	---	---	---	---	---	---
	5/2/2013		14.61	22.48	68	ND<0.50	ND<0.50	ND<0.50	ND<1.50	ND<1.0
	9/6/2013		15.90	21.19	---	---	---	---	---	---
	<b>2/7/2014</b>		<b>16.69</b>	<b>20.40</b>	<b>ND&lt;50</b>	<b>ND&lt;0.50</b>	<b>ND&lt;0.50</b>	<b>ND&lt;0.50</b>	<b>ND&lt;1.5</b>	<b>ND&lt;1.0</b>

**Table 1**  
**Groundwater Elevation and Analytical Data**

Palace Garage  
 14336 Washington Avenue  
 San Leandro, California

Well ID	Date Sampled	Casing Elevation (Feet MSL)	Depth To Water (Feet)	Groundwater Elevation (Feet)	TPHg/ GRO (mg/L)	B (mg/L)	T (mg/L)	E (mg/L)	X (mg/L)	Naphthalene (mg/L)
MW-5	2/2/2012	37.27	15.06	22.21	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.50	---
	5/9/2012		13.68	23.59	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.50	---
	resurvey 10/11/12	36.96								---
	11/8/2012		15.62	21.34	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.50	---
	2/7/2013		13.91	23.05	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.50	ND<1.5
	5/2/2013		14.56	22.40	82	ND<0.50	ND<0.50	ND<0.50	ND<1.50	ND<1.5
	9/6/2013		15.87	21.09	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.50	ND<1.5
	<b>2/7/2014</b>		<b>16.70</b>	<b>20.26</b>	<b>ND&lt;50</b>	<b>ND&lt;0.50</b>	<b>ND&lt;0.50</b>	<b>ND&lt;0.50</b>	<b>ND&lt;1.5</b>	<b>ND&lt;1.0</b>
MW-6	2/2/2012	37.34	14.63	22.71	17,000	340	57	1,900	2,100	---
	5/9/2012		13.26	24.08	34,000	170	310	1,700	3,920	---
	11/8/2012		15.36	21.98	9,700	210	270	2,800	3,320	---
	2/7/2013		13.63	23.71	7,700	250	240	2,800	4,790	1,100
	5/2/2013		14.35	22.99	16,000	82	36	1,200	1,050	490
	9/6/2013		15.64	21.70	19,000	130	61	1,900	1,480	830
	<b>2/7/2014</b>		<b>16.62</b>	<b>20.72</b>	<b>13,000</b>	<b>46</b>	<b>13</b>	<b>550</b>	<b>224</b>	<b>290</b>

**Table 1**  
**Groundwater Elevation and Analytical Data**  
Palace Garage  
14336 Washington Avenue  
San Leandro, California

Well ID	Date Sampled	Casing Elevation (Feet MSL)	Depth To Water (Feet)	Groundwater Elevation (Feet)	TPHg (mg/L)	B (mg/L)	T (mg/L)	E (mg/L)	X (mg/L)	Naphthalene (mg/L)
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ABBREVIATIONS:

- TPHg/ GRO total petroleum hydrocarbons as gasoline. Gasoline range organics
- B Benzene
- T Toluene
- E Ethylbenzene
- X Total xylenes
- mg/L Micrograms per liter (parts per billion [ppb])
- Not analyzed/measured/applicable
- ND< Not detected at or above specified laboratory reporting limit
- Bold** Current sampling event
- MSL mean sea level

LIMITATIONS:

Background information, including but not limited to previous field measurements, analytical results, Site plans, and other data have been obtained from previous consultants, and/or third parties, in the preparation of this report. Closure Solutions has relied on this information as furnished. Closure Solutions is not responsible for, nor has it confirmed the accuracy of data collected or generated by others.

**Table 2**  
**Fuel Oxygenate & Lead Scavenger Analytical Data**  
Palace Garage  
14336 Washington Avenue  
San Leandro, California

Well ID	Date Sampled	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)
MW-1	12/31/2002	<0.5	--	--	--	--	--	--
	9/22/2006	<1.0	--	--	--	--	--	--
	12/21/2006	3.9	--	--	--	--	--	--
	3/29/2007	<1.0	--	--	--	--	--	--
	9/27/2007	1.6	ND<5.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	12/21/2007	1.5	ND<5.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	2/21/2008	ND<7.0	ND<40	ND<7.0	ND<7.0	ND<7.0	ND<7.0	ND<7.0
	5/15/2008	ND<2.5	ND<15	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5
	8/7/2008	1.0	ND<5.0	ND<0.50	ND<0.50	ND<0.50	--	--
	11/13/2008	1.1	ND<5.0	ND<0.50	ND<0.50	ND<0.50	--	--
MW-2	12/31/2002	<0.5	--	--	--	--	--	--
	9/22/2006	<1.0	--	--	--	--	--	--
	12/21/2006	--	--	--	--	--	--	--
	3/29/2007	1.10	--	--	--	--	--	--
	9/27/2007	0.89	ND<5.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	12/20/2007	0.95	ND<5.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	2/21/2008	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	5/15/2008	ND<0.90	ND<5.0	ND<0.90	ND<0.90	ND<0.90	ND<0.90	ND<0.90
	8/7/2008	0.59	ND<5.0	ND<0.90	ND<0.90	ND<0.90	--	--
	11/13/2008	0.53	ND<5.0	ND<0.50	ND<0.50	ND<0.50	--	--



**Table 2**  
**Fuel Oxygenate & Lead Scavenger Analytical Data**  
Palace Garage  
14336 Washington Avenue  
San Leandro, California

Well ID	Date Sampled	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)
MW-3	12/31/2002	<0.5	--	--	--	--	--	--
	9/22/2006	<1.0	--	--	--	--	--	--
	12/21/2006	--	--	--	--	--	--	--
	3/29/2007	<1.0	--	--	--	--	--	--
	9/27/2007	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	12/20/2007	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	2/21/2008	--	--	--	--	--	--	--
	5/15/2008	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	8/7/2008	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<0.50	--	--
	11/13/2008	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<0.50	--	--
MW-4	12/31/2002	<0.5	--	--	--	--	--	--
	9/22/2006	<1.0	--	--	--	--	--	--
	12/21/2006	<1.0	--	--	--	--	--	--
	3/29/2007	<1.0	--	--	--	--	--	--
	9/27/2007	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	12/20/2007	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	2/21/2008	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	5/15/2008	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	8/7/2008	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<0.50	--	--
	11/13/2008	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<0.50	--	--

**Table 2**  
**Fuel Oxygenate & Lead Scavenger Analytical Data**  
Palace Garage  
14336 Washington Avenue  
San Leandro, California

Well ID	Date Sampled	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)
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**ABBREVIATIONS:**

MTBE	Methyl Tertiary Butyl Ether
TBA	Tertiary Butyl Alcohol
DIPE	Diisopropyl Ether
ETBE	Ethyl Tertiary Butyl ether
TAME	Tertiary Amyl Methyl Ether
1,2-DCA	1,2-Dichloroethane
EDB	1,2-Dibromoethane
µg/L	Micrograms per liter (parts per billion [ppb])
---	Not analyzed/measured/applicable
ND<	Not detected at or above specified laboratory reporting limit

**LIMITATIONS** Background information, including but not limited to previous field measurements, analytical results, Site plans, and other data have been obtained from previous consultants, and/or third parties, in the preparation of this report. Closure Solutions has relied on this information as furnished. Closure Solutions is not responsible for, nor has it confirmed the accuracy of data collected or generated by others.

**ATTACHMENT A**

**ACEH Correspondence**

## Matt Farris

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**From:** Matt Farris <Matt.Farris@innovex.net>  
**Sent:** Friday, March 14, 2014 7:59 PM  
**To:** 'Detterman, Mark, Env. Health'  
**Subject:** RE: Change order for Palace Garage

Thank You Mark. I appreciate it immensely.

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**From:** Detterman, Mark, Env. Health [mailto:Mark.Detterman@acgov.org]  
**Sent:** Friday, March 14, 2014 4:20 PM  
**To:** 'Matt Farris'  
**Subject:** RE: Change order for Palace Garage

What you can't do the impossible? I'm seriously disappointed! ☺

Thanks Matt. I'll extend the date to September 2, from what you've said.

Please use this email to document the change.

*Mark Detterman*  
*Senior Hazardous Materials Specialist, PG, CEG*  
*Alameda County Environmental Health*  
*1131 Harbor Bay Parkway*  
*Alameda, CA 94502*  
*Direct: 510.567.6876*  
*Fax: 510.337.9335*  
*Email: [mark.detterman@acgov.org](mailto:mark.detterman@acgov.org)*

*PDF copies of case files can be downloaded at:*

*<http://www.acgov.org/aceh/lop/ust.htm>*

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**From:** Matt Farris [mailto:Matt.Farris@innovex.net]  
**Sent:** Friday, March 14, 2014 2:47 PM  
**To:** Detterman, Mark, Env. Health  
**Subject:** Change order for Palace Garage

Hi Mark,

Just wanted to let you know I've been trying to contact the Fund to get a status report on the recent change order request I submitted for Palace Garage in San Leandro. So far no word on a decision. It's likely they won't have one either before the upcoming March 28 deadline for the revised CAP the county has requested has passed. As such I'm still behind the eight ball. There is no budget left for the site in the 2013/14 fiscal year. In addition, you may recall the previous change order request submitted back in July 2013 for the site was denied for this fiscal year. As such I'm unsure if we will be granted additional funds this year even with the new site information. If you have any connections with the Fund, would you be willing to ask and see if you can get an answer on the status? Otherwise I humbly ask that the extension I've requested to move the due date for the revised CAP to September 2, 2014 be granted. If you have any questions please feel free to call me.

Thanks,  
Matt

## **ATTACHMENT B**

### **Field Procedures and Field Data Sheets**



## **Standard Operating Procedures: Basic Gauge, Purge, and Sample.**

### **Routine Water Level Measurements**

1. Confirm that water or debris will not enter the well box upon removal of the well box lid.
2. Remove the cover using the appropriate tools.
3. Inspect the wellhead for deficiencies and document accordingly.
4. Confirm that water or debris will not enter the well upon removal of the well cap.
5. Unlock and remove the well cap lock (if applicable). If lock is not functional cut it off.
6. Loosen and remove the well cap. **CAUTION: DO NOT PLACE YOUR FACE OR HEAD DIRECTLY OVER WELLHEAD WHEN REMOVING THE WELL CAP. WELL CAP MAY BE UNDER PRESSURE AND/OR MAY RELEASE ACCUMULATED AND POTENTIALLY HARMFUL VAPORS.**
7. Verify and identify survey point as written on S.O.W.  
TOC: If survey point is listed as Top of Casing (TOC), look for the exact survey point in the form of a notch or mark on the top of the casing. If no mark is present, use the north side of the casing as the measuring point.  
TOB: If survey point is listed as Top of Box (TOB), the measuring point will be established manually. Place the inverted well box lid halfway across the well box opening and directly over the casing. The lower edge of the inverted cover directly over the casing will be the measuring point.
8. Put new Nitrile gloves on your hands.
9. Slowly lower the decontaminated water level meter probe into the well until it signals contact with water with a tone and/or flashing a light.
10. Gently raise the probe tip slightly above the water and hold it there. Wait momentarily to see if the meter emits a tone, signaling rising water in the casing. Gently lower the probe tip slightly below the water. Wait momentarily to see if the meter stops emitting a tone, signaling dropping water in the casing. Continue process until water level stabilizes indicating that the well has equilibrated.
11. While holding the probe at first contact with water and the tape against the measuring point, note depth. Repeat twice to verify accuracy. Write down measurement on well gauging sheet under depth to water column.
12. Recover probe, replace and tighten well cap, replace lock (if applicable), replace well box cover and tighten hardware (if applicable).

### **Purging With a Bailer (Teflon or Disposable)**

1. Attach bailer cord or string to bailer. Leave other end attached to spool.
2. Gently lower empty bailer into well until well bottom is reached.
3. Cut cord from spool. Tie a loop at end cord.
4. Gently raise full bailer out of well and clear of wellhead. Do not let the bailer or cord touch the ground.
5. Pour contents into graduated 5-gallon bucket or other graduated receptacle.
6. Repeat purging process.
7. Upon removal of first casing volume, fill clean parameter cup with purge water, empty the remainder of the purge water into the bucket, lower the bailer back into the well and secure the cord on the Sampling Vehicle.
8. Use the water in the cup to collect and record parameter measurements.
9. Continue purging until second casing volume is removed.

10. Collect parameter measurements.
11. Continue purging until third casing volume is removed.

### **Purging With a Fixed Speed Electric Submersible Pump**

1. Position thoroughly decontaminated pump over the top of the well.
2. Gently unreel and lower the pump to the well bottom.
3. Raise the pump to client specified location within screened interval. If no direction is given the pump inlet will be placed 5 feet above the bottom of the well.
4. Secure the hose reel.
5. Begin purging.
6. Verify pump rate with flow meter or graduated 5-gallon bucket.
7. Upon removal of first casing volume, fill clean parameter cup with water.
8. Use the water in the cup to collect and record parameter measurements.
9. Continue purging until second casing volume is removed.
10. Collect parameter measurements.
11. Continue purging until third casing volume is removed.
12. Upon completion of purging, gently recover the pump and secure the reel.

### **Sampling with a Bailer (Teflon or Disposable)**

1. Put new Latex or Nitrile gloves on your hands.
2. Determine required bottle set.
3. Fill out sample labels completely and attach to bottles.
4. Arrange bottles in filling order and loosen caps (see Determine Collection Order below).
5. Attach bailer cord or string to bailer. Leave other end attached to spool.
6. Gently lower empty bailer into well until water is reached.
7. As bailer fills, cut cord from spool and tie end of cord to hand.
8. Gently raise full bailer out of well and clear of wellhead. Do not let the bailer or cord touch the ground. If a set of parameter measurements is required, go to step 9. If no additional measurements are required, go to step 11.
9. Fill a clean parameter cup, empty the remainder contained in the bailer into the sink, lower the bailer back into the well and secure the cord on the sampling vehicle. Use the water in the cup to collect and record parameter measurements.
10. Fill bailer again and carefully remove it from the well.
11. Slowly fill and cap sample bottles. Fill and cap volatile compounds first, then semivolatile, then inorganic (see following steps). Return to the well as needed for additional sample material.
12. Fill 40-milliliter vials for volatile compounds as follows: Slowly pour water down the inside on the vial. Carefully pour the last drops creating a convex or positive meniscus on the surface. Gently screw the cap on eliminating any air space in the vial. Turn the vial over, tap several times and check for trapped bubbles. If bubbles are present, repeat the process.
13. Fill 1 liter amber bottles for semi-volatile compounds as follows: Slowly pour water into the bottle. Leave approximately 1 inch of headspace in the bottle. Cap bottle.
14. Field filtering of inorganic samples using a disposable bailer is performed as follows: Attach 0.45 micron filter to connector plug. Attach connector plug to bottom of full disposable bailer. Gravity feed water through the filter and into the sample bottle. If high turbidity level of water clogs filter, repeat process with new filter until bottle is filled. Leave headspace in the bottle. Cap bottle.
15. Bag samples and place in ice chest.
16. Note sample collection details on well data sheet and Chain of Custody.





# GROUND WATER MONITORING WELL SAMPLING FIELD DATA SHEET

Project Name: Palace Garage Date: Feb. 7, 2014

Sample No.: MW-1

Samplers Name: Kevin Dolan

Purge Equipment:  
 \_\_\_\_\_ Bailer: Disposable or Acrylic  
X 12 v. Pump -  
 \_\_\_\_\_ Bladder Pump  
 \_\_\_\_\_ SS Monsoon #

Sample Equipment:  
X Disposable Bailer  
 \_\_\_\_\_ Whaler # \_\_\_\_\_  
 \_\_\_\_\_ Bladder Pump  
 \_\_\_\_\_ Submersible Pump

Analyses Requested (circle all that apply):  
TPH-G / BTEX / Naphtalene      3 voa's w/hc  
 \_\_\_\_\_  
 \_\_\_\_\_

Well Number: MW-1      Well Diameter: 2" with Casing Volume of:  
 Depth to Water: 16.75 TOC      2" = (0.16 Gallon/Feet)  
 Well Depth: 23.25 BGS or TOC      4" = (0.65 Gallon/Feet)  
 Height W-Column: 6.50 feet (well depth - depth to water)      5" = (1.02 Gallon/Feet)  
 Volume in Well: 1.04 gallons (casing volume X height)      6" = (1.47 Gallon/Feet)  
 Gallons to purge: 3.12 gallons (volume X 3)      3/4" = (.0625 G/Ft)

Lab: SunStar      Transportation: \_\_\_\_\_

Time (24 hr.)	Volume Purged (Gallons)	Temperature (°C)	Conductivity (ms/cm)	D.O. (ppm)	pH	TDS (ppm)	Turbidity: Color - Fines	Micropurge Parameters Stabilized
1420	<u>Start</u>	_____	_____	_____	_____	_____	<u>NTU:</u>	_____
1422	1.10	19.00	0.956	4.70	6.82	✓	113' clear, min	_____
1425	2.20	18.90	0.951	4.26	6.74	✓	81'	_____
1428	3.25	18.90	0.936	4.04	6.67	✓	74' ↓ ↓	_____
Stop	Purge	Complete	_____	_____	_____	_____	_____	_____

**Wait for 80% well volume recovery prior to sampling.**  
 Calculate depth to water (from TOC), for 80% well volume recovery:

Calculate 80% of original well volume:

Original Height of Water Column =  $6.50 \times 0.8 = 5.20$  - (Well Depth)  $23.25 =$  Depth to water  $18.05$

Time: 1520 1st measured depth to water, 16.76 feet below TOC.      Is well within 80% of original well casing volume: Yes \_\_\_\_\_ No \_\_\_\_\_  
 Time: \_\_\_\_\_ 1st measured depth to water, \_\_\_\_\_ feet below TOC.      Is well within 80% of original well casing volume: Yes \_\_\_\_\_ No \_\_\_\_\_  
 Time: \_\_\_\_\_ 1st measured depth to water, \_\_\_\_\_ feet below TOC.      Is well within 80% of original well casing volume: Yes \_\_\_\_\_ No \_\_\_\_\_

**Sample Well**

Time: 1521      Sample ID: MW-1      Depth: 16.76

Comments: Moderate to clear - no silt

Well Condition: Good

# GROUND WATER MONITORING WELL SAMPLING FIELD DATA SHEET

Project Name: Palace Garage Date: Feb. 7, 2014

Sample No.: MW-2

Samplers Name: Kevin Dolan

Purge Equipment:  
 Bailer: Disposable or Acrylic  
 12 v. Pump -  
 Bladder Pump  
 SS Monsoon #

Sample Equipment:  
 Disposable Bailer  
 Whaler # \_\_\_\_\_  
 Bladder Pump  
 Submersible Pump

Analyses Requested (circle all that apply):  

TPH-G / BTEX / Naphtalene	3 voa's w/hc
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Well Number: MW-2 Well Diameter: 2" with Casing Volume of:  
 Depth to Water: 16.68 TOC 2" = (0.16 Gallon/Feet)  
 Well Depth: 23.64 BGS or TOC 4" = (0.65 Gallon/Feet)  
 Height W-Column: 6.96 feet (well depth - depth to water) 5" = (1.02 Gallon/Feet)  
 Volume in Well: 1.11 gallons (casing volume X height) 6" = (1.47 Gallon/Feet)  
 Gallons to purge: 3.33 gallons (volume X 3) 3/4" = (.0625 G/Ft)

Lab: SunStar Transportation: \_\_\_\_\_

Time (24 hr.)	Volume Purged (Gallons)	Temperature (°C)	Conductivity (ms/cm)	D.O. (ppm)	pH	TDS (ppm)	Turbidity: Color - Fines	Micropurge Parameters Stabilized
1303	Start	---	---	---	---	---	NTN:	
1305	1.10	19.10	0.986	4.19	6.70	✓	103; clear, min	
1307	2.30	19.00	0.981	3.83	6.68	✓	91;	
1310	3.50	18.80	0.979	3.71	6.63	✓	85: ↓ ↓	
Stop	Purge	Complete						
Z								

**Wait for 80% well volume recovery prior to sampling.**  
 Calculate depth to water (from TOC), for 80% well volume recovery:

Calculate 80% of original well volume:  
 Original Height of Water Column =  $6.96 \times 0.8 = 5.57$  (Well Depth)  $23.64 =$  Depth to water  $18.07$

Time: 1510 1st measured depth to water, 16.69 feet below TOC. Is well within 80% of original well casing volume: Yes  No   
 Time: \_\_\_\_\_ 1st measured depth to water, \_\_\_\_\_ feet below TOC. Is well within 80% of original well casing volume: Yes  No   
 Time: \_\_\_\_\_ 1st measured depth to water, \_\_\_\_\_ feet below TOC. Is well within 80% of original well casing volume: Yes  No

**Sample Well**

Time: 1512 Sample ID: MW-2 Depth: 16.69

Comments: NO odor - NO Sheen

Well Condition: Good

# GROUND WATER MONITORING WELL SAMPLING FIELD DATA SHEET

Project Name: Palace Garage Date: Feb. 7, 2014

Sample No.: MW-3

Samplers Name: Kevin Dolan

Purge Equipment:  
 Bailer: Disposable or Acrylic  
 12 v. Pump -  
 Bladder Pump  
 SS Monsoon #

Sample Equipment:  
 Disposable Bailer  
 Whaler # \_\_\_\_\_  
 Bladder Pump  
 Submersible Pump

Analyses Requested (circle all that apply):

<u>TPH-G / BTEX / Naphtalene</u>	<u>3 voa's w/hc</u>

Number and Types of Bottle Used:

Well Number: MW-3 Well Diameter: 2" with Casing Volume of:  
 Depth to Water: 16.50 TOC 2" = (0.16 Gallon/Feet)  
 Well Depth: 23.06 BGS or TOC 4" = (0.65 Gallon/Feet)  
 Height W-Column: 6.56 feet (well depth - depth to water) 5" = (1.02 Gallon/Feet)  
 Volume in Well: 1.05 gallons (casing volume X height) 6" = (1.47 Gallon/Feet)  
 Gallons to purge: 3.15 gallons (volume X 3) 3/4" = (.0625 G/Ft)

Lab: SunStar

Transportation:

Time (24 hr.)	Volume Purged (Gallons)	Temperature (°C)	Conductivity (ms/cm)	D.O. (ppm)	pH	TDS (ppm)	Turbidity: Color - Fines	Micropurge Parameters Stabilized
1245	Start	—	—	—	—	—	NTU:	
1247	1.10	18.90	0.724	4.13	6.29	✓	211: clear, min	
1250	2.20	18.70	0.716	4.02	6.24	✓	153	
1254	3.25	18.70	0.704	3.68	6.14	✓	130: ↓ ↓	
Stop!	Purge Complete							

**Wait for 80% well volume recovery prior to sampling.**

Calculate depth to water (from TOC), for 80% well volume recovery:

Calculate 80% of original well volume:

Original Height of Water Column =  $6.56 \times 0.8 = 5.25$  - (Well Depth)  $23.06 =$  Depth to water  $17.81$

Time: 1450 1st measured depth to water, 16.52 feet below TOC.  
 Time: \_\_\_\_\_ 1st measured depth to water, \_\_\_\_\_ feet below TOC.  
 Time: \_\_\_\_\_ 1st measured depth to water, \_\_\_\_\_ feet below TOC.

Is well within 80% of original well casing volume: Yes  No \_\_\_\_\_  
 Is well within 80% of original well casing volume: Yes \_\_\_\_\_ No \_\_\_\_\_  
 Is well within 80% of original well casing volume: Yes \_\_\_\_\_ No \_\_\_\_\_

Sample Well

Time: 1452 Sample ID: MW-3 Depth: 16.52

Comments: NO odor - NO Sheen

Well Condition: \_\_\_\_\_

# GROUND WATER MONITORING WELL SAMPLING FIELD DATA SHEET

Project Name: Palace Garage Date: Feb. 7, 2014

Sample No.: \_\_\_\_\_

Samplers Name: Kevin Dolan

Purge Equipment:  
 Bailer: Disposable or Acrylic  
 12 v. Pump - Foot valve ✓  
 Bladder Pump  
 SS Monsoon #

Sample Equipment:  
 Disposable Bailer  
 Whaler # \_\_\_\_\_  
 Bladder Pump  
 Submersible Pump

Analyses Requested (circle all that apply):  
TPH-G / BTEX / Naphtalene 3 voa's w/hc

Well Number: MW-4 Well Diameter: 34 with Casing Volume of:  
 Depth to Water: 16.69 TOC 2" = (0.16 Gallon/Feet)  
 Well Depth: 21.85 BGS or TOC 4" = (0.65 Gallon/Feet)  
 Height W-Column: 5.16 feet (well depth - depth to water) 5" = (1.02 Gallon/Feet)  
 Volume in Well: 0.32 gallons (casing volume X height) 6" = (1.47 Gallon/Feet)  
 Gallons to purge: 0.96 gallons (volume X 3) 3/4" = (.0625 G/Ft)  
 Lab: SunStar Transportation: \_\_\_\_\_

Time (24 hr.)	Volume Purged (Gallons)	Temperature (°C)	Conductivity (ms/cm)	D.O. (ppm)	pH	TDS (ppm)	Turbidity: Color - Fines NTU:	Micropurge Parameters Stabilized
1220	Start							
1222	.30	18.20	0.718	5.06	7.26	—	512: Brown, many	
1224	.60	18.40	0.696	5.03	7.21	—	490: ↓ ↓	
1227	1.00	18.50	0.684	5.00	7.14	—	483: ↓ ↓	
Stop	Purge	complete						

**Wait for 80% well volume recovery prior to sampling.**  
 Calculate depth to water (from TOC), for 80% well volume recovery:

Calculate 80% of original well volume:  
 Original Height of Water Column = 5.16 x 0.8 = 4.12 - (Well Depth) 21.85 = Depth to water 17.73

Time: 1235 1st measured depth to water, 16.86 feet below TOC. Is well within 80% of original well casing volume: Yes X No \_\_\_\_\_  
 Time: \_\_\_\_\_ 1st measured depth to water, \_\_\_\_\_ feet below TOC. Is well within 80% of original well casing volume: Yes \_\_\_\_\_ No \_\_\_\_\_  
 Time: \_\_\_\_\_ 1st measured depth to water, \_\_\_\_\_ feet below TOC. Is well within 80% of original well casing volume: Yes \_\_\_\_\_ No \_\_\_\_\_

### Sample Well

Time: 1236 Sample ID: MW-4 Depth: 16.86

Comments: NO odor - NO Sheen

Well Condition: \_\_\_\_\_

# GROUND WATER MONITORING WELL SAMPLING FIELD DATA SHEET

Project Name: Palace Garage Date: Feb. 7, 2014

Sample No.: MW-5

Samplers Name: Kevin Dolan

Purge Equipment:  
 Bailer: Disposable or Acrylic  
 12 v. Pump -  
 Bladder Pump  
 SS Monsoon #

Sample Equipment:  
 Disposable Bailer  
 Whaler # \_\_\_\_\_  
 Bladder Pump  
 Submersible Pump

Analyses Requested (circle all that apply): Number and Types of Bottle Used:

<u>TPH-G / BTEX / Naphtalene</u>	<u>3 voa's w/hc</u>
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Well Number: MW-5 Well Diameter: \_\_\_\_\_ with Casing Volume of:  
 Depth to Water: 16.70 TOC 2" = (0.16 Gallon/Feet)  
 Well Depth: 17.6 BGS or TOC 4" = (0.65 Gallon/Feet)  
 Height W-Column: 0.90 feet (well depth - depth to water) 5" = (1.02 Gallon/Feet)  
 Volume in Well: .14 gallons (casing volume X height) 6" = (1.47 Gallon/Feet)  
 Gallons to purge: 0.43 gallons (volume X 3) 3/4" = (.0625 G/Ft)

Lab: SunStar Transportation: \_\_\_\_\_

Time (24 hr.)	Volume Purged (Gallons)	Temperature (°C)	Conductivity (ms/cm)	D.O. (ppm)	pH	TDS (ppm)	Turbidity: Color - Fines	Micropurge Parameters Stabilized
<u>1323</u>	<u>Start</u>	_____	_____	_____	_____	_____	<u>NTU</u>	_____
<u>1326</u>	<u>.20</u>	<u>19.10</u>	<u>0.741</u>	<u>4.60</u>	<u>6.27</u>	✓	<u>412</u> : <u>Hazy Brown, many</u>	_____
<u>1329</u>	<u>.40</u>	<u>19.00</u>	<u>0.732</u>	<u>4.26</u>	<u>6.20</u>	✓	<u>386</u> : <u>↓ ↓</u>	_____
<u>1334</u>	<u>.60</u>	<u>18.80</u>	<u>0.712</u>	<u>4.11</u>	<u>6.14</u>	✓	<u>370</u> : <u>↓ ↓</u>	_____
<u>Stop!</u>	<u>Purge</u>	<u>Complete</u>	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

**Wait for 80% well volume recovery prior to sampling.**  
 Calculate depth to water (from TOC), for 80% well volume recovery:

Calculate 80% of original well volume:  
 Original Height of Water Column =  $0.90 \times 0.8 = 0.72$  - (Well Depth) 17.6 = Depth to water 16.88

Time: 1502 1st measured depth to water, 16.72 feet below TOC. Is well within 80% of original well casing volume: Yes  No   
 Time: \_\_\_\_\_ 1st measured depth to water, \_\_\_\_\_ feet below TOC. Is well within 80% of original well casing volume: Yes  No   
 Time: \_\_\_\_\_ 1st measured depth to water, \_\_\_\_\_ feet below TOC. Is well within 80% of original well casing volume: Yes  No

**Sample Well**

Time: 1504 Sample ID: MW-5 Depth: 16.72

Comments: No odor - no sheen

Well Condition: Good -

# GROUND WATER MONITORING WELL SAMPLING FIELD DATA SHEET

Project Name: Palace Garage Date: Feb. 7, 2014  
 Sample No.: MW-6

Samplers Name: Kevin Dolan

**Purge Equipment:**

- Bailer: Disposable or Acrylic
- 12 v. Pump -
- Bladder Pump
- SS Monsoon #

**Sample Equipment:**

- Disposable Bailer
- Whaler # \_\_\_\_\_
- Bladder Pump
- Submersible Pump

**Analyses Requested (circle all that apply):**

<u>TPH-G / BTEX / Naphtalene</u>	<u>3 voa's w/hc</u>
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**Number and Types of Bottle Used:**

Well Number: MW-6 Well Diameter: 2" with Casing Volume of:  
 Depth to Water: 16.62 TOC 2" = (0.16 Gallon/Feet)  
 Well Depth: 19.6 BGS or TOC 4" = (0.65 Gallon/Feet)  
 Height W-Column: 2.98 feet (well depth - depth to water) 5" = (1.02 Gallon/Feet)  
 Volume in Well: 0.47 gallons (casing volume X height) 6" = (1.47 Gallon/Feet)  
 Gallons to purge: 1.43 gallons (volume X 3) 3/4" = (.0625 G/Ft)

Lab: SunStar

**Transportation:**

Time (24 hr.)	Volume Purged (Gallons)	Temperature (°C)	Conductivity (ms/cm)	D.O. (ppm)	pH	TDS (ppm)	Turbidity: Color - Fines NTU:	Micropurge Parameters Stabilized
1351	Start	—	—	—	—	—	—	—
1355	0.50	19.00	0.991	4.03	6.73	—	470: Hazy Brown, many	—
1401	1.00	18.80	0.980	3.78	6.64	—	462: ↓ ↓	—
1407	1.50	18.60	0.974	3.71	6.60	—	450: ↓ ↓	—
Stop	purge complete	—	—	—	—	—	—	—
2	15	—	—	—	—	—	—	—

**Wait for 80% well volume recovery prior to sampling.**

Calculate depth to water (from TOC), for 80% well volume recovery:

Calculate 80% of original well volume:

Original Height of Water Column =  $2.98 \times 0.8 = 2.38$  - (Well Depth)  $19.6 =$  Depth to water  $17.22$

Time: 1528 1st measured depth to water, 16.62 feet below TOC.  
 Time: \_\_\_\_\_ 1st measured depth to water, \_\_\_\_\_ feet below TOC.  
 Time: \_\_\_\_\_ 1st measured depth to water, \_\_\_\_\_ feet below TOC.

Is well within 80% of original well casing volume: Yes  No \_\_\_\_\_  
 Is well within 80% of original well casing volume: Yes \_\_\_\_\_ No \_\_\_\_\_  
 Is well within 80% of original well casing volume: Yes \_\_\_\_\_ No \_\_\_\_\_

**Sample Well**

Time: 1530 Sample ID: MW-6 Depth: 16.62

Comments: Moderate HC odor - NO SNEEN

Well Condition: Good -

## **ATTACHMENT C**

**Laboratory Procedures, Certified Laboratory Analytical Reports and Chain-of-Custody Records**



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949.297.5027 Fax

14 February 2014

Matt Farris  
Innovex-Environmental Management, Inc.  
2300 Clayton Rd. Suite 1435  
Concord, CA 94520  
RE: Palace Garage

Enclosed are the results of analyses for samples received by the laboratory on 02/11/14 08:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Katherine RunningCrane  
Project Manager





25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Innovex-Environmental Management, Inc. 2300 Clayton Rd. Suite 1435 Concord CA, 94520	Project: Palace Garage Project Number: [none] Project Manager: Matt Farris	<b>Reported:</b> 02/14/14 16:08
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**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	T140242-01	Water	02/07/14 15:21	02/11/14 08:45
MW-2	T140242-02	Water	02/07/14 15:12	02/11/14 08:45
MW-3	T140242-03	Water	02/07/14 14:52	02/11/14 08:45
MW-4	T140242-04	Water	02/07/14 12:36	02/11/14 08:45
MW-5	T140242-05	Water	02/07/14 15:04	02/11/14 08:45
MW-6	T140242-06	Water	02/07/14 15:30	02/11/14 08:45

SunStar Laboratories, Inc.

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*Katherine RunningCrane*

Katherine RunningCrane, Project Manager



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Innovex-Environmental Management, Inc. 2300 Clayton Rd. Suite 1435 Concord CA, 94520	Project: Palace Garage Project Number: [none] Project Manager: Matt Farris	Reported: 02/14/14 16:08
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**MW-1**  
**T140242-01 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**SunStar Laboratories, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

<b>Naphthalene</b>	<b>3.7</b>	1.0	ug/l	1	4021107	02/11/14	02/12/14	EPA 8260B	
<b>Benzene</b>	<b>3.0</b>	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>19</b>	0.50	"	"	"	"	"	"	
<b>m,p-Xylene</b>	<b>30</b>	1.0	"	"	"	"	"	"	
<b>o-Xylene</b>	<b>1.0</b>	0.50	"	"	"	"	"	"	
<b>C6-C12 (GRO)</b>	<b>740</b>	50	"	"	"	"	"	"	
Surrogate: Toluene-d8		98.5 %	88.8-117		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		108 %	83.5-119		"	"	"	"	
Surrogate: Dibromofluoromethane		99.6 %	81.1-136		"	"	"	"	

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*Katherine RunningCrane*

Katherine RunningCrane, Project Manager



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Innovex-Environmental Management, Inc. 2300 Clayton Rd. Suite 1435 Concord CA, 94520	Project: Palace Garage Project Number: [none] Project Manager: Matt Farris	<b>Reported:</b> 02/14/14 16:08
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**MW-2**  
**T140242-02 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**SunStar Laboratories, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

Naphthalene	190	5.0	ug/l	5	4021107	02/11/14	02/12/14	EPA 8260B	
Benzene	78	0.50	"	1	"	"	"	"	
Toluene	1.2	0.50	"	"	"	"	"	"	
Ethylbenzene	28	0.50	"	"	"	"	"	"	
m,p-Xylene	2.0	1.0	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
<b>C6-C12 (GRO)</b>	<b>1100</b>	<b>50</b>	"	"	"	"	"	"	
Surrogate: Toluene-d8		102 %		88.8-117	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %		83.5-119	"	"	"	"	
Surrogate: Dibromofluoromethane		102 %		81.1-136	"	"	"	"	

SunStar Laboratories, Inc.

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*Katherine RunningCrane*

Katherine RunningCrane, Project Manager



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Innovex-Environmental Management, Inc. 2300 Clayton Rd. Suite 1435 Concord CA, 94520	Project: Palace Garage Project Number: [none] Project Manager: Matt Farris	Reported: 02/14/14 16:08
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**MW-3**  
**T140242-03 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**SunStar Laboratories, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

Naphthalene	ND	1.0	ug/l	1	4021107	02/11/14	02/12/14	EPA 8260B	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	1.0	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
C6-C12 (GRO)	ND	50	"	"	"	"	"	"	
Surrogate: Toluene-d8		102 %	88.8-117		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	83.5-119		"	"	"	"	
Surrogate: Dibromofluoromethane		98.4 %	81.1-136		"	"	"	"	

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*Katherine RunningCrane*

Katherine RunningCrane, Project Manager



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Innovex-Environmental Management, Inc. 2300 Clayton Rd. Suite 1435 Concord CA, 94520	Project: Palace Garage Project Number: [none] Project Manager: Matt Farris	Reported: 02/14/14 16:08
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**MW-4**  
**T140242-04 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**SunStar Laboratories, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

Naphthalene	ND	1.0	ug/l	1	4021107	02/11/14	02/12/14	EPA 8260B	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	1.0	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
C6-C12 (GRO)	ND	50	"	"	"	"	"	"	
Surrogate: Toluene-d8		102 %	88.8-117		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	83.5-119		"	"	"	"	
Surrogate: Dibromofluoromethane		98.2 %	81.1-136		"	"	"	"	

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Katherine RunningCrane, Project Manager



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Innovex-Environmental Management, Inc. 2300 Clayton Rd. Suite 1435 Concord CA, 94520	Project: Palace Garage Project Number: [none] Project Manager: Matt Farris	Reported: 02/14/14 16:08
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**MW-5**  
**T140242-05 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**SunStar Laboratories, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

Naphthalene	ND	1.0	ug/l	1	4021107	02/11/14	02/12/14	EPA 8260B	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	1.0	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
C6-C12 (GRO)	ND	50	"	"	"	"	"	"	
Surrogate: Toluene-d8		99.9 %	88.8-117		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	83.5-119		"	"	"	"	
Surrogate: Dibromofluoromethane		98.4 %	81.1-136		"	"	"	"	

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Katherine RunningCrane, Project Manager



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Innovex-Environmental Management, Inc. 2300 Clayton Rd. Suite 1435 Concord CA, 94520	Project: Palace Garage Project Number: [none] Project Manager: Matt Farris	<b>Reported:</b> 02/14/14 16:08
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**MW-6**  
**T140242-06 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**SunStar Laboratories, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

Naphthalene	290	10	ug/l	10	4021107	02/11/14	02/12/14	EPA 8260B	
Benzene	46	0.50	"	1	"	"	"	"	
Toluene	13	0.50	"	"	"	"	"	"	
Ethylbenzene	550	5.0	"	10	"	"	"	"	
m,p-Xylene	210	1.0	"	1	"	"	"	"	
o-Xylene	14	0.50	"	"	"	"	"	"	
C6-C12 (GRO)	13000	500	"	10	"	"	"	"	
Surrogate: Toluene-d8		100 %		88.8-117	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.4 %		83.5-119	"	"	"	"	
Surrogate: Dibromofluoromethane		96.8 %		81.1-136	"	"	"	"	

SunStar Laboratories, Inc.

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*Katherine RunningCrane*

Katherine RunningCrane, Project Manager

Innovex-Environmental Management, Inc.  
2300 Clayton Rd. Suite 1435  
Concord CA, 94520

Project: Palace Garage  
Project Number: [none]  
Project Manager: Matt Farris

**Reported:**  
02/14/14 16:08

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**

**SunStar Laboratories, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 4021107 - EPA 5030 GCMS**

**Blank (4021107-BLK1)**

Prepared: 02/11/14 Analyzed: 02/12/14

Naphthalene	ND	1.0	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
m,p-Xylene	ND	1.0	"							
o-Xylene	ND	0.50	"							
C6-C12 (GRO)	ND	50	"							
<i>Surrogate: Toluene-d8</i>	8.14		"	8.00		102	88.8-117			
<i>Surrogate: 4-Bromofluorobenzene</i>	8.55		"	8.00		107	83.5-119			
<i>Surrogate: Dibromofluoromethane</i>	7.91		"	8.00		98.9	81.1-136			

**LCS (4021107-BS1)**

Prepared: 02/11/14 Analyzed: 02/12/14

Chlorobenzene	18.2	1.0	ug/l	20.0		90.8	75-125			
1,1-Dichloroethene	16.4	1.0	"	20.0		82.2	75-125			
Trichloroethene	17.8	1.0	"	20.0		89.0	75-125			
Benzene	17.9	0.50	"	20.0		89.4	75-125			
Toluene	17.9	0.50	"	20.0		89.6	75-125			
<i>Surrogate: Toluene-d8</i>	7.93		"	8.00		99.1	88.8-117			
<i>Surrogate: 4-Bromofluorobenzene</i>	8.46		"	8.00		106	83.5-119			
<i>Surrogate: Dibromofluoromethane</i>	8.12		"	8.00		102	81.1-136			

**Matrix Spike (4021107-MS1)**

Source: T140242-01

Prepared: 02/11/14 Analyzed: 02/12/14

Chlorobenzene	19.4	1.0	ug/l	20.0	ND	97.0	75-125			
1,1-Dichloroethene	17.5	1.0	"	20.0	ND	87.6	75-125			
Trichloroethene	18.2	1.0	"	20.0	ND	91.2	75-125			
Benzene	21.9	0.50	"	20.0	3.05	94.2	75-125			
Toluene	18.8	0.50	"	20.0	0.250	93.0	75-125			
<i>Surrogate: Toluene-d8</i>	7.89		"	8.00		98.6	88.8-117			
<i>Surrogate: 4-Bromofluorobenzene</i>	8.09		"	8.00		101	83.5-119			
<i>Surrogate: Dibromofluoromethane</i>	7.99		"	8.00		99.9	81.1-136			

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager



Innovex-Environmental Management, Inc.  
2300 Clayton Rd. Suite 1435  
Concord CA, 94520

Project: Palace Garage  
Project Number: [none]  
Project Manager: Matt Farris

**Reported:**  
02/14/14 16:08

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**

**SunStar Laboratories, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 4021107 - EPA 5030 GCMS**

<b>Matrix Spike Dup (4021107-MSD1)</b>	<b>Source: T140242-01</b>			Prepared: 02/11/14		Analyzed: 02/12/14				
Chlorobenzene	20.2	1.0	ug/l	20.0	ND	101	75-125	3.89	20	
1,1-Dichloroethene	19.0	1.0	"	20.0	ND	95.2	75-125	8.37	20	
Trichloroethene	19.4	1.0	"	20.0	ND	97.2	75-125	6.42	20	
Benzene	22.5	0.50	"	20.0	3.05	97.2	75-125	2.70	20	
Toluene	20.3	0.50	"	20.0	0.250	100	75-125	7.21	20	
<i>Surrogate: Toluene-d8</i>	7.92		"	8.00		99.0	88.8-117			
<i>Surrogate: 4-Bromofluorobenzene</i>	8.17		"	8.00		102	83.5-119			
<i>Surrogate: Dibromofluoromethane</i>	8.10		"	8.00		101	81.1-136			

SunStar Laboratories, Inc.

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager



25712 Commercentre Drive  
Lake Forest, California 92630  
949.297.5020 Phone  
949.297.5027 Fax

Innovex-Environmental Management, Inc.  
2300 Clayton Rd. Suite 1435  
Concord CA, 94520

Project: Palace Garage  
Project Number: [none]  
Project Manager: Matt Farris

**Reported:**  
02/14/14 16:08

### Notes and Definitions

DET Analyte DETECTED  
ND Analyte NOT DETECTED at or above the reporting limit  
NR Not Reported  
dry Sample results reported on a dry weight basis  
RPD Relative Percent Difference

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SunStar Laboratories, Inc.

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

*Katherine RunningCrane*

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Katherine RunningCrane, Project Manager

SunStar Laboratories, Inc.  
 25712 Commercentre Dr  
 Lake Forest, CA 92630  
 949-297-5020

### Chain of Custody Record

T140242

Client: IMMOVEX ENV. MGT.  
 Address: 2300 Clayton Rd., St. 1435, Concord, CA  
 Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
 Project Manager: MATT FARRIS

Date: 2/10/14 Page: 1 Of 1  
 Project Name: PALACE GARAGE  
 Collector: K. Dolan Client Project #: \_\_\_\_\_  
 Batch #: 1Q 2014 EDF #: T0600101043

Sample ID	Date Sampled	Time	Sample Type	Container Type	8260 (TPH, g/BTEX)	8260 + OXY	8260 BTEX, OXY only	8270	8021 BTEX	8015M (gasoline)	8015M (diesel)	8015M Ext./Carbon Chain	6010/7000 Title 22 Metals	Laboratory ID #	Comments/Preservative	Total # of containers
MW-1	2/7/14	1521	GN	4 VOLS W/12L	X									01		
MW-2		1512												02		
MW-3		1452												03		
MW-4		1236												04		
MW-5		1504												05		
MW-6		1530												06		
<b>STD. TAT</b>																
Relinquished by: (signature) <u>[Signature]</u> Date / Time <u>9:15 2/10/14</u>			Received by: (signature) <u>[Signature]</u> Date / Time <u>2:22:30 2/10/14</u>			Total # of containers <u>24</u>		Chain of Custody seals Y/N/NA <u>Y</u>		Seals intact? Y/N/NA <u>Y</u>		Received good condition/cold <u>2.4</u>		Notes: <u>work order: results to m.farris@immovex-env.com kdolan@ " "</u>		
Relinquished by: (signature) <u>[Signature]</u> Date / Time <u>3:45 2/11/14</u>			Received by: (signature) <u>[Signature]</u> Date / Time <u>3:45 2/11/14</u>			Turn around time: <u>STD</u>										
Relinquished by: (signature) _____ Date / Time _____			Received by: (signature) _____ Date / Time _____													

Sample disposal Instructions: Disposal @ \$2.00 each \_\_\_\_\_ Return to client \_\_\_\_\_ Pickup \_\_\_\_\_

## SAMPLE RECEIVING REVIEW SHEET

BATCH # T190242

Client Name: INNOVEX

Project: PALACE GARAGE

Received by: BRIAN

Date/Time Received: 2/11/19 8:45

Delivered by:  Client  SunStar Courier  GSO  FedEx  Other \_\_\_\_\_

Total number of coolers received 1 Temp criteria = 6°C > 0°C (no frozen containers)

Temperature: cooler #1 2.6 °C +/- the CF (- 0.2°C) = 2.4 °C corrected temperature

cooler #2 \_\_\_\_\_ °C +/- the CF (- 0.2°C) = \_\_\_\_\_ °C corrected temperature

cooler #3 \_\_\_\_\_ °C +/- the CF (- 0.2°C) = \_\_\_\_\_ °C corrected temperature

Samples outside temp. but received on ice, w/in 6 hours of final sampling.  Yes  No\*  N/A

Custody Seals Intact on Cooler/Sample  Yes  No\*  N/A

Sample Containers Intact  Yes  No\*

Sample labels match COC ID's  Yes  No\*

Total number of containers received match COC  Yes  No\*

Proper containers received for analyses requested on COC  Yes  No\*

Proper preservative indicated on COC/containers for analyses requested  Yes  No\*  N/A

Complete shipment received in good condition with correct temperatures, containers, labels, volumes preservatives and within method specified holding times.  Yes  No\*

\* Complete Non-Conformance Receiving Sheet if checked

Cooler/Sample Review - Initials and date BC 2/11/19

Comments:

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