



January 31, 2019

Ms. Lynn Nakashima  
Project Manager  
Department of Toxic Substances Control  
700 Heinz Avenue, Suite 200  
Berkeley, California

Subject: Annual Groundwater and Surface Water Monitoring Report, January 1 through December 31, 2018, Campus Bay, Richmond, California

Dear Ms. Nakashima:

Terraphase Engineering Inc. (Terraphase) has prepared the enclosed subject report on behalf of Zeneca Inc., to present groundwater and surface water monitoring data collected between January 1 through December 31, 2017 at the former Zeneca property, now known as Campus Bay, located in Richmond, California ("the Site"). This annual groundwater monitoring report was prepared to meet the requirements of the Site Investigation and Remediation Order, Docket No. IS/E-RAO 06/07-005 ("the Order"), issued by the Department of Toxic Substances Control (DTSC) on September 15, 2006. Terraphase is submitting this report to the DTSC to fulfill the requirements of the respondents under the Order.

If you have any questions or comments regarding the report, please feel free to contact me at 510-326-1473.

Sincerely,

For Terraphase Engineering Inc.

A handwritten signature in blue ink, appearing to read "Andrew Romolo".

Andrew Romolo, P.G. (8110)  
Vice President and Principal Geologist

Enclosure

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**ANNUAL GROUNDWATER AND SURFACE WATER  
MONITORING REPORT  
JANUARY 1 THROUGH DECEMBER 31, 2018  
CAMPUS BAY, RICHMOND, CALIFORNIA**

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*Prepared for*

Zeneca Inc.

*Prepared by*

Terraphase Engineering Inc.  
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January 31, 2019

Project Number 0009.002.038B



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MW-24

## ACRONYMS AND ABBREVIATIONS

1,2-DCA	1,2-dichloroethane
AMR	Annual Groundwater and Surface Water Monitoring Report
AMSL	above mean sea level
Arcadis	Arcadis U.S. Inc.
AWQC	ambient water quality criteria
BAPB	Biologically Active Permeable Barrier
bgs	below ground surface
BS	blank spike
BSD	blank spike duplicate
CaCO <sub>3</sub>	calcium carbonate
CCV	Continuing Calibration Verification
cis-1,2-DCE	cis-1,2-dichloroethene
CSV	Cherokee Simeon Venture I, LLC
CT	carbon tetrachloride
DTSC	Department of Toxic Substances Control
EDD	electronic data deliverable
EKI	Erler & Kalinowski, Inc
EPA	United States Environmental Protection Agency
ERD	enhanced reductive dechlorination
ESM	East Stege Marsh
FS/RAP	Feasibility Study/Remedial Action Plan
ft/ft	foot per foot
GMW	groundskeeper maintenance worker
HA-2	Habitat Area 2
HHRA	Human Health Risk Assessment
ID	identification
IMW	temporary monitoring well prefix
LCS	laboratory control sample

LH	lower horizon
MCL	maximum contaminant level
mg/L	milligrams per liter
MS	matrix spike
MSD	matrix spike duplicate
MW	monitoring well prefix
NA	not applicable
NGVD	National Geodetic Vertical Datum
Order	DTSC Site Investigation and Remediation Order, Docket No. IS/E-RAO 06/07-005
ORP	oxidation reduction potential
PCE	tetrachloroethene
PZ	piezometer prefix
QAPP	Quality Assurance Project Plan
QA/QC	quality assurance/quality control
RPD	Relative Percent Difference
RL	laboratory reporting limit
RWQCB	California Regional Water Quality Control Board
Site	Campus Bay
SMR	Semi-Annual Groundwater and Surface Water Monitoring Report
SSG	Site-Specific Goal
SU	standard units
TCE	trichloroethene
TDS	total dissolved solids
Terraphase	Terraphase Engineering, Inc.
trans-1,2-DCE	trans-1,2-dichloroethene
TSS	total suspended solids
µg/L	micrograms per liter
UC BGC	University of California Berkeley Global Campus at Richmond Bay
UCL	upper confidence level
UH	upper horizon

VC              vinyl chloride

VOA            volatile organic analyte

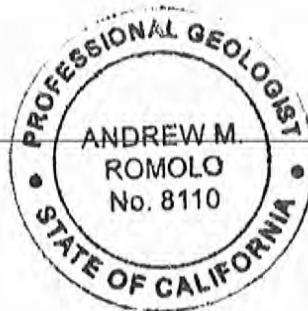
VOC            volatile organic compound

## CERTIFICATION

All geologic information, conclusions, and recommendations in this document have been prepared by a California Professional Geologist.



Andrew Romolo, P.G. (8110)  
Vice President and Principal Geologist



January 31, 2019

Date

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## 1.0 INTRODUCTION

Terraphase Engineering Inc. (Terraphase) has prepared this Annual Groundwater and Surface Water Monitoring Report (AMR) on behalf of Zeneca Inc. for the former Zeneca property, now known as Campus Bay, located in Richmond, California ("the Site;" Figures 1 and 2).

Groundwater and surface water monitoring is performed in accordance with the requirements of the California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) Site Investigation and Remediation Order, Docket No. IS/E-RAO 06/07-005 ("the Order"), which was issued by the DTSC on September 15, 2006 (DTSC 2006). Terraphase has prepared this AMR to fulfill the reporting obligations of the respondents under the Order; namely, Zeneca Inc., The Regents of the University of California, Bayer Crop Science Inc., and Cherokee Simeon Venture I, LLC (CSV). The groundwater sampling, monitoring and laboratory analysis were completed in accordance with the methods, procedures, and sample matrix provided in Appendix A.

This AMR discusses the data from groundwater and surface water samples collected from January 1 to December 31, 2018 ("the Reporting Period") and provides the historical chemical concentration data and data trends (Appendix B and Appendix C, respectively) from January 2003 through December 2018. Groundwater and surface water monitoring were conducted in accordance with the "Comprehensive Monitoring Plan, Subunit 1 of Meade Street Operable Unit, Former Zeneca Inc., Richmond Facility, Richmond, California," dated November 7, 2002 (LFR 2002) as modified by the California Regional Water Quality Control Board's (RWQCB's) review comments. The 2018 Semi-Annual Groundwater and Surface Water Monitoring Report (SMR; Terraphase 2018a) included the laboratory data reports and data validation reports for samples collected for the first half of the year (from January 1 through June 30, 2018) and are not repeated in this AMR. The laboratory data reports for the samples collected during the second half of the year (i.e., July 1 through December 31, 2018) are included in Appendix D. Data validation reports for the second half of the year (i.e., July 1 through December 31, 2018) are included in Appendix E.

This AMR presents the results for monitoring data collected during the Reporting Period from groundwater monitoring wells and surface water sampling locations that are part of the regular monitoring program at the Site.

### 1.1 Site Information

The following summarizes the Site information as it pertains to the Respondents requirements stipulated by the Order.

<b>Site Location</b>	Campus Bay 1360 South 49 <sup>th</sup> Street Richmond, California 94804
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<b>Site Contact</b>	Charles Elmendorf Zeneca Inc. 1800 Concord Pike P.O. Box 15437 Wilmington, Delaware 19850-5437
<b>Primary Consultant/Contact Person For Upland Groundwater Monitoring</b>	Andrew Romolo, P.G. (8110) Vice President and Principal Geologist Terraphase Engineering Inc. 1404 Franklin Street, Suite 600 Oakland California 94612 (510) 326-1473
<b>Lead Regulatory Agency</b>	DTSC
<b>Lead Regulatory Agency Contact</b>	Lynn Nakashima Department of Toxic Substances Control 700 Heinz Avenue, Suite 200 Berkeley, California 94710-2721 (510) 540-3839

## 2.0 WORK PERFORMED THIS MONITORING PERIOD

The following presents the groundwater and surface water monitoring activities completed at the Site during the Reporting Period. For reference, this section also discusses additional field activities conducted at the Site during the Reporting Period that are not directly related to groundwater and surface water monitoring.

- Semi-annual groundwater level measurements and sampling took place April 2, 2018 through April 16, 2018 and from August 13, 2018 through August 23, 2018. The groundwater sampling, monitoring and laboratory analysis were completed in accordance with the methods, procedures, and sample matrix provided in Appendix A. The second semi-annual monitoring event was conducted in August 2018 to accommodate the Habitat Area 2 (HA-2) remediation that began in September 2018.
- Storm water samples were collected in January through April 2018 and November through December 2018 from two of the three outfall locations: Outfall 002 and Outfall 003. During the Reporting Period, maintenance was completed on the autosamplers located at Outfall 002 and Outfall 003. In February 2018, the two pumps located in Outfall 002 vault were replaced. In September 2018, remediation of HA-2 began. Since the HA-2 remediation activities involve reconfiguration of Stormwater Outfall 002, the stormwater that would normally discharge at Outfall 002 has been temporarily rerouted to discharged at Outfall 001 until HA-2 remediation activities are complete.
- Inspection and maintenance of the temporary cap was completed by Arcadis U.S. Inc. (Arcadis) in 2018. The results of the cap inspections during the first half of 2018 (January through June 2018) were presented in a separate report submitted to the DTSC on August 1, 2018. The results of the cap inspections during the second half of 2018 will be presented in the Temporary Cap Inspection Summary Report scheduled to be submitted under separate cover by February 1, 2019.
- East Stege Marsh (ESM) monitoring activities were conducted in accordance with the ESM Operations and Maintenance Program (Arcadis 2013).
- Monitoring well maintenance activities were performed concurrently with the sampling activities to address monitoring well conditions noted during the sampling activities in April and August 2018. Maintenance activities included removing surface water from well boxes, and cleaning the well boxes, gaskets, and bolts with a wire brush. Further details are included in Appendix A.
- In September 2018, Arcadis began HA-2 remediation activities. Progress of the remediation activities are summarized by Arcadis in monthly construction reports submitted to the DTSC.

### 3.0 GROUNDWATER MONITORING SUMMARY

<b>Project Phase</b>	<ul style="list-style-type: none"><li>• Groundwater Monitoring and Sampling.</li><li>• Feasibility Study/Remedial Action Plan (FS/RAP).</li></ul>
<b>Number of wells Monitored/Sampled</b>	<p>In April and August 2018, depth-to-water measurements were collected from 93 monitoring wells and piezometers. Groundwater samples were collected from 84 monitoring wells and piezometers.</p> <p>In December 2017, following the annual groundwater monitoring event, five of the monitoring wells included in Appendix A were abandoned by Arcadis as approved by DTSC (DTSC 2017). The five groundwater monitoring wells abandoned were MW-16A, MW-16B, MW-17, PZ-13, and PZ-14. These wells have been removed from the groundwater monitoring program.</p> <p>A map of sample locations within the monitoring network is presented on Figure 2. The groundwater monitoring well construction details are summarized in Table 1. A map of the sample locations for the University of California Berkeley Global Campus at Richmond Bay (UC BGC) wells is provided in Appendix F.</p>
<b>Frequency of Monitoring/Sampling</b>	Semi-annual
<b>Groundwater Elevation Range</b>	<p>Groundwater elevation at the Site ranged from 3.87 to 14.98 feet above mean sea level (AMSL) National Geodetic Vertical Datum (NGVD) during the April 2018 sampling event. Groundwater elevation at the Site ranged from 1.39 to 11.63 feet AMSL NGVD during the August 2018 sampling event.</p> <p>Table 2 provides depth to groundwater and groundwater elevation data for the Site collected during the Reporting Period. Historical depth to groundwater and groundwater elevation data are included in Appendix B.</p>
<b>Groundwater Horizons</b>	Two water bearing units have been identified at the Site (Woodward 1993): the upper horizon (UH; identified as groundwater shallower than 25 feet below ground surface [bgs]) and the lower horizon (LH; identified as groundwater deeper than 25 feet bgs).

<b>Groundwater Gradient and Flow Direction</b>	<p><b>Upper Horizon Groundwater</b> In April 2018, the hydraulic gradient between wells MW-26 and MW-29 was calculated as 0.0028 foot per foot (ft/ft) and the groundwater flow direction was generally to the south. In August 2018, the hydraulic gradient between wells MW-26 and MW-29 was calculated as 0.0030 ft/ft and the groundwater flow direction was generally to the south.</p> <p><b>Lower Horizon Groundwater</b> In April 2018, the hydraulic gradient between wells IMW-29 and MW-10B was calculated as 0.0040 ft/ft and the groundwater flow direction was generally to the south. In August 2018, the hydraulic gradient between wells IMW-29 and MW-10B was calculated as 0.0037 ft/ft and the groundwater flow direction was generally to the south.</p> <p>The flow directions and gradients observed during the Reporting Period are generally consistent with the measurements collected during previous reporting periods.</p> <p>Groundwater elevation contour maps from April 2018 for upper horizon and lower horizon groundwater are provided on Figures 3A and 4A, respectively. Groundwater elevation contour maps from August 2018 for upper horizon and lower horizon groundwater are provided in Figures 3B and 4B, respectively.</p> <p>Groundwater flow is variable due to tidal influences. Tide data is included in Appendix A, Attachment A-2 for April 2, 2018 and August 13, 2018, the dates on which depth to groundwater measurements were collected.</p>
<b>Upper Horizon/Lower Horizon Vertical Gradient</b>	<p>In April 2018, the vertical gradient between the upper and lower horizons in monitoring well pairs were measured to be downward at two locations (well pairs MW-10A/10B and MW-11A/11B) and upward at one location (well pair MW-32A/32B).</p> <p>In August 2018, the vertical gradient between the upper and lower horizons in monitoring well pairs were measured to be downward at one location (well pair MW-32A/32B) and upward at two locations (well pairs MW-10A/10B and MW-11A/11B).</p>

	<p>Vertical gradients in the vicinity of ESM are influenced by the tidal cycle and can vary depending on the time the measurement was collected relative to the tidal cycle.</p>
<b>Field Measurements</b>	<p>The field measurements recorded during the collection of groundwater samples during the Reporting Period are included in Table 6. Water quality parameters were documented during sampling. Groundwater pH as measured at the time of sample collection is presented in Figures 5A, 5B, 6A, and 6B for the upper horizon wells and lower horizon wells in April and August, respectively. Groundwater field data forms for the second half of the year (i.e., from July 1 through December 31, 2018) are provided in Appendix A.</p>
<b>Analytical Results</b>	<p>Tables 3 through 6 and 8 present groundwater analytical data for groundwater samples collected during the Reporting Period. Details regarding screening criteria are presented in Table 7 and are based on site-specific goals (SSGs) presented in the Revised Human Health Risk Assessment (HHRA) prepared by Erler &amp; Kalinowski, Inc. (EKI 2008) and the revised SSGs for trichloroethene (TCE) prepared by Terraphase (Terraphase 2012) and presented in the FS/RAP for Lot 1, Lot 2, and the Uplands Portion of Lot 3, Campus Bay, Richmond, California (Terraphase 2018b). For reference, the applicable screening criteria presented in Table 7 are also included on Tables 3, 4, 5, and 8.</p> <p>Isoconcentration maps for the reporting period are presented in Figures 7A, 7B, 9A, 9B, 11A, 11B, 13A, 13B, 15A, 15B, 17A, 17B, 19A, 19B, 21A and 21B, which include results pertaining to upper horizon groundwater concentrations of tetrachloroethene (PCE), TCE, vinyl chloride (VC), 1,2-dichloroethane (1,2-DCA), arsenic, copper, nickel, and zinc. Corresponding lower horizon groundwater results are presented in Figures 8A, 8B, 10A, 10B, 12A, 12B, 14A, 14B, 16A, 16B, 18A, 18B, 20A, 20B, 22A and 22B respectively.</p> <p>Groundwater analytical results for samples collected from each monitoring well since 2003 have been tabulated and are included electronically in Appendix B. Additionally, concentration-versus-time graphs for constituents that exceeded screening criteria during the Reporting Period are presented in Appendix C. The</p>

	<p>concentration-versus-time graphs and analytical laboratory reports for the UC BGC monitoring wells are provided in Appendix F.</p>
<b>Changes in Site Conditions and Groundwater Concentration Trends</b>	<p>Concentration trends for analytes that exceeded screening criteria during the Reporting Period are discussed in Sections 3.1 and 3.2. No significant changes in Site conditions were noted relative to the conditions reported in the 2018 SMR (Terraphase 2018a). A few wells showed concentration increases relative to the previous monitoring event (April 2018) as noted in Sections 3.1 and 3.2. These trends will continue to be monitored.</p> <p>Long-term groundwater monitoring conducted in monitoring well MW-24 indicates that toluene (the primary contaminant of concern in this well) has not been detected above the SSG since April 2013. The United States Environmental Protection Agency's (EPA's) Groundwater Statistics Tool was used to evaluate the concentration of toluene detected in this well using the last 5 years of groundwater data for MW-24. The EPAs Groundwater Statistics Tool calculated the 95% Upper Confidence Level (UCL) of the mean of the data set as 62.3 micrograms per liter (<math>\mu\text{g}/\text{L}</math>), below the maximum contaminant level (MCL) of 150 <math>\mu\text{g}/\text{L}</math>. A copy of the output of the Groundwater Statistics Tool is included in Appendix G. The analysis indicates that the concentration of toluene detected in MW-24 is below the lowest applicable SSG (the maximum contaminant level) and that the concentration is anticipated to be below the lowest applicable SSG in the future.</p>

### 3.1 Volatile Organic Compounds

The following table presents a summary of the wells that exceeded the screening criteria for volatile organic compounds (VOCs; data summarized in Table 3) and a brief summary of the observed concentration trends in each well since groundwater monitoring began in the well. The trend analysis is based on a review of a best fit trend line for the data presented in the concentration-versus-time graphs provided in Appendix C. Concentration-versus time graphs for the UC BGC wells are provided in Appendix F. An 'X' in the table indicates an exceedance of the respective criterion; if blank no exceedance is observed. During the Reporting Period, the following VOCs were detected above the site specific screening criteria: benzene, carbon tetrachloride (CT), 1,2-DCA, cis-1,2-dichloroethene (cis-1,2-DCE), PCE, trans-1,2dichloroethene (trans-1,2-DCE), TCE, and VC. In general, a review of the data indicates that where enhanced reductive dechlorination (ERD) has been pilot tested, concentrations of cis-1,2-DCE and VC have increased, coupled with decreases in PCE and TCE concentrations. These cis-1,2-DCE and VC

increases are expected with the degradation process being monitored in these areas and can be addressed upon implementation of the recommended remedy proposed in the FS/RAP.

Well ID	Ground-water Horizon	Analyte	Residential SSG	Commercial/ Industrial SSG	Groundskeeper/ Maintenance Worker SSG 5x, 40x, or 160x Aquatic Criteria	Drinking Water Standard	Trend
<b>Lot 1</b>							

*Lot 1-2 ERD Pilot Study Area (pilot study implemented in Oct – Nov 2006)*

IMW-1	UH	VC	X			NA	X	Generally decreasing since October 2012
IMW-2	UH	VC	X	X		NA	X	General decrease August 2009 until April 2013; Fluctuates since April 2013
IMW-3	UH	VC	X	X		NA	X	General decrease November 2011 until October 2015; General increase since October 2015
IMW-4	UH	VC	X	X <sub>F</sub>		NA	X	Fluctuates seasonally

*Lot 1-5 & MW-25 ERD Pilot Study Area (implemented November – December 2009)*

IMW-15	LH	cis-1,2-DCE				NA	X	Fluctuates, but generally increasing from October 2012 to April 2014; general decreasing trend since October 2015
		VC				NA	X	Generally increasing since October 2013
IMW-16	LH	cis-1,2-DCE				NA	X	Generally increasing since May 2010
		TCE				NA	X <sub>S</sub>	Generally decreasing since October 2009
		VC				NA	X	Generally increasing since August 2010
IMW-17	LH	cis-1,2-DCE				NA	X	Increase from February 2010 to October 2015. Generally decreasing since October 2015
		TCE				NA	X <sub>S</sub>	Generally decreasing since September 2006

Well ID	Ground-water Horizon	Analyte	Residential SSG	Commercial/ Industrial SSG	Groundskeeper/ Maintenance Worker SSG	5x, 40x, or 160x Aquatic Criteria	Drinking Water Standard	Trend	
		VC				NA	X <sub>F</sub>	Generally increasing since April 2014; concentration increase in August 2018 relative to April 2018 event	
IMW-23	UH	TCE				NA	X	Fluctuates; overall decreasing since October 2009	
IMW-26		cis-1,2-DCE				NA	X <sub>F</sub>	General decrease from October 2012 until October 2016; Fluctuates seasonally since October 2016	
		TCE				NA	X <sub>F</sub>	Generally decreasing since October 2009	
		VC	X	X		NA	X	Fluctuates; overall decreasing since October 2015	
IMW-27	UH	cis-1,2-DCE				NA	X	Fluctuates seasonally, but general decrease since October 2015	
		PCE	X <sub>F</sub>		X <sub>F</sub>	NA	X	Fluctuates seasonally, but generally decreasing since October 2014	
		TCE				NA	X	Fluctuates, but overall decreasing since May 2010	
		VC	X	X		NA	X	Fluctuates seasonally; General increase April 2014 until October 2016; General decrease since October 2016	
IMW-28	UH	cis-1,2-DCE				NA	X	Fluctuates seasonally; General decrease since November 2010	
		PCE				NA	X <sub>S</sub>	Generally stable from January 2013 to April 2015; Seasonal fluctuations beginning in October 2015; Overall decreasing since October 2016	
		TCE	X			NA	X	Fluctuates; generally decreasing since April 2014	

Well ID	Ground-water Horizon	Analyte	Residential SSG	Commercial/ Industrial SSG	Groundskeeper/ Maintenance Worker SSG	5x, 40x, or 160x Aquatic Criteria	Drinking Water Standard	Trend
IMW-29	LH	VC	X	X	X <sub>F</sub>	NA	X	Fluctuates; generally increasing since April 2011
		cis-1,2-DCE				NA	X	Slight increasing trend since April 2015
		trans-1,2-DCE				NA	X	Increase beginning October 2014; stable concentrations since October 2015
		TCE				NA	X	Decreasing since October 2009
IMW-30	UH	VC				NA	X	Increasing from August 2010 to April 2014; decreasing April 2014 to October 2015; Generally increasing since October 2015
		cis-1,2-DCE				NA	X	Generally decreasing October 2012 to April 2017; increase from April 2017
		TCE	X	X		NA	X	No detections above the laboratory reporting limit from April 2011 to October 2017; Increase since October 2017
IMW-31	UH	VC				NA	X <sub>s</sub>	No detections above the laboratory reporting limit from December 2011 to October 2017; increase since April 2016
		cis-1,2-DCE				NA	X	Fluctuates, but overall decreasing relative to previous concentrations since October 2015
		VC	X	X		NA	X	Increasing trend from April 2013 to October 2016. Decreasing trend since October 2016.
IMW-33	LH	cis-1,2-DCE				NA	X	Fluctuates, but overall increasing since October 2012
		VC				NA	X	Fluctuates, overall increasing trend since October 2013

Well ID	Ground-water Horizon	Analyte	Residential SSG	Commercial/ Industrial SSG	Groundskeeper/ Maintenance Worker SSG 5x, 40x, or 160x Aquatic Criteria	Drinking Water Standard	Trend	
MW-25R	UH	cis-1,2-DCE			NA	X	Fluctuates	
		PCE	X	X <sub>F</sub>	X	NA	X	Fluctuates; General decrease since April 2015
		TCE				NA	X	Fluctuates, but overall decreasing since October 2009
		VC	X	X		NA	X	Fluctuates, but overall decreasing since October 2015
MW-27	UH	VC				X <sub>F</sub>	Fluctuates seasonally	
MW-30	UH	TCE			NA	X	Stable since April 2015	
		VC			NA	X <sub>s</sub>	Results were less than the reporting limit from installation in 2006 until April 2015; minor increases since April 2015	
PZ-11	UH	cis-1,2-DCE			NA	X	Fluctuates; Generally decreasing since October 2015	
		trans-1,2-DCE				X <sub>F</sub>	Generally decreasing since October 2013	
		TCE			NA	X	Decreasing since October 2009	
		VC	X	X	NA	X	Fluctuates; generally increasing since April 2016	
PZ-12	UH	VC	X	X	NA	X	Generally increasing December 2011 to April 2016: Fluctuates seasonally since April 2016	
<b>Lot 2</b>								
<i>Lot 2-27 ERD Pilot Study Area (pilot study implemented November 2006)</i>								
IMW-22	UH	1,2-DCA			NA	X	Decreasing from April 2006 to April 2013; increase from April 2014 to April 2015 relative to previous years; General decrease since October 2015	
		cis-1,2-DCE			NA	X <sub>s</sub>	Fluctuates but general decrease since October 2013.	

Well ID	Ground-water Horizon	Analyte	Residential SSG	Commercial/ Industrial SSG	Groundskeeper/ Maintenance Worker SSG	5x, 40x, or 160x Aquatic Criteria	Drinking Water Standard	Trend
		VC	X	X <sub>s</sub>		NA	X	Fluctuates, but overall increasing from April 2011 to October 2014; decreasing trend since October 2014.
IMW-5	UH	cis-1,2-DCE				NA	X	Slight increasing trend since October 2015.
		VC	X	X		NA	X	Increasing trend since October 2015.
IMW-6	UH	1,2-DCA				NA	X	Generally decreasing trend August 2008 to April 2014; overall stable since October 2015
		cis-1,2-DCE				NA	X	Overall decrease from 2007; Increase from April 2013 to April 2014, followed by a decreasing trend; stable since April 2015
		TCE				NA	X <sub>s</sub>	Overall decrease from 2007; Stable since April 2010
		VC	X			NA	X	Overall decrease since April 2014; increase in April 2018 and August 2018 relative to October 2017
IMW-7	UH	1,2-DCA	X	X <sub>s</sub>		NA	X	Overall decreasing since September 2006; increasing since October 2016
		VC				NA	X <sub>s</sub> *	Fluctuates, but overall decreasing since 2007
IMW-8	UH	cis-1,2-DCE				NA	X	Concentrations stable from August 2008 to October 2013; decrease since April 2014
		VC	X	X		NA	X	Concentrations appear stable since October 2015.
MW-31	UH	1,2-DCA				NA	X	Overall decreasing trend since November 2008

Well ID	Ground-water Horizon	Analyte	Residential SSG	Commercial/ Industrial SSG	Groundskeeper/ Maintenance Worker SSG	5x, 40x, or 160x Aquatic Criteria	Drinking Water Standard	Trend
		TCE				NA	X	Overall decrease from April 2006; stable since October 2010
<b>Lot 3</b>								
MW-2	UH	VC	X <sub>S</sub>				NA	Increase April 2015 to April 2017; general decrease since April 2017
MW-3	UH	VC	X				NA	Fluctuates; generally increasing since April 2012
MW-5	UH	VC	X <sub>S</sub>				NA	Generally stable since 2004
MW-6	UH	VC	X				NA	Fluctuates but increasing since October 2013
MW-13	UH	PCE	X <sub>F</sub>	X <sub>F</sub>	X <sub>F</sub>		NA	Fluctuates; generally decreasing since 2003
		TCE	X <sub>F</sub>				NA	Fluctuates; generally increasing since April 2013
MW-18	UH	PCE	X		X		NA	Fluctuates; generally increasing since July 2003
MW-22	UH	TCE	X	X			NA	Fluctuates; generally decreasing since August 2009
		VC	X <sub>F</sub>	X <sub>F</sub>			NA	Fluctuates; overall decreasing since 2003
MW-29	UH	PCE	X <sub>F</sub>	X <sub>F</sub>	X <sub>F</sub>		NA	Increase from April 2013 to October 2015; general decrease since October 2015
<i>MW-19 ERD Pilot Study Area (Implemented January – February 2011)</i>								
MW-19	UH	PCE	X		X		NA	Overall decrease since July 2003
		VC	X	X	X		NA	Increase from October 2011 to April 2013, general decrease October 2013 to October 2015; slight increasing trend since April 2016

Well ID	Ground-water Horizon	Analyte	Residential SSG	Commercial/ Industrial SSG	Groundskeeper/ Maintenance Worker SSG	5x, 40x, or 160x Aquatic Criteria	Drinking Water Standard	Trend
MW-20	UH	PCE			X <sub>s</sub>		NA	Fluctuates; generally decreasing since October 2004
MW-32A	UH	PCE	X	X	X		NA	Fluctuates; increasing since April 2013
		TCE	X <sub>s</sub>				NA	Fluctuates
IMW-42	UH	PCE	X	X	X		NA	Fluctuates; General decrease since April 2014
		VC	X <sub>s</sub>				NA	Fluctuates; General decrease since April 2015
IMW-43	UH	VC	X <sub>F</sub>	X <sub>F</sub>			NA	Generally increasing since April 2014
<i>MW-21 ERD Pilot Study Area (implemented November – December 2010)</i>								
MW-21	UH	PCE	X	X	X		NA	Overall decreasing since 2003
		VC	X <sub>F</sub>				NA	First detection above laboratory reporting limit in August 2018
IMW-45	UH	VC	X	X <sub>s</sub>			NA	Increase from October 2012 to October 2014; decreasing since October 2014; Slight increase since October 2016
IMW-48	UH	PCE	X		X		NA	Decreasing from October 2011 to April 2013, stable since October 2015
		VC	X <sub>F</sub>				NA	First detection above laboratory reporting limit in August 2018
<i>Lot 3 Subarea ERD Pilot Study Area (implemented January 2011)</i>								
IMW-50	UH	VC	X <sub>s</sub>	X <sub>s</sub>			NA	Decreasing since December 2011
IMW-57	UH	Benzene	X	X			NA	Generally decreasing since June 2011
		VC	X	X			NA	Generally increasing October 2013 to April 2015; decreasing since April 2015
<i>Lot 3 Groundwater Investigation (Implemented April-May 2014)</i>								
	UH	CT	X	X	X*		NA	Fluctuates**

Well ID	Ground-water Horizon	Analyte	Residential SSG	Commercial/ Industrial SSG	Groundskeeper/ Maintenance Worker SSG 5x, 40x, or 160x Aquatic Criteria	Drinking Water Standard	Trend
IMW-58		TCE	X <sub>F</sub> *			NA	Fluctuates seasonally; slight increasing trend since October 2014
		VC	X <sub>F</sub>			NA	Fluctuates seasonally; generally stable
IMW-62	UH	PCE	X <sub>S</sub>	X		NA	Increasing trend April 2014 to October 2016; generally decreasing trend since April 2017
		TCE	X	X <sub>F</sub>		NA	Fluctuates seasonally, but overall increasing
		VC	X	X		NA	Fluctuates seasonally, but overall decrease since October 2013
<b>DTSC Wells</b>							
DTSC-MW-1	UH	TCE				X	Slight fluctuations; overall decreasing since 2010
		1,2-DCA				X	Slight fluctuations; overall decreasing since 2010
DTSC-MW-2	UH	TCE				X	Fluctuates; slight increasing trend since 2014
		1,2-DCA				X	Fluctuates; Stable since 2009
DTSC-MW-4	UH	TCE				X	Fluctuates but generally decreasing since August 2010
		1,2-DCA				X	Generally decreasing trend since February 2009
<b>UC BGC BAPB Wells</b>							
MW-41	UH	PCE		X		NA	Fluctuates seasonally; overall decreasing since 2013
MW-42	UH	PCE		X	X	NA	Stable since installation in 2013
MW-43	UH	PCE		X		NA	Fluctuates, but generally stable since October 2014

Table Notes:

X = exceedance during both April and August 2018 sampling events

X<sub>S</sub> = exceedance during April 2018 (spring) sampling event

X<sub>F</sub> = exceedance during August 2018 (fall) sampling event

BAPPB = biologically active permeable barrier

trans-1,2-DCE = trans-1,2-dichloroethene

IMW = temporary monitoring well prefix

MW = monitoring well prefix

NA = not applicable

PZ = piezometer prefix

\* = the analytical result exceeded the indicated screening criteria for either the primary or duplicate sample, but not both.

\*\* = the analyte is rarely detected at concentrations exceeding screening criteria and therefore time-concentration charts are not included in Appendix C

### 3.2 Metals

The following table presents a summary of the wells that exceeded the screening criteria for metals (data summarized in Table 4), and a brief summary of the observed concentration trends in each well since groundwater monitoring began in the well. The trend analysis is based on a review of a best fit trend line for the data presented in the concentration-versus-time graphs provided in Appendix C. Concentration-versus time graphs for the UC BGC wells are provided in Appendix F. An 'X' in the table indicates an exceedance of the respective criterion.

Well ID	Groundwater Horizon	Analyte	Residential SSG	Commercial/ Industrial SSG	Groundskeeper/ Maintenance Worker SSG	5x, 40x, or 160x Aquatic Criteria	Drinking Water Standard	Trend
<b>Lot 1</b>								
<i>Lot 1-2 Pilot Study Area</i>								
IMW-1	UH	Arsenic				NA	X	Decreasing since January 2007
IMW-2	UH	Arsenic				NA	X	Fluctuates, but overall decreasing since February 2009
IMW-3	UH	Arsenic				NA	X	Fluctuates, but overall stable since October 2010

Well ID	Groundwater Horizon	Analyte	Residential SSG	Commercial/ Industrial SSG	Groundskeeper/ Maintenance Worker SSG	5x, 40x, or 160x Aquatic Criteria	Drinking Water Standard	Trend
IMW-4	UH	Arsenic				NA	X	Generally stable; Decreasing since May 2008
<i>Lot 1-5 &amp; MW-25 Pilot Study Area</i>								
IMW-29	LH	Arsenic				NA	X	Fluctuates; decreasing trend since April 2015
MW-30	UH	Arsenic				NA	X	Decreasing since November 2006
PZ-11	UH	Cadmium				NA	X <sub>s</sub>	Generally Stable**
		Nickel				NA	X	Fluctuates; general decrease since May 2011
PZ-12	UH	Arsenic				NA	X	Fluctuates; generally stable since April 2017
<b>Lot 2</b>								
<i>Lot 2-27 Pilot Study Area</i>								
IMW-5	UH	Arsenic				NA	X	Fluctuates, but overall decreasing since April 2011
IMW-6	UH	Arsenic				NA	X	Fluctuates; but overall decreasing
IMW-8	UH	Arsenic				NA	X	Fluctuates, but increasing since May 2007
<b>Lot 3</b>								
<i>Upgradient of BAPB</i>								
MW-18	UH	Copper				X	NA	Fluctuates; but overall increasing since July 2003
		Nickel				X	NA	Fluctuates, generally increasing trend since February 2005
		Zinc				X	NA	Fluctuates; but overall increasing since April 2017

Well ID	Groundwater Horizon	Analyte	Residential SSG	Commercial/ Industrial SSG	Groundskeeper/ Maintenance Worker SSG	5x, 40x, or 160x Aquatic Criteria	Drinking Water Standard	Trend
MW-20	UH	Arsenic		X <sub>s</sub>		NA		Generally stable from 2005 to October 2015; Increasing in April 2016 with decreases in April 2018 and August 2018 relative to October 2017
PZ-10	UH	Copper			X <sub>s</sub>	NA		Stable from 2011 until October 2015; fluctuates seasonally since April 2016
<i>Immediately Upgradient of BAPB</i>								
MW-2	UH	Arsenic		X	X	NA		Fluctuates; general increase since April 2017
MW-6	UH	Arsenic		X	X	NA		Fluctuates; General decrease since October 2015
		Selenium			X <sub>s</sub>	NA		Fluctuates seasonally
MW-8	UH	Nickel			X <sub>f</sub>	NA		Fluctuates; generally decreasing since April 2015
		Zinc			X <sub>f</sub>	NA		Fluctuates; generally decreasing since April 2015
MW-13	UH	Cadmium			X <sub>f</sub>	NA		Fluctuates**
		Copper			X <sub>f</sub>	NA		Seasonal increase since October 2015
		Nickel			X <sub>f</sub>	NA		Fluctuates seasonally since October 2013
		Zinc			X <sub>f</sub>	NA		Fluctuates seasonally
MW-29	UH	Nickel			X <sub>f</sub>	NA		Fluctuates; general increase from October 2013 until October 2016; generally decreasing since April 2017

Well ID	Groundwater Horizon	Analyte	Residential SSG	Commercial/ Industrial SSG	Groundskeeper/ Maintenance Worker SSG	5x, 40x, or 160x Aquatic Criteria	Drinking Water Standard	Trend
		Selenium				X <sub>s</sub>	NA	Non-detectable concentrations from 2006 to 2016; seasonal fluctuations beginning April 2017
		Zinc				X <sub>f</sub>	NA	Fluctuates; overall stable
<i>Within BAPB</i>								
MW-9	UH	Arsenic			X	X	NA	Increase from January 2003 to November 2006, but stable from August 2006 to April 2015; decreasing trend since April 2015
MW-3	UH	Selenium				X	NA	Generally non-detectable concentrations since 2011; increase in 2018 relative to October 2017
		Silver				X <sub>s</sub>	NA	First detection in April 2016; Stable April 2017 to April 2018; not detected above reporting limit in August 2018
<i>Downgradient of BAPB</i>								
MW-10A	UH	Nickel				X <sub>f</sub>	NA	Stable/non-detectable concentrations from 2011 to 2014, generally increasing since 2014
MW-1	UH	Arsenic			X <sub>f</sub>		NA	Fluctuates; generally decreasing since October 2014
MW-10B	LH	Copper				X	NA	Fluctuates; decreasing since April 2017
		Zinc				X	NA	Fluctuates; increasing since 2013

Well ID	Groundwater Horizon	Analyte	Residential SSG	Commercial/ Industrial SSG	Groundskeeper/ Maintenance Worker SSG	5x, 40x, or 160x Aquatic Criteria	Drinking Water Standard	Trend
MW-11A	UH	Copper				X	NA	Fluctuates; Overall decreasing trend since October 2006
		Zinc				X <sub>F</sub>	NA	Fluctuates seasonally
MW-15	UH	Copper				X <sub>S</sub>	NA	Fluctuates; General decrease from April 2014
MW-28	UH	Silver				X <sub>S</sub>	NA	Fluctuates
MW-4	UH	Arsenic			X	X <sub>F</sub>	NA	Fluctuates; Generally increasing since April 2016
MW-5	UH	Arsenic			X	X	NA	Increasing since November 2007
MW-7	UH	Silver				X <sub>S</sub>	NA	Increasing October 2016 to April 2018; decrease in August 2018 relative to April 2018
<i>MW-19 Pilot Study Area</i>								
MW-32A	UH	Nickel				X	NA	Generally increasing since August 2008
		Zinc				X	NA	Generally increasing since August 2008
MW-32B	LH	Copper				X	NA	Increasing August 2008 until October 2016; decreasing since April 2017
		Zinc				X	NA	Overall decreasing since 2008
IMW-42	UH	Nickel				X	NA	Fluctuates; Overall decreasing since 2011
		Zinc				X <sub>S</sub>	NA	Overall decrease since 2011; generally increasing since October 2013

Well ID	Groundwater Horizon	Analyte	Residential SSG	Commercial/ Industrial SSG	Groundskeeper/ Maintenance Worker SSG	5x, 40x, or 160x Aquatic Criteria	Drinking Water Standard	Trend
<b>MW-21 Pilot Study Area</b>								
MW-21	UH	Selenium			X <sub>s</sub>	NA	Fluctuates seasonally	
		Zinc			X <sub>s</sub>	NA	Fluctuates seasonally	
<b>UC BGC BAPB Wells</b>								
MW-34	UH	Nickel			X	NA	Stable since installation in 2013	
		Silver			X <sub>s</sub>	NA	Increase in October 2017; Decrease since April 2018 relative to October 2017	
MW-36	UH	Nickel			X	NA	Fluctuates; generally decreasing since installation in 2013	
MW-40	UH	Selenium			X <sub>s</sub>	NA	Fluctuates; increase in April 2018 relative to October 2017	
		Silver			X <sub>s</sub>	NA	Increase in October 2017; Decreasing since April 2018 relative to October 2017	
MW-41	UH	Silver			X <sub>s</sub>	NA	Increase in October 2017; Decreasing since April 2018 relative to October 2017	
MW-42	UH	Nickel			X	NA	Fluctuates; increasing trend from October 2013 to October 2015; decreasing from April 2016 to October 2017; stable since April 2018	
		Silver			X <sub>s</sub>	NA	Increase in October 2017; decrease since April 2018 relative to October 2017	
MW-43	UH	Silver			X <sub>s</sub>	NA	Increase in October 2017; decrease in October 2018 relative to April 2018	

Well ID	Groundwater Horizon	Analyte	Residential SSG	Commercial/ Industrial SSG	Groundskeeper/ Maintenance Worker SSG	5x, 40x, or 160x Aquatic Criteria	Drinking Water Standard	Trend
MW-44	UH	Silver			X <sub>s</sub>	NA		Increase in October 2017; Decreasing since April 2018 relative to October 2017
MW-45	UH	Zinc			X	NA		Stable since April 2014; slight decreasing trend since 2015
MW-46	UH	Silver			X <sub>s</sub>	NA		Increase in October 2017; Decreasing since April 2018 relative to October 2017

Table Notes:

X = exceedance during both April and August 2018 sampling events

X<sub>s</sub> = exceedance during April 2018 (spring) sampling event

X<sub>f</sub> = exceedance during August 2018 (fall) sampling event

\* = the analytical result exceeded the indicated screening criteria for either the primary or duplicate sample, but not both.

\*\* = the analyte is rarely detected at concentrations exceeding screening criteria and therefore time-concentration charts are not included in Appendix C

### 3.3 Pesticides

Concentrations of pesticides did not exceed the screening criteria in samples collected from the monitoring wells during the Reporting Period (Table 5).

## 4.0 SURFACE WATER MONITORING SUMMARY

Project Phase	Surface Water Monitoring
<b>Sampling Locations</b>	<p>Typically, surface water monitoring may be conducted at the three storm-drain outfall locations shown on Figure 2 (Outfalls 001, 002, and 003) depending on weather conditions (i.e. magnitude and duration of rainfall). Outfall 001 is located at the lower evaporation pond and Outfall 002 is located at the upper evaporation pond.</p> <p>Typically Outfalls 001 and 002 discharge to ESM and Outfall 003 discharges to San Francisco Bay in the tidal mud flats immediately south of ESM. However, during the HA-2 remediation activities, stormwater discharges are not occurring at Outfall 002 since the scope of the HA-2 remedial work includes modifications to the outfall location. Therefore, during HA2 remediation the stormwater flows that would typically discharge at Outfall 002 have been temporarily rerouted to discharge at Outfall 001 until HA-2 remediation is complete. Although the stormwater flow discharge was routed to Outfall 001, the stormwater samples collected during HA-2 remediation were still labeled Outfall 002 to indicate that the drainage area associated with the sample was that associated with Outfall 002, not Outfall 001 (whose drainage area is the lower lagoon).</p>
<b>Frequency of Sampling</b>	<p>Monthly, as-needed based on weather conditions (i.e. magnitude and duration of rainfall). Surface water samples were collected from Outfalls 002 and 003 in January, April, November, and December 2018. No surface water samples were collected from Outfall 001 during the Reporting Period.</p>
<b>Analytical Results</b>	<p>Analytical results for surface water samples collected during the Reporting Period are presented in Tables 3, 4, 5, and 6. No VOCs were detected in surface water samples above the applicable screening criteria during the Reporting Period (Table 3). During the Reporting Period, surface water samples contained copper, lead, mercury, nickel, selenium, silver, and zinc at concentrations exceeding the storm water screening criteria (Table 4). No pesticides were detected above the applicable screening criteria during the Reporting Period (Table 5). The pH of the surface water samples ranged from 5.4 to 7.6 standard units (SU) during the Reporting Period (Table 6). The pH samples from 002-040718 and 003-040718 (Outfalls 002 and 003 obtained on April 7, 2018) were analyzed outside of the EPA recommended hold-time. Low pH (less</p>

	than 3 SU) was not detected in surface water samples collected during the Reporting Period.
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## 5.0 INDICATOR PARAMETERS AND DISSOLVED METALS ANALYTICAL RESULTS FOR BAPB CLUSTER WELLS

The primary objective for the biologically active permeable barrier (BAPB) located at the Site (Figure 2) is to reduce the concentrations of divalent metals (cadmium, copper, nickel, lead, and zinc) in groundwater. Table 4 presents dissolved metals data, and Table 6 presents data for general minerals and pH for groundwater samples collected from monitoring wells at the Site. The combination of three wells positioned upgradient, within, and downgradient of the BAPB constitutes what is referred to in this AMR as a well cluster<sup>1</sup>. Table 8 summarizes the data specifically for the BAPB monitoring well clusters.

Project Phase	BAPB Cluster Wells
Sampling Locations	Well Cluster MW-8/-9/-28  Well Cluster MW-2/-3/-4  Well Cluster MW-13/-14/-15
Analytical Results	Table 8 presents the dissolved metals concentrations in the BAPB cluster wells. The applicable screening criteria are also provided in Table 8. A discussion of the metal concentrations detected in the BAPB cluster wells is provided below.
Geochemical /Biochemical Indicator Parameters	Table 8 presents geochemical/biochemical indicator parameters in the BAPB cluster wells. The objective of the BAPB is to reduce concentrations of dissolved divalent metals in groundwater migrating through the BAPB by altering the geochemistry of the groundwater. Sulfate-reducing bacteria use organic carbon as a food source (electron donor) to create anaerobic conditions within the BAPB. The oxidation of the organic carbon by the sulfate-reducing bacteria is coupled with the reduction of sulfate to sulfide. The sulfides then react with dissolved iron and metals to create a low-solubility metal-iron-sulfide precipitate, thereby lowering the dissolved metals concentrations in groundwater passing through the BAPB.  Organic carbon is supplied by leafy compost that is a major component of the BAPB. The BAPB was not specifically designed to reduce organic chemicals migrating in upper horizon groundwater, but organic chemicals

<sup>1</sup> Terraphase recognizes that groundwater in the vicinity of the BAPB may not flow directly from an upgradient well, to the BAPB well, and then to the well downgradient from the BAPB. However, concentrations measured in a sample collected from a given well are assumed to be representative of the general conditions in the vicinity of that well. Therefore, conditions within the cluster wells are used to assess the general efficacy of the BAPB.

	<p>may undergo reductive dehalogenation when they enter the reducing zone created by the BAPB.</p> <p>In addition to measuring metals and VOC concentrations in groundwater, geochemical and biochemical indicator parameters are monitored in BAPB cluster wells to assist in evaluating the effectiveness of the BAPB in buffering groundwater and creating reducing conditions necessary for the precipitation of dissolved metals as groundwater migrates through the BAPB. These parameters, which include pH, oxidation reduction potential (ORP), alkalinity, and ferrous iron, provide an indication of geochemical conditions in the groundwater. The ORP, iron, sulfate, and sulfide measurements provide an indication of groundwater redox conditions. Alkalinity and pH measure the effectiveness of the BAPB in buffering any remaining acid in the groundwater. Alkalinity is also an indirect measure of biological activity due to carbon dioxide production by microorganisms.</p> <p>The pH and alkalinity data indicate that the BAPB appears to be effectively buffering groundwater. In all three well clusters, the pH values in the wells within the BAPB were the same or higher than the pH in the corresponding upgradient well during the Reporting Period. In general, alkalinity was higher in the BAPB wells compared to the upgradient wells during the Reporting Period, except in Well Clusters MW-8/-9/-28 and MW-13/-14/-15 in April 2018 and Well Cluster MW-8/-9/-28 in August 2018.</p> <p>The ORP results indicate that the BAPB is creating reducing conditions near all three well clusters as shown by the negative ORP values for wells located in the BAPB (Table 8). Ferrous iron concentrations were lower in groundwater samples from within the BAPB wells than in samples from their corresponding upgradient wells. Ferrous iron concentrations are decreasing within the BAPB either because ferrous iron is being further reduced or because it is precipitating with sulfides (as ferrous sulfide).</p> <p>In general, sulfate concentrations were lower in groundwater samples from BAPB wells relative to their corresponding upgradient wells during the Reporting Period, except in Well Cluster MW-8/-9/-28 in April 2018. Decreasing sulfate concentrations are an indication of sulfate-reducing conditions.</p> <p>In all three well clusters, sulfide concentrations in the BAPB increased or remained below detectable levels compared to the concentrations observed upgradient of the BAPB. The downgradient sulfide</p>
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	<p>concentrations did not exceed the laboratory reporting limit for all three well clusters. The presence of dissolved sulfide is an indication of strongly reducing conditions and the activity of sulfate reducing bacteria.</p>
<b>Divalent Metal (Cu, Pb, Ni, Zn) Concentrations at the BAPB (well clusters identified in order of well located upgradient of BAPB, well located within BAPB, and well located downgradient of BAPB)</b>	<p>Table 8 presents divalent metal concentrations detected in the BAPB cluster wells. When comparing the data in the upgradient wells to those within the BAPB and downgradient from the BAPB, the data generally indicate that the BAPB continues to function as intended.</p> <p><b><u>Well Cluster MW-2/-3/-4</u></b></p> <p>Copper was not detected above the laboratory reporting limit in samples collected from this well cluster in April or August 2018.</p> <p>Lead was detected at a concentration of 7.7 µg/L in well MW-2 (upgradient of the BAPB) in August 2018 but not detected above the laboratory reporting limit in wells MW-3 (in BAPB) or MW-4 (downgradient of the BAPB) in April or August 2018.</p> <p>Nickel was detected at concentrations of 5.6 µg/L, 5.0 µg/L, and 11 µg/L in wells MW-2, MW-3, and MW-4, respectively in April 2018 but not detected above the laboratory reporting limit in August 2018.</p> <p>Zinc was not detected above the laboratory reporting limit in samples collected from wells MW-2 or MW-3 during the Reporting Period but was detected in the downgradient well (MW-4) at a concentration of 28 µg/L in April 2018. Zinc was not detected in MW-4 above the laboratory reporting limit in August 2018.</p> <p><b><u>Well Cluster MW-8/-9/-28</u></b></p> <p>Copper was not detected above the laboratory reporting limit in samples collected from this well cluster in April or August 2018.</p> <p>Lead was not detected above the laboratory reporting limit in samples collected from this well cluster in April 2018. Lead was detected in the samples collected from MW-08 (upgradient of the BAPB) and MW-28 (downgradient of the BAPB) in August 2018 at concentrations of 6.8 µg/L and 6.0 µg/L respectively but was not detected in MW-09 (in BAPB).</p> <p>Nickel was not detected in well MW-9 (in BAPB) in April or August 2018 but was detected in well MW-8 (upgradient) at a concentration of 51 µg/L in August 2018 and MW-28 (downgradient) in April and August 2018 at concentrations of 5.1 µg/L and 6.4 µg/L, respectively.</p>

	<p>Zinc was detected in the samples collected from the well upgradient of the BAPB at concentrations of 70 µg/L and 3,600 µg/L in April 2018 and August 2018, respectively, but was not detected above the laboratory reporting limit in the samples collected from the well within the BAPB in either sampling event. Zinc was detected in the samples collected from the well downgradient of the BAPB at concentrations of 40 µg/L and 390 µg/L in the April and August 2018 sampling events, respectively. An evaluation of the concentration trend graphs presented in Appendix C indicates that zinc concentrations in well MW-28 have generally remained stable, and below historical concentrations, from 2013 through October 2017, with the exception of one elevated detection in October 2015.</p> <p><u>Well Cluster MW-13/-14/-15</u></p> <p>In this cluster, copper was detected in the sample collected from the well downgradient of the BAPB (MW-15) in April 2018 at a concentration of 92 µg/L but was not detected in the wells upgradient or within the BAPB during the April 2018 sampling event. Copper was detected in the sample collected from the well upgradient of the BAPB in August 2018 at a concentration of 530 µg/L but was not detected in the wells downgradient and within the BAPB during the August 2018 sampling event.</p> <p>Lead was not detected above the laboratory reporting limit in samples collected from this well cluster in April 2018 but was detected in the sample collected from the upgradient well (MW-13) at a concentration of 14 µg/L in the August 2018 event. Lead was not detected in the wells within or downgradient of the BAPB in the August 2018 event.</p> <p>In April and August 2018, nickel was detected in the samples collected from the well upgradient of the BAPB at concentrations of 21 µg/L and 700 µg/L, respectively. Nickel was not detected above the laboratory reporting limit in the wells within or downgradient of the BAPB in April or August 2018.</p> <p>Zinc was detected in the upgradient and downgradient wells in April 2018 at concentrations of 350 µg/L and 360 µg/L respectively. Zinc was detected in the upgradient and downgradient wells in August 2018 at concentrations of 22,000 µg/L and 26 µg/L respectively. Zinc was not detected above the laboratory reporting limit in samples collected from the wells within the BAPB in this well cluster in April or August 2018.</p>
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Arsenic Concentrations at the BAPB	<p>The BAPB may be less effective in treating metalloids such as arsenic, which generally occurs as an oxyanion in groundwater. Arsenic is redox-sensitive and can be precipitated as sulfide compounds. However, under mildly reducing conditions, arsenic solubility can increase. Therefore, the BAPB may not be capable of maintaining dissolved arsenic concentrations below the ecological screening criteria for wells within or downgradient from the BAPB. Arsenic concentrations varied among the BAPB cluster wells during the Reporting Period and are discussed below. Table 8 presents arsenic concentrations detected in the BAPB cluster wells.</p> <p><b><u>Well Cluster MW-2/-3/-4</u></b></p> <p>In April and August 2018, arsenic was detected in samples collected from the wells upgradient and downgradient of the BAPB. Arsenic was not detected in the well within the BAPB (MW-3) in either April or August 2018. In April 2018, arsenic concentrations were detected at slightly lower concentrations in the downgradient well (MW-4) than they were in the upgradient well (MW-2) however in August 2018 the concentrations in the downgradient well were nearly double the concentrations detected in the upgradient well.</p> <p>During the Reporting Period, arsenic was detected at 190 µg/L in April 2018 and 290 µg/L in August 2018 at MW-2. An evaluation of the concentration trend graphs presented in Appendix C indicate that although arsenic concentrations at well MW-2 have increased since 2006, the arsenic concentrations have been on an overall decreasing trend since 2015. The arsenic trend graph for well MW-4 indicates that overall concentrations were decreasing from 2004 to 2012 but increased from April 2012 to October 2015. Since April 2016, arsenic concentrations in MW-4 appear to fluctuate seasonally. Arsenic was detected at 160 µg/L in April 2018 and 560 µg/L in August 2018 at MW-4.</p> <p><b><u>Well Cluster MW-8/-9/-28</u></b></p> <p>In April and August 2018, arsenic was detected in samples collected from the wells upgradient of, within, and downgradient of the BAPB in this well cluster with the greatest concentrations detected in well MW-9 located within the BAPB.</p> <p>An evaluation of the concentration trend graph for well MW-8 (upgradient of the BAPB) indicates that from August 2006 through April 2011, arsenic concentrations were at or above the screening criteria of 5X the ambient water quality criteria (AWQC; 180 µg/L). However, arsenic concentrations for samples collected at MW-8 from October 2011 through August 2018 have been below both the 5X AWQC criteria and are</p>
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	<p>generally below the groundskeeper maintenance worker (GMW) criteria, with only two results (April 2015 and October 2016) above the GMW criteria. During the Reporting Period, arsenic was detected at 96 µg/L in April 2018 and 92 µg/L in August 2018 at MW-8.</p> <p>At MW-9, within the BAPB, a review of the concentration trend graph indicates that since August 2006, arsenic concentrations in groundwater at MW-9 range between 230 µg/L and 690 µg/L. During the Reporting Period, arsenic was detected at 430 µg/L in April 2018 and 440 µg/L in August 2018 at MW-9.</p> <p>At MW-28, downgradient of the BAPB, the arsenic concentration trend shows seasonal variability. However, the concentration peaks have generally attenuated from 2006 through 2013, then increased in 2014 relative to previous years, followed by a decrease in 2015. By October 2015, the concentration was similar to the concentration just before the increase in 2014 followed by seasonal fluctuation again beginning in October 2017. During the Reporting Period, arsenic was detected at 59 µg/L in April 2018 and 120 µg/L in August 2018 at MW-28.</p> <p><b><u>Well Cluster MW-13/-14/-15</u></b></p> <p>In April and August 2018, arsenic was detected in samples collected from the wells upgradient, within, and downgradient of the BAPB in well cluster MW-13/-14/-15 at concentrations of similar magnitude. In April 2018, arsenic was detected at concentrations of 30 µg/L, 21 µg/L, and 13 µg/L in the well upgradient of the BAPB, in the BAPB, and downgradient of the BAPB, respectively. In August 2018, arsenic was detected at concentrations of 20 µg/L, 45 µg/L, and 17 µg/L in the well upgradient of the BAPB, in the BAPB, and downgradient of the BAPB, respectively.</p> <p>An evaluation of the concentration trend graphs for well MW-13 indicates that arsenic concentrations have remained at or slightly above laboratory reporting limits since 2004 with increasing concentration peaks since 2012. At wells MW-14 and MW-15, the arsenic trend graphs indicate variability. However, since August of 2010, arsenic concentration at well MW-14 has increased from below laboratory reporting limits (5 µg/L) to 62 µg/L in October 2011 and has generally decreased since October 2011 with but show a recent increase in August 2018 to 45 µg/L. Arsenic concentrations at well MW-15 have also generally decreased since October 2011. Concentrations of arsenic in samples collected from this well cluster were all below the applicable screening criteria.</p>
<b>BAPB Function</b>	When comparing the metals concentrations in the upgradient wells to those within the BAPB and downgradient from the BAPB, the data

	<p>indicate that the BAPB continues to function as intended. Although concentrations of divalent metals are detected in wells downgradient of the BAPB, an assessment of the concentration trends of the cluster wells indicate that the detected metal concentrations in the downgradient wells are likely due to residual divalent metals concentrations in groundwater downgradient of the BAPB present prior to the installation of the BAPB.</p>
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## 6.0 QUALITY ASSURANCE/QUALITY CONTROL RESULTS

Terraphase performed a quality assurance/quality control (QA/QC) evaluation of the data generated during the Reporting Period in general accordance with the Quality Assurance Project Plan (QAPP), dated July 18, 2005 (LFR 2005). The results of the QA/QC evaluation for samples collected during the first half of the year were presented in the SMR (Terraphase 2018a) and are not repeated in this report. The results of the QA/QC evaluation for the second half of the year are presented in Appendix E and are summarized below. Based on a review of the QA/QC evaluation in the SMR and this AMR, the analytical data obtained during the Reporting Period are considered to be usable for the intended monitoring purposes.

### 6.1 Sample Handling

The sample identification (ID) numbers listed on the chain-of-custody records were consistent with the sample IDs reported in the laboratory electronic data deliverables (EDDs) and hardcopy data packages. The chain-of-custody reports were complete and accurate.

Samples were received within the acceptable temperature range upon arrival at the laboratory. Samples were received properly preserved and in good condition and were analyzed within the proper holding times for the analyses requested, except as noted below:

- During the August 2018 groundwater monitoring event, three out of three volatile organic analyte (VOA) vials arrived containing bubbles for sample MW-11B (lab sample number 302625-007) and one out of three VOA vials arrived containing bubbles for sample MW-14 (lab sample number 302625-003) as indicated in laboratory report 302625. Although the VOA vials for sample MW-11B contained bubbles, the VOC analytical results for the August 2018 event were consistent with previous VOC analytical results. For MW-14, only one VOA vial is used for analysis and it is standard laboratory practice in this case to select VOA vials without bubbles for analysis. Therefore, data qualifiers were not applied to the VOC data for MW-11B and MW-14.
- During the November 2018 surface water monitoring event, three out of three trip blank sample VOA vials arrived containing bubbles (sample TB-112118, lab sample number 305325-002) as indicated in laboratory report 305325. The VOC analysis for report 305325 was performed by the Enthalpy Analytical laboratory in Orange, California. The Orange laboratory applied “P” flags to this trip blank sample data. Although It is the laboratory’s professional opinion that the presence of bubbles in the VOA vials does not significantly affect the integrity of the sample and the Berkeley laboratory does not flag data from VOA vials containing bubbles, it is standard practice for the Orange laboratory to flag sample data when all three VOA vials contain bubbles.
- During the November 2018 surface water monitoring event, one of three trip blank sample VOA vials arrived containing bubbles (sample TB-112918, lab sample number 305442-002) as indicated in report 305442. Only one VOA vial is used for analysis and it

is standard laboratory practice in this case to select VOA vials without bubbles for analysis therefore, data qualifiers were not applied to the VOC data for sample TB-112918.

- During the December 2018 surface water monitoring event, two of three trip blank sample VOA vials arrived containing bubbles (sample TB-120518, lab sample number 305614-002) as indicated in laboratory report 305614. Only one VOA vial is used for analysis and it is standard laboratory practice in this case to select VOA vials without bubbles for analysis therefore, data qualifiers were not applied to the VOC data for sample TB-120518.
- During the December 2018 surface water monitoring event, two of two trip blank sample VOA vials arrived containing bubbles (sample TB-120518, lab sample number 305614-002) as indicated in laboratory report 305884. It is the laboratory's professional opinion that the presence of bubbles in the VOA vials does not significantly affect the integrity of the sample (Nadim 2001) and therefore, data qualifiers were not applied to the VOC data for TB-120518.

## 6.2 Accuracy

During the Reporting Period, one trip blank was submitted to the analytical laboratory and analyzed for VOCs for each day that sampling was conducted. There were no detections in the trip blank samples and bubbles were not noted in the VOC sample containers on the laboratory cooler receipt checklists, except as noted below:

- During the August 2018 groundwater monitoring event, chloroform was detected above the laboratory reporting limit in the trip blank sample at a concentration of 0.7 µg/L as indicated in laboratory report 302625. Chloroform was detected in one sample associated with this blank sample (sample MW-29) at a concentration of 21 µg/L. This result was not qualified because it is greater than five times the respective trip blank result.
- During the August 2018 groundwater monitoring event, chloroform was detected above the laboratory reporting limit in the trip blank sample at a concentration of 0.5 µg/L as indicated in laboratory report 302639. Chloroform was not detected above the laboratory reporting limit in other samples associated with this blank.
- During the November 2018 surface water monitoring event, methylene chloride and toluene were detected in the trip blank sample at concentrations of 1.7 µg/L and 0.110 µg/L, respectively as indicated in laboratory report 305325. Methylene chloride was detected in sample 002-112118 (outfall 002 obtained on November 21, 2018) at a concentration of 4.0 µg/L therefore, the qualifier "FB" was applied to this sample result since the result was less than five times the trip blank result. Toluene was not detected above the laboratory reporting limit in sample 002-112118.

- During the November 2018 surface water monitoring event, 2-Butanone was detected in the trip blank sample at a concentration of 0.680 µg/L as indicated in laboratory report 305442. 2-Butanone was not detected above the laboratory reporting limit in the stormwater sample associated with this blank.

In general, analytes were not detected in method blank samples except as noted below:

- During the August 2018 groundwater monitoring event, lead was detected above the reporting limit and flagged with a “b” in the method blank at a concentration of 14b µg/L for batch 262626 associated with laboratory report 302431. Lead was not detected in the project groundwater samples associated with this batch at or above the RL; therefore, the data were not qualified.
- During the November 2018 surface water monitoring event, methylene chloride was detected above the reporting limit and flagged with a “b” in the method blank samples for batches 1198204 and 1198298 associated with laboratory report 305325 at concentrations of 1.6 µg/L and 6.9 µg/L respectively. Methylene chloride was also detected in the stormwater and trip blank samples (002-112118 and TB-112118) associated with these batches. Trip blank sample TB-112118 associated with batch 1198204 had a methylene chloride concentration of 1.7 µg/L and stormwater sample 002-112118 associated with batch 1198298 had a methylene chloride concentration of 4.0 µg/L, both concentrations were flagged with a “b” since the analyte was present in the associated method blank.
- During the November 2018 surface water monitoring event, 2-Butanone, chloroform, and methylene chloride were detected in method blank samples for laboratory report 305442. 2-Butanone, chloroform, and methylene chloride were detected at concentrations of 3.1 µg/L, 0.320 µg/L, and 1.9 µg/L, respectively in the method blank for batch 1198492 and flagged with a “J” indicating the reported value is estimated. 2-Butanone and methylene chloride were detected at concentrations of 2.5 µg/L and 0.44 µg/L, respectively in batch 1198467 and flagged with a J, the reported value is estimated. 2-Butanone was detected in TB-112918 at a concentration of 0.680 µg/L this sample is associated with batch 1198467 and the analyte was detected in the sample at a concentration of less than 10 times that of the blank therefore, the data was qualified with a “J” flag. Methylene chloride was detected in stormwater sample 003-112918 (outfall 003 obtained on November 29, 2018) at a concentration of 0.92 µg/L this sample is associated with batch 1198492 and the analyte was detected in the sample at a concentration of less than 10 times that of the blank therefore, the data was qualified with a “J” flag.

- During the December 2018 surface water monitoring event, copper was detected above the reporting limit and flagged with a “b” in the method blank at a concentration of 1.1 µg/L for batch 266356 associated with laboratory report 305978. Copper was detected in the stormwater sample 002-120518 associated with batch 266356 at a concentration of 11 µg/L, this data was not qualified since the concentration was 10 times the concentration of the associated method blank.

One equipment blank sample was collected and submitted to the analytical laboratory for analysis on each day that groundwater sampling was conducted. In addition, source blank samples were collected of the source water used for each of the equipment blank samples during each groundwater monitoring event (collected on August 17, 2018 [sample ID SB-081718] for the August monitoring event). In general, there were no detections in the equipment blank or source blank samples, except as noted below:

- During the August 2018 groundwater monitoring event, alkalinity bicarbonate and alkalinity total as calcium carbonate ( $\text{CaCO}_3$ ) were detected above the laboratory reporting limit in the equipment blank sample collected on August 20, 2018 (sample ID as EB-082018; laboratory report 302551). Alkalinity bicarbonate and alkalinity total as  $\text{CaCO}_3$  were detected in associated project samples MW-4, MW-34, MW-36, MW-40, MW-41, MW-42, MW-42-D, MW-43 at concentrations greater than five times the respective equipment blank result; therefore, the data were not qualified.
- During the August 2018 groundwater monitoring event, chloroform was detected above the laboratory reporting limit in EB-082018 (laboratory report 302551). Since chloroform was detected in the associated source blank sample (sample ID as SB-082218; laboratory report 302625) the project sample results were not qualified.
- During the August 2018 groundwater monitoring event, dissolved sulfide was detected above the laboratory reporting limit in the equipment blank sample collected on August 21, 2018 (sample ID as EB-082118; laboratory report 302587). Dissolved sulfide was detected in associated project samples MW-1, MW-3, MW-5, MW-7, and MW-10B. All dissolved sulfide results for wells associated with this equipment blank were qualified with an “FB” flag except for MW-3 because its detection was greater than five times the respective equipment blank result.
- During the August 2018 groundwater monitoring event, chloroform was detected above the laboratory reporting limit in EB-082118 (laboratory report 302587). Since chloroform was detected in the associated source blank sample (sample ID as SB-082218; laboratory report 302625) the project sample results were not qualified.
- During the August 2018 groundwater monitoring event, chloroform was detected above the laboratory reporting limit in the equipment blank sample collected on August 22,

2018 (sample ID as EB-082218; laboratory report 302625). Since chloroform was detected in the associated source blank sample (sample ID as SB-082218; laboratory report 302625) the project sample results were not qualified.

- During the August 2018 groundwater monitoring event, chloroform was detected above the laboratory reporting limit in the equipment blank sample collected on August 23, 2018 (sample ID as EB-082318; laboratory report 302639). Since chloroform was detected in the associated source blank sample (sample ID as SB-082218; laboratory report 302625) and was not detected above laboratory reporting limits for samples in this batch, no associated sample results were qualified.

The surrogate recoveries were within specified ranges for VOCs. The recoveries for laboratory control sample (LCS), blank spike (BS), blank spike duplicate (BSD), matrix spike (MS), and matrix spike duplicate (MSD) samples were within acceptable ranges. Project VOC data were not qualified during the Reporting Period.

The surrogate recoveries were within specified ranges for pesticides. The recoveries for BS and BSD samples were within acceptable ranges. The laboratory applied the following flag to the indicated pesticide results for project samples:

- Endosulfan sulfate was flagged with a "b" in samples PZ-15, PZ-16, DTSC-MW-2, and EB-081618 (laboratory report 302431) because of a high response. Endosulfan sulfate was not detected at or above the RL in the associated samples, so the data is not affected.
- gamma-Chloradane was flagged with a "#" in samples PZ-15, PZ-16, DTSC-MW-2, and EB-081618 (laboratory report 302431; batch 262660) indicating that the CCV drift was outside of limits but the average CCV drift was within limits per method requirements.
- gamma-Chloradane was flagged with a "#" in samples SB-081718 (laboratory report 302471; batch 262689) indicating that the CCV drift was outside of limits but the average CCV drift was within limits per method requirements.
- alpha-Chloradane and gamma-Chloradane were flagged with a "#" in samples SB-082218 (laboratory report 302471; batch 262689) indicating that the CCV drift was outside of limits but the average CCV drift was within limits per method requirements.

The recoveries for BS/BSD and MS/MSD samples were within acceptable ranges for metals analytical results. The laboratory applied the following flag to the indicated metals results for project samples:

- Beryllium was flagged with a "b" in samples IMW-23, IMW-50, MW-31, EB-081418, MW-24, IMW-57 (laboratory report 302350) because of the high Interface Check Standard A bias. All associated samples were non-detect so the data is not affected.

The recoveries for LCS, BS/BSD and MS/MSD samples were within acceptable ranges for general mineral analytical results.

### 6.3 Precision

The relative percent difference (RPD) of field duplicate samples was calculated to evaluate the precision of the data. An RPD can be evaluated only if the results of the analyses for both duplicates are above the RL. Where RPDs could be evaluated, the RPDs were generally within the QAPP compliance criterion of 30% for groundwater samples, except as noted below:

- During the August 2018 groundwater monitoring event, sample MW-19-D was collected as a field duplicate of sample MW-19 (reported in laboratory report 302471). Cis-1,2-Dichloroethene was detected in the primary and duplicate samples at concentrations of 71 µg/L and 130 µg/L respectively; the calculated RPD was 59%. The RL for cis-1,2-DCE is 2.5 µg/L. PCE was detected in the primary and duplicate samples at concentrations of 45 µg/L and 89 µg/L respectively; the calculated RPD was 66%. The RL for PCE is 2.5 µg/L. In accordance with the QAPP, the cis-1,2-DCE and PCE results have all been flagged with a "J" since the RPD is greater than 30% and the detected concentrations are greater than 10 times the laboratory RL. The "J" qualifier is defined as: "The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample." TCE was detected in the primary and duplicate samples at concentrations of 16 µg/L and 24 µg/L respectively; the calculated RPD was 40%. The RL for TCE is 2.5 µg/L. Although the RPD for TCE exceeded the QAPP compliance criterion of 30%, the data were not qualified since the detected concentrations were less than 10 times the laboratory RL. All other RPDs for analytes associated with this field duplicate pair were within the QAPP compliance criterion of 30% for groundwater samples.

The data associated with the duplicate analyses has been qualified as noted above, but the data is still considered valid and available for use in this report. When evaluating trends and preparing groundwater contours, the higher of the two results were used.

Laboratory analytical precision is evaluated by laboratory QC sample RPD calculations using the MS/MSD, BS/BSD, or laboratory duplicate sample results. The results of RPD calculations for MS/MSD, BS/BSD, and laboratory duplicate sample pairs were within the laboratory's acceptable range.

### 6.4 Data Quality Summary

Based on the QA review reported in the SMR and this AMR, no samples were rejected as unusable due to QC failures. The analytical data obtained during the Reporting Period are considered to be usable for the intended monitoring purposes and results affected by QC anomalies are qualified with the appropriate data flags.

## 7.0 WORK PLANNED FOR THE FIRST HALF OF 2019

The following field activities are currently anticipated to occur during the first half of 2019:

- Upkeep and maintenance of the temporary cap will continue.
- Conduct semi-annual groundwater monitoring activities in April 2019.
- Monitor the storm-drain outfall locations during rain events and collect storm water samples, as needed.

Additional activities at the Site are summarized in monthly reports submitted to the DTSC by the Respondents on approximately the 15th of each month.

## 8.0 REFERENCES

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## **TABLES**

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**Table 1****Groundwater Monitoring Well Construction Details**

Campus Bay, Richmond, California

Well Name	Well Installation Date	Total Depth (feet bgs)	Casing Diameter (inches)	Screen Interval (feet bgs)	Borehole Diameter (inches)	Mount	TOC Elevation (feet) (a)	Approximate Ground Surface Elevation (feet) (b)	Comments
<b>Upper Horizon Monitoring Wells</b>									
MW-1	2/12/2003	14.0	2.0 PVC	5.0-14.0	8.0	Riser Pipe	10.57	8.4	
MW-2	2/12/2003	18.0	2.0 PVC	8.0-18.0	8.0	Flush	13.39	14.0	
MW-3 (c)	2/19/2003	18.0	2.0 PVC	8.0-18.0	3.5	Riser Pipe	15.42	13.4	
MW-4	2/19/2003	15.0	2.0 PVC	5.0-15.0	8.0	Riser Pipe	13.25	11.4	
MW-5	3/3/2003	14.0	2.0 PVC	5.0-14.0	8.0	Riser Pipe	10.57	8.9	
MW-6	2/12/2003	18.0	2.0 PVC	8.0-18.0	8.0	Flush	13.97	14.6	Cinder 12 - 14.5 feet bgs
MW-7	2/18/2003	18.0	2.0 PVC	8.0-18.0	8.0	Riser Pipe	16.16	13.2	
MW-8	2/18/2003	18.0	2.0 PVC	8.0-18.0	8.0	Flush	14.82	15.3	
MW-9 (c)	2/19/2003	18.0	2.0 PVC	8.0-18.0	3.5	Flush	14.32	14.2	
MW-10A	2/3/2003	14.0	2.0 PVC	5.0-14.0	8.0	Riser Pipe	9.92	8.3	
MW-11A	2/18/2003	15.0	2.0 PVC	5.0-15.0	8.0	Riser Pipe	13.72	11.5	Cinder 10.5 - 11 feet bgs
MW-12	2/18/2003	15.0	2.0 PVC	5.0-15.0	8.0	Riser Pipe	12.71	10.0	Cinder 10 - 10.5 feet bgs
MW-13	2/13/2003	18.0	2.0 PVC	8.0-18.0	8.0	Flush	13.18	13.4	
MW-14 (c)	2/19/2003	18.0	2.0 PVC	8.0-18.0	3.5	Flush	12.92	13.2	
MW-15	2/18/2003	15.0	2.0 PVC	5.0-15.0	8.0	Riser Pipe	16.83	12.7	
MW-16A	2/19/2003	20.0	2.0 PVC	10.0-20.0	8.0	Flush	12.80	13.1	Well abandoned in December 2017 in preparation for Habitat Area 2 remediation
MW-17	2/19/2003	20.0	2.0 PVC	10.0-20.0	8.0	Flush	12.50	13.0	Cinder 5.0 - 5.4 feet bgs; Well abandoned in December 2017 in preparation for Habitat Area 2 remediation
MW-18	6/23/2003	18.5	2.0 PVC	8.5-18.5	8.0	Flush	15.00	15.3	
MW-19	6/23/2003	20.0	2.0 PVC	10.0-20.0	8.0	Flush	17.52	18.0	
MW-20	6/23/2003	22.0	2.0 PVC	12.0-22.0	8.0	Flush	17.79	18.1	
MW-21	6/24/2003	22.0	2.0 PVC	7.0-22.0	8.0	Flush	14.36	14.7	
MW-22	6/24/2003	19.0	2.0 PVC	9.0-19.0	8.0	Flush	17.18	17.4	
MW-23	6/24/2003	19.0	2.0 PVC	9.0-19.0	8.0	Flush	19.25	19.6	
MW-24 (d)	6/23/2003	15.0	2.0 PVC	5.0-15.0	8.0	Riser Pipe	17.07	14.3	
MW-25R	10/6/2009	23.0	2.0 PVC	10.0-23.0	8.0	Flush	22.73	NM	
MW-26	12/8/2005	20.0	2.0 PVC	10.0-20.0	8.0	Flush	24.91	25.3	
MW-27	12/8/2005	20.0	2.0 PVC	10.0-20.0	8.0	Flush	23.20	23.7	
MW-28	3/27/2006	18.0	2.0 PVC	8.0-18.0	8.0	Riser Pipe	16.72	14.0	Cinder 12.5 - 13.8 feet bgs
MW-29	3/27/2006	17.0	2.0 PVC	7.0-17.0	8.0	Flush	13.46	13.8	Cinder 12.3 - 13.4 feet bgs
MW-30	3/23/2006	21.0	2.0 PVC	11.0-21.0	8.0	Flush	13.71	14.3	
MW-31	3/23/2006	17.0	2.0 PVC	7.0-17.0	8.0	Flush	14.50	14.8	

**Table 1****Groundwater Monitoring Well Construction Details**

Campus Bay, Richmond, California

Well Name	Well Installation Date	Total Depth (feet bgs)	Casing Diameter (inches)	Screen Interval (feet bgs)	Borehole Diameter (inches)	Mount	TOC Elevation (feet) (a)	Approximate Ground Surface Elevation (feet) (b)	Comments
MW-32A	6/25/2008	27.0	2.0 PVC	17.0-27.0	8.0	Flush	16.98	17.9	
MW-33	9/28/2009	18.0	2.0 PVC	8.0-18.0	8.0	Flush	15.13	15.8	
MW-34	12/17/2010	19.0	2.0 PVC	9.0-19.0	8.0	Riser Pipe	7.18	4.74	
MW-36	12/16/2010	17.0	2.0 PVC	7.0-17.0	8.0	Riser Pipe	6.78	4.07	
MW-40	5/10/2012	14.0	2.0 PVC	9.0-14.0	2.0	Riser Pipe	7.33	4.34	
MW-41	5/10/2012	13.0	2.0 PVC	8.0-13.0	2.0	Riser Pipe	7.51	6.14	
MW-42	10/17/2013	19.0	2.0 PVC	13-19	8.0	Riser Pipe	10.99	8.1	
MW-43	10/17/2013	17.0	2.0 PVC	12-17	8.0	Riser Pipe	8.32	5.5	
MW-44	10/18/2013	15.0	2.0 PVC	10-15	8.0	Riser Pipe	9.11	5.9	
MW-45	10/17/2013	15.0	2.0 PVC	5-15	8.0	Riser Pipe	7.45	4.5	
MW-46	10/18/2013	12.0	2.0 PVC	7-12	8.0	Riser Pipe	5.66	3.1	
<b>Lower Horizon Monitoring Wells</b>									
MW-10B	3/3/2003	33.0	10.0 STEEL, 2.0 PVC	23.0-33.0	8.0-12.0	Riser Pipe	9.88	7.9	Conductor casing 19.0 feet bgs
MW-11B	3/3/2003	35.0	10.0 STEEL, 2.0 PVC	25.0-35.0	8.0-12.0	Riser Pipe	13.94	11.2	Conductor casing 20.0 feet bgs
MW-16B	5/3/2006	37.0	10.0 STEEL, 2.0 PVC	27.0-37.0	8.0-12.0	Flush	11.72	12.2	Conductor casing 20.9 feet bgs, Cinder 7.0 - 8.0 feet bgs; Well abandoned in December 2017 in preparation for Habitat Area 2 remediation
MW-32B	6/23/2008	42.0	10.0 STEEL, 2.0 PVC	32.0-42.0	8.0-12.0	Flush	17.28	18.0	Conductor casing 28.0 feet bgs
<b>Piezometers</b>									
PZ-1S (c)	3/30/2006	12.0	1.0 PVC	11.0-12.0	6.0	Flush	15.02	15.1	
PZ-1D (c)	3/30/2006	19.0	1.0 PVC	18.0-19.0	6.0	Flush	15.07	15.2	Trace cinder, 9.5 feet bgs
PZ-2S (c)	3/30/2006	12.0	1.0 PVC	11.0-12.0	6.0	Flush	14.64	14.8	
PZ-2D (c)	3/30/2006	19.0	1.0 PVC	18.0-19.0	6.0	Flush	14.67	14.7	
PZ-3S (c)	3/30/2006	12.0	1.0 PVC	11.0-12.0	6.0	Flush	13.11	13.3	
PZ-3D (c)	3/30/2006	19.0	1.0 PVC	18.0-19.0	6.0	Flush	13.26	13.2	Cinder 12.0 - 12.3 feet bgs
PZ-4S (c)	3/31/2006	12.0	1.0 PVC	11.0-12.0	6.0	Flush	14.79	14.9	
PZ-4D (c)	3/31/2006	19.0	1.0 PVC	18.0-19.0	6.0	Flush	14.80	14.8	Cinder 12.5 - 13.7 feet bgs
PZ-5S (c)	3/31/2006	12.0	1.0 PVC	11.0-12.0	6.0	Flush	14.44	14.4	
PZ-5D (c)	3/31/2006	19.0	1.0 PVC	18.0-19.0	6.0	Flush	14.46	14.5	
PZ-6S (c)	3/31/2006	12.0	1.0 PVC	11.0-12.0	6.0	Flush	14.12	14.2	
PZ-6D (c)	3/31/2006	19.0	1.0 PVC	18.0-19.0	6.0	Flush	14.23	14.3	Cinder 12.0 - 12.7 feet bgs
PZ-7	4/12/2007	20.1	2.0 PVC	8-20	8.0	Flush	16.50	17.0	
PZ-8	4/12/2007	21.1	2.0 PVC	8-21	8.0	Flush	14.37	14.8	
PZ-9	4/12/2007	20.0	2.0 PVC	9-20	8.0	Flush	23.72	24.1	
PZ-10	6/25/2008	17.0	2.0 PVC	7.0-17.0	8.0	Flush	13.19	14.0	

**Table 1****Groundwater Monitoring Well Construction Details**

Campus Bay, Richmond, California

Well Name	Well Installation Date	Total Depth (feet bgs)	Casing Diameter (inches)	Screen Interval (feet bgs)	Borehole Diameter (inches)	Mount	TOC Elevation (feet) (a)	Approximate Ground Surface Elevation (feet) (b)	Comments
PZ-11	10/6/2009	19.0	2.0 PVC	9.0-19.0	8.0	Flush	21.66	NM	
PZ-12	10/7/2009	18.0	2.0 PVC	8.0-18.0	8.0	Flush	23.96	NM	
PZ-13	10/16/2009	17.0	2.0 PVC	7.0-17.0	8.0	Flush	11.39	11.6	Well abandoned in December 2017 in preparation for Habitat Area 2 remediation
PZ-14	10/16/2009	17.0	2.0 PVC	7.0-17.0	8.0	Flush	11.93	12.4	Well abandoned in December 2017 in preparation for Habitat Area 2 remediation
PZ-15	10/16/2009	16.5	2.0 PVC	6.5-16.5	8.0	Flush	7.49	7.9	
PZ-16	10/15/2009	20.0	2.0 PVC	10.0-20.0	8.0	Flush	6.71	7.0	
<b>Temporary Monitoring Wells (Pilot Test Study)</b>									
IMW-1	9/20/2006	20.1	1.0 PVC	10-20	6.0	Flush	14.81	15.1	
IMW-2	9/20/2006	19.9	1.0 PVC	10-20	6.0	Flush	15.05	15.3	
IMW-3	9/20/2006	19.1	1.0 PVC	10-20	6.0	Flush	15.34	15.8	
IMW-4	9/19/2006	19.7	1.0 PVC	10-20	6.0	Flush	15.83	15.9	
IMW-5	9/18/2006	22.2	1.0 PVC	12-22	6.0	Flush	13.77	13.9	
IMW-6 (d)	9/18/2006	21.1	1.0 PVC	12-22	6.0	Riser pipe	17.67	14.6	
IMW-7 (d)	9/18/2006	22.1	1.0 PVC	12-22	6.0	Riser Pipe	18.30	15.6	
IMW-8	9/18/2006	22.1	1.0 PVC	12-22	6.0	Flush	13.92	14.1	
IMW-9 (d)	9/19/2006	21.2	1.0 PVC	11-21	6.0	Riser Pipe	19.60	16.8	
IMW-10 (d)	9/19/2006	21.4	1.0 PVC	11-21	6.0	Riser Pipe	19.53	16.6	
IMW-11 (d)	9/19/2006	21.1	1.0 PVC	11-21	6.0	Riser Pipe	19.44	16.6	
IMW-12	9/19/2006	16.1	1.0 PVC	6-16	6.0	Flush	16.99	17.2	
IMW-13	9/19/2006	15.2	1.0 PVC	6-16	6.0	Flush	17.38	17.5	
IMW-14	9/19/2006	16.0	1.0 PVC	6-16	6.0	Flush	17.36	17.6	
IMW-15*	9/20/2006	31.6	1.0 PVC	16-31	6.0	Flush	20.01	20.2	
IMW-16*	9/19/2006	31.4	1.0 PVC	16-31	6.0	Flush	20.38	20.5	
IMW-17*	9/20/2006	31.5	1.0 PVC	16-31	6.0	Flush	20.29	20.3	
IMW-22 (d)	9/20/2006	22.0	1.0 PVC	12-22	6.0	Riser Pipe	18.14	15.3	
IMW-23	10/21/2009	19.0	1.0 PVC	9.0-19.0	6.0	Flush	22.00	NM	
IMW-24	10/7/2009	18.0	1.0 PVC	8.0-18.0	6.0	Flush	23.35	NM	Trace cinder 3' bgs
IMW-25	10/2/2009	18.0	1.0 PVC	8.0-18.0	6.0	Flush	25.18	NM	
IMW-26	10/6/2009	21.0	1.0 PVC	11.0-21.0	6.0	Flush	23.84	NM	
IMW-27	10/6/2009	23.0	1.0 PVC	13.0-23.0	6.0	Flush	25.93	NM	
IMW-28	10/5/2009	21.0	1.0 PVC	11.0-21.0	6.0	Flush	24.48	NM	
IMW-29*	10/5/2009	35.0	1.0 PVC	25.0-35.0	6.0	Flush	25.08	NM	
IMW-30	10/2/2009	18.0	1.0 PVC	8.0-18.0	6.0	Flush	20.38	NM	Mixed fill and cinder 0'-0.5' and 2.0'-3.0' bgs

**Table 1****Groundwater Monitoring Well Construction Details**

Campus Bay, Richmond, California

Well Name	Well Installation Date	Total Depth (feet bgs)	Casing Diameter (inches)	Screen Interval (feet bgs)	Borehole Diameter (inches)	Mount	TOC Elevation (feet) (a)	Approximate Ground Surface Elevation (feet) (b)	Comments
<b>Temporary Monitoring Wells (Pilot Test Study) Continued</b>									
IMW-31	9/29/2009	17.0	1.0 PVC	7.0-17.0	6.0	Flush	20.11	NM	Mixed fill and cinder 1.0'-2.0' bgs
IMW-32*	10/1/2009	38.0	1.0 PVC	23.0-38.0	6.0	Flush	20.76	NM	Mixed fill and cinder 0'-1.0' and 2.0'-3.0' bgs
IMW-33*	9/29/2009	33.0	1.0 PVC	18.0-33.0	6.0	Flush	20.01	NM	Mixed fill and cinder 2.0'-3.0' bgs
IMW-34	12/30/2009	15.0	2.0 PVC	5.0-15.0	8.0	Riser Pipe	9.73	6.97	Mixed fill and trace cinder 1' to 4' bgs
IMW-34B*	9/3/2010	25.0	2.0 PVC	15.0-25.0	8.0	Riser Pipe	9.39	6.37	Mixed fill and cinder 5' to 6.5' bgs
IMW-35	12/30/2009	15.0	2.0 PVC	5.0-15.0	8.0	Riser Pipe	10.37	7.56	
IMW-35B*	9/2/2010	25.0	2.0 PVC	15.0-25.0	8.0	Riser Pipe	10.29	7.27	Mixed fill and cinder 7' to 9' bgs
IMW-36	12/28/2009	15.0	2.0 PVC	5.0-15.0	8.0	Riser Pipe	10.00	7.68	Mixed fill with cinder trace 6.5' to 8'
IMW-36B*	9/1/2010	29.0	2.0 PVC	19.0-29.0	8.0	Riser Pipe	12.46	9.56	Mixed fill and cinder 7.5' to 10'
IMW-37	12/28/2009	15.0	2.0 PVC	5.0-15.0	8.0	Riser Pipe	9.49	7.03	Cinder 4' to 5' bgs
IMW-37B*	9/3/2010	29.0	2.0 PVC	19.0-29.0	8.0	Riser Pipe	13.17	10.27	Mixed fill with cinder trace 9.5' to 11.5'
IMW-38A	12/29/2009	15.0	2.0 PVC	5.0-15.0	8.0	Riser Pipe	11.71	9.56	
IMW-38B*	12/31/2009	28.5	2.0 PVC	18.5-28.5	8.0	Riser Pipe	11.83	9.12	Mixed fill and cinder 8.5' to 10' bgs
IMW-39A	12/29/2009	15.0	2.0 PVC	5.0-15.0	8.0	Riser Pipe	12.37	10.39	
IMW-39B*	12/31/2009	27.0	2.0 PVC	17.0-27.0	8.0	Riser Pipe	13.10	9.90	Mixed fill and trace cinder 8' to 12' bgs
IMW-40A	12/29/2009	15.0	2.0 PVC	5.0-15.0	8.0	Riser Pipe	14.66	12.38	Mixed fill and cinder 11.5' to 13' bgs
IMW-40B*	12/30/2009	27.0	2.0 PVC	17.0-27.0	8.0	Riser Pipe	13.48	10.36	Mixed fill and cinder 9' to 11' bgs
IMW-41A	12/29/2009	15.0	2.0 PVC	5.0-15.0	8.0	Riser Pipe	15.14	12.93	Mixed fill and cinder 11' to 13' bgs
IMW-41B*	12/31/2009	28.5	2.0 PVC	18.5-28.5	8.0	Riser Pipe	11.83	9.27	Mixed fill and cinder 11.5' to 13' bgs
IMW-42	9/17/2010	21.0	2.0 PVC	11.0-21.0	8.0	Flush	18.36	18.63	
IMW-43	9/16/2010	21.0	2.0 PVC	11.0-21.0	8.0	Flush	17.99	18.37	
IMW-44	9/16/2010	21.0	2.0 PVC	11.0-21.0	8.0	Flush	17.87	17.86	
IMW-45	9/15/2010	20.0	2.0 PVC	10.0-20.0	8.0	Flush	15.93	16.38	
IMW-46	9/15/2010	20.0	2.0 PVC	10.0-20.0	8.0	Flush	15.52	15.70	
IMW-47	9/15/2010	19.0	2.0 PVC	9.0-19.0	8.0	Flush	16.24	16.48	
IMW-48	9/16/2010	20.0	2.0 PVC	10.0-20.0	8.0	Flush	17.59	17.91	
IMW-49	9/17/2010	17.0	2.0 PVC	7.0-17.0	8.0	Flush	11.78	9.26	
IMW-50	9/17/2010	17.0	2.0 PVC	7.0-17.0	8.0	Flush	13.91	11.24	
IMW-51	8/31/2010	17.0	2.0 PVC	7.0-17.0	8.0	Riser Pipe	15.17	12.47	Mixed fill and cinder 11.5' to 12' bgs
IMW-52	8/31/2010	17.0	2.0 PVC	7.0-17.0	8.0	Riser Pipe	15.12	12.76	Mixed fill and cinder 11'-12' and 14'-15' bgs
IMW-53	8/30/2010	17.0	2.0 PVC	7.0-17.0	8.0	Riser Pipe	15.57	12.72	Mixed fill and cinder 10' to 10.5' bgs
IMW-54	8/30/2010	17.0	2.0 PVC	7.0-17.0	8.0	Riser Pipe	14.94	12.40	Mixed fill and cinder 10.5' to 13' bgs
IMW-55	9/1/2010	16.0	2.0 PVC	6.0-16.0	8.0	Riser Pipe	13.77	11.01	Mixed fill and cinder 9' to 12.5' bgs
IMW-56	12/29/2009	13.5	2.0 PVC	3.5-13.5	8.0	Riser Pipe	12.70	9.87	Mixed fill and cinder 9' to 10.5' bgs

**Table 1****Groundwater Monitoring Well Construction Details**

Campus Bay, Richmond, California

Well Name	Well Installation Date	Total Depth (feet bgs)	Casing Diameter (inches)	Screen Interval (feet bgs)	Borehole Diameter (inches)	Mount	TOC Elevation (feet) (a)	Approximate Ground Surface Elevation (feet) (b)	Comments
IMW-57	9/20/2010	17.0	2.0 PVC	7.0-17.0	8.0	Flush	11.88	8.92	
IMW-58	4/16/2013	19.0	2.0 PVC	9.0-19.0	8.0	Flush	14.89	15.30	
IMW-59	4/15/2013	18.0	2.0 PVC	8.0-18.0	8.0	Flush	18.83	19.26	
IMW-60	4/16/2013	18.0	2.0 PVC	8.0-18.0	8.0	Flush	17.74	18.11	
IMW-61	4/15/2013	18.0	2.0 PVC	8.0-18.0	8.0	Flush	17.97	18.36	
IMW-62	4/15/2013	18.0	2.0 PVC	8.0-18.0	8.0	Flush	16.76	17.14	
<b>DTSC Harborfront Wells</b>									
DTSC-MW-1	2/7/2007	19.1	2.0 PVC	9-19	8.0	Flush	10.89	NM	
DTSC-MW-2	2/7/2009	18.0	2.0 PVC	8.0-18.0	8.0	Flush	7.54	NM	
DTSC-MW-4	2/7/2007	14.5	2.0 PVC	9.5-14.5	8.0	Flush	12.80	NM	

**Abbreviations:**

A = Represents the upper horizon monitoring well in a pair of upper and lower horizon wells

B = Represents the lower horizon monitoring well in a pair of upper and lower horizon wells

bgs = Below ground surface

D = Represents the deeper of a pair of nested piezometers (still screened in the upper horizon)

DTSC-MW = Department of Toxic Substances Control monitoring well

IMW = Temporary monitoring well

MW = Monitoring well

NM = Not measured

PVC = Polyvinyl chloride

PZ = Piezometer

S = Represents the shallower of a pair of nested piezometers

TOC = Top of casing

**Notes:**

(a) Top of casing elevations based on the National Geodetic Vertical Datum 29 Standard

(b) Approximate ground surface elevation was determined through manual measurement of the distance between surveyed top of well casing and ground surface adjacent to the well. For wells IMW-34 through IMW-64, MW-34, MW-36, MW-40 and MW-41, ground surface elevation is based on survey data and reported to nearest 0.01 feet.

(c) Indicates that wells were installed with a Geoprobe rig using direct-push technology. In these locations, pre-pack wells were installed.

Cinder = The appearance of untreated cinder material during the installation of wells

(d) The well casing was extended and flush mount well box replaced with a monument style box in April 2010. The top of casing elevation was surveyed in June 2010.

\* Denotes lower horizon temporary monitoring well

**Table 2****Groundwater Elevation Data**

Campus Bay, Richmond, California

Well Name	Sample Date	Top of Casing Elevation (feet NVGD)	Depth to Water (feet below top of casing)	Groundwater Elevation (feet NGVD)
<i>Upper Horizon Groundwater Monitoring Wells</i>				
MW-1	4/2/2018	10.57	6.70	3.87
MW-1	8/13/2018	10.57	8.12	2.45
MW-2	4/2/2018	13.39	8.93	4.46
MW-2	8/13/2018	13.39	10.65	2.74
MW-3	4/2/2018	15.42	10.91	4.51
MW-3	8/13/2018	15.42	12.67	2.75
MW-4	4/2/2018	13.25	9.25	4.00
MW-4	8/13/2018	13.25	10.52	2.73
MW-5	4/2/2018	10.57	6.65	3.92
MW-5	8/13/2018	10.57	7.96	2.61
MW-6	4/2/2018	13.97	9.51	4.46
MW-6	8/13/2018	13.97	11.25	2.72
MW-7	4/2/2018	16.16	12.04	4.12
MW-7	8/13/2018	16.16	13.41	2.75
MW-8	4/2/2018	14.82	9.42	5.40
MW-8	8/13/2018	14.82	11.51	3.31
MW-9	4/2/2018	14.32	9.32	5.00
MW-9	8/13/2018	14.32	11.90	2.42
MW-10A	4/2/2018	9.92	5.01	4.91
MW-10A	8/13/2018	9.92	7.12	2.80
MW-11A	4/2/2018	13.72	9.04	4.68
MW-11A	8/13/2018	13.72	12.33	1.39
MW-12	4/2/2018	12.71	6.51	6.20
MW-12	8/13/2018	12.71	9.85	2.86
MW-13	4/2/2018	13.18	7.33	5.85
MW-13	8/13/2018	13.18	10.15	3.03
MW-14	4/2/2018	12.92	6.53	6.39
MW-14	8/13/2018	12.92	10.02	2.90
MW-15	4/2/2018	16.83	10.32	6.51
MW-15	8/13/2018	16.83	14.06	2.77
MW-18	4/2/2018	15.00	9.02	5.98
MW-18	8/13/2018	15.00	10.78	4.22
MW-19	4/2/2018	17.52	9.88	7.64
MW-19	8/13/2018	17.52	9.13	8.39
MW-20	4/2/2018	17.79	12.52	5.27
MW-20	8/13/2018	17.79	13.98	3.81
MW-21	4/2/2018	14.36	8.56	5.80
MW-21	8/13/2018	14.36	10.29	4.07
MW-22	4/2/2018	17.18	9.44	7.74
MW-22	8/13/2018	17.18	12.04	5.14
MW-23	4/2/2018	19.25	9.64	9.61
MW-23	8/13/2018	19.25	12.20	7.05
MW-24	4/2/2018	17.07	4.88	12.19
MW-24	8/13/2018	17.07	8.20	8.87
MW-25R <sup>1</sup>	4/2/2018	22.73	9.28	13.45
MW-25R <sup>1</sup>	8/13/2018	22.73	11.22	11.51
MW-26	4/2/2018	24.91	12.55	12.36
MW-26	8/13/2018	24.91	13.28	11.63

**Table 2**  
**Groundwater Elevation Data**  
 Campus Bay, Richmond, California

Well Name	Sample Date	Top of Casing Elevation (feet NVGD)	Depth to Water (feet below top of casing)	Groundwater Elevation (feet NGVD)
MW-27	4/2/2018	23.20	9.40	13.80
MW-27	8/13/2018	23.20	11.75	11.45
MW-28	4/2/2018	16.72	11.57	5.15
MW-28	8/13/2018	16.72	13.91	2.81
MW-29	4/2/2018	13.46	7.82	5.64
MW-29	8/13/2018	13.46	10.52	2.94
MW-30	4/2/2018	13.71	4.19	9.52
MW-30	8/13/2018	13.71	6.51	7.20
MW-31	4/2/2018	14.50	4.35	10.15
MW-31	8/13/2018	14.50	7.02	7.48
MW-32A	4/2/2018	16.98	11.79	5.19
MW-32A	8/13/2018	16.98	13.05	3.93
MW-33	4/2/2018	15.13	5.15	9.98
MW-33	8/13/2018	15.13	7.84	7.29
MW-34	4/2/2018	7.18	2.61	4.57
MW-34	8/13/2018	7.18	3.42	3.76
MW-36	4/2/2018	6.78	2.44	4.34
MW-36	8/13/2018	6.78	2.82	3.96
MW-40	4/2/2018	7.33	2.82	4.51
MW-40	8/13/2018	7.33	3.46	3.87
MW-41	4/2/2018	7.51	2.86	4.65
MW-41	8/13/2018	7.51	3.70	3.81
MW-42	4/2/2018	10.99	6.23	4.76
MW-42	8/13/2018	10.99	7.26	3.73
MW-43	4/2/2018	8.32	3.92	4.40
MW-43	8/13/2018	8.32	3.98	4.34
MW-44	4/2/2018	9.11	4.17	4.94
MW-44	8/13/2018	9.11	6.02	3.09
MW-45	4/2/2018	7.45	3.47	3.98
MW-45	8/13/2018	7.45	4.20	3.25
MW-46	4/2/2018	5.66	1.47	4.19
MW-46	8/13/2018	5.66	2.15	3.51
<b><i>Lower Horizon Groundwater Monitoring Wells</i></b>				
MW-10B	4/2/2018	9.88	5.54	4.34
MW-10B	8/13/2018	9.88	6.80	3.08
MW-11B	4/2/2018	13.94	9.54	4.40
MW-11B	8/13/2018	13.94	11.01	2.93
MW-32B	4/2/2018	17.28	12.02	5.26
MW-32B	8/13/2018	17.28	13.54	3.74
<b><i>Piezometers</i></b>				
PZ-7	4/2/2018	16.50	5.75	10.75
PZ-7	8/13/2018	16.50	9.53	6.97
PZ-10	4/2/2018	13.19	4.66	8.53
PZ-10	8/13/2018	13.19	8.72	4.47
PZ-11	4/2/2018	21.66	8.99	12.67
PZ-11	8/13/2018	21.66	12.52	9.14
PZ-12	4/2/2018	23.96	11.08	12.88
PZ-12	8/13/2018	23.96	13.48	10.48
PZ-15	4/2/2018	7.49	2.83	4.66
PZ-15	8/13/2018	7.49	4.35	3.14

**Table 2****Groundwater Elevation Data**

Campus Bay, Richmond, California

Well Name	Sample Date	Top of Casing Elevation (feet NVGD)	Depth to Water (feet below top of casing)	Groundwater Elevation (feet NGVD)
PZ-16	4/2/2018	6.71	2.59	4.12
PZ-16	8/13/2018	6.71	3.65	3.06
<b>Temporary Groundwater Monitoring Wells (Support Pilot Studies)</b>				
IMW-1	4/2/2018	14.81	4.94	9.87
IMW-1	8/13/2018	14.81	7.62	7.19
IMW-2	4/2/2018	15.05	5.11	9.94
IMW-2	8/13/2018	15.05	7.80	7.25
IMW-3	4/2/2018	15.34	5.02	10.32
IMW-3	8/13/2018	15.34	7.88	7.46
IMW-4	4/2/2018	15.83	5.45	10.38
IMW-4	8/13/2018	15.83	8.28	7.55
IMW-5	4/2/2018	13.77	3.88	9.89
IMW-5	8/13/2018	13.77	6.55	7.22
IMW-6	4/2/2018	17.67	7.78	9.89
IMW-6	8/13/2018	17.67	10.25	7.42
IMW-7	4/2/2018	18.30	8.03	10.27
IMW-7	8/13/2018	18.30	10.76	7.54
IMW-8	4/2/2018	13.92	4.16	9.76
IMW-8	8/13/2018	13.92	6.74	7.18
IMW-12	4/2/2018	16.99	5.28	11.71
IMW-12	8/13/2018	16.99	9.04	7.95
IMW-13	4/2/2018	17.38	5.43	11.95
IMW-13	8/13/2018	17.38	9.50	7.88
IMW-14	4/2/2018	17.36	5.63	11.73
IMW-14	8/13/2018	17.36	9.65	7.71
IMW-15	4/2/2018	20.01	7.32	12.69
IMW-15	8/13/2018	20.01	11.35	8.66
IMW-16	4/2/2018	20.38	7.70	12.68
IMW-16	8/13/2018	20.38	11.60	8.78
IMW-17	4/2/2018	20.29	7.60	12.69
IMW-17	8/13/2018	20.29	11.62	8.67
IMW-22	4/2/2018	18.14	7.99	10.15
IMW-22	8/13/2018	18.14	10.65	7.49
IMW-23	4/2/2018	22.00	8.69	13.31
IMW-23	8/13/2018	22.00	12.11	9.89
IMW-24	4/2/2018	23.35	10.40	12.95
IMW-24	8/13/2018	23.35	12.58	10.77
IMW-25	4/2/2018	25.18	10.20	14.98
IMW-25	8/13/2018	25.18	13.72	11.46
IMW-26	4/2/2018	23.84	10.20	13.64
IMW-26	8/13/2018	23.84	12.24	11.60
IMW-27	4/2/2018	25.93	12.44	13.49
IMW-27	8/13/2018	25.93	14.37	11.56
IMW-28	4/2/2018	24.48	11.37	13.11
IMW-28	8/13/2018	24.48	12.87	11.61
IMW-29	4/2/2018	25.08	11.92	13.16
IMW-29	8/13/2018	25.08	13.75	11.33
IMW-30	4/2/2018	20.38	7.58	12.80
IMW-30	8/13/2018	20.38	11.54	8.84
IMW-31	4/2/2018	20.11	7.52	12.59

**Table 2****Groundwater Elevation Data**

Campus Bay, Richmond, California

Well Name	Sample Date	Top of Casing Elevation (feet NVGD)	Depth to Water (feet below top of casing)	Groundwater Elevation (feet NGVD)
IMW-31	8/13/2018	20.11	11.46	8.65
IMW-32	4/2/2018	20.76	8.90	11.86
IMW-32	8/13/2018	20.76	11.87	8.89
IMW-33	4/2/2018	20.01	7.42	12.59
IMW-33	8/13/2018	20.01	11.41	8.60
IMW-42	4/2/2018	18.36	7.01	11.35
IMW-42	8/13/2018	18.36	11.00	7.36
IMW-43	4/2/2018	17.99	11.37	6.62
IMW-43	8/13/2018	17.99	11.53	6.46
IMW-44	4/2/2018	17.87	11.73	6.14
IMW-44	8/13/2018	17.87	13.39	4.48
IMW-45	4/2/2018	15.93	9.99	5.94
IMW-45	8/13/2018	15.93	11.30	4.63
IMW-46	4/2/2018	15.52	9.05	6.47
IMW-46	8/13/2018	15.52	10.55	4.97
IMW-47	4/2/2018	16.24	9.91	6.33
IMW-47	8/13/2018	16.24	11.13	5.11
IMW-48	4/2/2018	17.59	10.43	7.16
IMW-48	8/13/2018	17.59	11.68	5.91
IMW-49	4/2/2018	11.78	3.92	7.86
IMW-49	8/13/2018	11.78	7.17	4.61
IMW-50	4/2/2018	13.91	6.34	7.57
IMW-50	8/13/2018	13.91	8.43	5.48
IMW-57	4/2/2018	11.88	4.00	7.88
IMW-57	8/13/2018	11.88	6.56	5.32
IMW-58	4/2/2018	14.89	7.25	7.64
IMW-58	8/13/2018	14.89	9.86	5.03
IMW-59	4/2/2018	18.83	7.80	11.03
IMW-59	8/13/2018	18.83	11.49	7.34
IMW-60	4/2/2018	17.74	8.34	9.40
IMW-60	8/13/2018	17.74	11.34	6.40
IMW-61	4/2/2018	17.97	7.45	10.52
IMW-61	8/13/2018	17.97	10.78	7.19
IMW-62	4/2/2018	16.76	7.64	9.12
IMW-62	8/13/2018	16.76	10.44	6.32
<b>DTSC Harborfront Wells</b>				
DTSC-MW-1	4/2/2018	10.89	3.98	6.91
DTSC-MW-1	8/13/2018	10.89	5.58	5.31
DTSC-MW-2	4/2/2018	7.54	1.75	5.79
DTSC-MW-2	8/13/2018	7.54	3.24	4.30
DTSC-MW-4	4/2/2018	12.80	3.15	9.65
DTSC-MW-4	8/13/2018	12.80	5.65	7.15

**Notes:**

-- = groundwater elevation not calculated

NGVD = National Geodetic Vertical Datum

NM = Not measured

Depth to water measurements were collected prior to well sampling.

<sup>1</sup> Monitoring well MW-25R was installed in the same location as the original MW-25 abandoned in 2008

**Table 3**

## **Sampling Analytical Results - Volatile Organic Compounds**

Campus Bay, Richmond, CA

Lot/Area	Location	Sample Type	Sampled Date	Sample Horizon	Sample Location Relative to BAPB (Applicable to Lot 3 Wells Only)	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1-dichloroethene	1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichloropropane	1,4-dichlorobenzene	2-chlorotoluene	2-hexanone	Acetone	Benzene	Benzene	Carbon disulfide
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Drinking Water Standards Lots 1 and 2 (Upper and Lower Horizon)						-	1.00E+00	5.00E+00	6.00E+00	6.00E+02	5.00E-01	5.00E+00	5.00E+00	-	-	-	1.00E+00	-
On-Site Commercial/ Industrial Worker Lots 1, 2, and 3 (Upper Horizon)						-	4.00E+02	6.30E+02	8.90E+03	4.70E+05	3.60E+02	3.70E+02	4.60E+02	8.90E+04	-	3.70E+07	6.10E+01	7.60E+04
On-Site Groundskeeper/Maintenance Worker Lots 1, 2, and 3 (Upper Horizon)						-	2.10E+02	1.10E+03	6.30E+05	3.50E+05	2.90E+03	1.90E+03	1.90E+03	7.80E+04	-	2.20E+08	4.40E+02	1.30E+06
On-Site Residential Lots 1, 2, and 3 (Upper Horizon)						-	1.30E+02	2.10E+02	1.90E+03	1.00E+05	1.20E+02	1.20E+02	1.50E+02	1.90E+04	-	7.90E+06	2.00E+01	1.60E+04
5x Aquatic Criteria, Lot 3 (Upper Horizon, Near BAPB)						-	5.50E+02	2.10E+03	1.60E+02	8.50E+05	5.00E+03	2.00E+03	1.30E+05	-	-	-	3.60E+03	-
40x Aquatic Criteria, Lot 3 (Upper Horizon, Uplands)						-	4.40E+03	1.70E+04	1.30E+03	6.80E+06	4.00E+04	1.60E+04	1.00E+06	-	-	-	2.80E+04	-
160x Aquatic Criteria, Lot 3 (Lower Horizon)						-	1.80E+04	6.70E+04	5.10E+03	2.70E+07	1.60E+05	6.20E+04	4.20E+06	-	-	-	1.10E+05	-
Storm-water Criteria, (Storm-water Outfalls)						-	1.10E+01	4.20E+01	3.20E+00	1.70E+04	9.90E+01	3.90E+01	2.60E+03	-	-	-	7.10E+01	-
DTSC Harborfront, Offsite	DTSC-MW-1	Primary	4/12/2018	Upper	NA	<0.5	<0.5	<0.5	<0.5	<0.5	3.2	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
DTSC Harborfront, Offsite	DTSC-MW-1	Primary	8/16/2018	Upper	NA	<0.5	<0.5	<0.5	<0.5	<0.5	4.7	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
DTSC Harborfront, Offsite	DTSC-MW-2	Primary	4/12/2018	Upper	NA	<0.5	<0.5	<0.5	0.7	<0.5	1.1	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
DTSC Harborfront, Offsite	DTSC-MW-2	Primary	8/16/2018	Upper	NA	<0.5	<0.5	<0.5	0.5	<0.5	1.6	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
DTSC Harborfront, Offsite	DTSC-MW-4	Primary	4/12/2018	Upper	NA	<0.5	<0.5	<0.5	<0.5	<0.5	1.7	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
DTSC Harborfront, Offsite	DTSC-MW-4	Primary	8/16/2018	Upper	NA	<0.5	<0.5	<0.5	<0.5	<0.5	1.3	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 1	IMW-15	Primary	4/16/2018	Lower	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<40	<40	<2	<2
Lot 1	IMW-15	Primary	8/14/2018	Lower	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<40	<40	<2	<2
Lot 1	IMW-16	Primary	4/16/2018	Lower	NA	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<50	<50	<2.5	<2.5
Lot 1	IMW-16	Primary	8/14/2018	Lower	NA	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<50	<50	<2.5	<2.5
Lot 1	IMW-17	Primary	4/16/2018	Lower	NA	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<25	<25	<1.3	<1.3
Lot 1	IMW-17	Primary	8/14/2018	Lower	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<20	<20	<1	<1
Lot 1	IMW-29	Primary	4/12/2018	Lower	NA	<5	<5	<5	<5	<5	<5	<5	<5	<5	<100	<100	<5	<5
Lot 1	IMW-29	Primary	8/15/2018	Lower	NA	<5	<5	<5	<5	<5	<5	<5	<5	<5	<100	<100	<5	<5
Lot 1	IMW-32	Primary	4/13/2018	Lower	NA	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 1	IMW-32	Primary	8/15/2018	Lower	NA	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 1	IMW-33	Primary	4/13/2018	Lower	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<40	<40	<2	<2
Lot 1	IMW-33	Primary	8/15/2018	Lower	NA	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<63	<63	<3.1	<3.1
Lot 1	IMW-01	Primary	4/5/2018	Upper	NA	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 1	IMW-01	Primary	8/23/2018	Upper	NA	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 1	IMW-02	Primary	4/5/2018	Upper	NA	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 1	IMW-02	Primary	8/23/2018	Upper	NA	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 1	IMW-03	Primary	4/5/2018	Upper	NA	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 1	IMW-03	Primary	8/23/2018	Upper	NA	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 1	IMW-04	Primary	4/5/2018	Upper	NA	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 1	IMW-04	Primary	8/23/2018	Upper	NA	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 1	IMW-23	Primary	4/13/2018	Upper	NA	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 1	IMW-23	Primary	8/14/2018	Upper	NA	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 1	IMW-25	Primary	4/13/2018	Upper	NA	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 1	IMW-25	Primary	8/15/2018	Upper	NA	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 1	IMW-26																	

**Table 3****Sampling Analytical Results - Volatile Organic Compounds**

Campus Bay, Richmond, CA

Lot/Area	Location	Sample Type	Sampled Date	Sample Horizon	Sample Location Relative to BAPB (Applicable to Lot 3 Wells Only)	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	cis-1,2-dichloroethene	Methyl Ethyl Ketone	Methyl Tertiary Butyl Ether	Tetrachloroethene	Toluene	trans-1,2-dichloroethene	Trichloroethylene	Vinyl chloride
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
<b>Drinking Water Standards Lots 1 and 2 (Upper and Lower Horizon)</b>						5.00E-01	7.00E+01	-	8.00E+01	6.00E+00	-	-	5.00E+00	1.50E+02	1.00E+01	5.00E+00	5.00E-01
On-Site Commercial/ Industrial Worker Lots 1, 2, and 3 (Upper Horizon)						8.50E+00	1.10E+06	-	4.00E+02	3.40E+04	1.30E+07	-	1.10E+02	1.60E+05	3.10E+04	2.70E+02	3.60E+00
On-Site Groundskeeper/Maintenance Worker Lots 1, 2, and 3 (Upper Horizon)						1.60E+02	1.40E+05	-	2.50E+03	2.70E+05	1.40E+08	-	2.20E+01	5.70E+05	5.10E+05	8.90E+02	3.00E+02
On-Site Residential Lots 1, 2, and 3 (Upper Horizon)						2.80E+00	2.50E+05	-	1.30E+02	7.20E+03	2.80E+06	-	3.80E+01	3.50E+04	6.70E+03	1.10E+02	1.20E+00
5x Aquatic Criteria, Lot 3 (Upper Horizon, Near BAPB)						2.20E+02	1.10E+06	-	2.40E+04	-	-	-	4.40E+02	1.00E+07	7.00E+06	4.10E+03	2.60E+04
40x Aquatic Criteria, Lot 3 (Upper Horizon, Uplands)						1.80E+03	8.40E+06	-	1.90E+05	-	-	-	3.50E+03	8.00E+07	5.60E+07	3.20E+04	2.10E+05
160x Aquatic Criteria, Lot 3 (Lower Horizon)						7.00E+03	3.40E+07	-	7.50E+05	-	-	-	1.40E+04	3.20E+08	2.20E+08	1.30E+05	8.40E+05
Storm-water Criteria, (Storm-water Outfalls)						4.40E+00	2.10E+04	-	4.70E+02	-	-	-	8.90E+00	2.00E+05	1.40E+05	8.10E+01	5.30E+02
DTSC Harborfront, Offsite	DTSC-MW-1	Primary	4/12/2018	Upper	NA	<0.5	<0.5	<1	<0.5	1.3	<10	<0.5	<0.5	<0.5	<0.5	44	<0.5
DTSC Harborfront, Offsite	DTSC-MW-1	Primary	8/16/2018	Upper	NA	<0.5	<0.5	<1	<0.5	1.3	<10	<0.5	<0.5	<0.5	<0.5	45	<0.5
DTSC Harborfront, Offsite	DTSC-MW-2	Primary	4/12/2018	Upper	NA	<0.5	<0.5	<1	<0.5	1.4	<10	<0.5	<0.5	<0.5	<0.5	13	<0.5
DTSC Harborfront, Offsite	DTSC-MW-2	Primary	8/16/2018	Upper	NA	<0.5	<0.5	<1	<0.5	1.1	<10	<0.5	<0.5	<0.5	<0.5	14	<0.5
DTSC Harborfront, Offsite	DTSC-MW-4	Primary	4/12/2018	Upper	NA	<0.5	<0.5	<1	<0.5	0.7	<10	<0.5	<0.5	<0.5	<0.5	48	<0.5
DTSC Harborfront, Offsite	DTSC-MW-4	Primary	8/16/2018	Upper	NA	<0.5	<0.5	<1	<0.5	0.5	<10	<0.5	<0.5	<0.5	<0.5	44	<0.5
Lot 1	IMW-15	Primary	4/16/2018	Lower	NA	<2	<2	<4	<2	340	<40	<2	<2	<2	<2	<2	63
Lot 1	IMW-15	Primary	8/14/2018	Lower	NA	<2	<2	<4	<2	230	<40	<2	<2	<2	<2	<2	110
Lot 1	IMW-16	Primary	4/16/2018	Lower	NA	<2.5	<2.5	<5	<2.5	390	<50	<2.5	<2.5	<2.5	3	18	17
Lot 1	IMW-16	Primary	8/14/2018	Lower	NA	<2.5	<2.5	<5	<2.5	320	<50	<2.5	<2.5	<2.5	2.5	<2.5	45
Lot 1	IMW-17	Primary	4/16/2018	Lower	NA	<1.3	<1.3	<2.5	<1.3	180	<25	<1.3	<1.3	<1.3	<1.3	6.7	<1.3
Lot 1	IMW-17	Primary	8/14/2018	Lower	NA	<1	<1	<2	<1	160	<20	<1	<1	<1	<1	1.7	50
Lot 1	IMW-29	Primary	4/12/2018	Lower	NA	<5	<5	<10	<5	670	<100	<5	<5	<5	12	5.7	610
Lot 1	IMW-29	Primary	8/15/2018	Lower	NA	<5	<5	<10	<5	690	<100	<5	<5	<5	11	12	700
Lot 1	IMW-32	Primary	4/13/2018	Lower	NA	<0.5	<0.5	<1	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Lot 1	IMW-32	Primary	8/15/2018	Lower	NA	<0.5	<0.5	<1	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Lot 1	IMW-33	Primary	4/13/2018	Lower	NA	<2	<2	<4	<2	440	<40	<2	<2	<2	<2	3.4	8.3
Lot 1	IMW-33	Primary	8/15/2018	Lower	NA	<3.1	<3.1	<6.3	<3.1	340	<63	<3.1	<3.1	<3.1	<3.1	<3.1	10
Lot 1	IMW-01	Primary	4/5/2018	Upper	NA	<0.5	<0.5	<1	<0.5	1.3	<10	<0.5	<0.5	<0.5	<0.5	<0.5	1.4
Lot 1	IMW-01	Primary	8/23/2018	Upper	NA	<0.5	<0.5	<1	<0.5	1.2	<10	<0.5	<0.5	<0.5	<0.5	<0.5	1.6
Lot 1	IMW-02	Primary	4/5/2018	Upper	NA	<0.5	<0.5	<1	<0.5	2.8	<10	<0.5	<0.5	<0.5	<0.5	<0.5	5.9
Lot 1	IMW-02	Primary	8/23/2018	Upper	NA	<0.5	<0.5	<1	<0.5	2.3	<10	<0.5	<0.5	<0.5	<0.5	<0.5	5.6
Lot 1	IMW-03	Primary	4/5/2018	Upper	NA	<0.5	<0.5	<1	<0.5	2	<10	<0.5	<0.5	<0.5	<0.5	<0.5	5
Lot 1	IMW-03	Primary	8/23/2018	Upper	NA	<0.5	<0.5	<1	<0.5	2.2	<10	<0.5	<0.5	<0.5	<0.5	<0.5	4.5
Lot 1	IMW-04	Primary	4/5/2018	Upper	NA	<0.5	<0.5	<1	<0.5	2.5	<10	<0.5	<0.5	<0.5	<0.5	0.6	2.3
Lot 1	IMW-04	Primary	8/23/2018	Upper	NA	<0.5	<0.5	<1	<0.5	3.3	<10	<0.5	<0.5	<0.5	<0.5	<0.5	5.6
Lot 1	IMW-23	Primary	4/13/2018	Upper	NA	<0.5	<0.5	<1	<0.5	4.1	<10	<0.5	1.1	<0.5	<0.5	11	<0.5
Lot 1	IMW-23	Primary	8/14/2018	Upper	NA	<0.5	<0.5	<1	<0.5	2.1	<10	<0.5	0.7	<0.5	<0.5	8	<0.5
Lot 1	IMW-25	Primary	4/13/2018	Upper	NA	<0.5	<0.5	<1	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	1.2	<0.5
Lot 1	IMW-25	Primary	8/15/2018	Upper	NA	<0.5	<0.5	<1	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	3.3	<0.5
Lot 1	IMW-26	Primary	4/13/2018	Upper	NA	<0.5	<0.5	<1	<0.5	3.8	<10	<0.5	1	<0.5	<0.5	4.8	24
Lot 1	IMW-26	Primary	8/15/2018	Upper	NA	<0.5	<0.5	1.3	<0.5	6.3	<10	<0.5	2	<0.5	<0.5	7.3	19
Lot 1	IMW-27	Primary	4/13/2018	Upper</													

**Table 3****Sampling Analytical Results - Volatile Organic Compounds**

Campus Bay, Richmond, CA

Lot/Area	Location	Sample Type	Sampled Date	Sample Horizon	Sample Location Relative to BAPB (Applicable to Lot 3 Wells Only)	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethene	1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichloropropane	1,4-dichlorobenzene	2-chlorotoluene	2-hexanone	Acetone	Benzene	Carbon disulfide
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
Drinking Water Standards Lots 1 and 2 (Upper and Lower Horizon)						-	1.00E+00	5.00E+00	6.00E+00	6.00E+02	5.00E-01	5.00E+00	5.00E+00	-	-	-	1.00E+00	-
On-Site Commercial/ Industrial Worker Lots 1, 2, and 3 (Upper Horizon)						-	4.00E+02	6.30E+02	8.90E+03	4.70E+05	3.60E+02	3.70E+02	4.60E+02	8.90E+04	-	3.70E+07	6.10E+01	7.60E+04
On-Site Groundskeeper/Maintenance Worker Lots 1, 2, and 3 (Upper Horizon)						-	2.10E+02	1.10E+03	6.30E+05	3.50E+05	2.90E+03	1.90E+03	1.90E+03	7.80E+04	-	2.20E+08	4.40E+02	1.30E+06
On-Site Residential Lots 1, 2, and 3 (Upper Horizon)						-	1.30E+02	2.10E+02	1.90E+03	1.00E+05	1.20E+02	1.20E+02	1.50E+02	1.90E+04	-	7.90E+06	2.00E+01	1.60E+04
5x Aquatic Criteria, Lot 3 (Upper Horizon, Near BAPB)						-	5.50E+02	2.10E+03	1.60E+02	8.50E+05	5.00E+03	2.00E+03	1.30E+05	-	-	-	3.60E+03	-
40x Aquatic Criteria, Lot 3 (Upper Horizon, Uplands)						-	4.40E+03	1.70E+04	1.30E+03	6.80E+06	4.00E+04	1.60E+04	1.00E+06	-	-	-	2.80E+04	-
160x Aquatic Criteria, Lot 3 (Lower Horizon)						-	1.80E+04	6.70E+04	5.10E+03	2.70E+07	1.60E+05	6.20E+04	4.20E+06	-	-	-	1.10E+05	-
Storm-water Criteria, (Storm-water Outfalls)						-	1.10E+01	4.20E+01	3.20E+00	1.70E+04	9.90E+01	3.90E+01	2.60E+03	-	-	-	7.10E+01	-
Lot 1	IMW-31	Primary	4/16/2018	Upper	NA	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<63	<63	<3.1	<3.1
Lot 1	IMW-31	Primary	8/16/2018	Upper	NA	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<63	<63	<3.1	<3.1
Lot 1	MW-25R	Primary	4/13/2018	Upper	NA	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 1	MW-25R	Primary	8/15/2018	Upper	NA	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 1	MW-26	Primary	4/13/2018	Upper	NA	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 1	MW-26	Duplicate	4/13/2018	Upper	NA	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 1	MW-26	Primary	8/15/2018	Upper	NA	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 1	MW-26	Duplicate	8/15/2018	Upper	NA	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 1	MW-27	Primary	4/12/2018	Upper	NA	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 1	MW-27	Primary	8/15/2018	Upper	NA	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 1	MW-30	Primary	4/16/2018	Upper	NA	<0.5	<0.5	<0.5	<0.5	2.1	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 1	MW-30	Primary	8/23/2018	Upper	NA	<0.5	<0.5	<0.5	<0.5	1.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 1	MW-33	Primary	4/12/2018	Upper	NA	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 1	MW-33	Duplicate	4/12/2018	Upper	NA	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 1	MW-33	Primary	8/16/2018	Upper	NA	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 1	MW-33	Duplicate	8/16/2018	Upper	NA	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 1	PZ-11	Primary	4/13/2018	Upper	NA	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 1	PZ-11	Duplicate	4/13/2018	Upper	NA	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 1	PZ-11	Primary	8/15/2018	Upper	NA	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 1	PZ-11	Duplicate	8/15/2018	Upper	NA	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 1	PZ-12	Primary	4/13/2018	Upper	NA	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 1	PZ-12	Primary	8/15/2018	Upper	NA	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 2	IMW-05	Primary	4/11/2018	Upper	NA	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 2	IMW-05	Primary	8/14/2018	Upper	NA	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 2	IMW-06	Primary	4/11/2018	Upper	NA	<0.5	<0.5	<0.5	<0.5	19	53	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 2	IMW-06	Primary	8/14/2018	Upper	NA	<0.5	<0.5	<0.5	<0.5	20	73	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 2	IMW-07	Primary	4/11/2018	Upper	NA	<1	<1	1.5	<1	3.2	970	<1	<1	<1	<20	<20	<1	<1
Lot 2	IMW-07	Duplicate	4/11/2018	Upper	NA	<1	<1	1.6	<1	3.7	990	<1	<1	<1	<20	<20	<1	<1
Lot 2	IMW-07	Primary	8/14/2018	Upper	NA	<1.7	<1.7	<1.7	<1.7	<1.7	5.4							

**Table 3****Sampling Analytical Results - Volatile Organic Compounds**

Campus Bay, Richmond, CA

Lot/Area	Location	Sample Type	Sampled Date	Sample Horizon	Sample Location Relative to BAPB (Applicable to Lot 3 Wells Only)	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	cis-1,2-dichloroethene	Methyl Ethyl Ketone	Methyl Tertiary Butyl Ether	Tetrachloroethene	Toluene	trans-1,2-dichloroethene	Trichloroethylene	Vinyl chloride
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
<b>Drinking Water Standards Lots 1 and 2 (Upper and Lower Horizon)</b>						<b>5.00E-01</b>	<b>7.00E+01</b>	-	<b>8.00E+01</b>	<b>6.00E+00</b>	-	-	<b>5.00E+00</b>	<b>1.50E+02</b>	<b>1.00E+01</b>	<b>5.00E+00</b>	<b>5.00E-01</b>
On-Site Commercial/ Industrial Worker Lots 1, 2, and 3 (Upper Horizon)						8.50E+00	1.10E+06	-	4.00E+02	3.40E+04	1.30E+07	-	1.10E+02	1.60E+05	3.10E+04	2.70E+02	3.60E+00
On-Site Groundskeeper/Maintenance Worker Lots 1, 2, and 3 (Upper Horizon)						<b>1.60E+02</b>	<b>1.40E+05</b>	-	<b>2.50E+03</b>	<b>2.70E+05</b>	<b>1.40E+08</b>	-	<b>2.20E+01</b>	<b>5.70E+05</b>	<b>5.10E+05</b>	<b>8.90E+02</b>	<b>3.00E+02</b>
On-Site Residential Lots 1, 2, and 3 (Upper Horizon)						2.80E+00	2.50E+05	-	1.30E+02	7.20E+03	2.80E+06	-	3.80E+01	3.50E+04	6.70E+03	1.10E+02	1.20E+00
5x Aquatic Criteria, Lot 3 (Upper Horizon, Near BAPB)						2.20E+02	1.10E+06	-	2.40E+04	-	-	-	4.40E+02	1.00E+07	7.00E+06	4.10E+03	2.60E+04
40x Aquatic Criteria, Lot 3 (Upper Horizon, Uplands)						1.80E+03	8.40E+06	-	1.90E+05	-	-	-	3.50E+03	8.00E+07	5.60E+07	3.20E+04	2.10E+05
160x Aquatic Criteria, Lot 3 (Lower Horizon)						7.00E+03	3.40E+07	-	7.50E+05	-	-	-	1.40E+04	3.20E+08	2.20E+08	1.30E+05	8.40E+05
Storm-water Criteria, (Storm-water Outfalls)						4.40E+00	2.10E+04	-	4.70E+02	-	-	-	8.90E+00	2.00E+05	1.40E+05	8.10E+01	5.30E+02
Lot 1	IMW-31	Primary	4/16/2018	Upper	NA	<3.1	<3.1	<6.3	<3.1	290	<63	<3.1	<3.1	<3.1	<3.1	3.8	<b>7.4</b>
Lot 1	IMW-31	Primary	8/16/2018	Upper	NA	<3.1	<3.1	<6.3	<3.1	400	<63	<3.1	<3.1	<3.1	<3.1	<3.1	<b>5.7</b>
Lot 1	MW-25R	Primary	4/13/2018	Upper	NA	<0.5	<0.5	<1	<0.5	72	<10	<0.5	<b>80</b>	<0.5	0.7	<b>40</b>	<b>8.8</b>
Lot 1	MW-25R	Primary	8/15/2018	Upper	NA	<0.5	<0.5	<1	<0.5	69	<10	<0.5	<b>140</b>	<0.5	0.8	<b>45</b>	<b>63</b>
Lot 1	MW-26	Primary	4/13/2018	Upper	NA	<0.5	<0.5	<1	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Lot 1	MW-26	Duplicate	4/13/2018	Upper	NA	<0.5	<0.5	<1	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Lot 1	MW-26	Primary	8/15/2018	Upper	NA	<0.5	<0.5	<1	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Lot 1	MW-26	Duplicate	8/15/2018	Upper	NA	<0.5	<0.5	<1	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Lot 1	MW-27	Primary	4/12/2018	Upper	NA	<0.5	<0.5	<1	<0.5	1	<10	<0.5	<0.5	<0.5	<0.5	2.5	<0.5
Lot 1	MW-27	Primary	8/15/2018	Upper	NA	<0.5	<0.5	<1	<0.5	1.9	<10	<0.5	<0.5	<0.5	<0.5	2.5	<b>0.7</b>
Lot 1	MW-30	Primary	4/16/2018	Upper	NA	<0.5	<0.5	<1	<0.5	3.8	<10	<0.5	<0.5	<0.5	<0.5	<b>8.3</b>	<b>0.6</b>
Lot 1	MW-30	Primary	8/23/2018	Upper	NA	<0.5	<0.5	<1	<0.5	2.7	<10	<0.5	<0.5	<0.5	<0.5	<b>7.1</b>	<0.5
Lot 1	MW-33	Primary	4/12/2018	Upper	NA	<0.5	<0.5	<1	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	2.2	<0.5
Lot 1	MW-33	Duplicate	4/12/2018	Upper	NA	<0.5	<0.5	<1	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	2.2	<0.5
Lot 1	MW-33	Primary	8/16/2018	Upper	NA	<0.5	<0.5	<1	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	2	<0.5
Lot 1	MW-33	Duplicate	8/16/2018	Upper	NA	<0.5	<0.5	<1	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	1.8	<0.5
Lot 1	PZ-11	Primary	4/13/2018	Upper	NA	<0.5	<0.5	<1	<0.5	27	<10	<0.5	0.8	<0.5	5	<b>12</b>	<b>47</b>
Lot 1	PZ-11	Duplicate	4/13/2018	Upper	NA	<0.5	<0.5	<1	<0.5	26	<10	<0.5	0.7	<0.5	4.9	<b>12</b>	<b>45</b>
Lot 1	PZ-11	Primary	8/15/2018	Upper	NA	<0.5	<0.5	<1	<0.5	59	<10	<0.5	1.1	<0.5	<b>14</b>	<b>18</b>	<b>150</b>
Lot 1	PZ-11	Duplicate	8/15/2018	Upper	NA	<0.5	<0.5	<1	<0.5	62	<10	<0.5	1.1	<0.5	<b>14</b>	<b>19</b>	<b>150</b>
Lot 1	PZ-12	Primary	4/13/2018	Upper	NA	<0.5	<0.5	<1	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<b>31</b>
Lot 1	PZ-12	Primary	8/15/2018	Upper	NA	<0.5	<0.5	<1	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<b>71</b>
Lot 2	IMW-05	Primary	4/11/2018	Upper	NA	<0.5	<0.5	<1	<0.5	96	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<b>12</b>
Lot 2	IMW-05	Primary	8/14/2018	Upper	NA	<0.5	<0.5	<1	<0.5	89	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<b>13</b>
Lot 2	IMW-06	Primary	4/11/2018	Upper	NA	<0.5	0.5	<1	<0.5	13	<10	<0.5	1.6	<0.5	1.3	<b>6.9</b>	<b>1.4</b>
Lot 2	IMW-06	Primary	8/14/2018	Upper	NA	<0.5	0.5	<1	<0.5	13	<10	<0.5	<0.5	<0.5	<0.5	3.2	<b>1.5</b>
Lot 2	IMW-07	Primary	4/11/2018	Upper	NA	<1	<1	<20	<1	5.4	<20	<1	<1	<1	<1	1.3	<1
Lot 2	IMW-07	Duplicate	4/11/2018	Upper	NA	<1	<1	<20	<1	5.6	<20	<1	<1	<1	<1	1.4	<b>1.1</b>
Lot 2	IMW-07	Primary	8/14/2018	Upper	NA	<1.7	<1.7	<3.3	<1.7	3.2	<33	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7
Lot 2	IMW-07	Duplicate	8/14/2018	Upper	NA	<1.7	<1.7	<3.3	<1.7	3.3	<33	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7
Lot 2	IMW-08	Primary	4/11/2018	Upper	NA	<1	<1	<2	<1	110	<20	<1	<1	<1	<1	2.1	<b>35</b>
Lot 2	IMW-08																

**Table 3****Sampling Analytical Results - Volatile Organic Compounds**

Campus Bay, Richmond, CA

Lot/Area	Location	Sample Type	Sampled Date	Sample Horizon	Sample Location Relative to BAPB (Applicable to Lot 3 Wells Only)	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethene	1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichloropropane	1,4-dichlorobenzene	2-chlorotoluene	2-hexanone	Acetone	Benzene	Carbon disulfide	
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L		
Drinking Water Standards Lots 1 and 2 (Upper and Lower Horizon)						-	1.00E+00	5.00E+00	6.00E+00	6.00E+02	5.00E-01	5.00E+00	5.00E+00	-	-	-	1.00E+00	-	
On-Site Commercial/ Industrial Worker Lots 1, 2, and 3 (Upper Horizon)						-	4.00E+02	6.30E+02	8.90E+03	4.70E+05	3.60E+02	3.70E+02	4.60E+02	8.90E+04	-	3.70E+07	6.10E+01	7.60E+04	
On-Site Groundskeeper/Maintenance Worker Lots 1, 2, and 3 (Upper Horizon)						-	2.10E+02	1.10E+03	6.30E+05	3.50E+05	2.90E+03	1.90E+03	1.90E+03	7.80E+04	-	2.20E+08	4.40E+02	1.30E+06	
On-Site Residential Lots 1, 2, and 3 (Upper Horizon)						-	1.30E+02	2.10E+02	1.90E+03	1.00E+05	1.20E+02	1.20E+02	1.50E+02	1.90E+04	-	7.90E+06	2.00E+01	1.60E+04	
5x Aquatic Criteria, Lot 3 (Upper Horizon, Near BAPB)						-	5.50E+02	2.10E+03	1.60E+02	8.50E+05	5.00E+03	2.00E+03	1.30E+05	-	-	-	3.60E+03	-	
40x Aquatic Criteria, Lot 3 (Upper Horizon, Uplands)						-	4.40E+03	1.70E+04	1.30E+03	6.80E+06	4.00E+04	1.60E+04	1.00E+06	-	-	-	2.80E+04	-	
160x Aquatic Criteria, Lot 3 (Lower Horizon)						-	1.80E+04	6.70E+04	5.10E+03	2.70E+07	1.60E+05	6.20E+04	4.20E+06	-	-	-	1.10E+05	-	
Storm-water Criteria, (Storm-water Outfalls)						-	1.10E+01	4.20E+01	3.20E+00	1.70E+04	9.90E+01	3.90E+01	2.60E+03	-	-	-	7.10E+01	-	
Lot 3, Uplands	IMW-42	Primary	4/10/2018	Upper	UG of BAPB	<1.7	2.3	7.9	2	<1.7	24	<1.7	<1.7	<1.7	<33	<33	<1.7	<1.7	
Lot 3, Uplands	IMW-42	Primary	8/17/2018	Upper	UG of BAPB	<2.5	<2.5	13	<2.5	<2.5	37	<2.5	<2.5	<2.5	<50	<50	<2.5	<2.5	
Lot 3, Uplands	IMW-43	Primary	4/9/2018	Upper	UG of BAPB	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<33	<33	<1.7	<1.7	
Lot 3, Uplands	IMW-43	Primary	8/22/2018	Upper	UG of BAPB	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<33	<33	<1.7	<1.7	
Lot 3, Uplands	IMW-45	Primary	4/10/2018	Upper	UG of BAPB	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	23	1.5	2.4	
Lot 3, Uplands	IMW-45	Primary	8/17/2018	Upper	UG of BAPB	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	11	1.7	2.7	
Lot 3, Uplands	IMW-48	Primary	4/9/2018	Upper	UG of BAPB	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<33	160	3.4	2.2	
Lot 3, Uplands	IMW-48	Primary	8/16/2018	Upper	UG of BAPB	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<33	3.7	<1.7	<1.7	
Lot 3, Uplands	IMW-50	Primary	4/11/2018	Upper	UG of BAPB	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5	
Lot 3, Uplands	IMW-50	Primary	8/14/2018	Upper	UG of BAPB	<1	<1	<1	<1	<1	<1	<1	<1	<1	<20	<20	<1	<1	
Lot 3, Uplands	IMW-57	Primary	4/11/2018	Upper	UG of BAPB	<3.1	<3.1	<3.1	<3.1	<3.1	390	17	<3.1	15	<63	<63	80	<3.1	
Lot 3, Uplands	IMW-57	Primary	8/14/2018	Upper	UG of BAPB	<3.1	<3.1	<3.1	<3.1	<3.1	480	18	<3.1	20	<63	<63	89	<3.1	
Lot 3, Uplands	IMW-58	Primary	4/9/2018	Upper	UG of BAPB	<1.3	<1.3	<1.3	<1.3	<1.3	11	<1.3	<1.3	<1.3	<25	<25	<1.3	<1.3	
Lot 3, Uplands	IMW-58	Duplicate	4/9/2018	Upper	UG of BAPB	<1.3	<1.3	<1.3	<1.3	<1.3	11	<1.3	<1.3	<1.3	<25	<25	<1.3	<1.3	
Lot 3, Uplands	IMW-58	Primary	8/17/2018	Upper	UG of BAPB	<1.3	<1.3	<1.3	<1.3	<1.3	28	<1.3	<1.3	<1.3	<25	<25	<1.3	1.4	
Lot 3, Uplands	IMW-58	Duplicate	8/17/2018	Upper	UG of BAPB	<1.3	<1.3	<1.3	<1.3	<1.3	28	<1.3	<1.3	<1.3	<25	<25	<1.3	1.4	
Lot 3, Uplands	IMW-59	Primary	4/10/2018	Upper	UG of BAPB	<1	<1	<1	<1	<1	100	2.5	<1	1.5	<20	<20	4.9	<1	
Lot 3, Uplands	IMW-59	Primary	8/17/2018	Upper	UG of BAPB	<1	<1	<1	<1	<1	110	2.5	<1	1.4	<20	<20	4.9	<1	
Lot 3, Uplands	IMW-60	Primary	4/10/2018	Upper	UG of BAPB	<0.5	<0.5	<0.5	<0.5	<0.5	10	1	<0.5	0.5	<10	<10	<0.5	<0.5	
Lot 3, Uplands	IMW-60	Primary	8/17/2018	Upper	UG of BAPB	<0.5	<0.5	<0.5	<0.5	<0.5	30	3.6	<0.5	1.3	<10	<10	<0.5	<0.5	
Lot 3, Uplands	IMW-61	Primary	4/11/2018	Upper	UG of BAPB	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5	
Lot 3, Uplands	IMW-61	Primary	8/17/2018	Upper	UG of BAPB	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5	
Lot 3, Uplands	IMW-62	Primary	4/11/2018	Upper	UG of BAPB	<5	<5	<5	<5	<5	<5	<5	<5	<5	<100	<100	<5	<5	
Lot 3, Uplands	IMW-62	Primary	8/17/2018	Upper	UG of BAPB	<5	<5	<5	<5	<5	7.3	<5	<5	<5	<100	<100	<5	<5	
Lot 3, Uplands	MW-18	Primary	4/10/2018	Upper	UG of BAPB	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5	
Lot 3, Uplands	MW-18	Primary	8/17/2018	Upper	UG of BAPB	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5	
Lot 3, Uplands	MW-19	Primary	4/10/2018	Upper	UG of BAPB	<2.5	<2.5	<2.5	<2.5	<2.5	4.9	<2.5	<2.5	<2.5	<2.5	<50	<50	<2.5	<2.5
Lot 3, Uplands	MW-19	Duplicate	4/10/2018	Upper	UG of BAPB	<2.5	<2.5	<2.5	<2.5	<2.5	5.4	<2.5	<2.5	<2.5	<2.5	<50	<50	<2.5	<2

Table 3

## Sampling Analytical Results - Volatile Organic Compounds

Campus Bay, Richmond, CA

Lot/Area	Location	Sample Type	Sampled Date	Sample Horizon	Sample Location Relative to BAPB (Applicable to Lot 3 Wells Only)	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	cis-1,2-dichloroethene	Methyl Ethyl Ketone	Methyl Tertiary Butyl Ether	Tetrachloroethene	Toluene	trans-1,2-dichloroethene	Trichloroethene	Vinyl chloride
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Drinking Water Standards Lots 1 and 2 (Upper and Lower Horizon)						5.00E-01	7.00E+01	-	8.00E+01	6.00E+00	-	-	5.00E+00	1.50E+02	1.00E+01	5.00E+00	5.00E-01
On-Site Commercial/ Industrial Worker Lots 1, 2, and 3 (Upper Horizon)						8.50E+00	1.10E+06	-	4.00E+02	3.40E+04	1.30E+07	-	1.10E+02	1.60E+05	3.10E+04	2.70E+02	3.60E+00
On-Site Groundskeeper/Maintenance Worker Lots 1, 2, and 3 (Upper Horizon)						1.60E+02	1.40E+05	-	2.50E+03	2.70E+05	1.40E+08	-	2.20E+01	5.70E+05	5.10E+05	8.90E+02	3.00E+02
On-Site Residential Lots 1, 2, and 3 (Upper Horizon)						2.80E+00	2.50E+05	-	1.30E+02	7.20E+03	2.80E+06	-	3.80E+01	3.50E+04	6.70E+03	1.10E+02	1.20E+00
5x Aquatic Criteria, Lot 3 (Upper Horizon, Near BAPB)						2.20E+02	1.10E+06	-	2.40E+04	-	-	-	4.40E+02	1.00E+07	7.00E+06	4.10E+03	2.60E+04
40x Aquatic Criteria, Lot 3 (Upper Horizon, Uplands)						1.80E+03	8.40E+06	-	1.90E+05	-	-	-	3.50E+03	8.00E+07	5.60E+07	3.20E+04	2.10E+05
160x Aquatic Criteria, Lot 3 (Lower Horizon)						7.00E+03	3.40E+07	-	7.50E+05	-	-	-	1.40E+04	3.20E+08	2.20E+08	1.30E+05	8.40E+05
Storm-water Criteria, (Storm-water Outfalls)						4.40E+00	2.10E+04	-	4.70E+02	-	-	-	8.90E+00	2.00E+05	1.40E+05	8.10E+01	5.30E+02
Lot 3, Uplands	IMW-42	Primary	4/10/2018	Upper	UG of BAPB	<1.7	14	<3.3	1.8	350	<33	<1.7	190	<1.7	4.9	46	1.9
Lot 3, Uplands	IMW-42	Primary	8/17/2018	Upper	UG of BAPB	<2.5	10	<5	<2.5	240	<50	<2.5	140	2.8	4.7	48	<2.5
Lot 3, Uplands	IMW-43	Primary	4/9/2018	Upper	UG of BAPB	<1.7	<1.7	<3.3	<1.7	100	<33	<1.7	4.5	<1.7	<1.7	<1.7	<1.7
Lot 3, Uplands	IMW-43	Primary	8/22/2018	Upper	UG of BAPB	<1.7	<1.7	<3.3	<1.7	120	<33	<1.7	4.5	<1.7	<1.7	<1.7	4
Lot 3, Uplands	IMW-45	Primary	4/10/2018	Upper	UG of BAPB	<0.5	25	<1	<0.5	10	<10	<0.5	<0.5	<0.5	1	2.1	4.5
Lot 3, Uplands	IMW-45	Primary	8/17/2018	Upper	UG of BAPB	<0.5	27	<1	<0.5	3.3	<10	<0.5	0.6	<0.5	0.9	3.5	1.8
Lot 3, Uplands	IMW-48	Primary	4/9/2018	Upper	UG of BAPB	<1.7	120	<3.3	<1.7	160	<33	<1.7	70	<1.7	<1.7	15	<1.7
Lot 3, Uplands	IMW-48	Primary	8/16/2018	Upper	UG of BAPB	<1.7	140	<3.3	<1.7	240	<33	<1.7	64	<1.7	<1.7	20	2.9
Lot 3, Uplands	IMW-50	Primary	4/11/2018	Upper	UG of BAPB	<0.5	8.3	<1	<0.5	98	<10	<0.5	<0.5	<0.5	1.3	<0.5	12
Lot 3, Uplands	IMW-50	Primary	8/14/2018	Upper	UG of BAPB	<1	6.3	<2	<1	<1	<20	<1	<1	<1	<1	<1	<1
Lot 3, Uplands	IMW-57	Primary	4/11/2018	Upper	UG of BAPB	<3.1	350	<6.3	<3.1	99	<63	<3.1	<3.1	3.6	<3.1	<3.1	71
Lot 3, Uplands	IMW-57	Primary	8/14/2018	Upper	UG of BAPB	<3.1	370	<6.3	<3.1	130	<63	<3.1	4.6	4.2	<3.1	4.4	70
Lot 3, Uplands	IMW-58	Primary	4/9/2018	Upper	UG of BAPB	170	11	<2.5	41	1.9	<25	<1.3	1.7	<1.3	<1.3	56	<1.3
Lot 3, Uplands	IMW-58	Duplicate	4/9/2018	Upper	UG of BAPB	160	12	<2.5	43	2.1	<25	<1.3	<1.3	<1.3	<1.3	57	<1.3
Lot 3, Uplands	IMW-58	Primary	8/17/2018	Upper	UG of BAPB	610	16	<2.5	120	3.2	<25	<1.3	1.3	<1.3	<1.3	120	2.5
Lot 3, Uplands	IMW-58	Duplicate	8/17/2018	Upper	UG of BAPB	630	15	<2.5	120	3	<25	<1.3	<1.3	<1.3	<1.3	110	2.1
Lot 3, Uplands	IMW-59	Primary	4/10/2018	Upper	UG of BAPB	<1	45	<2	<1	6.9	<20	<1	2.3	<1	<1	4.4	<1
Lot 3, Uplands	IMW-59	Primary	8/17/2018	Upper	UG of BAPB	<1	50	<2	<1	8.7	<20	<1	<1	<1	<1	3.3	<1
Lot 3, Uplands	IMW-60	Primary	4/10/2018	Upper	UG of BAPB	<0.5	4.4	<1	0.8	1.4	<10	<0.5	15	<0.5	<0.5	2.9	<0.5
Lot 3, Uplands	IMW-60	Primary	8/17/2018	Upper	UG of BAPB	<0.5	9.1	<1	0.6	3.6	<10	<0.5	22	<0.5	<0.5	9.9	0.9
Lot 3, Uplands	IMW-61	Primary	4/11/2018	Upper	UG of BAPB	<0.5	0.5	<1	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	0.6	<0.5
Lot 3, Uplands	IMW-61	Primary	8/17/2018	Upper	UG of BAPB	<0.5	1.9	<1	<0.5	1.3	<10	<0.5	<0.5	<0.5	<0.5	1.4	<0.5
Lot 3, Uplands	IMW-62	Primary	4/11/2018	Upper	UG of BAPB	<5	12	<10	<5	710	<100	<5	66	<5	<5	170	85
Lot 3, Uplands	IMW-62	Primary	8/17/2018	Upper	UG of BAPB	<5	17	<10	<5	1700	<100	<5	38	<5	11	380	110
Lot 3, Uplands	MW-18	Primary	4/10/2018	Upper	UG of BAPB	<0.5	1.1	<1	<0.5	<0.5	<10	<0.5	71	<0.5	<0.5	4.4	<0.5
Lot 3, Uplands	MW-18	Primary	8/17/2018	Upper	UG of BAPB	<0.5	<0.5	<1	<0.5	<0.5	<10	<0.5	55	<0.5	<0.5	3	<0.5
Lot 3, Uplands	MW-19	Primary	4/10/2018	Upper	UG of BAPB	<2.5	6.5	<5	<2.5	330	<50	<2.5	45	<2.5	33	63	340
Lot 3, Uplands	MW-19	Duplicate	4/10/2018	Upper	UG of BAPB	<2.5	6	<5	<2.5	310	<50	<2.5	50	<2.5	42	68	370
Lot 3, Uplands	MW-19	Primary	8/17/2018	Upper	UG of BAPB	<2.5	4	8.2	<2.5	71J	<50	<2.5	45J	<2.5	17	16	360
Lot 3, Uplands	MW-19	Duplicate	8/17/2018	Upper	UG of BAPB	<2.5	4.5	8.8	<2.5	130J	<50	<2.5	89J	<2.5	17	24	350
Lot 3, Uplands	MW-20	Primary	4/10/2018	Upper	UG of BAPB	<25	3100	<50	<25	<25	<500	<25	27	<25	<25	26	<25
Lot 3, Uplands	MW-20	Primary	8/16/2018	Upper	UG of BAPB	<13	1600	<25	<13	<13	<250	<13	<13	<13	<13	<13	<13
Lot 3, Uplands	MW-21	Primary	4/9/2018	Upper	UG of BAPB	<1.3	4.2	<2.5	1.6	40	<25	<1.3	190	<1.3	36	<1.3	
Lot 3, Uplands	MW-21	Primary</															

**Table 3****Sampling Analytical Results - Volatile Organic Compounds**

Campus Bay, Richmond, CA

Lot/Area	Location	Sample Type	Sampled Date	Sample Horizon	Sample Location Relative to BAPB (Applicable to Lot 3 Wells Only)	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethene	1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichloropropane	1,4-dichlorobenzene	2-chlorotoluene	2-hexanone	Acetone	Benzene	Carbon disulfide
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
Drinking Water Standards Lots 1 and 2 (Upper and Lower Horizon)						-	1.00E+00	5.00E+00	6.00E+00	6.00E+02	5.00E-01	5.00E+00	5.00E+00	-	-	-	1.00E+00	-
On-Site Commercial/ Industrial Worker Lots 1, 2, and 3 (Upper Horizon)						-	4.00E+02	6.30E+02	8.90E+03	4.70E+05	3.60E+02	3.70E+02	4.60E+02	8.90E+04	-	3.70E+07	6.10E+01	7.60E+04
On-Site Groundskeeper/Maintenance Worker Lots 1, 2, and 3 (Upper Horizon)						-	2.10E+02	1.10E+03	6.30E+05	3.50E+05	2.90E+03	1.90E+03	1.90E+03	7.80E+04	-	2.20E+08	4.40E+02	1.30E+06
On-Site Residential Lots 1, 2, and 3 (Upper Horizon)						-	1.30E+02	2.10E+02	1.90E+03	1.00E+05	1.20E+02	1.20E+02	1.50E+02	1.90E+04	-	7.90E+06	2.00E+01	1.60E+04
5x Aquatic Criteria, Lot 3 (Upper Horizon, Near BAPB)						-	5.50E+02	2.10E+03	1.60E+02	8.50E+05	5.00E+03	2.00E+03	1.30E+05	-	-	-	3.60E+03	-
40x Aquatic Criteria, Lot 3 (Upper Horizon, Uplands)						-	4.40E+03	1.70E+04	1.30E+03	6.80E+06	4.00E+04	1.60E+04	1.00E+06	-	-	-	2.80E+04	-
160x Aquatic Criteria, Lot 3 (Lower Horizon)						-	1.80E+04	6.70E+04	5.10E+03	2.70E+07	1.60E+05	6.20E+04	4.20E+06	-	-	-	1.10E+05	-
Storm-water Criteria, (Storm-water Outfalls)						-	1.10E+01	4.20E+01	3.20E+00	1.70E+04	9.90E+01	3.90E+01	2.60E+03	-	-	-	7.10E+01	-
Lot 3, Uplands	MW-32A	Primary	4/10/2018	Upper	UG of BAPB	<3.6	82	<3.6	<3.6	<3.6	23	<3.6	<3.6	<3.6	<71	<71	5.7	<3.6
Lot 3, Uplands	MW-32A	Primary	8/21/2018	Upper	UG of BAPB	<5	59	<5	<5	<5	17	<5	<5	<5	<100	<100	<5	<5
Lot 3, Uplands	MW-32B	Primary	4/10/2018	Lower	UG of BAPB	<10	<10	<10	<10	<10	49	<10	<10	<10	<200	<200	<10	<10
Lot 3, Uplands	MW-32B	Primary	8/21/2018	Lower	UG of BAPB	<17	<17	<17	<17	<17	42	<17	<17	<17	<330	<330	<17	<17
Lot 3, Uplands	PZ-10	Primary	4/9/2018	Upper	UG of BAPB	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	<0.5	<0.5	<0.5	<10	<10	0.7	<0.5
Lot 3, Uplands	PZ-10	Primary	8/16/2018	Upper	UG of BAPB	<0.5	<0.5	<0.5	<0.5	<0.5	2	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 3, Near BAPB	MW-01	Primary	4/4/2018	Upper	DG of BAPB	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 3, Near BAPB	MW-01	Primary	8/21/2018	Upper	DG of BAPB	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 3, Near BAPB	MW-02	Primary	4/6/2018	Upper	Immediately UG	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 3, Near BAPB	MW-02	Primary	8/21/2018	Upper	Immediately UG	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 3, Near BAPB	MW-03	Primary	4/4/2018	Upper	In BAPB	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 3, Near BAPB	MW-03	Primary	8/21/2018	Upper	In BAPB	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 3, Near BAPB	MW-04	Primary	4/4/2018	Upper	DG of BAPB	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 3, Near BAPB	MW-04	Duplicate	4/4/2018	Upper	DG of BAPB	<1	<1	<1	<1	<1	<1	<1	<1	<1	<20	<20	<1	<1
Lot 3, Near BAPB	MW-04	Primary	8/21/2018	Upper	DG of BAPB	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 3, Near BAPB	MW-04	Duplicate	8/21/2018	Upper	DG of BAPB	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 3, Near BAPB	MW-05	Primary	4/4/2018	Upper	DG of BAPB	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 3, Near BAPB	MW-05	Primary	8/21/2018	Upper	DG of BAPB	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 3, Near BAPB	MW-06	Primary	4/6/2018	Upper	Immediately UG	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	0.5	<0.5
Lot 3, Near BAPB	MW-06	Primary	8/22/2018	Upper	Immediately UG	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	1.2	<0.5
Lot 3, Near BAPB	MW-07	Primary	4/4/2018	Upper	DG of BAPB	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 3, Near BAPB	MW-07	Primary	8/21/2018	Upper	DG of BAPB	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 3, Near BAPB	MW-08	Primary	4/6/2018	Upper	Immediately UG	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 3, Near BAPB	MW-08	Primary	8/22/2018	Upper	Immediately UG	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	1.5	<0.5
Lot 3, Near BAPB	MW-09	Primary	4/6/2018	Upper	In BAPB	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 3, Near BAPB	MW-09	Primary	8/22/2018	Upper	In BAPB	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Lot 3, Near BAPB	MW-10A	Primary	4/9/2018	Upper	DG of BAPB	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<33	<33	<1.7	<1.7
Lot 3, Near BAPB	MW-10A	Primary	8/21/2018	Upper	DG of BAPB	<1.7	2.2	<1.7	<1.7	<1.7	3.1</							

**Table 3****Sampling Analytical Results - Volatile Organic Compounds**

Campus Bay, Richmond, CA

Lot/Area	Location	Sample Type	Sampled Date	Sample Horizon	Sample Location Relative to BAPB (Applicable to Lot 3 Wells Only)	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	cis-1,2-dichloroethene	Methyl Ethyl Ketone	Methyl Tertiary Butyl Ether	Tetrachloroethene	Toluene	trans-1,2-dichloroethene	Trichloroethylene	Vinyl chloride					
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L					
<b>Drinking Water Standards Lots 1 and 2 (Upper and Lower Horizon)</b>						5.00E-01	7.00E+01	-	8.00E+01	6.00E+00	-	-	5.00E+00	1.50E+02	1.00E+01	5.00E+00	5.00E-01					
On-Site Commercial/ Industrial Worker Lots 1, 2, and 3 (Upper Horizon)						8.50E+00	1.10E+06	-	4.00E+02	3.40E+04	1.30E+07	-	1.10E+02	1.60E+05	3.10E+04	2.70E+02	3.60E+00					
On-Site Groundskeeper/Maintenance Worker Lots 1, 2, and 3 (Upper Horizon)						1.60E+02	1.40E+05	-	2.50E+03	2.70E+05	1.40E+08	-	2.20E+01	5.70E+05	5.10E+05	8.90E+02	3.00E+02					
On-Site Residential Lots 1, 2, and 3 (Upper Horizon)						2.80E+00	2.50E+05	-	1.30E+02	7.20E+03	2.80E+06	-	3.80E+01	3.50E+04	6.70E+03	1.10E+02	1.20E+00					
5x Aquatic Criteria, Lot 3 (Upper Horizon, Near BAPB)						2.20E+02	1.10E+06	-	2.40E+04	-	-	-	4.40E+02	1.00E+07	7.00E+06	4.10E+03	2.60E+04					
40x Aquatic Criteria, Lot 3 (Upper Horizon, Uplands)						1.80E+03	8.40E+06	-	1.90E+05	-	-	-	3.50E+03	8.00E+07	5.60E+07	3.20E+04	2.10E+05					
160x Aquatic Criteria, Lot 3 (Lower Horizon)						7.00E+03	3.40E+07	-	7.50E+05	-	-	-	1.40E+04	3.20E+08	2.20E+08	1.30E+05	8.40E+05					
Storm-water Criteria, (Storm-water Outfalls)						4.40E+00	2.10E+04	-	4.70E+02	-	-	-	8.90E+00	2.00E+05	1.40E+05	8.10E+01	5.30E+02					
Lot 3, Uplands	MW-32A	Primary	4/10/2018	Upper	UG of BAPB	<3.6	620	<7.1	120	10	<71	<3.6	440	<3.6	<3.6	150	<3.6					
Lot 3, Uplands	MW-32A	Primary	8/21/2018	Upper	UG of BAPB	<5	470	<10	81	5.5	<100	<5	260	<5	<5	95	<5					
Lot 3, Uplands	MW-32B	Primary	4/10/2018	Lower	UG of BAPB	<10	1900	<20	<25	<25	<200	<10	200	<10	<10	95	<10					
Lot 3, Uplands	MW-32B	Primary	8/21/2018	Lower	UG of BAPB	<17	1800	<33	<17	<17	<330	<17	120	<17	<17	78	<17					
Lot 3, Uplands	PZ-10	Primary	4/9/2018	Upper	UG of BAPB	<0.5	<0.5	<1	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5					
Lot 3, Uplands	PZ-10	Primary	8/16/2018	Upper	UG of BAPB	<0.5	<0.5	<1	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5					
Lot 3, Near BAPB	MW-01	Primary	4/4/2018	Upper	DG of BAPB	<0.5	<0.5	<1	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5					
Lot 3, Near BAPB	MW-01	Primary	8/21/2018	Upper	DG of BAPB	<0.5	<0.5	<1	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5					
Lot 3, Near BAPB	MW-02	Primary	4/6/2018	Upper	Immediately UG	<0.5	<0.5	<1	<0.5	15	<10	<0.5	<0.5	<0.5	0.6	<0.5	2.5					
Lot 3, Near BAPB	MW-02	Primary	8/21/2018	Upper	Immediately UG	<0.5	<0.5	<1	<0.5	15	<10	<0.5	<0.5	<0.5	0.6	<0.5	0.9					
Lot 3, Near BAPB	MW-03	Primary	4/4/2018	Upper	In BAPB	<0.5	<0.5	<1	<0.5	2.3	<10	<0.5	<0.5	<0.5	<0.5	<0.5	1.7					
Lot 3, Near BAPB	MW-03	Primary	8/21/2018	Upper	In BAPB	<0.5	<0.5	<1	<0.5	1.7	<10	<0.5	<0.5	<0.5	<0.5	<0.5	2.3					
Lot 3, Near BAPB	MW-04	Primary	4/4/2018	Upper	DG of BAPB	<0.5	<0.5	<1	<0.5	9.1	<10	<0.5	<0.5	<0.5	<0.5	<0.5	0.6					
Lot 3, Near BAPB	MW-04	Duplicate	4/4/2018	Upper	DG of BAPB	<1	<1	<2	<1	6.5	<20	<1	<1	<1	<1	<1						
Lot 3, Near BAPB	MW-04	Primary	8/21/2018	Upper	DG of BAPB	<0.5	<0.5	<1	<0.5	3.8	<10	<0.5	<0.5	<0.5	<0.5	<0.5						
Lot 3, Near BAPB	MW-04	Duplicate	8/21/2018	Upper	DG of BAPB	<0.5	<0.5	<1	<0.5	3.9	<10	<0.5	<0.5	<0.5	<0.5	<0.5						
Lot 3, Near BAPB	MW-05	Primary	4/4/2018	Upper	DG of BAPB	<0.5	<0.5	<1	<0.5	17	<10	<0.5	<0.5	<0.5	<0.5	<0.5						
Lot 3, Near BAPB	MW-05	Primary	8/21/2018	Upper	DG of BAPB	<0.5	<0.5	<1	<0.5	4.7	<10	<0.5	<0.5	<0.5	<0.5	<0.5						
Lot 3, Near BAPB	MW-06	Primary	4/6/2018	Upper	Immediately UG	<0.5	2.2	<1	<0.5	24	<10	<0.5	<0.5	<0.5	0.9	0.5						
Lot 3, Near BAPB	MW-06	Primary	8/22/2018	Upper	Immediately UG	<0.5	1.7	<1	<0.5	36	<10	<0.5	<0.5	<0.5	2.5	0.9						
Lot 3, Near BAPB	MW-07	Primary	4/4/2018	Upper	DG of BAPB	<0.5	0.8	<1	<0.5	4.6	<10	<0.5	<0.5	<0.5	<0.5	<0.5						
Lot 3, Near BAPB	MW-07	Primary	8/21/2018	Upper	DG of BAPB	<0.5	0.8	<1	<0.5	5.9	<10	<0.5	<0.5	<0.5	<0.5	<0.5						
Lot 3, Near BAPB	MW-08	Primary	4/6/2018	Upper	Immediately UG	<0.5	1.4	<1	<0.5	3.4	<10	<0.5	<0.5	<0.5	<0.5	<0.5						
Lot 3, Near BAPB	MW-08	Primary	8/22/2018	Upper	Immediately UG	<0.5	4.6	<1	<0.5	12	<10	<0.5	7.3	<0.5	0.8	2.3						
Lot 3, Near BAPB	MW-09	Primary	4/6/2018	Upper	In BAPB	<0.5	0.9	<1	<0.5	3.4	<10	<0.5	<0.5	<0.5	<0.5	<0.5						
Lot 3, Near BAPB	MW-09	Primary	8/22/2018	Upper	In BAPB	<0.5	1	<1	<0.5	7	<10	<0.5	<0.5	<0.5	<0.5	<0.5						
Lot 3, Near BAPB	MW-10A	Primary	4/9/2018	Upper	DG of BAPB	<1.7	4.8	<3.3	<1.7	<1.7	<33	<1.7	<1.7	<1.7	<1.7	2.2	<1.7					
Lot 3, Near BAPB	MW-10A	Primary	8/21/2018	Upper	DG of BAPB	<1.7	200	<3.3	<1.7	4.1	<33	<1.7	8.6	<1.7	<1.7	23	<1.7					
Lot 3, Near BAPB	MW-10B	Primary	4/4/2018	Lower	DG of BAPB	<0.5	0.8	<1	23	<0.5	<10	<0.5	8.7	<0.5	<0.5	6.7	<0.5					
Lot 3, Near BAPB	MW-10B	Primary	8/21/2018	Lower	DG of BAPB	<2.5	440	<5	67	3.3	<50	<2.5	33	<2.5	<2.5	27	<2.5					
Lot 3, Near BAPB	MW-11A																					

**Table 3****Sampling Analytical Results - Volatile Organic Compounds**

Campus Bay, Richmond, CA

Lot/Area	Location	Sample Type	Sampled Date	Sample Horizon	Sample Location Relative to BAPB (Applicable to Lot 3 Wells Only)	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethene	1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichloropropane	1,4-dichlorobenzene	2-chlorotoluene	2-hexanone	Acetone	Benzene	Carbon disulfide
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
Drinking Water Standards Lots 1 and 2 (Upper and Lower Horizon)						-	1.00E+00	5.00E+00	6.00E+00	6.00E+02	5.00E-01	5.00E+00	5.00E+00	-	-	-	1.00E+00	-
On-Site Commercial/ Industrial Worker Lots 1, 2, and 3 (Upper Horizon)						-	4.00E+02	6.30E+02	8.90E+03	4.70E+05	3.60E+02	3.70E+02	4.60E+02	8.90E+04	-	3.70E+07	6.10E+01	7.60E+04
On-Site Groundskeeper/Maintenance Worker Lots 1, 2, and 3 (Upper Horizon)						-	2.10E+02	1.10E+03	6.30E+05	3.50E+05	2.90E+03	1.90E+03	1.90E+03	7.80E+04	-	2.20E+08	4.40E+02	1.30E+06
On-Site Residential Lots 1, 2, and 3 (Upper Horizon)						-	1.30E+02	2.10E+02	1.90E+03	1.00E+05	1.20E+02	1.20E+02	1.50E+02	1.90E+04	-	7.90E+06	2.00E+01	1.60E+04
5x Aquatic Criteria, Lot 3 (Upper Horizon, Near BAPB)						-	5.50E+02	2.10E+03	1.60E+02	8.50E+05	5.00E+03	2.00E+03	1.30E+05	-	-	-	3.60E+03	-
40x Aquatic Criteria, Lot 3 (Upper Horizon, Uplands)						-	4.40E+03	1.70E+04	1.30E+03	6.80E+06	4.00E+04	1.60E+04	1.00E+06	-	-	-	2.80E+04	-
160x Aquatic Criteria, Lot 3 (Lower Horizon)						-	1.80E+04	6.70E+04	5.10E+03	2.70E+07	1.60E+05	6.20E+04	4.20E+06	-	-	-	1.10E+05	-
Storm-water Criteria, (Storm-water Outfalls)						-	1.10E+01	4.20E+01	3.20E+00	1.70E+04	9.90E+01	3.90E+01	2.60E+03	-	-	-	7.10E+01	-
Lot 3, Near BAPB	MW-13	Primary	4/6/2018	Upper	Immediately UG	<1	<1	<1	<1	1.1	<1	<1	<1	<20	<20	<1	<1	
Lot 3, Near BAPB	MW-13	Primary	8/22/2018	Upper	Immediately UG	<2.5	<2.5	<2.5	<2.5	29	<2.5	<2.5	<2.5	<50	<50	3.5	<2.5	
Lot 3, Near BAPB	MW-14	Primary	4/5/2018	Upper	In BAPB	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5	
Lot 3, Near BAPB	MW-14	Primary	8/22/2018	Upper	In BAPB	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5	
Lot 3, Near BAPB	MW-15	Primary	4/5/2018	Upper	DG of BAPB	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5	
Lot 3, Near BAPB	MW-15	Primary	8/22/2018	Upper	DG of BAPB	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5	
Lot 3, Near BAPB	MW-28	Primary	4/4/2018	Upper	DG of BAPB	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<10	<10	0.9	<0.5	
Lot 3, Near BAPB	MW-28	Primary	8/21/2018	Upper	DG of BAPB	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<10	<10	1.3	<0.5	
Lot 3, Near BAPB	MW-29	Primary	4/6/2018	Upper	Immediately UG	<2.5	<2.5	<2.5	<2.5	2.5	<2.5	<2.5	<2.5	<50	<50	5.5	<2.5	
Lot 3, Near BAPB	MW-29	Primary	8/22/2018	Upper	Immediately UG	<13	<13	<13	<13	13	<13	<13	<13	<250	<250	<13	<13	
Lot 3, Near BAPB	PZ-15	Primary	4/12/2018	Upper	DG of BAPB	<0.5	<0.5	<0.5	<0.5	3.1	2.7	<0.5	<0.5	<10	<10	<0.5	<0.5	
Lot 3, Near BAPB	PZ-15	Primary	8/16/2018	Upper	DG of BAPB	<0.5	<0.5	<0.5	<0.5	2.7	2.3	<0.5	<0.5	<10	<10	0.5	<0.5	
Lot 3, Near BAPB	PZ-16	Primary	4/12/2018	Upper	DG of BAPB	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5	
UC BGC, Near BAPB, Offsite	MW-34	Primary	4/3/2018	Upper	Immediately UG	<0.5	<0.5	<0.5	<0.5	1.6	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5	
UC BGC, Near BAPB, Offsite	MW-34	Primary	8/20/2018	Upper	Immediately UG	<0.5	<0.5	<0.5	<0.5	1.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5	
UC BGC, Near BAPB, Offsite	MW-36	Primary	4/3/2018	Upper	DG of BAPB	<1.7	<1.7	<1.7	<1.7	2.5	<1.7	<1.7	<1.7	<33	<33	<1.7	<1.7	
UC BGC, Near BAPB, Offsite	MW-36	Primary	8/20/2018	Upper	DG of BAPB	<1.7	<1.7	<1.7	<1.7	3.5	<1.7	<1.7	<1.7	<33	<33	<1.7	<1.7	
UC BGC, Near BAPB, Offsite	MW-40	Primary	4/4/2018	Upper	In BAPB	<1	<1	<1	<1	1	<1	<1	<1	<20	<20	1.4	<0.5	
UC BGC, Near BAPB, Offsite	MW-40	Primary	8/20/2018	Upper	In BAPB	<1	<1	<1	<1	1	<1	<1	<1	<20	<20	1.5	13	
UC BGC, Near BAPB, Offsite	MW-41	Primary	4/3/2018	Upper	In BAPB	<1.7	<1.7	<1.7	<1.7	6.3	<1.7	<1.7	<1.7	<33	<33	<1.7	<1.7	
UC BGC, Near BAPB, Offsite	MW-41	Primary	8/20/2018	Upper	In BAPB	<1.7	<1.7	<1.7	<1.7	15	<1.7	<1.7	<1.7	<33	<33	<1.7	<1.7	
UC BGC, Near BAPB, Offsite	MW-42	Primary	4/3/2018	Upper	Immediately UG	<7.1	<7.1	<7.1	<7.1	33	<7.1	<7.1	<7.1	<140	<140	<7.1	<7.1	
UC BGC, Near BAPB, Offsite	MW-42	Duplicate	4/3/2018	Upper	Immediately UG	<7.1	<7.1	<7.1	<7.1	33	<7.1	<7.1	<7.1	<140	<140	<7.1	<7.1	
UC BGC, Near BAPB, Offsite	MW-42	Primary	8/20/2018	Upper	Immediately UG	<7.1	<7.1	<7.1	<7.1	32	<7.1	<7.1	<7.1	<140	<140	<7.1	<7.1	
UC BGC, Near BAPB, Offsite	MW-42	Duplicate	8/20/2018	Upper	Immediately UG	<7.1	<7.1	<7.1	<7.1	31	<7.1	<7.1	<7.1	<140	<140	<7.1	<7.1	
UC BGC, Near BAPB, Offsite	MW-43	Primary	4/3/2018	Upper	DG of BAPB	<8.3	<8.3	<8.3	<8.3	46	<8.3	<8.3	<8.3	<170	<170	<8.3	<8.3	
UC BGC, Near BAPB, Offsite	MW-43	Primary	8/20/2018	Upper	DG of BAPB	<8.3	<8.3	<8.3	<8.3	60	<8.3	<8.3	<8.3	<170	<170	<8.3	<8.3	
UC BGC, Near BAPB, Offsite	MW-44	Primary	4/3/2018	Upper	Immediately UG	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5	
UC BGC, Near BAPB, Offsite	MW-44	Primary	8/20/2018	Upper	Immediately UG	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5	
UC BGC, Near BAPB, Offsite	MW-45	Primary	4/3															

**Table 3****Sampling Analytical Results - Volatile Organic Compounds**

Campus Bay, Richmond, CA

Lot/Area	Location	Sample Type	Sampled Date	Sample Horizon	Sample Location Relative to BAPB (Applicable to Lot 3 Wells Only)	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	cis-1,2-dichloroethene	Methyl Ethyl Ketone	Methyl Tertiary Butyl Ether	Tetrachloroethene	Toluene	trans-1,2-dichloroethene	Trichloroethylene	Vinyl chloride					
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L					
<b>Drinking Water Standards Lots 1 and 2 (Upper and Lower Horizon)</b>						5.00E-01	7.00E+01	-	8.00E+01	6.00E+00	-	-	5.00E+00	1.50E+02	1.00E+01	5.00E+00	5.00E-01					
On-Site Commercial/ Industrial Worker Lots 1, 2, and 3 (Upper Horizon)						8.50E+00	1.10E+06	-	4.00E+02	3.40E+04	1.30E+07	-	1.10E+02	1.60E+05	3.10E+04	2.70E+02	3.60E+00					
On-Site Groundskeeper/Maintenance Worker Lots 1, 2, and 3 (Upper Horizon)						1.60E+02	1.40E+05	-	2.50E+03	2.70E+05	1.40E+08	-	2.20E+01	5.70E+05	5.10E+05	8.90E+02	3.00E+02					
On-Site Residential Lots 1, 2, and 3 (Upper Horizon)						2.80E+00	2.50E+05	-	1.30E+02	7.20E+03	2.80E+06	-	3.80E+01	3.50E+04	6.70E+03	1.10E+02	1.20E+00					
5x Aquatic Criteria, Lot 3 (Upper Horizon, Near BAPB)						2.20E+02	1.10E+06	-	2.40E+04	-	-	-	4.40E+02	1.00E+07	7.00E+06	4.10E+03	2.60E+04					
40x Aquatic Criteria, Lot 3 (Upper Horizon, Uplands)						1.80E+03	8.40E+06	-	1.90E+05	-	-	-	3.50E+03	8.00E+07	5.60E+07	3.20E+04	2.10E+05					
160x Aquatic Criteria, Lot 3 (Lower Horizon)						7.00E+03	3.40E+07	-	7.50E+05	-	-	-	1.40E+04	3.20E+08	2.20E+08	1.30E+05	8.40E+05					
Storm-water Criteria, (Storm-water Outfalls)						4.40E+00	2.10E+04	-	4.70E+02	-	-	-	8.90E+00	2.00E+05	1.40E+05	8.10E+01	5.30E+02					
Lot 3, Near BAPB	MW-13	Primary	4/6/2018	Upper	Immediately UG	<1	82	<2	<1	18	<20	<1	6.2	<1	<1	11	<1					
Lot 3, Near BAPB	MW-13	Primary	8/22/2018	Upper	Immediately UG	<2.5	780	<5	<2.5	12	<50	<2.5	120	<2.5	<2.5	170	<2.5					
Lot 3, Near BAPB	MW-14	Primary	4/5/2018	Upper	In BAPB	<0.5	<0.5	<1	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5					
Lot 3, Near BAPB	MW-14	Primary	8/22/2018	Upper	In BAPB	<0.5	2.4	<1	<0.5	1.3	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5					
Lot 3, Near BAPB	MW-15	Primary	4/5/2018	Upper	DG of BAPB	<0.5	<0.5	<1	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5					
Lot 3, Near BAPB	MW-15	Primary	8/22/2018	Upper	DG of BAPB	<0.5	0.5	<1	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5					
Lot 3, Near BAPB	MW-28	Primary	4/4/2018	Upper	DG of BAPB	<0.5	6.7	<1	<0.5	25	<10	<0.5	<0.5	<0.5	1.1	11	<0.5					
Lot 3, Near BAPB	MW-28	Primary	8/21/2018	Upper	DG of BAPB	<0.5	7.5	<1	<0.5	28	<10	<0.5	0.5	<0.5	1.2	3.6	<0.5					
Lot 3, Near BAPB	MW-29	Primary	4/6/2018	Upper	Immediately UG	<2.5	520	<5	<2.5	49	<50	<2.5	4.5	<2.5	2.9	36	<2.5					
Lot 3, Near BAPB	MW-29	Primary	8/22/2018	Upper	Immediately UG	<13	1500	<25	21	17	<250	<13	190	<13	<13	27	<13					
Lot 3, Near BAPB	PZ-15	Primary	4/12/2018	Upper	DG of BAPB	<0.5	99	<1	<0.5	17	<10	<0.5	<0.5	<0.5	0.8	1.6	<0.5					
Lot 3, Near BAPB	PZ-15	Primary	8/16/2018	Upper	DG of BAPB	<0.5	81	<1	<0.5	12	<10	<0.5	<0.5	<0.5	0.7	1.1	<0.5					
Lot 3, Near BAPB	PZ-16	Primary	4/12/2018	Upper	DG of BAPB	<0.5	<0.5	<1	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5					
Lot 3, Near BAPB	PZ-16	Primary	8/16/2018	Upper	DG of BAPB	<0.5	<0.5	<1	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5					
UC BGC, Near BAPB, Offsite	MW-34	Primary	4/3/2018	Upper	Immediately UG	<0.5	30	<1	<0.5	2.2	<10	<0.5	7.6	<0.5	<0.5	23	<0.5					
UC BGC, Near BAPB, Offsite	MW-34	Primary	8/20/2018	Upper	Immediately UG	<0.5	30	<1	<0.5	2.7	<10	<0.5	7.8	<0.5	<0.5	21	<0.5					
UC BGC, Near BAPB, Offsite	MW-36	Primary	4/3/2018	Upper	DG of BAPB	<1.7	250	<3.3	<1.7	6.6	<33	<1.7	13	<1.7	<1.7	17	<1.7					
UC BGC, Near BAPB, Offsite	MW-36	Primary	8/20/2018	Upper	DG of BAPB	<1.7	250	<3.3	<1.7	6	<33	<1.7	14	<1.7	<1.7	20	<1.7					
UC BGC, Near BAPB, Offsite	MW-40	Primary	4/4/2018	Upper	In BAPB	<1	22	<2	<1	<1	<20	<1	<1	<1	<1	<1	<1					
UC BGC, Near BAPB, Offsite	MW-40	Primary	8/20/2018	Upper	In BAPB	<1	36	<2	<1	<1	<20	<1	<1	<1	<1	<1	<1					
UC BGC, Near BAPB, Offsite	MW-41	Primary	4/3/2018	Upper	In BAPB	<1.7	180	<3.3	<1.7	48	<33	<1.7	100	<1.7	<1.7	98	1.8					
UC BGC, Near BAPB, Offsite	MW-41	Primary	8/20/2018	Upper	In BAPB	<1.7	330	<3.3	<1.7	51	<33	<1.7	240	<1.7	<1.7	160	3.1					
UC BGC, Near BAPB, Offsite	MW-42	Primary	4/3/2018	Upper	Immediately UG	<7.1	850	<14	22	9.4	<140	<7.1	770	<7.1	<7.1	200	<7.1					
UC BGC, Near BAPB, Offsite	MW-42	Duplicate	4/3/2018	Upper	Immediately UG	<7.1	910	<14	22	9.8	<140	<7.1	840	<7.1	<7.1	200	<7.1					
UC BGC, Near BAPB, Offsite	MW-42	Primary	8/20/2018	Upper	Immediately UG	<7.1	1000	<14	19	9.9	<140	<7.1	820	<7.1	<7.1	160	<7.1					
UC BGC, Near BAPB, Offsite	MW-42	Duplicate	8/20/2018	Upper	Immediately UG	<7.1	1100	<14	19	10	<140	<7.1	950	<7.1	<7.1	180	<7.1					
UC BGC, Near BAPB, Offsite	MW-43	Primary	4/3/2018	Upper	DG of BAPB	<8.3	1200	<17	18	63	<170	<8.3	380	<8.3	<8.3	160	<8.3					
UC BGC, Near BAPB, Offsite	MW-43	Primary	8/20/2018	Upper	DG of BAPB	<8.3	1500	<17	14	61	<170	<8.3	420	<8.3	<8.3	170	14					
UC BGC, Near BAPB, Offsite	MW-44	Primary	4/3/2018	Upper	Immediately UG	<0.5	1.2	<1	<0.5	0.7	<10	0.5	<0.5	<0.5	<0.5	0.8	<0.5					
UC BGC, Near BAPB, Offsite	MW-44	Primary	8/20/2018	Upper	Immediately UG	<0.5	1.2	<1	<0.5	0.7	<10	<0.5	<									

**Table 3****Sampling Analytical Results - Volatile Organic Compounds**

Campus Bay, Richmond, CA

Lot/Area	Location	Sample Type	Sampled Date	Sample Horizon	Sample Location Relative to BAPB (Applicable to Lot 3 Wells Only)	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethene	1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichloropropane	1,4-dichlorobenzene	2-chlorotoluene	2-hexanone	Acetone	Benzene	Carbon disulfide
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
Drinking Water Standards Lots 1 and 2 (Upper and Lower Horizon)						-	1.00E+00	5.00E+00	6.00E+00	6.00E+02	5.00E-01	5.00E+00	5.00E+00	-	-	-	1.00E+00	-
On-Site Commercial/ Industrial Worker Lots 1, 2, and 3 (Upper Horizon)						-	4.00E+02	6.30E+02	8.90E+03	4.70E+05	3.60E+02	3.70E+02	4.60E+02	8.90E+04	-	3.70E+07	6.10E+01	7.60E+04
On-Site Groundskeeper/Maintenance Worker Lots 1, 2, and 3 (Upper Horizon)						-	2.10E+02	1.10E+03	6.30E+05	3.50E+05	2.90E+03	1.90E+03	1.90E+03	7.80E+04	-	2.20E+08	4.40E+02	1.30E+06
On-Site Residential Lots 1, 2, and 3 (Upper Horizon)						-	1.30E+02	2.10E+02	1.90E+03	1.00E+05	1.20E+02	1.20E+02	1.50E+02	1.90E+04	-	7.90E+06	2.00E+01	1.60E+04
5x Aquatic Criteria, Lot 3 (Upper Horizon, Near BAPB)						-	5.50E+02	2.10E+03	1.60E+02	8.50E+05	5.00E+03	2.00E+03	1.30E+05	-	-	-	3.60E+03	-
40x Aquatic Criteria, Lot 3 (Upper Horizon, Uplands)						-	4.40E+03	1.70E+04	1.30E+03	6.80E+06	4.00E+04	1.60E+04	1.00E+06	-	-	-	2.80E+04	-
160x Aquatic Criteria, Lot 3 (Lower Horizon)						-	1.80E+04	6.70E+04	5.10E+03	2.70E+07	1.60E+05	6.20E+04	4.20E+06	-	-	-	1.10E+05	-
Storm-water Criteria, (Storm-water Outfalls)						-	1.10E+01	4.20E+01	3.20E+00	1.70E+04	9.90E+01	3.90E+01	2.60E+03	-	-	-	7.10E+01	-
Storm Water	003	Primary	1/8/2018	NA	NA	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Storm Water	003	Primary	4/7/2018	NA	NA	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5
Storm Water	003	Primary	11/29/2018	NA	NA	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<10	<0.5	-
Storm Water	003	Primary	12/17/2018	NA	NA	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<10	<0.5	<0.5

**Table 3****Sampling Analytical Results - Volatile Organic Compounds**

Campus Bay, Richmond, CA

Lot/Area	Location	Sample Type	Sampled Date	Sample Horizon	Sample Location Relative to BAPB (Applicable to Lot 3 Wells Only)	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	cis-1,2-dichloroethene	Methyl Ethyl Ketone	Methyl Tertiary Butyl Ether	Tetrachloroethene	Toluene	trans-1,2-dichloroethene	Trichloroethylene	Vinyl chloride
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Drinking Water Standards Lots 1 and 2 (Upper and Lower Horizon)						5.00E-01	7.00E+01	-	8.00E+01	6.00E+00	-	-	5.00E+00	1.50E+02	1.00E+01	5.00E+00	5.00E-01
On-Site Commercial/ Industrial Worker Lots 1, 2, and 3 (Upper Horizon)						8.50E+00	1.10E+06	-	4.00E+02	3.40E+04	1.30E+07	-	1.10E+02	1.60E+05	3.10E+04	2.70E+02	3.60E+00
On-Site Groundskeeper/Maintenance Worker Lots 1, 2, and 3 (Upper Horizon)						1.60E+02	1.40E+05	-	2.50E+03	2.70E+05	1.40E+08	-	2.20E+01	5.70E+05	5.10E+05	8.90E+02	3.00E+02
On-Site Residential Lots 1, 2, and 3 (Upper Horizon)						2.80E+00	2.50E+05	-	1.30E+02	7.20E+03	2.80E+06	-	3.80E+01	3.50E+04	6.70E+03	1.10E+02	1.20E+00
5x Aquatic Criteria, Lot 3 (Upper Horizon, Near BAPB)						2.20E+02	1.10E+06	-	2.40E+04	-	-	-	4.40E+02	1.00E+07	7.00E+06	4.10E+03	2.60E+04
40x Aquatic Criteria, Lot 3 (Upper Horizon, Uplands)						1.80E+03	8.40E+06	-	1.90E+05	-	-	-	3.50E+03	8.00E+07	5.60E+07	3.20E+04	2.10E+05
160x Aquatic Criteria, Lot 3 (Lower Horizon)						7.00E+03	3.40E+07	-	7.50E+05	-	-	-	1.40E+04	3.20E+08	2.20E+08	1.30E+05	8.40E+05
Storm-water Criteria, (Storm-water Outfalls)						4.40E+00	2.10E+04	-	4.70E+02	-	-	-	8.90E+00	2.00E+05	1.40E+05	8.10E+01	5.30E+02
Storm Water	003	Primary	1/8/2018	NA	NA	<0.5	<0.5	<1	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Storm Water	003	Primary	4/7/2018	NA	NA	<0.5	<0.5	<1	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Storm Water	003	Primary	11/29/2018	NA	NA	<0.5	<0.5	<0.5	<0.5	<0.5	<5	-	<0.5	<0.5	<0.5	<0.5	<0.5
Storm Water	003	Primary	12/17/2018	NA	NA	<0.5	<0.5	<1.0	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

**Table 3****Sampling Analytical Results - Volatile Organic Compounds**

Campus Bay, Richmond, CA

**Abbreviations:**

&lt;0.50 = Concentration not detected at or above indicated laboratory reporting limit.

- = Sample not analyzed or criteria not available

J = The analyte was positively identified; the reported concentration is approximate

Duplicate = Duplicate sample collected from a well

Primary = primary sample collected from a well

BAPB = biologically active permeable barrier

UC BGC = University of California, Berkeley Global Campus

DG = downgradient

DTSC-MW = Department of Toxic Substances Control monitoring well

EPA = Environmental Protection Agency

IMW = Temporary monitoring well

MW = Monitoring well

MW-##A = Represents the upper horizon groundwater well in a pair of upper and lower horizon wells

MW-##B = Represents the lower horizon groundwater well in a pair of upper and lower horizon wells

NA = not applicable

PZ = Piezometers

SSG = site-specific goal

UG = Upgradient

VOC = volatile organic compound

µg/L = micrograms per liter

Upper, offsite = upper horizon, outside of site boundary

**Notes:**

The 002 storm water samples collected in November and December 2018 were temporarily discharged at Outfall 001 during Habitat Area 2 remediation.

Groundwater and storm-water samples analyzed for VOCs by Enthalpy of Berkeley, California using EPA Method 8260B. Only VOCs with at least one detection above the laboratory reporting limit are shown in this table.

Screening criteria and sources for screening criteria are summarized in Table 7.

If a screening criterion is exceeded, the analytical results are designated as follows:

**Bold font** indicates a detection in upper or lower horizon groundwater above the drinking water standard (applicable to Lots 1 and 2 only) indicates a detection in upper horizon groundwater above the commercial/industrial SSG**Pink Font** indicates a detection in upper horizon groundwater above the groundskeeper/maintenance worker SSG*Italic font* indicates a detection in upper horizon groundwater above the residential SSG indicates a detection in upper horizon groundwater above 5x the aquatic criterion (applicable to Lot 3 area near BAPB only) indicates a detection in upper horizon groundwater above 40x the aquatic criterion (applicable to Lot 3 Uplands only) indicates a detection in lower horizon groundwater above 160x the aquatic criterion (applicable to Lot 3 only) indicates a detection in storm-water above the storm-water criteria (applicable to storm-water samples only)Underline indicates a concentration which is greater than 90% of an applicable screening criterion but does not exceed it

Table 4

## Sampling Analytical Results - Metals

Campus Bay, Richmond, CA

Lot/Area	Location	Sample Type	Sample Date	Sample Horizon	Sample Location Relative to BAPB (Applicable to Lot 3 Wells Only)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium (III+VI)	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
Drinking Water Standards Lots 1 and 2 (Upper and Lower Horizon)						6.00E+00	1.00E+01	1.00E+03	-	5.00E+00	5.00E+01	-	1.00E+03	1.50E+01	2.00E+00	-	1.00E+02	5.00E+01	1.00E+02	2.00E+00	-	5.00E+03
On-Site Commercial/ Industrial Worker Lots 1, 2, and 3 (Upper Horizon)						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
On-Site Groundskeeper/Maintenance Worker Lots 1, 2, and 3 (Upper Horizon)						1.50E+05	1.10E+02	7.50E+07	-	1.90E+05	5.60E+08	-	1.50E+07	-	1.10E+05	-	9.30E+07	1.90E+06	3.10E+06	2.50E+04	3.70E+05	1.90E+08
On-Site Residential Lots 1, 2, and 3 (Upper Horizon)						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
5x Aquatic Criteria, Lot 3 (Upper Horizon, Near BAPB)						2.20E+05	1.80E+02	-	-	4.70E+01	-	-	1.60E+01	4.10E+01	1.10E+01	-	4.10E+01	2.50E+01	9.50E+00	3.20E+02	-	4.10E+02
40x Aquatic Criteria, Lot 3 (Upper Horizon, Uplands)						1.70E+06	1.40E+03	-	-	3.70E+02	-	-	1.20E+02	3.20E+02	8.40E+01	-	3.30E+02	2.00E+02	7.60E+01	2.50E+03	-	3.20E+03
160x Aquatic Criteria, Lot 3 (Lower Horizon)						6.90E+06	5.80E+03	-	-	1.50E+03	-	-	5.00E+02	1.30E+03	3.40E+02	-	1.30E+03	8.00E+02	3.00E+02	1.00E+04	-	1.30E+04
Storm-water Criteria, (Storm-water Outfalls)						4.30E+03	3.60E+01	-	-	1.10E+00	1.80E+02	-	3.10E+00	2.50E+00	2.50E-02	-	8.20E+00	5.00E+00	1.90E+00	6.30E+00	-	8.10E+01
DTSC Harborfront, Offsite	DTSC-MW-2	Primary	4/12/2018	Upper	NA	<12	<10	150	<2	<5	<5	<5	<5	<5	<0.2	<5	<5	<10	<5	<12	10	22
DTSC Harborfront, Offsite	DTSC-MW-2	Primary	8/16/2018	Upper	NA	<10	<10	140	<2	<5	<5	<5	<5	<5	<0.2	<5	<5	<10	<5	<6.9	6.7	<20
Lot 1	IMW-29	Primary	4/12/2018	Lower	NA	<12	42	200	<2	<5	<5	<5	<5	<5	<0.2	<5	6.7	<10	<5	<12	5.1	<20
Lot 1	IMW-29	Primary	8/15/2018	Lower	NA	<12	34	190	<2	<5	<5	<5	<5	<5	<0.2	<5	<10	<5	<12	8.8	<20	
Lot 1	IMW-01	Primary	4/5/2018	Upper	NA	-	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Lot 1	IMW-01	Primary	8/23/2018	Upper	NA	-	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Lot 1	IMW-02	Primary	4/5/2018	Upper	NA	-	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Lot 1	IMW-02	Primary	8/23/2018	Upper	NA	-	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Lot 1	IMW-03	Primary	4/5/2018	Upper	NA	-	37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Lot 1	IMW-03	Primary	8/23/2018	Upper	NA	-	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Lot 1	IMW-04	Primary	4/5/2018	Upper	NA	-	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Lot 1	IMW-04	Primary	8/23/2018	Upper	NA	-	38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Lot 1	IMW-23	Primary	4/13/2018	Upper	NA	<12	<10	23	<2	<5	<5	<5	<5	<5	<0.2	<5	37	<10	<5	<12	8.5	58
Lot 1	IMW-23	Primary	8/14/2018	Upper	NA	<10	<10	22	<2b	<5	<5	<5	<5	<5	<0.2	<5	59	<10	<5	<6.9	<5	71
Lot 1	IMW-27	Primary	4/13/2018	Upper	NA	<12	<10	24	<2	<5	<5	<5	<5	<5	<0.2	<5	18	<10	<5	<12	7.6	<20
Lot 1	IMW-27	Primary	8/15/2018	Upper	NA	<12	<10	28	<2	<5	<5	<5	<5	<5	<0.2	<5	14	<10	<5	<12	14	<20
Lot 1	IMW-28	Primary	4/12/2018	Upper	NA	<12	<10	20	<2	<5	<5	<5	<5	<5	<0.2	<5	29	<10	<5	<12	<5	<20
Lot 1	IMW-28	Primary	8/15/2018	Upper	NA	<12	<10	24	<2	<5	<5	<5	<5	<5	<0.2	<5	35	<10	<5	<12	9.4	<20
Lot 1	MW-25R	Primary	4/13/2018	Upper	NA	<12	<10	42	<2	<5	<5	<5	<5	<5	<0.2	<5	6.0	<10	<5	<12	10	<20
Lot 1	MW-25R	Primary	8/15/2018	Upper	NA	<12	<10	39	<2	<5	<5	<5	<5	<5	<0.2	<5	11	<10	<5	<12	11	<20
Lot 1	MW-26	Primary	4/13/2018	Upper	NA	<12	<10	47	<2	<5	<5	<5	<5	<5	<0.2	<5	12	<10	<5	<12	11	<20
Lot 1	MW-26	Duplicate	4/13/2018	Upper	NA	<12	<10	47	<2	<5	<5	<5	<5	<5	<0.2	<5	10	<10	<5	<12	10	<20
Lot 1	MW-26	Primary	8/15/2018	Upper	NA	<12	<10	45	<2	<5	<5	<5	<5	<5	<0.2	<5	13	<10	<5	<12	13	<20
Lot 1	MW-26	Duplicate	8/15/2018	Upper	NA	<12	<10	43	<2	<5	<5	<5	<5	<5	<0.2	<5	14	<10	<5	<12	13	<20
Lot 1	MW-27	Primary	4/12/2018	Upper	NA	<12	<10	44	<2	<5	<5	<5	<5	<5	<0.2	<5	10	<10	<5	<12	<5	<20
Lot 1	MW-27	Primary	8/15/2018	Upper	NA	<12	<10	35	<2	<5	<5	<5	<5	<5	<0.2	<5	13	<10	<5	<12	8.6	<20
Lot 1	MW-30	Primary	4/16/2018	Upper	NA	<12	14	120	<2	<5	<5	<5	<5	<5	<0.2	<5	10	<10	<5	<12	<5	<20
Lot 1	MW-30	Primary	8/23/2018	Upper	NA	<12	18	120	<2	<5	<5	<5	<5	<5	<0.2	<5	11	<10	<5	<12	8.5	<20
Lot 1	MW-33	Primary	4/12/2018	Upper	NA	<12	<10	6														

Table 4

## Sampling Analytical Results - Metals

Campus Bay, Richmond, CA

Lot/Area	Location	Sample Type	Sample Date	Sample Horizon	Sample Location Relative to BAPB (Applicable to Lot 3 Wells Only)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium (III+VI)	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
Drinking Water Standards Lots 1 and 2 (Upper and Lower Horizon)						6.00E+00	1.00E+01	1.00E+03	-	5.00E+00	5.00E+01	-	1.00E+03	1.50E+01	2.00E+00	-	1.00E+02	5.00E+01	1.00E+02	2.00E+00	-	5.00E+03
On-Site Commercial/ Industrial Worker Lots 1, 2, and 3 (Upper Horizon)						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
On-Site Groundskeeper/Maintenance Worker Lots 1, 2, and 3 (Upper Horizon)						1.50E+05	1.10E+02	7.50E+07	-	1.90E+05	5.60E+08	-	1.50E+07	-	1.10E+05	-	9.30E+07	1.90E+06	3.10E+06	2.50E+04	3.70E+05	1.90E+08
On-Site Residential Lots 1, 2, and 3 (Upper Horizon)						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
5x Aquatic Criteria, Lot 3 (Upper Horizon, Near BAPB)						2.20E+05	1.80E+02	-	-	4.70E+01	-	-	1.60E+01	4.10E+01	1.10E+01	-	4.10E+01	2.50E+01	9.50E+00	3.20E+02	-	4.10E+02
40x Aquatic Criteria, Lot 3 (Upper Horizon, Uplands)						1.70E+06	1.40E+03	-	-	3.70E+02	-	-	1.20E+02	3.20E+02	8.40E+01	-	3.30E+02	2.00E+02	7.60E+01	2.50E+03	-	3.20E+03
160x Aquatic Criteria, Lot 3 (Lower Horizon)						6.90E+06	5.80E+03	-	-	1.50E+03	-	-	5.00E+02	1.30E+03	3.40E+02	-	1.30E+03	8.00E+02	3.00E+02	1.00E+04	-	1.30E+04
Storm-water Criteria, (Storm-water Outfalls)						4.30E+03	3.60E+01	-	-	1.10E+00	1.80E+02	-	3.10E+00	2.50E+00	2.50E-02	-	8.20E+00	5.00E+00	1.90E+00	6.30E+00	-	8.10E+01
Lot 2	IMW-07	Duplicate	8/14/2018	Upper	NA	-	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Lot 2	IMW-08	Primary	4/11/2018	Upper	NA	-	77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Lot 2	IMW-08	Primary	8/14/2018	Upper	NA	-	73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Lot 2	IMW-22	Primary	4/11/2018	Upper	NA	-	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Lot 2	IMW-22	Primary	8/14/2018	Upper	NA	-	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Lot 2	MW-24	Primary	4/11/2018	Upper	NA	<12	<10	80	<2	<5	37	<5	20	<5	<0.2	32	<5	<10	<5	<12	43	<20
Lot 2	MW-24	Primary	8/14/2018	Upper	NA	<10	<10	55	<2b	<5	<5	<5	15	<5	<0.2	37	<5	12	<5	<10	47	<20
Lot 2	MW-31	Primary	4/16/2018	Upper	NA	<12	<10	110	<2	<5	<5	<5	<5	<5	<0.2	<5	<5	<10	<5	<12	10	<20
Lot 2	MW-31	Primary	8/14/2018	Upper	NA	<10	<10	110	<2b	<5	<5	<5	<5	<5	<0.2	<5	<5	<10	<5	<6.9	6.6	<20
Lot 3, Uplands	IMW-42	Primary	4/10/2018	Upper	UG of BAPB	<12	36	16	<2	8	<5	370	<5	10	<0.2	<5	1100	74	<5	<12	100	4400
Lot 3, Uplands	IMW-42	Primary	8/17/2018	Upper	UG of BAPB	<12	34	15	<2	10	<5	120	<5	65	<0.2	<5	420	<10	<5	<12	98	1600
Lot 3, Uplands	IMW-43	Primary	4/9/2018	Upper	UG of BAPB	<12	11	35	<2	<5	<5	<5	<5	<0.2	<5	17	<10	<5	<12	43	<20	
Lot 3, Uplands	IMW-43	Primary	8/22/2018	Upper	UG of BAPB	<12	11	32	<2	<5	<5	<5	<5	<0.2	<5	15	<10	<5	<12	45	<20	
Lot 3, Uplands	IMW-45	Primary	4/10/2018	Upper	UG of BAPB	<12	16	38	<2	<5	9.6	<5	18	<5	<0.2	<5	14	120	<5	<12	15	21
Lot 3, Uplands	IMW-45	Primary	8/17/2018	Upper	UG of BAPB	<12	20	33	<2	<5	15	<5	<5	<0.2	<5	100	<5	<12	18	<20		
Lot 3, Uplands	IMW-48	Primary	4/9/2018	Upper	UG of BAPB	<12	17	12	<2	<5	22	<5	<5	<0.2	<5	17	79	8.2	<12	21	<20	
Lot 3, Uplands	IMW-48	Primary	8/16/2018	Upper	UG of BAPB	<10	<10	19	<2	<5	9.5	<5	<5	<0.2	<5	76	6.2	<6.9	<5	<20		
Lot 3, Uplands	IMW-50	Primary	4/11/2018	Upper	UG of BAPB	<12	27	350	<2	<5	<5	<5	<5	<0.2	<5	9.9	12	<5	<2.5	5.7	<20	
Lot 3, Uplands	IMW-50	Primary	8/14/2018	Upper	UG of BAPB	<10	15	330	<2b	<5	<5	<5	<5	<0.2	<5	10	<5	<10	<5	<6.9	<5	<20
Lot 3, Uplands	IMW-57	Primary	4/11/2018	Upper	UG of BAPB	<12	16	74	<2	<5	<5	<5	<5	<0.2	<5	8.2	<10	<5	<12	8.8	<20	
Lot 3, Uplands	IMW-57	Primary	8/14/2018	Upper	UG of BAPB	<10	<10	72	<2b	<5	<5	<5	<5	<0.2	<5	1100	12	<5	<6.9	<5	<20	
Lot 3, Uplands	MW-18	Primary	4/10/2018	Upper	UG of BAPB	<12	14	13	3.1	97	6.1	59	1300	<5	<0.2	<5	1500	<10	<5	<12	7500	
Lot 3, Uplands	MW-18	Primary	8/17/2018	Upper	UG of BAPB	<12	<10	11	<2	83	6.5	45	890	<5	<0.2	<5	1500	<10	<5	<6.9	7.2	5600
Lot 3, Uplands	MW-19	Primary	4/10/2018	Upper	UG of BAPB	<12	15	35	<2	<5	<5	<5	<5	<0.2	<5	14	<5	<12	8.9	<20		
Lot 3, Uplands	MW-19	Duplicate	4/10/2018	Upper	UG of BAPB	<12	16	33	<2	<5	<5	<5	<5	<0.2	<5	5.1	32	<5	<12	9.7	<20	
Lot 3, Uplands	MW-19	Primary	8/17/2018	Upper	UG of BAPB	<12	13	30	<2	<5	<5	<5	<5	<0.2	<5	32	<5	<12	13	<20		
Lot 3, Uplands	MW-19	Duplicate	8/17/2018	Upper	UG of BAPB	<12	14	31	<2	<5	<5	<5	<5	<0.2	<5	26	<5	<12	14	<20		
Lot 3, Uplands	MW-20	Primary	4/10/2018	Upper	UG of BAPB	<12	210	27	2.6	<5	11	45	<5	&lt								

**Table 4****Sampling Analytical Results - Metals**

Campus Bay, Richmond, CA

Lot/Area	Location	Sample Type	Sample Date	Sample Horizon	Sample Location Relative to BAPB (Applicable to Lot 3 Wells Only)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium (III+VI)	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L		
Drinking Water Standards Lots 1 and 2 (Upper and Lower Horizon)						6.00E+00	1.00E+01	1.00E+03	-	5.00E+00	5.00E+01	-	1.00E+03	1.50E+01	2.00E+00	-	1.00E+02	5.00E+01	1.00E+02	2.00E+00	-	5.00E+03	
On-Site Commercial/ Industrial Worker Lots 1, 2, and 3 (Upper Horizon)						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
On-Site Groundskeeper/Maintenance Worker Lots 1, 2, and 3 (Upper Horizon)						1.50E+05	1.10E+02	7.50E+07	-	1.90E+05	5.60E+08	-	1.50E+07	-	1.10E+05	-	9.30E+07	1.90E+06	3.10E+06	2.50E+04	3.70E+05	1.90E+08	
On-Site Residential Lots 1, 2, and 3 (Upper Horizon)						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
5x Aquatic Criteria, Lot 3 (Upper Horizon, Near BAPB)						2.20E+05	1.80E+02	-	-	4.70E+01	-	-	1.60E+01	4.10E+01	1.10E+01	-	4.10E+01	2.50E+01	9.50E+00	3.20E+02	-	4.10E+02	
40x Aquatic Criteria, Lot 3 (Upper Horizon, Uplands)						1.70E+06	1.40E+03	-	-	3.70E+02	-	-	1.20E+02	3.20E+02	8.40E+01	-	3.30E+02	2.00E+02	7.60E+01	2.50E+03	-	3.20E+03	
160x Aquatic Criteria, Lot 3 (Lower Horizon)						6.90E+06	5.80E+03	-	-	1.50E+03	-	-	5.00E+02	1.30E+03	3.40E+02	-	1.30E+03	8.00E+02	3.00E+02	1.00E+04	-	1.30E+04	
Storm-water Criteria, (Storm-water Outfalls)						4.30E+03	3.60E+01	-	-	1.10E+00	1.80E+02	-	3.10E+00	2.50E+00	2.50E-02	-	8.20E+00	5.00E+00	1.90E+00	6.30E+00	-	8.10E+01	
Lot 3, Near BAPB	MW-03	Primary	4/4/2018	Upper	In BAPB	<12	<10	140	<2	<5	<5	<5	<5	<5	<0.2	<5	5	26	10	<12	6.4	<20	
Lot 3, Near BAPB	MW-03	Primary	8/21/2018	Upper	In BAPB	<10	<10	190	<2	<5	<5	<5	<5	<5	<0.2	<5	<5	26	<5	<10	<5	<20	
Lot 3, Near BAPB	MW-04	Primary	4/4/2018	Upper	DG of BAPB	<12	160	83	<2	<5	<5	<5	<5	<5	<0.2	<5	10	<10	<5	<12	11	26	
Lot 3, Near BAPB	MW-04	Duplicate	4/4/2018	Upper	DG of BAPB	<12	140	90	<2	<5	<5	<5	<5	<5	<0.2	<5	11	<10	5.1	<12	11	28	
Lot 3, Near BAPB	MW-04	Primary	8/21/2018	Upper	DG of BAPB	<10	550	43	<2	<5	<5	<5	<5	<5	<0.2	<5	<10	<5	<10	<5	<20		
Lot 3, Near BAPB	MW-04	Duplicate	8/21/2018	Upper	DG of BAPB	<10	560	43	<2	<5	<5	<5	<5	<5	<0.2	<5	<10	<5	<10	<5	<20		
Lot 3, Near BAPB	MW-05	Primary	4/4/2018	Upper	DG of BAPB	<12	320	20	<2	<5	<5	<5	<5	<5	<0.2	<5	9.5	<10	<5	<12	12	<20	
Lot 3, Near BAPB	MW-05	Primary	8/21/2018	Upper	DG of BAPB	<10	280	19	<2	<5	<5	<5	<5	<5	<0.2	<5	<10	<5	<10	<5	<20		
Lot 3, Near BAPB	MW-06	Primary	4/6/2018	Upper	Immediately UG	<12	420	43	<2	<5	<5	<5	<5	<5	<0.2	<5	<5	27	6.1	<12	<5	<20	
Lot 3, Near BAPB	MW-06	Primary	8/22/2018	Upper	Immediately UG	<12	850	27	<2	6.4	<5	<5	<5	<5	<0.2	<5	11	<10	<5	<12	17	<20	
Lot 3, Near BAPB	MW-07	Primary	4/4/2018	Upper	DG of BAPB	<12	58	50	<2	<5	<5	<5	<5	6.3	<0.2	<5	14	<10	13	<2.5	8.9	<20	
Lot 3, Near BAPB	MW-07	Primary	8/21/2018	Upper	DG of BAPB	<10	63	46	<2	<5	<5	<5	<5	<5	<0.2	<5	19	<5	<10	<5	<20		
Lot 3, Near BAPB	MW-08	Primary	4/6/2018	Upper	Immediately UG	<12	96	150	<2	<5	<5	<5	<5	<5	<0.2	<5	17	<5	<12	<5	70		
Lot 3, Near BAPB	MW-08	Primary	8/22/2018	Upper	Immediately UG	<12	92	14	<2	<5	<5	<5	7.6	<5	6.8	<0.2	<5	51	<10	<5	<12	24	3600
Lot 3, Near BAPB	MW-09	Primary	4/6/2018	Upper	In BAPB	<12	430	62	<2	<5	<5	<5	<5	<5	<0.2	<5	23	<5	<12	<5	<20		
Lot 3, Near BAPB	MW-09	Primary	8/22/2018	Upper	In BAPB	<12	440	35	<2	<5	<5	<5	<5	<5	<0.2	<5	<10	<5	<12	10	<20		
Lot 3, Near BAPB	MW-10A	Primary	4/9/2018	Upper	DG of BAPB	<12	35	6	<2	<5	<5	<5	<5	<5	<0.2	9	5.2	<10	<5	<12	5.4	<20	
Lot 3, Near BAPB	MW-10A	Primary	8/21/2018	Upper	DG of BAPB	<10	42	23	<2	<5	<5	<5	37	<5	<0.2	<5	88	<10	<5	<10	<5	310	
Lot 3, Near BAPB	MW-10B	Primary	4/4/2018	Lower	DG of BAPB	<12	20	20	<2	78	12	470	1100	<5	<0.2	<5	1000	23	11	<12	5.9	16000	
Lot 3, Near BAPB	MW-10B	Primary	8/21/2018	Lower	DG of BAPB	<10	<10	15	<2	74	<5	500	880	<5	<0.2	<5	1100	<10	<5	<10	<5	17000	
Lot 3, Near BAPB	MW-11A	Primary	4/5/2018	Upper	DG of BAPB	<12	<10	30	<2	<5	<5	<5	40	<5	<0.2	7.8	<5	<10	<5	<12	<5	160	
Lot 3, Near BAPB	MW-11A	Primary	8/22/2018	Upper	DG of BAPB	<12	30	45	<2	5.4	<5	<5	25	<5	<0.2	<5	13	<10	<5	<12	15	760	
Lot 3, Near BAPB	MW-11B	Primary	4/5/2018	Lower	DG of BAPB	<12	17	18	<2	18	<5	86	59	<5	<0.2	<5	160	15	16	50	<5	1500	
Lot 3, Near BAPB	MW-11B	Primary	8/22/2018	Lower	DG of BAPB	<12	17	17	<2	14	5.8	62	42	<5	<0.2	<5	76	15	<5	<6.9	9.8	790	
Lot 3, Near BAPB	MW-12	Primary	4/5/2018	Upper	DG of BAPB	<12	14	32	<2	<5	<5	<5	16	<5	<0.2	<5	<5	<10	5.4	<12	<5	230	
Lot 3, Near BAPB	MW-12	Duplicate	4/5/2018	Upper	DG of BAPB	<12	14	33	<2	&lt													

**Table 4****Sampling Analytical Results - Metals**

Campus Bay, Richmond, CA

Lot/Area	Location	Sample Type	Sample Date	Sample Horizon	Sample Location Relative to BAPB (Applicable to Lot 3 Wells Only)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium (III+VI)	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L		
Drinking Water Standards Lots 1 and 2 (Upper and Lower Horizon)						6.00E+00	1.00E+01	1.00E+03	-	5.00E+00	5.00E+01	-	1.00E+03	1.50E+01	2.00E+00	-	1.00E+02	5.00E+01	1.00E+02	2.00E+00	-	5.00E+03	
On-Site Commercial/ Industrial Worker Lots 1, 2, and 3 (Upper Horizon)						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
On-Site Groundskeeper/Maintenance Worker Lots 1, 2, and 3 (Upper Horizon)						1.50E+05	1.10E+02	7.50E+07	-	1.90E+05	5.60E+08	-	1.50E+07	-	1.10E+05	-	9.30E+07	1.90E+06	3.10E+06	2.50E+04	3.70E+05	1.90E+08	
On-Site Residential Lots 1, 2, and 3 (Upper Horizon)						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
5x Aquatic Criteria, Lot 3 (Upper Horizon, Near BAPB)						2.20E+05	1.80E+02	-	-	4.70E+01	-	-	1.60E+01	4.10E+01	1.10E+01	-	4.10E+01	2.50E+01	9.50E+00	3.20E+02	-	4.10E+02	
40x Aquatic Criteria, Lot 3 (Upper Horizon, Uplands)						1.70E+06	1.40E+03	-	-	3.70E+02	-	-	1.20E+02	3.20E+02	8.40E+01	-	3.30E+02	2.00E+02	7.60E+01	2.50E+03	-	3.20E+03	
160x Aquatic Criteria, Lot 3 (Lower Horizon)						6.90E+06	5.80E+03	-	-	1.50E+03	-	-	5.00E+02	1.30E+03	3.40E+02	-	1.30E+03	8.00E+02	3.00E+02	1.00E+04	-	1.30E+04	
Storm-water Criteria, (Storm-water Outfalls)						4.30E+03	3.60E+01	-	-	1.10E+00	1.80E+02	-	3.10E+00	2.50E+00	2.50E-02	-	8.20E+00	5.00E+00	1.90E+00	6.30E+00	-	8.10E+01	
UC BGC, Near BAPB, Offsite	MW-36	Primary	8/20/2018	Upper	DG of BAPB	<10	<10	19	<2	<5	<5	18	<5	<5	<0.2	<5	65	<10	<5	<10	<5	<20	
UC BGC, Near BAPB, Offsite	MW-40	Primary	4/4/2018	Upper	In BAPB	<12	20	190	<2	<5	<5	<5	<5	<5	<0.2	<5	50	12	<2.5	5.6	<20		
UC BGC, Near BAPB, Offsite	MW-40	Primary	8/20/2018	Upper	In BAPB	<10	<10	200	<2	<5	<5	<5	<5	<5	<0.2	<5	<10	<5	<10	<5	<20		
UC BGC, Near BAPB, Offsite	MW-41	Primary	4/3/2018	Upper	In BAPB	<12	15	39	<2	<5	<5	<5	<5	<5	<0.2	<5	12	<10	12	<12	<5	<20	
UC BGC, Near BAPB, Offsite	MW-41	Primary	8/20/2018	Upper	In BAPB	<10	<10	35	<2	<5	<5	<5	<5	<5	<0.2	<5	12	<10	<5	<10	<5	<20	
UC BGC, Near BAPB, Offsite	MW-42	Primary	4/3/2018	Upper	Immediately UG	<12	13	15	<2	12	7	<5	<5	0.79	<5	190	<10	14	<12	5.3	60		
UC BGC, Near BAPB, Offsite	MW-42	Duplicate	4/3/2018	Upper	Immediately UG	<12	14	15	<2	12	6.9	<5	<5	<5	<0.2	<5	210	<10	14	<12	5.4	64	
UC BGC, Near BAPB, Offsite	MW-42	Primary	8/20/2018	Upper	Immediately UG	<10	<10	13	<2	14	<5	<5	<5	<5	0.26	<5	220	<10	<5	<10	<5	230	
UC BGC, Near BAPB, Offsite	MW-42	Duplicate	8/20/2018	Upper	Immediately UG	<10	<10	13	<2	15	<5	<5	<5	<5	0.38	<5	240	<10	<5	<10	<5	300	
UC BGC, Near BAPB, Offsite	MW-43	Primary	4/3/2018	Upper	DG of BAPB	<12	16	24	<2	<5	<5	5.1	<5	<0.2	<5	15	<10	22	<12	<5	<20		
UC BGC, Near BAPB, Offsite	MW-43	Primary	8/20/2018	Upper	DG of BAPB	<10	<10	24	<2	<5	<5	<5	<5	<0.2	<5	11	<10	<5	<10	<5	<20		
UC BGC, Near BAPB, Offsite	MW-44	Primary	4/3/2018	Upper	Immediately UG	<12	13	62	<2	<5	<5	<5	<5	<0.2	<5	31	<10	15	<12	<5	<20		
UC BGC, Near BAPB, Offsite	MW-44	Primary	8/20/2018	Upper	Immediately UG	<10	<10	55	<2	<5	<5	<5	<5	<0.2	<5	34	<10	<5	<10	<5	<20		
UC BGC, Near BAPB, Offsite	MW-45	Primary	4/3/2018	Upper	DG of BAPB	<12	11	12	<2	<5	<5	30	<5	<0.2	<5	23	<10	6.9	<12	<5	700		
UC BGC, Near BAPB, Offsite	MW-45	Primary	8/20/2018	Upper	DG of BAPB	<10	<10	11	<2	<5	<5	29	<5	<0.2	<5	21	<10	<5	<10	<5	700		
UC BGC, Near BAPB, Offsite	MW-46	Primary	4/3/2018	Upper	DG of BAPB	<12	13	20	<2	<5	<5	5.1	<5	<0.2	<5	7.3	<10	12	<12	9.8	<20		
UC BGC, Near BAPB, Offsite	MW-46	Primary	8/20/2018	Upper	DG of BAPB	<10	<10	18	<2	<5	<5	<5	<5	<0.2	<5	5.4	<10	<5	<10	<5	<20		
Storm Water*	002	Primary	1/4/2018	NA	NA	<10	13	87	<2	<5	<5	<5	<5	17	<5	<0.2	6.3	16	<10	16	<10	73	66
Storm Water**	002	Primary	1/4/2018	NA	NA	<10	14	98	<2	<5	25	<5	14	<5	<0.2	<5	18	<10	16	<10	49	100	
Storm Water*	002	Primary	4/7/2018	NA	NA	<12	12	26	<2	<5	<5	<5	<5	<5	<0.2	6.4	<5	150	<5	<12	14	33	
Storm Water**	002	Primary	4/7/2018	NA	NA	<12	<10	29	<2	<5	6.3	<5	<5	<5	<0.2	7.2	<5	130	<5	<12	11	36	
Storm Water*	002	Primary	11/21/2018	NA	NA	<10	<10	74	<2	<5	5.6	<5	16	20	<0.2	<5	12	<10	<5	<10	8.4	970	
Storm Water**	002	Primary	11/21/2018	NA	NA	<10	23	140	<2	<5	29	12	140	54	1.2	5.6	38	<10	<5	<10	66	1500	
Storm Water*	002	Primary	12/5/2018	NA	NA	<10	10	36	<2	<5	<5	<5	11	<5	<0.2	10	<5	91	<5	<10	7	<20	
Storm Water* <sup>1</sup>	002	Primary	12/5/2018	NA	NA	1.9	8.2	38	<1	<1	4	<1	11	<1	<0.2	10	2	81	<1	<1	6.9	19	
Storm Water**	002	Primary	12/5/2018	NA	NA	<10	13	47	<2	<5	7.9	<5	26	7.2	0.21	10	5.6	80	<5	<10	11	70</td	

**Table 4****Sampling Analytical Results - Metals**

Campus Bay, Richmond, CA

## Abbreviations:

&lt;# = Concentration not detected at or above indicated laboratory reporting limit.

- = Sample not analyzed or criteria not available

b = high RSD between exposures were observed but the result was confirmed by another run

BAPB = biologically active permeable barrier

DG = downgradient

DTSC-MW = Department of Toxic Substances Control monitoring well

Duplicate = duplicate sample collected from a well

EPA = Environmental Protection Agency

IMW = Temporary monitoring well

MW = Monitoring well

MW-##A = Represents the upper horizon groundwater well in a pair of upper and lower horizon wells

MW-##B = Represents the lower horizon groundwater well in a pair of upper and lower horizon wells

NA = not applicable

offsite = outside of site boundary

Primary = primary sample collected from a well

PZ = Piezometers

SSG = site-specific goal

UC BGC = University of California, Berkeley Global Campus

UG = Upgradient

µg/L = micrograms per liter

## Notes:

The 002 storm water samples collected in November and December 2018 were temporarily discharged at Outfall 001 during Habitat Area 2 remediation.

Groundwater and storm-water samples analyzed for metals by Enthalpy of Berkeley, California using EPA Method 6010B.

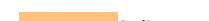
\* indicates the sample was lab filtered before analysis.

\*\* indicates the sample was not filtered before analysis.

<sup>1</sup> storm-water sample analyzed using EPA Method 6020

Screening criteria and sources for screening criteria are summarized in Table 7.

If a screening criterion is exceeded, the analytical results are designated as follows:

**Bold font** indicates a detection in upper or lower horizon groundwater above the drinking water standard (applicable to Lots 1 and 2 only) indicates a detection in upper horizon groundwater above the commercial/industrial SSG indicates a detection in upper horizon groundwater above the groundskeeper/maintenance worker SSG indicates a detection in upper horizon groundwater above the residential SSG indicates a detection in upper horizon groundwater above 5x the aquatic criterion (applicable to Lot 3 area near BAPB only) indicates a detection in upper horizon groundwater above 40x the aquatic criterion (applicable to Lot 3 Uplands only) indicates a detection in lower horizon groundwater above 160x the aquatic criterion (applicable to Lot 3 only) indicates a detection in storm-water above the storm-water criteria (applicable to storm-water samples only)Underline indicates a concentration which is greater than 90% of an applicable screening criterion but does not exceed it

**Table 5**  
**Sampling Analytical Results - Pesticides**  
Campus Bay, Richmond, CA

Lot/Area	Location	Sample Type	Sampled Date	Sample Horizon	Sample Location Relative to BAPB (Applicable to Lot 3 Wells Only)	Proprietary Pesticides							Organochlorine Pesticides						
						Butylate µg/L	Vernolate µg/L	Cycloate µg/L	EPTC µg/L	Molinate µg/L	Napropamide µg/L	Pebulate µg/L	a-BHC µg/L	Aldrin µg/L	b-BHC µg/L	Chlordane (cis) µg/L	Chlordane (trans) µg/L	4,4'-DDD µg/L	4,4'-DDE µg/L
<b>Drinking Water Standards Lots 1 and 2 (Upper and Lower Horizon)</b>										<b>2.00E+01</b>			<b>5.00E-01</b>						
On-Site Commercial/ Industrial Worker Lots 1, 2, and 3 (Upper Horizon)									<b>2.50E+06</b>										
On-Site Groundskeeper/Maintenance Worker Lots 1, 2, and 3 (Upper Horizon)						<b>2.40E+06</b>	<b>4.90E+04</b>	<b>9.80E+04</b>	<b>1.20E+06</b>	<b>9.80E+04</b>	<b>4.90E+06</b>	<b>2.40E+06</b>	<b>6.60E+00</b>		<b>1.20E+01</b>		<b>4.20E+00</b>		
On-Site Residential Lots 1, 2, and 3 (Upper Horizon)										<b>5.30E+05</b>									
5x Aquatic Criteria, Lot 3 (Upper Horizon, Near BAPB)						<b>2.80E+02</b>		<b>2.40E+02</b>	<b>2.20E+02</b>	<b>1.80E+02</b>	<b>2.40E+02</b>	<b>1.20E+02</b>	<b>6.50E-01</b>		<b>2.30E+00</b>			<b>5.00E-03</b>	
160x Aquatic Criteria, Lot 3 (Lower Horizon)						<b>8.80E+03</b>		<b>7.50E+03</b>	<b>6.90E+03</b>	<b>5.60E+03</b>	<b>7.50E+03</b>	<b>3.70E+03</b>							
Storm-water Criteria, (Storm-water Outfalls)						<b>5.50E+01</b>		<b>4.70E+01</b>	<b>4.30E+01</b>	<b>3.50E+01</b>	<b>4.70E+01</b>	<b>2.30E+01</b>	<b>1.30E-02</b>		<b>4.60E-02</b>			<b>8.40E-04</b>	
DTSC Harborfront, Offsite	DTSC-MW-2	Primary	4/12/2018	Upper	NA	<5	<5	<5	<5	<5	<25	<5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.1
DTSC Harborfront, Offsite	DTSC-MW-2	Primary	8/16/2018	Upper	NA	<2.5	<2.5	<2.5	<2.5	<2.5	<5	<2.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.1
Lot 3, Near BAPB	MW-01	Primary	4/4/2018	Upper	DG of BAPB	<5	<5	<5	<5	<5	<5	<25	<5	-	-	-	-	-	-
Lot 3, Near BAPB	MW-01	Primary	8/21/2018	Upper	DG of BAPB	<2.5	<2.5	<2.5	<2.5	<2.5	<5	<2.5	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-02	Primary	4/6/2018	Upper	Immediately UG	<5	<5	<5	<5	<5	<25	<5	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-02	Primary	8/21/2018	Upper	Immediately UG	<2.5	<2.5	<2.5	<2.5	<2.5	<5	<2.5	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-03	Primary	4/4/2018	Upper	In BAPB	<5	<5	<5	<5	<5	<25	<5	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-03	Primary	8/21/2018	Upper	In BAPB	<2.5	<2.5	<2.5	<2.5	<2.5	<5	<2.5	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-04	Primary	4/4/2018	Upper	DG of BAPB	<5	<5	<5	<5	<5	<25	<5	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-04	Duplicate	4/4/2018	Upper	DG of BAPB	<5	<5	<5	<5	<5	<25	<5	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-04	Primary	8/21/2018	Upper	DG of BAPB	<2.5	<2.5	<2.5	<2.5	<2.5	<5	<2.5	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-04	Duplicate	8/21/2018	Upper	DG of BAPB	<2.5	<2.5	<2.5	<2.5	<2.5	<5	<2.5	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-05	Primary	4/4/2018	Upper	DG of BAPB	<5	<5	<5	<5	<5	<25	<5	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-05	Primary	8/21/2018	Upper	DG of BAPB	<2.5	<2.5	<2.5	<2.5	<2.5	<5	<2.5	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-06	Primary	4/6/2018	Upper	Immediately UG	<5	<5	<5	<5	<5	<25	<5	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-06	Primary	8/22/2018	Upper	Immediately UG	<2.5	<2.5	<2.5	3.4	<2.5	<5	<2.5	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-07	Primary	4/4/2018	Upper	DG of BAPB	<5	<5	<5	<5	<5	<25	<5	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-07	Primary	8/21/2018	Upper	DG of BAPB	<2.5	<2.5	<2.5	<2.5	<2.5	<5	<2.5	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-08	Primary	4/6/2018	Upper	Immediately UG	<5	<5	<5	<5	<5	<25	<5	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-08	Primary	8/22/2018	Upper	Immediately UG	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<5	<2.5	-	-	-	-	-	-
Lot 3, Near BAPB	MW-09	Primary	4/6/2018	Upper	In BAPB	<5	<5	<5	<5	<5	<25	<5	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-09	Primary	8/22/2018	Upper	In BAPB	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<5	<2.5	-	-	-	-	-	-
Lot 3, Near BAPB	MW-10A	Primary	4/9/2018	Upper	DG of BAPB	<5	<5	<5	<5	<5	<25	<5	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-10A	Primary	8/21/2018	Upper	DG of BAPB	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<5	<2.5	-	-	-	-	-	-
Lot 3, Near BAPB	MW-10B	Primary	4/4/2018	Lower	DG of BAPB	<5	<5	<5	9.4	<5	<25	<5	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-10B	Primary	8/21/2018	Lower	DG of BAPB	<2.5	<2.5	<2.5	6.4	<2.5	<5	<2.5	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-11A	Primary	4/5/2018	Upper	DG of BAPB	<5	<5	<5	<5	<5	<25	<5	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-11A	Primary	8/22/2018	Upper	DG of BAPB	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<5	<2.5	-	-	-	-	-	-
Lot 3, Near BAPB	MW-11B	Primary	4/5/2018	Lower	DG of BAPB	<5	<5	<5	67	5	<25	<5	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-11B	Primary	8/22/2018	Lower	DG of BAPB	<2.5	<2.5	<2.5	39	4.3	<5	<2.5	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-12	Primary	4/5/2018	Upper	DG of BAPB	<5	<5	<5	<5	<5	<25	<5	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-12	Duplicate	4/5/2018	Upper	DG of BAPB	<5	<5	<5	<5	<5	<25	<5	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-12	Primary	8/22/2018	Upper	DG of BAPB	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<5	<2.5	-	-	-	-	-	-
Lot 3, Near BAPB	MW-12	Duplicate	8/22/2018	Upper	DG of BAPB	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<5	<2.5	-	-	-	-	-	

**Table 5**  
**Sampling Analytical Results - Pesticides**  
 Campus Bay, Richmond, CA

Lot/Area	Location	Sample Type	Sampled Date	Sample Horizon	Sample Location Relative to BAPB (Applicable to Lot 3 Wells Only)	Organochlorine Pesticides													
						4,4'-DDT	d-BHC	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene	
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Drinking Water Standards Lots 1 and 2 (Upper and Lower Horizon)																			
On-Site Commercial/ Industrial Worker Lots 1, 2, and 3 (Upper Horizon)																			
On-Site Groundskeeper/Maintenance Worker Lots 1, 2, and 3 (Upper Horizon)						1.80E+00	1.60E+01								1.60E+01	3.70E+00			
On-Site Residential Lots 1, 2, and 3 (Upper Horizon)																			
5x Aquatic Criteria, Lot 3 (Upper Horizon, Near BAPB)						5.00E-03									8.00E-01	1.10E-02			
160x Aquatic Criteria, Lot 3 (Lower Horizon)																			
Storm-water Criteria, (Storm-water Outfalls)						5.90E-04									6.30E-02	2.10E-04			
DTSC Harborfront, Offsite	DTSC-MW-2	Primary	4/12/2018	Upper	NA	<0.1	<0.05	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1#	<0.1	<0.05	<0.05	<0.05	<0.5	<1
DTSC Harborfront, Offsite	DTSC-MW-2	Primary	8/16/2018	Upper	NA	<0.1	<0.05	<0.1	<0.05	<0.1	<0.1	<0.1b	<0.1	<0.1	<0.05	<0.05	<0.05	<0.5	<1
Lot 3, Near BAPB	MW-01	Primary	4/4/2018	Upper	DG of BAPB	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-01	Primary	8/21/2018	Upper	DG of BAPB	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-02	Primary	4/6/2018	Upper	Immediately UG	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-02	Primary	8/21/2018	Upper	Immediately UG	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-03	Primary	4/4/2018	Upper	In BAPB	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-03	Primary	8/21/2018	Upper	In BAPB	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-04	Primary	4/4/2018	Upper	DG of BAPB	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-04	Duplicate	4/4/2018	Upper	DG of BAPB	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-04	Primary	8/21/2018	Upper	DG of BAPB	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-04	Duplicate	8/21/2018	Upper	DG of BAPB	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-05	Primary	4/4/2018	Upper	DG of BAPB	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-05	Primary	8/21/2018	Upper	DG of BAPB	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-06	Primary	4/6/2018	Upper	Immediately UG	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-06	Primary	8/22/2018	Upper	Immediately UG	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-07	Primary	4/4/2018	Upper	DG of BAPB	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-07	Primary	8/21/2018	Upper	DG of BAPB	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-08	Primary	4/6/2018	Upper	Immediately UG	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-08	Primary	8/22/2018	Upper	Immediately UG	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-09	Primary	4/6/2018	Upper	In BAPB	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-09	Primary	8/22/2018	Upper	In BAPB	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-10A	Primary	4/9/2018	Upper	DG of BAPB	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-10A	Primary	8/21/2018	Upper	DG of BAPB	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-10B	Primary	4/4/2018	Lower	DG of BAPB	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-10B	Primary	8/21/2018	Lower	DG of BAPB	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-11A	Primary	4/5/2018	Upper	DG of BAPB	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-11A	Primary	8/22/2018	Upper	DG of BAPB	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-11B	Primary	4/5/2018	Lower	DG of BAPB	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-11B	Primary	8/22/2018	Lower	DG of BAPB	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-12	Primary	4/5/2018	Upper	DG of BAPB	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-12	Duplicate	4/5/2018	Upper	DG of BAPB	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-12	Primary	8/22/2018	Upper	DG of BAPB	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-12	Duplicate	8/22/2018	Upper	DG of BAPB	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-13	Primary	4/6/2018	Upper	Immediately UG	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-13	Primary	8/22/2018	Upper	Immediately UG	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-14	Primary	4/5/2018	Upper	In BAPB	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-14	Primary	8/22/2018	Upper	In BAPB	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lot 3, Near BAPB	MW-15	Primary	4/5/2018	Upper	DG of BAPB	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**Table 5**  
**Sampling Analytical Results - Pesticides**  
 Campus Bay, Richmond, CA

Lot/Area	Location	Sample Type	Sampled Date	Sample Horizon	Sample Location Relative to BAPB (Applicable to Lot 3 Wells Only)	Proprietary Pesticides						Organochlorine Pesticides						
						Butylate µg/L	Vernolate µg/L	Cycloate µg/L	EPTC µg/L	Molinate µg/L	Napropamide µg/L	Pebulate µg/L	a-BHC µg/L	Aldrin µg/L	b-BHC µg/L	Chlordane (cis) µg/L	Chlordane (trans) µg/L	4,4'-DDD µg/L
<b>Drinking Water Standards Lots 1 and 2 (Upper and Lower Horizon)</b>										2.00E+01			5.00E-01					
On-Site Commercial/ Industrial Worker Lots 1, 2, and 3 (Upper Horizon)									2.50E+06									
On-Site Groundskeeper/Maintenance Worker Lots 1, 2, and 3 (Upper Horizon)						2.40E+06	4.90E+04	9.80E+04	1.20E+06	9.80E+04	4.90E+06	2.40E+06	6.60E+00		1.20E+01		4.20E+00	
On-Site Residential Lots 1, 2, and 3 (Upper Horizon)									5.30E+05									
5x Aquatic Criteria, Lot 3 (Upper Horizon, Near BAPB)						2.80E+02		2.40E+02	2.20E+02	1.80E+02	2.40E+02	1.20E+02	6.50E-01		2.30E+00		5.00E-03	
160x Aquatic Criteria, Lot 3 (Lower Horizon)						8.80E+03		7.50E+03	6.90E+03	5.60E+03	7.50E+03	3.70E+03						
Storm-water Criteria, (Storm-water Outfalls)						5.50E+01		4.70E+01	4.30E+01	3.50E+01	4.70E+01	2.30E+01	1.30E-02		4.60E-02		8.40E-04	
Lot 3, Near BAPB	MW-15	Primary	8/22/2018	Upper	DG of BAPB	<2.5	<2.5	<2.5	<2.5	<2.5	<5	<2.5	-	-	-	-	-	
Lot 3, Near BAPB	MW-28	Primary	4/4/2018	Upper	DG of BAPB	<5	<5	<5	<5	<5	<25	<5	-	-	-	-	-	
Lot 3, Near BAPB	MW-28	Primary	8/21/2018	Upper	DG of BAPB	<2.5	<2.5	<2.5	<2.5	<2.5	<5	<2.5	-	-	-	-	-	
Lot 3, Near BAPB	MW-29	Primary	4/6/2018	Upper	Immediately UG	<5	<5	<5	<5	<5	<25	<5	-	-	-	-	-	
Lot 3, Near BAPB	MW-29	Primary	8/22/2018	Upper	Immediately UG	<2.5	<2.5	<2.5	5.5	<2.5	<5	<2.5	-	-	-	-	-	
Lot 3, Near BAPB	PZ-15	Primary	4/12/2018	Upper	DG of BAPB	<5	33	13	120	<5	<25	73	<0.05	<0.05	<0.05	<0.05	<0.1	
Lot 3, Near BAPB	PZ-15	Primary	8/16/2018	Upper	DG of BAPB	3.3	39	16	120	<2.5	<5	79	<0.05	<0.05	<0.05	<0.05	<0.1	
Lot 3, Near BAPB	PZ-16	Primary	4/12/2018	Upper	DG of BAPB	<5	<5	<5	<5	<5	<25	<5	<0.05	<0.05	<0.05	<0.05	<0.1	
Lot 3, Near BAPB	PZ-16	Primary	8/16/2018	Upper	DG of BAPB	<2.5	<2.5	<2.5	<2.5	<2.5	<5	<2.5	<0.05	<0.05	<0.05	<0.05	<0.1	
Storm Water	002	Primary	1/4/2018	NA	NA	<5	<5	<5	<5	<5	<25	<5	<0.05	<0.05	<0.05	<0.05	<0.1	
Storm Water	002	Primary	4/7/2018	NA	NA	<25	<25	<25	<25	<25	<130	<25	<0.05	<0.05	<0.05	<0.05	<0.1	
Storm Water	002	Primary	11/21/2018	NA	NA	<5	<5	<5	<5	<5	<5	<5	<0.05	<0.05	<0.05	0.1	<0.1	
Storm Water	002	Primary	12/5/2018	NA	NA	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<0.05	<0.05	<0.05	<0.05	<0.1	
Storm Water	003	Primary	1/8/2018	NA	NA	<5	<5	<5	<5	<5	<25	<5	<0.05	<0.05	<0.05	<0.05	<0.1	
Storm Water	003	Primary	4/7/2018	NA	NA	<5	<5	<5	<5	<5	<25	<5	<0.05	<0.05	<0.05	<0.05	<0.1	
Storm Water	003	Primary	11/29/2018	NA	NA	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<0.05	<0.05	<0.05	<0.05	<0.1	
Storm Water	003	Primary	12/17/2018	NA	NA	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<0.05	<0.05	<0.05	<0.05	<0.1	

**Table 5**  
**Sampling Analytical Results - Pesticides**  
 Campus Bay, Richmond, CA

Lot/Area	Location	Sample Type	Sampled Date	Sample Horizon	Sample Location Relative to BAPB (Applicable to Lot 3 Wells Only)	Organochlorine Pesticides												
						4,4'-DDT µg/L	d-BHC µg/L	Dieldrin µg/L	Endosulfan I µg/L	Endosulfan II µg/L	Endosulfan sulphate µg/L	Endrin µg/L	Endrin aldehyde µg/L	g-BHC (Lindane) µg/L	Heptachlor µg/L	Heptachlor epoxide µg/L	Methoxychlor µg/L	Toxaphene µg/L
<b>Drinking Water Standards Lots 1 and 2 (Upper and Lower Horizon)</b>																		
On-Site Commercial/ Industrial Worker Lots 1, 2, and 3 (Upper Horizon)																		
On-Site Groundskeeper/Maintenance Worker Lots 1, 2, and 3 (Upper Horizon)						1.80E+00	1.60E+01							1.60E+01	3.70E+00			
On-Site Residential Lots 1, 2, and 3 (Upper Horizon)																		
5x Aquatic Criteria, Lot 3 (Upper Horizon, Near BAPB)						5.00E-03								8.00E-01	1.10E-02			
160x Aquatic Criteria, Lot 3 (Lower Horizon)																		
Storm-water Criteria, (Storm-water Outfalls)						5.90E-04								6.30E-02	2.10E-04			
Lot 3, Near BAPB	MW-15	Primary	8/22/2018	Upper	DG of BAPB	-	-	-	-	-	-	-	-	-	-	-	-	
Lot 3, Near BAPB	MW-28	Primary	4/4/2018	Upper	DG of BAPB	-	-	-	-	-	-	-	-	-	-	-	-	
Lot 3, Near BAPB	MW-28	Primary	8/21/2018	Upper	DG of BAPB	-	-	-	-	-	-	-	-	-	-	-	-	
Lot 3, Near BAPB	MW-29	Primary	4/6/2018	Upper	Immediately UG	-	-	-	-	-	-	-	-	-	-	-	-	
Lot 3, Near BAPB	MW-29	Primary	8/22/2018	Upper	Immediately UG	-	-	-	-	-	-	-	-	-	-	-	-	
Lot 3, Near BAPB	PZ-15	Primary	4/12/2018	Upper	DG of BAPB	<0.1	<0.05	<0.1	<0.05	<0.1	<0.1	<0.1#	<0.1	<0.05	<0.05	<0.05	<0.5	<1
Lot 3, Near BAPB	PZ-15	Primary	8/16/2018	Upper	DG of BAPB	<0.1	<0.05	<0.1	<0.05	<0.1	<0.1b	<0.1	<0.1	<0.05	<0.05	<0.05	<0.5	<1
Lot 3, Near BAPB	PZ-16	Primary	4/12/2018	Upper	DG of BAPB	<0.1	<0.05	<0.1	<0.05	<0.1	<0.1	<0.1#	<0.1	<0.05	<0.05	<0.05	<0.5	<1
Lot 3, Near BAPB	PZ-16	Primary	8/16/2018	Upper	DG of BAPB	<0.1	<0.05	<0.1	<0.05	<0.1	<0.1b	<0.1	<0.1	<0.05	<0.05	<0.05	<0.5	<1
Storm Water	002	Primary	1/4/2018	NA	NA	<0.1	<0.05	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.5	<1
Storm Water	002	Primary	4/7/2018	NA	NA	<0.1	<0.05	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.5	<1
Storm Water	002	Primary	11/21/2018	NA	NA	<0.1	<0.05	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.5	<1
Storm Water	002	Primary	12/5/2018	NA	NA	<0.1	<0.05	<0.1	<0.05	<0.1	<0.1#	<0.1	<0.1#	<0.05	<0.05	<0.05	<0.5	<1
Storm Water	003	Primary	1/8/2018	NA	NA	<0.1	<0.05	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.5	<1
Storm Water	003	Primary	4/7/2018	NA	NA	<0.1	<0.05	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.5	<1
Storm Water	003	Primary	11/29/2018	NA	NA	<0.1	<0.05	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.5b	<1
Storm Water	003	Primary	12/17/2018	NA	NA	<0.1	<0.05	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.5	<1

**Table 5**  
**Sampling Analytical Results - Pesticides**  
 Campus Bay, Richmond, CA

Abbreviations:

<0.50 = Concentration not detected at or above indicated laboratory reporting limit.

- = Sample not analyzed or criteria not available

Duplicate = duplicate sample collected from a well

Primary = primary sample collected from a well

BAPB = biologically active permeable barrier

DG = downgradient

DTSC-MW = Department of Toxic Substances Control monitoring well

EPA = Environmental Protection Agency

MW = Monitoring well

MW-##A = Represents the upper horizon groundwater well in a pair of upper and lower horizon wells

MW-##B = Represents the lower horizon groundwater well in a pair of upper and lower horizon wells

NA = not applicable

PZ = Piezometers

SSG = site-specific goal

UG = Upgradient

# = CCV drift outside limits; average CCV drift within limits per method requirements

b = prepared outside of hold time

µg/L = micrograms per liter

Upper, offsite = upper horizon, outside of site boundary

Notes:

The 002 storm water samples collected in November and December 2018 were temporarily discharged at Outfall 001 during Habitat Area 2 remediation.

Groundwater and storm-water samples analyzed for proprietary pesticides by Enthalpy of Berkeley, California using EPA Method 8270SIM and

organochlorine pesticides by EPA Method 8081. Only pesticides with at least one detection above the laboratory reporting limit are shown in this table.

C = Presence confirmed, but relative percent difference between columns exceeds 40%

Screening criteria and sources for screening criteria are summarized in Table 7.

If a screening criterion is exceeded, the analytical results are designated as follows:

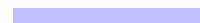
**Bold font** indicates a detection in upper or lower horizon groundwater above the drinking water standard (applicable to Lots 1 and 2 only)

 indicates a detection in upper horizon groundwater above the commercial/industrial SSG

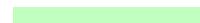
**Pink Font** indicates a detection in upper horizon groundwater above the groundskeeper/maintenance worker SSG

*Italic font* indicates a detection in upper horizon groundwater above the residential SSG

 indicates a detection in upper horizon groundwater above 5x the aquatic criterion (applicable to Lot 3 only)

 indicates a detection in upper horizon groundwater above 40x the aquatic criterion (applicable to Lot 3 only)

 indicates a detection in lower horizon groundwater above 160x the aquatic criterion (applicable to Lot 3 only)

 indicates a detection in storm-water above the storm-water criteria (applicable to storm-water samples only)

Underline indicates a concentration which is greater than 90% of an applicable screening criterion but does not exceed it

Table 6

## Sampling Analytical Results - General Minerals and Field Parameters

Campus Bay, Richmond, CA

Lot/Area	Location	Sample Type	Sampled Date	Sample Horizon	Sample Location Relative to BAPB (Applicable to Lot 3 Wells Only)	Alkalinity, Bicarbonate (mg/l)	Alkalinity, Carbonate (mg/l)	Alkalinity, Hydroxide (mg/l)	Alkalinity, Total as CaCO3 (mg/l)	Chloride (mg/l)	Dissolved Oxygen (mg/l)	Ferrous Iron, Fe+2 (mg/l)	Oxidation Reduction Potential (mV)	pH (SU)	Specific Conductance (µS/cm)	Sulfate (mg/l)	Sulfide (mg/l)	Total Dissolved Solids (mg/l)	Total Suspended Solids (mg/l)
DTSC Harborfront	DTSC-MW-1	Primary	4/12/2018	Upper	NA	-	-	-	-	0.19	-	93.5	6.73	1476	-	-	-	-	
DTSC Harborfront	DTSC-MW-1	Primary	8/16/2018	Upper	NA	-	-	-	-	-0.07	-	58.6	7.11	1872	-	-	-	-	
DTSC Harborfront	DTSC-MW-2	Primary	4/12/2018	Upper	NA	-	-	-	-	0.17	<0.1	64.9	6.88	1216	-	<0.04	-	-	
DTSC Harborfront	DTSC-MW-2	Primary	8/16/2018	Upper	NA	-	-	-	-	0.1	<0.1	176.5	6.91	1460	-	0.08	-	-	
DTSC Harborfront	DTSC-MW-4	Primary	4/12/2018	Upper	NA	-	-	-	-	0.19	-	63.1	6.81	1289	-	-	-	-	
DTSC Harborfront	DTSC-MW-4	Primary	8/16/2018	Upper	NA	-	-	-	-	-0.07	-	81.6	7.17	1450	-	-	-	-	
Lot 1	IMW-01	Primary	4/5/2018	Upper	NA	-	-	-	-	0.1	-	-77.4	6.66	1201	-	-	-	-	
Lot 1	IMW-01	Primary	8/23/2018	Upper	NA	-	-	-	-	0.14	-	-84.3	6.71	1253	-	-	-	-	
Lot 1	IMW-02	Primary	4/5/2018	Upper	NA	-	-	-	-	0.14	-	-55	6.23	1531	-	-	-	-	
Lot 1	IMW-02	Primary	8/23/2018	Upper	NA	-	-	-	-	0.13	-	-46.4	6.42	1528	-	-	-	-	
Lot 1	IMW-03	Primary	4/5/2018	Upper	NA	-	-	-	-	0.13	-	-103.6	6.46	1214	-	-	-	-	
Lot 1	IMW-03	Primary	8/23/2018	Upper	NA	-	-	-	-	0.15	-	-79.6	6.59	1296	-	-	-	-	
Lot 1	IMW-04	Primary	4/5/2018	Upper	NA	-	-	-	-	0.12	-	-109.4	6.37	1336	-	-	-	-	
Lot 1	IMW-04	Primary	8/23/2018	Upper	NA	-	-	-	-	0.16	-	-76.3	6.58	1408	-	-	-	-	
Lot 1	IMW-15	Primary	4/16/2018	Lower	NA	-	-	-	-	0.1	-	-100.2	6.39	2567	-	-	-	-	
Lot 1	IMW-15	Primary	8/14/2018	Lower	NA	-	-	-	-	0.38	-	-150.7	6.27	3097	-	-	-	-	
Lot 1	IMW-16	Primary	4/16/2018	Lower	NA	-	-	-	-	0.06	-	-40.7	6.19	3202	-	-	-	-	
Lot 1	IMW-16	Primary	8/14/2018	Lower	NA	-	-	-	-	0.07	-	3.1	6.33	3052	-	-	-	-	
Lot 1	IMW-17	Primary	4/16/2018	Lower	NA	-	-	-	-	0.18	-	8.9	6.27	1607	-	-	-	-	
Lot 1	IMW-17	Primary	8/14/2018	Lower	NA	-	-	-	-	0.39	-	-121.2	6.29	1883	-	-	-	-	
Lot 1	IMW-23	Primary	4/13/2018	Upper	NA	-	-	-	-	0.44	-	217.7	5.63	1579	-	-	-	-	
Lot 1	IMW-23	Primary	8/14/2018	Upper	NA	-	-	-	-	0.13	-	263.2	5.84	1658	-	-	-	-	
Lot 1	IMW-25	Primary	4/13/2018	Upper	NA	-	-	-	-	3.63	-	169	6.69	1712	-	-	-	-	
Lot 1	IMW-25	Primary	8/15/2018	Upper	NA	-	-	-	-	1.21	-	248.4	6.6	2006	-	-	-	-	
Lot 1	IMW-26	Primary	4/13/2018	Upper	NA	-	-	-	-	0.25	-	60.6	6.6	1614	-	-	-	-	
Lot 1	IMW-26	Primary	8/15/2018	Upper	NA	-	-	-	-	0.07	-	67	6.7	1778	-	-	-	-	
Lot 1	IMW-27	Primary	4/13/2018	Upper	NA	-	-	-	-	0.16	-	103.4	6.26	1713	-	-	-	-	
Lot 1	IMW-27	Primary	8/15/2018	Upper	NA	-	-	-	-	0.09	-	188.4	6.57	2224	-	-	-	-	
Lot 1	IMW-28	Primary	4/12/2018	Upper	NA	-	-	-	-	0.14	-	46.3	6.51	1880	-	-	-	-	
Lot 1	IMW-28	Primary	8/15/2018	Upper	NA	-	-	-	-	0.08	-	166.3	6.54	2266	-	-	-	-	
Lot 1	IMW-29	Primary	4/12/2018	Lower	NA	-	-	-	-	0.04	-	-118.2	6.15	1928	-	-	-	-	
Lot 1	IMW-29	Primary	8/15/2018	Lower	NA	-	-	-	-	0.01	-	-26.8	6.29	1920	-	-	-	-	
Lot 1	IMW-30	Primary	4/13/2018	Upper	NA	-	-	-	-	0.09	-	-39.8	5.79	1751	-	-	-	-	
Lot 1	IMW-30	Primary	8/15/2018	Upper	NA	-	-	-	-	0.09	-	22	5.95	1883	-	-	-	-	
Lot 1	IMW-31	Primary	4/16/2018	Upper	NA	-	-	-	-	0.14	-	-68.3	6.11	1908	-	-	-	-	
Lot 1	IMW-31	Primary	8/16/2018	Upper	NA	-	-	-	-	-0.09	-	-51.8	6.6	2156	-	-	-	-	
Lot 1	IMW-32	Primary	4/13/2018	Lower	NA	-	-	-	-	0.17	-	43.4	7.41	716	-	-	-	-	
Lot 1	IMW-32	Primary	8/15/2018	Lower	NA	-	-	-	-	-0.06	-	246.4	7.19	867	-	-	-	-	
Lot 1	IMW-33	Primary	4/13/2018	Lower	NA	-	-	-	-	0.14	-	23.2	6.4	1785	-	-	-	-	
Lot 1	IMW-33	Primary	8/15/2018	Lower	NA	-	-	-	-	-0.08	-	61.1	6.33	2106	-	-	-	-	
Lot 1	MW-25R	Primary	4/13/2018	Upper	NA	-	-	-	-	1.74	0.2	6.9	6.73	1835	-	<0.04	-	-	
Lot 1	MW-25R	Primary	8/15/2018	Upper	NA	-	-	-	-	0.07	0.28	28.5	6.7	1953	-	<0.04	-	-	
Lot 1	MW-26	Primary	4/13/2018	Upper	NA	-	-	-	-	0.85	<0.1	102	6.8	897	-	<0.04	-	-	
Lot 1	MW-26	Duplicate	4/13/2018	Upper	NA	-	-	-	-	0.85	<0.1	102	6.8	897	-	<0.04	-	-	
Lot 1	MW-26	Primary	8/15/2018	Upper	NA	-	-	-	-	0.13	<0.1	184.8	6.91	1072	-	<0.04	-	-	
Lot 1	MW-26	Duplicate	8/15/2018	Upper	NA	-	-	-	-	0.13	<0.1	184.8	6.91	1072	-	<0.04	-	-	
Lot 1	MW-27	Primary	4/12/2018	Upper	NA	-	-	-	-	0.16	<0.1	110.4	6.25	1544	-	<0.04	-	-	
Lot 1	MW-27	Primary	8/15/2018	Upper	NA	-	-	-	-	0.02	0.14	109.7	6.31	1694	-	<0.04	-	-	
Lot 1	MW-30	Primary	4/16/2018	Upper	NA	-	-	-	-	0.12	2.1	-76.2	6.54	1231	-	<0.04	-	-	
Lot 1	MW-30	Primary	8/23/2018	Upper	NA	-	-	-	-	0.14	2.6	-96.7	6.59	1396	-	0.05	-	-	
Lot 1	MW-33	Primary	4/12/2018	Upper	NA	-	-	-	-	0.21	<0.1								

Table 6

## Sampling Analytical Results - General Minerals and Field Parameters

Campus Bay, Richmond, CA

Lot/Area	Location	Sample Type	Sampled Date	Sample Horizon	Sample Location Relative to BAPB (Applicable to Lot 3 Wells Only)	Alkalinity, Bicarbonate (mg/l)	Alkalinity, Carbonate (mg/l)	Alkalinity, Hydroxide (mg/l)	Alkalinity, Total as CaCO3 (mg/l)	Chloride (mg/l)	Dissolved Oxygen (mg/l)	Ferrous Iron, Fe+2 (mg/l)	Oxidation Reduction Potential (mV)	pH (SU)	Specific Conductance ( $\mu\text{S}/\text{cm}$ )	Sulfate (mg/l)	Sulfide (mg/l)	Total Dissolved Solids (mg/l)	Total Suspended Solids (mg/l)
Lot 1	PZ-11	Duplicate	4/13/2018	Upper	NA	-	-	-	-	0.1	-	143.6	5.75	3799	-	-	-	-	
Lot 1	PZ-11	Primary	8/15/2018	Upper	NA	-	-	-	-	0.05	-	108.7	6.37	4359	-	-	-	-	
Lot 1	PZ-11	Duplicate	8/15/2018	Upper	NA	-	-	-	-	0.05	-	108.7	6.37	4359	-	-	-	-	
Lot 1	PZ-12	Primary	4/13/2018	Upper	NA	-	-	-	-	0.22	-	-55.2	6.38	1284	-	-	-	-	
Lot 1	PZ-12	Primary	8/15/2018	Upper	NA	-	-	-	-	-0.09	-	-59	6.28	1492	-	-	-	-	
Lot 2	IMW-05	Primary	4/11/2018	Upper	NA	-	-	-	-	0.17	-	-89.7	6.59	1182	-	-	-	-	
Lot 2	IMW-05	Primary	8/14/2018	Upper	NA	-	-	-	-	0.11	-	1.5	6.73	1220	-	-	-	-	
Lot 2	IMW-06	Primary	4/11/2018	Upper	NA	-	-	-	-	0.2	-	-78.2	6.6	1819	-	-	-	-	
Lot 2	IMW-06	Primary	8/14/2018	Upper	NA	-	-	-	-	0.39	-	-94.6	6.51	2029	-	-	-	-	
Lot 2	IMW-07	Primary	4/11/2018	Upper	NA	-	-	-	-	0.12	-	-112.7	6.52	1741	-	-	-	-	
Lot 2	IMW-07	Duplicate	4/11/2018	Upper	NA	-	-	-	-	0.12	-	-112.7	6.52	1741	-	-	-	-	
Lot 2	IMW-07	Primary	8/14/2018	Upper	NA	-	-	-	-	0.42	-	-84	6.5	1910	-	-	-	-	
Lot 2	IMW-07	Duplicate	8/14/2018	Upper	NA	-	-	-	-	0.42	-	-84	6.5	1910	-	-	-	-	
Lot 2	IMW-08	Primary	4/11/2018	Upper	NA	-	-	-	-	0.2	-	-90.1	6.55	1589	-	-	-	-	
Lot 2	IMW-08	Primary	8/14/2018	Upper	NA	-	-	-	-	0.05	-	-52.8	6.67	1447	-	-	-	-	
Lot 2	IMW-22	Primary	4/11/2018	Upper	NA	-	-	-	-	0.06	-	-113.7	6.67	1336	-	-	-	-	
Lot 2	IMW-22	Primary	8/14/2018	Upper	NA	-	-	-	-	0.41	-	-101.5	6.69	1485	-	-	-	-	
Lot 2	MW-24	Primary	4/11/2018	Upper	NA	-	-	-	-	0.17	<0.1	-95.6	11.56	2141	-	<0.04	-	-	
Lot 2	MW-24	Primary	8/14/2018	Upper	NA	-	-	-	-	0.69	<0.1	-220.5	11.65	2166	-	<0.04	-	-	
Lot 2	MW-31	Primary	4/16/2018	Upper	NA	-	-	-	-	0.26	<0.1	243.3	6.64	1039	-	<0.04	-	-	
Lot 2	MW-31	Primary	8/14/2018	Upper	NA	-	-	-	-	0.38	<0.1	-115.7	6.69	1118	-	<0.04	-	-	
Lot 3, Uplands	IMW-42	Primary	4/10/2018	Upper	UG of BAPB	-	-	-	-	0.05	-	29.7	5.08	12,450	-	-	-	-	
Lot 3, Uplands	IMW-42	Primary	8/17/2018	Upper	UG of BAPB	-	-	-	-	0.02	-	18.3	5.2	17,230	-	-	-	-	
Lot 3, Uplands	IMW-43	Primary	4/9/2018	Upper	UG of BAPB	-	-	-	-	0.01	-	-100	5.87	4842	-	-	-	-	
Lot 3, Uplands	IMW-43	Primary	8/21/2018	Upper	UG of BAPB	-	-	-	-	0.71	-	-61.3	5.57	5397	-	-	-	-	
Lot 3, Uplands	IMW-45	Primary	4/9/2018	Upper	UG of BAPB	-	-	-	-	0.68	-	-131.8	6.33	4143	-	-	-	-	
Lot 3, Uplands	IMW-45	Primary	8/16/2018	Upper	UG of BAPB	-	-	-	-	0.29	-	-250.4	6.02	5508	-	-	-	-	
Lot 3, Uplands	IMW-48	Primary	4/9/2018	Upper	UG of BAPB	-	-	-	-	0.02	-	-316.4	5.71	3197	-	-	-	-	
Lot 3, Uplands	IMW-48	Primary	8/16/2018	Upper	UG of BAPB	-	-	-	-	0	-	-306.6	5.74	5414	-	-	-	-	
Lot 3, Uplands	IMW-50	Primary	4/11/2018	Upper	UG of BAPB	-	-	-	-	0.04	-	-94.9	6.25	2842	-	-	-	-	
Lot 3, Uplands	IMW-50	Primary	8/14/2018	Upper	UG of BAPB	-	-	-	-	0.08	-	-58.9	6.37	3012	-	-	-	-	
Lot 3, Uplands	IMW-57	Primary	4/11/2018	Upper	UG of BAPB	-	-	-	-	0.19	-	-125.7	6.14	2803	-	-	-	-	
Lot 3, Uplands	IMW-57	Primary	8/14/2018	Upper	UG of BAPB	-	-	-	-	0.42	-	-108.9	6.01	3076	-	-	-	-	
Lot 3, Uplands	IMW-58	Primary	4/9/2018	Upper	UG of BAPB	-	-	-	-	0.15	-	96.2	6.48	2954	-	-	-	-	
Lot 3, Uplands	IMW-58	Duplicate	4/9/2018	Upper	UG of BAPB	-	-	-	-	0.15	-	96.2	6.48	2954	-	-	-	-	
Lot 3, Uplands	IMW-58	Primary	8/17/2018	Upper	UG of BAPB	-	-	-	-	0.12	-	139.9	6.46	4998	-	-	-	-	
Lot 3, Uplands	IMW-58	Duplicate	8/17/2018	Upper	UG of BAPB	-	-	-	-	0.12	-	139.9	6.46	4998	-	-	-	-	
Lot 3, Uplands	IMW-59	Primary	4/10/2018	Upper	UG of BAPB	-	-	-	-	0.02	-	31.5	6.31	2807	-	-	-	-	
Lot 3, Uplands	IMW-59	Primary	8/17/2018	Upper	UG of BAPB	-	-	-	-	0.03	-	68.4	6.47	3465	-	-	-	-	
Lot 3, Uplands	IMW-60	Primary	4/10/2018	Upper	UG of BAPB	-	-	-	-	0.09	-	113.5	6.61	2488	-	-	-	-	
Lot 3, Uplands	IMW-60	Primary	8/17/2018	Upper	UG of BAPB	-	-	-	-	0.27	-	33.7	6.46	3665	-	-	-	-	
Lot 3, Uplands	IMW-61	Primary	4/11/2018	Upper	UG of BAPB	-	-	-	-	0.12	-	71.9	6.62	3474	-	-	-	-	
Lot 3, Uplands	IMW-61	Primary	8/17/2018	Upper	UG of BAPB	-	-	-	-	0.27	-	46.4	6.57	4702	-	-	-	-	
Lot 3, Uplands	IMW-62	Primary	4/11/2018	Upper	UG of BAPB	-	-	-	-	0.02	-	-84.7	6.34	2505	-	-	-	-	
Lot 3, Uplands	IMW-62	Primary	8/17/2018	Upper	UG of BAPB	-	-	-	-	0.12	-	112.4	6.37	3185	-	-	-	-	
Lot 3, Uplands	MW-18	Primary	4/10/2018	Upper	UG of BAPB	-	-	-	-	0.16	<0.1	217.7	5.05	7003	-	<0.04	-	-	
Lot 3, Uplands	MW-18	Primary	8/17/2018	Upper	UG of BAPB	-	-	-	-	-0.08	<0.1	206.1	4.95	8856	-	<0.04	-	-	
Lot 3, Uplands	MW-19	Primary	4/10/2018	Upper	UG of BAPB	-	-	-	-	0.02	4.3	-360	6.03	7301	-	9.7	-	-	
Lot 3, Uplands	MW-19	Duplicate	4/10/2018	Upper	UG of BAPB	-	-	-	-	0.02	4	-360	6.03	7301	-	11	-	-	
Lot 3, Uplands	MW-19																		

Table 6

## Sampling Analytical Results - General Minerals and Field Parameters

Campus Bay, Richmond, CA

Lot/Area	Location	Sample Type	Sampled Date	Sample Horizon	Sample Location Relative to BAPB (Applicable to Lot 3 Wells Only)	Alkalinity, Bicarbonate (mg/l)	Alkalinity, Carbonate (mg/l)	Alkalinity, Hydroxide (mg/l)	Alkalinity, Total as CaCO3 (mg/l)	Chloride (mg/l)	Dissolved Oxygen (mg/l)	Ferrous Iron, Fe+2 (mg/l)	Oxidation Reduction Potential (mV)	pH (SU)	Specific Conductance ( $\mu\text{S}/\text{cm}$ )	Sulfate (mg/l)	Sulfide (mg/l)	Total Dissolved Solids (mg/l)	Total Suspended Solids (mg/l)
Lot 3, Uplands	MW-22	Primary	4/9/2018	Upper	UG of BAPB	-	-	-	-	0.18	<0.1	86.6	6.7	3855	-	<0.04	-	-	
Lot 3, Uplands	MW-22	Primary	8/17/2018	Upper	UG of BAPB	-	-	-	-	0.13	<0.1	56.9	6.77	5237	-	<0.04	-	-	
Lot 3, Uplands	MW-23	Primary	4/10/2018	Upper	UG of BAPB	-	-	-	-	0.03	76	3.6	5.65	4555	-	<0.04	-	-	
Lot 3, Uplands	MW-23	Primary	8/17/2018	Upper	UG of BAPB	-	-	-	-	0.03	88	-7	5.84	6517	-	<0.04	-	-	
Lot 3, Uplands	MW-32A	Primary	4/10/2018	Upper	UG of BAPB	-	-	-	-	0.15	<0.1	198.2	5.35	6719	-	<0.04	-	-	
Lot 3, Uplands	MW-32A	Primary	8/21/2018	Upper	UG of BAPB	-	-	-	-	0.11	<0.1	287	5.32	6613	-	<0.04	-	-	
Lot 3, Uplands	MW-32B	Primary	4/10/2018	Lower	UG of BAPB	-	-	-	-	0.17	<0.1	233.9	5.09	8484	-	<0.04	-	-	
Lot 3, Uplands	MW-32B	Primary	8/21/2018	Lower	UG of BAPB	-	-	-	-	0.1	<0.1	247.9	4.97	8471	-	<0.04	-	-	
Lot 3, Uplands	PZ-10	Primary	4/9/2018	Upper	UG of BAPB	-	-	-	-	0.34	-	150.8	5.42	9518	-	-	-	-	
Lot 3, Uplands	PZ-10	Primary	8/16/2018	Upper	UG of BAPB	-	-	-	-	0.1	-	30	5.9	14,150	-	-	-	-	
Lot 3, Near BAPB	MW-01	Primary	4/4/2018	Upper	DG of BAPB	-	-	-	-	6.67	0.48	76.5	7.29	1215	-	<0.04	-	-	
Lot 3, Near BAPB	MW-01	Primary	8/21/2018	Upper	DG of BAPB	-	-	-	-	0.12	1.7	-156.5	7.02	1749	-	0.05FB	-	-	
Lot 3, Near BAPB	MW-02	Primary	4/6/2018	Upper	Immediately UG	440	<20	<20	440	870	0.08	79	-57.3	6.12	5519	760	<0.04	2980	-
Lot 3, Near BAPB	MW-02	Primary	8/21/2018	Upper	Immediately UG	400	<20	<20	400	960	0.14	91	-80.1	6.01	6221	1400	<0.04	4070	-
Lot 3, Near BAPB	MW-03	Primary	4/4/2018	Upper	In BAPB	450	<20	<20	450	250	0.07	15	-261.1	6.4	2640	450	3.9	1460	-
Lot 3, Near BAPB	MW-03	Primary	8/21/2018	Upper	In BAPB	760	<10	<10	760	920	0.04	2	-339.4	6.34	5173	610	9.6	3220	-
Lot 3, Near BAPB	MW-04	Primary	4/4/2018	Upper	DG of BAPB	270	<10	<10	270	940	0.2	68	-90.8	6.41	5980	1400	0.04	3850	-
Lot 3, Near BAPB	MW-04	Duplicate	4/4/2018	Upper	DG of BAPB	270	<10	<10	270	900	0.2	75	-90.8	6.41	5980	1400	<0.04	3610	-
Lot 3, Near BAPB	MW-04	Primary	8/21/2018	Upper	DG of BAPB	420	<20	<20	420	1200	0.1	84	-134.5	6.46	8490	2200	<0.04	5390	-
Lot 3, Near BAPB	MW-04	Duplicate	8/21/2018	Upper	DG of BAPB	450	<20	<20	450	1200	0.1	87	-134.5	6.46	8490	2200	<0.04	5360	-
Lot 3, Near BAPB	MW-05	Primary	4/4/2018	Upper	DG of BAPB	-	-	-	-	0.12	92	-100.2	6.22	7748	-	<0.04	-	-	
Lot 3, Near BAPB	MW-05	Primary	8/21/2018	Upper	DG of BAPB	-	-	-	-	0.15	75	-135.9	6.47	8727	-	0.06FB	-	-	
Lot 3, Near BAPB	MW-06	Primary	4/6/2018	Upper	Immediately UG	-	-	-	-	0.06	33	-76.5	6.02	8161	-	<0.04	-	-	
Lot 3, Near BAPB	MW-06	Primary	8/22/2018	Upper	Immediately UG	-	-	-	-	0.11	87	-61.7	6.06	8150	-	0.08	-	-	
Lot 3, Near BAPB	MW-07	Primary	4/4/2018	Upper	DG of BAPB	-	-	-	-	0.05	21	-106.7	6.33	6305	-	<0.04	-	-	
Lot 3, Near BAPB	MW-07	Primary	8/21/2018	Upper	DG of BAPB	-	-	-	-	0.08	31	-110	6.14	8059	-	0.05FB	-	-	
Lot 3, Near BAPB	MW-08	Primary	4/6/2018	Upper	Immediately UG	460	<20	<20	460	1100	0.14	46	-77.1	6.23	5822	680	<0.04	2920	-
Lot 3, Near BAPB	MW-08	Primary	8/22/2018	Upper	Immediately UG	360	<10	<10	360	1500	0.11	140	-58.8	6	8318	1100	0.05	4250	-
Lot 3, Near BAPB	MW-09	Primary	4/6/2018	Upper	In BAPB	420	<20	<20	420	890	0.15	30	-89.3	6.22	5505	750	0.08	2710	-
Lot 3, Near BAPB	MW-09	Primary	8/22/2018	Upper	In BAPB	240	<10	<10	240	600	1.13	27	-113.8	6.17	4064	660	0.11	2170	-
Lot 3, Near BAPB	MW-10A	Primary	4/9/2018	Upper	DG of BAPB	-	-	-	-	0.1	10	-92.8	6.67	2398	-	<0.04	-	-	
Lot 3, Near BAPB	MW-10A	Primary	8/21/2018	Upper	DG of BAPB	-	-	-	-	0.09	61	-11.4	5.87	11,350	-	<0.04	-	-	
Lot 3, Near BAPB	MW-10B	Primary	4/4/2018	Lower	DG of BAPB	-	-	-	-	6.6	47	217.2	6.22	15,440	-	<0.04	-	-	
Lot 3, Near BAPB	MW-10B	Primary	8/21/2018	Lower	DG of BAPB	-	-	-	-	0.1	2	124.9	5.47	13,850	-	0.04FB	-	-	
Lot 3, Near BAPB	MW-11A	Primary	4/5/2018	Upper	DG of BAPB	-	-	-	-	0.4	<0.1	113.9	6.88	2278	-	<0.04	-	-	
Lot 3, Near BAPB	MW-11A	Primary	8/22/2018	Upper	DG of BAPB	-	-	-	-	0.29	48	-45.4	5.95	5918	-	<0.04	-	-	
Lot 3, Near BAPB	MW-11B	Primary	4/5/2018	Lower	DG of BAPB	-	-	-	-	0.12	41	99.1	5.84	10,680	-	0.08	-	-	
Lot 3, Near BAPB	MW-11B	Primary	8/22/2018	Lower	DG of BAPB	-	-	-	-	0.02	<0.1	117.1	5.88	11,610	-	<0.04	-	-	
Lot 3, Near BAPB	MW-12	Primary	4/5/2018	Upper	DG of BAPB	-	-	-	-	0.1	41	-0.3	5.83	6705	-	<0.04	-	-	
Lot 3, Near BAPB	MW-12	Duplicate	4/5/2018	Upper	DG of BAPB	-	-	-	-	0.1	37	-0.3	5.83	6705	-	<0.04	-	-	
Lot 3, Near BAPB	MW-12	Primary	8/22/2018	Upper	DG of BAPB	-	-	-	-	0.15	59	-57.5	5.69	5919	-	<0.04	-	-	
Lot 3, Near BAPB	MW-12	Duplicate	8/22/2018	Upper	DG of BAPB	-	-	-	-	0.15	60	-57.5	5.69	5919	-	0.07	-	-	
Lot 3, Near BAPB	MW-13	Primary	4/6/2018	Upper	Immediately UG	540	<20	<20	540	860	0.16	16	-47.2	6.32	5621	640	0.05	2760	-
Lot 3, Near BAPB	MW-13	Primary	8/22/2018	Upper	Immediately UG	<0.5	<0.5	<0.5	<0.5										

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Campus Bay, Richmond, CA

Lot/Area	Location	Sample Type	Sampled Date	Sample Horizon	Sample Location Relative to BAPB (Applicable to Lot 3 Wells Only)	Alkalinity, Bicarbonate (mg/l)	Alkalinity, Carbonate (mg/l)	Alkalinity, Hydroxide (mg/l)	Alkalinity, Total as CaCO3 (mg/l)	Chloride (mg/l)	Dissolved Oxygen (mg/l)	Ferrous Iron, Fe+2 (mg/l)	Oxidation Reduction Potential (mV)	pH (SU)	Specific Conductance (µS/cm)	Sulfate (mg/l)	Sulfide (mg/l)	Total Dissolved Solids (mg/l)	Total Suspended Solids (mg/l)
Lot 3, Near BAPB	PZ-16	Primary	8/16/2018	Upper	DG of BAPB	-	-	-	-	0.11	<0.1	265.8	7.07	4355	-	<0.04	-	-	
UC BGC, Near BAPB, Offsite	MW-34	Primary	4/3/2018	Upper	Immediately UG	430	<20	<20	430	1300	0.04	0.15	95	6.42	9416	3100	<0.04	5940	9
UC BGC, Near BAPB, Offsite	MW-34	Primary	8/20/2018	Upper	Immediately UG	340	<10	<10	340	1200	-0.01	<0.1	22.7	6.22	8996	3100	<0.04	6730	10
UC BGC, Near BAPB, Offsite	MW-36	Primary	4/3/2018	Upper	DG of BAPB	420	<20	<20	420	1500	0.08	0.4	69.7	6.33	9133	1800	<0.04	5150	11
UC BGC, Near BAPB, Offsite	MW-36	Primary	8/20/2018	Upper	DG of BAPB	600	<20	<20	600	1500	0.01	0.49	19.5	6.14	8384	1900	<0.04	5230	12
UC BGC, Near BAPB, Offsite	MW-40	Primary	4/4/2018	Upper	In BAPB	310	<10	<10	310	1900	0.02	0.15	-325.6	6.67	9514	190	8.1	4860	8
UC BGC, Near BAPB, Offsite	MW-40	Primary	8/20/2018	Upper	In BAPB	2200	<10	<10	2200	1600	0.04	<0.1	-328.6	6.98	11,920	190	14	4900	6
UC BGC, Near BAPB, Offsite	MW-41	Primary	4/3/2018	Upper	In BAPB	430	<20	<20	430	1700	0.63	1.3	-28.5	6.5	8632	1400	<0.04	4830	20
UC BGC, Near BAPB, Offsite	MW-41	Primary	8/20/2018	Upper	In BAPB	710	<20	<20	710	1300	1.92	7.3	-47	6.96	7260	1500	<0.04	4960	31
UC BGC, Near BAPB, Offsite	MW-42	Primary	4/3/2018	Upper	Immediately UG	400J	<20	<20	400J	780	0.72	<0.1	176.1	5.83	6061	2300	<0.04	4550	8
UC BGC, Near BAPB, Offsite	MW-42	Duplicate	4/3/2018	Upper	Immediately UG	230J	<10	<10	230J	770	0.72	<0.1	176.1	5.83	6061	2400	<0.04	4210	9
UC BGC, Near BAPB, Offsite	MW-42	Primary	8/20/2018	Upper	Immediately UG	160	<6.7	<6.7	160	740	0.06	<0.1	-10.6	5.69	5963	2300	0.14	4690	7
UC BGC, Near BAPB, Offsite	MW-42	Duplicate	8/20/2018	Upper	Immediately UG	150	<6.7	<6.7	150	740	0.06	<0.1	-10.6	5.69	5963	2300	<0.04	4740	7
UC BGC, Near BAPB, Offsite	MW-43	Primary	4/3/2018	Upper	DG of BAPB	510	<20	<20	510	1900	-0.01	<0.1	23.9	6.36	9612	2300	<0.04	6180	10
UC BGC, Near BAPB, Offsite	MW-43	Primary	8/20/2018	Upper	DG of BAPB	670	<10	<10	670	1800	-0.01	<0.1	59.2	6.13	9104	2300	<0.04	6440	8
UC BGC, Near BAPB, Offsite	MW-44	Primary	4/3/2018	Upper	Immediately UG	-	-	-	-	-	0.18	0.4	51.6	6.29	9091	-	<0.04	-	-
UC BGC, Near BAPB, Offsite	MW-44	Primary	8/20/2018	Upper	Immediately UG	-	-	-	-	-	0.02	0.3	-19.8	6.47	13,130	-	<0.04	-	-
UC BGC, Near BAPB, Offsite	MW-45	Primary	4/3/2018	Upper	DG of BAPB	-	-	-	-	-	0.13	8.5	46.1	5.96	3511	-	<0.04	-	-
UC BGC, Near BAPB, Offsite	MW-45	Primary	8/20/2018	Upper	DG of BAPB	-	-	-	-	-	0.09	8.7	19	6.09	4870	-	<0.04	-	-
UC BGC, Near BAPB, Offsite	MW-46	Primary	4/3/2018	Upper	DG of BAPB	-	-	-	-	-	0.06	<0.1	-103.2	6.59	12,120	-	<0.04	-	-
UC BGC, Near BAPB, Offsite	MW-46	Primary	8/20/2018	Upper	DG of BAPB	-	-	-	-	-	0.03	<0.1	-3.7	6.76	17,020	-	0.07	-	-
Storm Water	002	Primary	1/4/2018	NA	NA	-	-	-	-	-	-	-	-	7.2	-	-	-	-	26
Storm Water	002	Primary	4/7/2018	NA	NA	-	-	-	-	-	-	-	-	7.1b	-	-	-	-	<5
Storm Water	002	Primary	11/21/2018	NA	NA	-	-	-	-	-	-	-	-	7.3	-	-	-	-	120
Storm Water	002	Primary	12/5/2018	NA	NA	-	-	-	-	-	-	-	-	7.4	-	-	-	-	13
Storm Water	003	Primary	1/8/2018	NA	NA	-	-	-	-	-	-	-	-	5.4	-	-	-	-	<5
Storm Water	003	Primary	4/7/2018	NA	NA	-	-	-	-	-	-	-	-	7.2b	-	-	-	-	<5
Storm Water	003	Primary	11/29/2018	NA	NA	-	-	-	-	-	-	-	-	7.6	-	-	-	-	13
Storm Water	003	Primary	12/17/2018	NA	NA	-	-	-	-	-	-	-	-	7.4	-	-	-	-	<5

## Abbreviations:

&lt;0.50 = Concentration not detected at or above indicated laboratory reporting limit.

- = Sample not analyzed

Duplicate = duplicate sample collected from a well

Primary = primary sample collected from a well

DTSC-MW = Department of Toxic Substances Control monitoring well

UC BGC = University of California, Berkeley Global Campus

BAPB = biologically active permeable barrier

DG = downgradient

IMW = Temporary monitoring well

MW = Monitoring well

MW-##A = Represents the upper horizon groundwater well in a pair of upper and lower horizon wells

MW-##B = Represents the lower horizon groundwater well in a pair of upper and lower horizon wells

NA = not applicable

PZ = Piezometer

SU = Standard Units

UG = Upgradient

b = analyzed past the EPA recommended hold time

mS/cm = millisiemens per centimeter

mV = millivolts

mg/L = milligrams per liter

J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample

## Notes:

The 002 storm water samples collected in November and December 2018 were temporarily discharged at Outfall 001 during Habitat Area 2 remediation.

Table 7

Screening Criteria for Groundwater and Surface-Water Samples

Campus Bay, Richmond, California

Chemical	Human Health Risk-Based SSGs (a)			SSGs Based on Published Criteria (a)				Aquatic Criteria (b)			Storm-Water Criteria (g) (µg/L)
	Lots 1, 2, and 3 (Upper Horizon)			Lots 1 and 2 (Upper and Lower Horizon)	10x Human Consumption of Aquatic Organisms (d) (µg/L)	Saltwater Aquatic Criteria (e) (µg/L)	Freshwater Aquatic Criteria (e) (µg/L)	Lot 3 (Upper Horizon, near BAPB)	Lot 3 (Upper Horizon, Uplands)	Lot 3 (Lower Horizon)	
	On-Site Residential (µg/L)	On-Site Commercial/Industrial Worker (µg/L)	On-Site Groundskeeper/Maintenance Worker (µg/L)	Drinking Water Standards (c) (µg/L)				5x Aquatic Criteria (f) (µg/L)	40x Aquatic Criteria (f) (µg/L)	160x Aquatic Criteria (f) (µg/L)	
<b>Inorganics</b>											
Antimony	-	-	1.50E+05	6.00E+00	4.30E+04	na	na	2.20E+05	1.70E+06	6.90E+06	4.30E+03
Arsenic	-	-	1.10E+02	1.00E+01	- (h)	3.60E+01 (i)	1.50E+02 (i)	1.80E+02	1.40E+03	5.80E+03	3.60E+01
Barium	-	-	7.50E+07	1.00E+03	na	na	na	-	-	-	-
Beryllium	-	-	-	-	-	-	na	-	-	-	-
Cadmium	-	-	1.90E+05	5.00E+00	na	9.30E+00 (i)	1.10E+00 (n)	4.70E+01	3.70E+02	1.50E+03	1.10E+00
Chromium	-	-	5.60E+08	5.00E+01	na	-	1.80E+02 (i)(o)	-	-	-	1.80E+02
Cobalt	-	-	-	na	na	na	na	-	-	-	-
Copper	-	-	1.50E+07	1.00E+03	na	3.10E+00 (i)	9.00E+00 (i)(p)	1.60E+01	1.20E+02	5.00E+02	3.10E+00
Lead	-	-	-	1.50E+01	na	8.10E+00 (i)	2.50E+00 (i)(q)	4.10E+01	3.20E+02	1.30E+03	2.50E+00
Mercury	-	-	1.10E+05	2.00E+00	na (j)	2.10E+00 (j)	2.50E-02	1.10E+01	8.40E+01	3.40E+02	2.50E-02
Molybdenum	-	-	-	na	na	na	na	-	-	-	-
Nickel	-	-	9.30E+07	1.00E+02	4.60E+04	8.20E+00 (i)	5.20E+01 (i)(r)	4.10E+01	3.30E+02	1.30E+03	8.20E+00
Selenium	-	-	1.90E+06	5.00E+01	4.20E+04	5.00E+00	5.00E+00 (s)	2.50E+01	2.00E+02	8.00E+02	5.00E+00
Silver	-	-	3.10E+06	1.00E+02	na	1.90E+00 (i)(k)	3.40E+00 (i)(t)(u)	9.50E+00	7.60E+01	3.00E+02	1.90E+00
Thallium	-	-	2.50E+04	2.00E+00	6.30E+01	na	na	3.20E+02	2.50E+03	1.00E+04	6.30E+00
Vanadium	-	-	3.70E+05	na	na	na	na	-	-	-	-
Zinc	-	-	1.90E+08	5.00E+03	2.60E+05	8.10E+01 (i)	1.20E+02 (i)(v)	4.10E+02	3.20E+03	1.30E+04	8.10E+01
<b>VOCs</b>											
Acetone	7.90E+06	3.70E+07	2.20E+08	na	na	na	na	-	-	-	-
Benzene	2.00E+01	6.10E+01	4.40E+02	1.00E+00	7.10E+02	na	na	3.60E+03	2.80E+04	1.10E+05	7.10E+01
Bromochloromethane	1.80E+03	5.60E+03	6.20E+03	na	na	na	-	-	-	-	-
2-Butanone (Methyl Ethyl Ketone)	2.80E+06	1.30E+07	1.40E+08	na	na	na	na	-	-	-	-
Carbon Disulfide	1.60E+04	7.60E+04	1.30E+06	na	na	na	-	-	-	-	-
Carbon Tetrachloride	2.80E+00	8.50E+00	1.60E+02	5.00E-01	4.40E+01	na	-	2.20E+02	1.80E+03	7.00E+03	4.40E+00
Chlorobenzene	2.50E+05	1.10E+06	1.40E+05	7.00E+01	2.10E+05	na	na	1.10E+06	8.40E+06	3.40E+07	2.10E+04
Chloroform	1.30E+02	4.00E+02	2.50E+03	8.00E+01	4.70E+03	na	-	2.40E+04	1.90E+05	7.50E+05	4.70E+02
2-Chlorotoluene	1.90E+04	8.90E+04	7.80E+04	na	na	na	-	-	-	-	-
Dibromomethane	3.70E+04	1.70E+05	3.60E+05	na	na	na	-	-	-	-	-
1,2-Dichlorobenzene	1.00E+05	4.70E+05	3.50E+05	6.00E+02	1.70E+05	na	-	8.50E+05	6.80E+06	2.70E+07	1.70E+04
1,4-Dichlorobenzene	1.50E+02	4.60E+02	1.90E+03	5.00E+00	2.60E+04	na	-	1.30E+05	1.00E+06	4.20E+06	2.60E+03
1,1-Dichloroethane	4.00E+02	1.20E+03	1.50E+04	5.00E+00	na	na	-	-	-	-	-
1,2-Dichloroethane	1.20E+02	3.60E+02	2.90E+03	5.00E-01	9.90E+02	na	-	5.00E+03	4.00E+04	1.60E+05	9.90E+01
1,1-Dichloroethene	1.90E+03	8.90E+03	6.30E+05	6.00E+00	3.20E+01	na	-	1.60E+02	1.30E+03	5.10E+03	3.20E+00
cis-1,2-Dichloroethene	7.20E+03	3.40E+04	2.70E+05	6.00E+00	na	na	na	-	-	-	-
trans-1,2-Dichloroethene	6.70E+03	3.10E+04	5.10E+05	1.00E+01	1.40E+06	na	-	7.00E+06	5.60E+07	2.20E+08	1.40E+05
1,2-Dichloropropane	1.20E+02	3.70E+02	1.90E+03	5.00E+00	3.90E+02	na	-	2.00E+03	1.60E+04	6.20E+04	3.90E+01

Table 7

Screening Criteria for Groundwater and Surface-Water Samples

Campus Bay, Richmond, California

Chemical	Human Health Risk-Based SSGs (a)			SSGs Based on Published Criteria (a)			Aquatic Criteria (b)			Storm-Water Criteria (g) (µg/L)
	Lots 1, 2, and 3 (Upper Horizon)			Lots 1 and 2 (Upper and Lower Horizon)	10x Human Consumption of Aquatic Organisms (d) (µg/L)	Saltwater Aquatic Criteria (e) (µg/L)	Freshwater Aquatic Criteria (e) (µg/L)	Lot 3 (Upper Horizon, near BAPB)	Lot 3 (Upper Horizon, Uplands)	
	On-Site Residential (µg/L)	On-Site Commercial/Industrial Worker (µg/L)	On-Site Groundskeeper/Maintenance Worker (µg/L)	Drinking Water Standards (c) (µg/L)				5x Aquatic Criteria (f) (µg/L)	40x Aquatic Criteria (f) (µg/L)	
<b>VOCs (cont.)</b>										
Ethylbenzene	2.40E+05	1.10E+06	4.20E+05	3.00E+02	2.90E+05	na	-	1.50E+06	1.20E+07	4.60E+07
Methylene Chloride	9.80E+02	3.00E+03	1.30E+04	5.00E+00	na	na	na	-	-	-
Naphthalene	2.10E+02	6.40E+02	9.00E+01	na	na	na	na	-	-	-
1,1,2,2-Tetrachloroethane	1.30E+02	4.00E+02	2.10E+02	1.00E+00	1.10E+02	na	na	5.50E+02	4.40E+03	1.80E+04
Tetrachloroethene	3.80E+01	1.10E+02	2.20E+01	5.00E+00	8.90E+01	na	na	4.40E+02	3.50E+03	1.40E+04
Toluene	3.50E+04	1.60E+05	5.70E+05	1.50E+02	2.00E+06	na	na	1.00E+07	8.00E+07	3.20E+08
1,1,2-Trichloroethane	2.10E+02	6.30E+02	1.10E+03	5.00E+00	4.20E+02	na	-	2.10E+03	1.70E+04	6.70E+04
Trichloroethene (w)	1.10E+02	2.70E+02	8.90E+02	5.00E+00	8.10E+02	na	na	4.10E+03	3.20E+04	1.30E+05
Trichlorofluoromethane (Freon 11)	5.30E+03	2.50E+04	2.40E+06	1.50E+02	na	na	-	-	-	-
1,2,3-Trichloropropane	1.20E+01	3.70E+01	1.90E+01	na	na	na	-	-	-	-
Trichlorotrifluoroethane (Freon 113)	5.20E+04	2.40E+05	3.80E+07	1.20E+03	na	na	-	-	-	-
1,2,4-Trimethylbenzene	1.10E+03	5.30E+03	1.60E+05	na	na	na	na	-	-	-
Vinyl Chloride	1.20E+00	3.60E+00	3.00E+02	5.00E-01	5.30E+03	na	-	2.60E+04	2.10E+05	8.40E+05
Xylenes, total	1.10E+05	5.00E+05	7.80E+05	1.80E+03 (I)	na	na	na	-	-	-
m,p-Xylenes	8.30E+04	3.90E+05	7.80E+05	1.80E+03 (I)	na	na	-	-	-	-
o-Xylene	1.10E+05	5.00E+05	7.80E+05	1.80E+03 (I)	na	na	-	-	-	-
<b>Pesticides</b>										
alpha-BHC	-	-	6.60E+00	na	1.30E-01	na	na	6.50E-01	5.20E+00	2.10E+01
beta-BHC	-	-	1.20E+01	na	4.60E-01	na	na	2.30E+00	1.80E+01	7.40E+01
delta-BHC	-	-	1.60E+01	na	na	na	na	-	-	-
gamma-BHC	-	-	1.60E+01	na	6.30E-01	1.60E-01 (m)	9.50E-01 (m)	8.00E-01	6.40E+00	2.60E+01
Butylate	-	-	2.40E+06	na	na	5.50E+01	na	2.80E+02	2.20E+03	8.80E+03
Cycloate	-	-	9.80E+04	na	na	4.70E+01	na	2.40E+02	1.90E+03	7.50E+03
4,4'-DDD	-	-	4.20E+00	na	8.40E-03	1.00E-03	1.00E-03	5.00E-03	4.00E-02	1.60E-01
4,4'-DDT	-	-	1.80E+00	na	5.90E-03	1.00E-03	1.00E-03	5.00E-03	4.00E-02	1.60E-01
EPTC	5.30E+05	2.50E+06	1.20E+06	na	na	4.30E+01	na	2.20E+02	1.70E+03	6.90E+03
Heptachlor	-	-	3.70E+00	na	2.10E-03	3.60E-03	3.80E-03	1.10E-02	8.40E-02	3.40E-01
Molinate	-	-	9.80E+04	na	na	3.50E+01	na	1.80E+02	1.40E+03	5.60E+03
Napropamide	-	-	4.90E+06	na	na	4.70E+01	na	2.40E+02	1.90E+03	7.50E+03
Pebulate	-	-	2.40E+06	na	na	2.30E+01	na	1.20E+02	9.20E+02	3.70E+03
Vernolate	-	-	4.90E+04	na	na	na	-	-	-	-

**Table 7****Screening Criteria for Groundwater and Surface-Water Samples**

Campus Bay, Richmond, California

**Abbreviations:**

BAPB = biologically active permeable barrier

BHC = hexachlorocyclohexane

COPC = chemical of potential concern

CTR = California Toxics Rule

DDD = dichlorodiphenyldichloroethane

DDT = dichlorodiphenyltrichloroethane

EPTC = s-ethyl dipropylthiocarbamate

HHRA = Human Health Risk Assessment

MCL = maximum contaminant level

NRWQC = National Recommended Ambient Water Quality Criteria

PER = Pacific EcoRisk Report

SSG = site-specific goal

mg/L = milligrams per liter

µg/L = micrograms per liter

U.S. EPA = United States Environmental Protection Agency

VOCs = volatile organic compounds

A hyphen (-) indicates that the chemical is not a COPC in the media (see Table G-1 of the Revised HHRA [EKI 2008]), the pathway indicated for the COPC is not complete, or chemical or toxicity properties for the pathway and COPC are unavailable. na indicates that the numerical value is not available for the chemical.

**Notes:**

- (a) Groundwater SSGs are developed in Appendix G of the Revised HHRA (EKI 2008) for chemicals retained as COPCs in groundwater and volatile COPCs in soil. The formulas used to calculate SSGs are presented in Appendix H of the Revised HHRA. Please note that groundwater SSGs have not been compared to the solubility in water; therefore some SSGs may exceed the COPC's solubility in water. Additionally, the Human Consumption of Aquatic Organisms criteria, Salt Water Aquatic Criteria, and Freshwater Aquatic Criteria are used to select screening criteria for Lot 3 groundwater and storm water, as described in footnotes (b), (f), and (g).
- (b) The aquatic criteria are the more stringent of the 10x Human Consumption of Aquatic Organisms value and the Salt Water Aquatic Criteria value.
- (c) The drinking water criteria presented in this table are the more stringent of federal (U.S. EPA 2005) and California (CDHS 2007) primary and secondary maximum contaminant levels (MCLs).
- (d) Human health criteria based on consumption of aquatic organisms are from the following sources in order of preference: CTR (U.S. EPA 2000) and the NRWQC (U.S. EPA 2006).
- (e) Saltwater Aquatic Criteria are the continuous concentration criteria, where available, from the following sources in order of preference: (1) more stringent of the Basin Plan (RWQCB 2006) and the CTR (U.S. EPA 2000), (2) the NRWQC (U.S. EPA 2006), and (3) the PER (1999). Freshwater Aquatic Criteria are the continuous concentration criteria, where available, from the following sources in order of preference: (1) more stringent of the Basin Plan (RWQCB 2006) and the CTR (U.S. EPA 2000), and (2) the NRWQC (U.S. EPA 2006).
- (f) The dilution factors of 5, 40, and 160 for Lot 3 groundwater are developed and presented in Appendix E of the Feasibility Study and Remedial Action Plan for Lots 1, 2, and 3 (Terraphase 2018).
- (g) The storm-water criteria are the more stringent of the Human Consumption of Aquatic Organisms value (without the 10x factor), the Salt Water Aquatic Criteria value, and Freshwater Aquatic Criteria value.
- (h) The NRWQC criterion of 0.14 µg/L not considered herein because this criterion, presented in the 1992 version of the CTR, is currently being reviewed by U.S. EPA (2006).
- (i) These SSGs are expressed in terms of the dissolved fraction of the metal in the water column.
- (j) On August 9, 2006, the RWQCB adopted Resolution R2-2006-0052 amending the Basin Plan. That amendment was subsequently approved by the State Water Resources Control Board on July 17, 2007, and the U.S. EPA on February 12, 2008.
- (k) Since the chronic criterion for silver was not available (in the references reviewed), the 1-hour acute criterion was used instead. The amendment vacated the marine waters four-day average water-quality objective for San Francisco Bay waters that was cited in the HHRA, and retained the AWQC of 2.1 µg/L one-hour average that is listed above for mercury. [http://www.waterboards.ca.gov/sanfranciscobay/water\_issues/programs/TMDLs/sfbaymercurytmdl.shtml]
- (l) SSGs for xylenes are for the sum of all isomers.
- (m) Maximum concentration criterion presented because the continuous concentration criterion was not available.
- (n) The objective for cadmium is hardness dependant. The value in table is for a hardness of 100 mg/L as CaCO<sub>3</sub>. At other hardnesses, the four-day cadmium value is expressed by  $e^{(0.7852*H - 3.490)}$ , where H = ln (hardness) as CaCO<sub>3</sub> in mg/L (RWQCB 2006).
- (o) The objective listed for chromium is for chromium (III) and is hardness dependent. The value in the table is for a hardness of 100 mg/L CaCO<sub>3</sub>. At other hardnesses, the four-day average for chromium (III) is expressed by  $0.860 * e^{(0.8190 * H + 1.561)}$ , where H = ln (hardness) as CaCO<sub>3</sub> in mg/L (RWQCB 2006).
- (p) The objective for copper is hardness dependent. The value in the table is for a hardness of 100 mg/L as CaCO<sub>3</sub>. At other hardnesses, the four-day average for copper is expressed by  $0.960 * e^{(0.8545 * H - 1.702)}$ , where H = ln (hardness) as CaCO<sub>3</sub> in mg/L (RWQCB 2006).
- (q) The objective for lead is hardness dependent. The value in this table is for a hardness 100 mg/L as CaCO<sub>3</sub>. At other hardnesses, the four-day average lead value is expressed by  $(1.46203 - 0.475712 * H) * e^{(1.273 * H - 4.705)}$ , where H = ln (hardness) as CaCO<sub>3</sub> in mg/L (RWQCB 2006).
- (r) The objective for nickel is based on hardness. The value in the table is for 100 mg/L hardness as CaCO<sub>3</sub>. At other hardnesses, the four-day nickel value is expressed by  $0.997 * e^{(0.8460H + 0.0584)}$ , where H = ln (hardness) as CaCO<sub>3</sub> in mg/L (RWQCB 2006).
- (s) The Basin Plan references the selenium criterion promulgated for all San Francisco Bay/Delta in the National Toxics Rule (40 Code of Federal Regulations, Part 131), which is 5.0 µg/L for the four-day average value (RWQCB 2006).
- (t) Since the chronic criterion for silver was not available (in the references reviewed), the 1-hour acute criterion was used instead.
- (u) The objective for silver is based on hardness. The table value assumes a hardness of 100 mg/L CaCO<sub>3</sub>. At other hardnesses, the 1-hour silver value is expressed by  $0.85 * e^{(1.72 * H - 6.52)}$ , where H = ln (hardness) as CaCO<sub>3</sub> in mg/L (RWQCB 2006).
- (v) The objective for zinc is hardness dependent. The value in the table is for a hardness of 100 mg/L as CaCO<sub>3</sub>. At other hardnesses, the four-day zinc value is expressed by  $0.986 * e^{(0.8473 * H + 0.884)}$ , where H = ln (hardness) as CaCO<sub>3</sub> in mg/L (RWQCB 2006).
- (w) SSGs for TCE were revised as presented in the "Revised TCE Risk Evaluation Technical Memorandum" (Terraphase 2012) and based on input from DTSC (Terraphase 2018).

**Table 7**

**Screening Criteria for Groundwater and Surface-Water Samples**

Campus Bay, Richmond, California

**References:**

- CDHS 2007. California Code of Regulations, Title 22, Division 4, Chapter 15 - Domestic Water Quality and Monitoring, California Department of Health Services, 2007.
- EKI 2008. Revised Human Health Risk Assessment and Calculation of Site Specific Goals for Lot 1, 2 and 3, Campus Bay Site, Richmond, California, April 30, 2008.
- PER 1999. Sediment Quality in Stege Marsh: 1. Ecological Risk Assessment, Pacific EcoRisk, 1999.
- RWQCB 2006. Water Quality Control Plan (Basin Plan) for the San Francisco Bay Basin, San Francisco Bay Regional Water Quality Control Board, December 2006.
- Terraphase Engineering, Inc. (Terraphase). 2012. Revised TCE Risk Evaluation Technical Memorandum. July 19.
- Terraphase Engineering, Inc. (Terraphase). 2018. Feasibility Study and Remedial Action Plan for Lot 1, Lot 2, and the Uplands Portion of Lot 3, Campus Bay, Richmond, California. July 9.
- U.S. EPA 1989. Risk Assessment Guidance for Superfund (RAGS"), Volume 1, Human Health Evaluation Manual (Part A), EPA/540/1-89/002, U.S. Environmental Protection Agency, Office of Emergency and Remedial Response (OERR), December 1989.
- U.S. EPA 2000. Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic for the State of California; Rule, Federal Register 40 CFR Part 131, May 2000.  
available at: <http://www.epa.gov/waterscience/standards/ctr/toxic.pdf>
- U.S. EPA 2002. National Toxics Rule, 40 CFR Ch I (7-1-02), Section 131.36, U.S. Environmental Protection Agency, 2002.
- U.S. EPA 2004. User's Guide and Background Technical Document for USEPA Region 9's Preliminary Remediation Goals (PRG) Table, U.S. EPA Region IX, October 2004.
- U.S. EPA 2006. Code of Federal Regulations, Title 40, Part 131 - Water Quality Standards, U.S. Environmental Protection Agency, 2005.
- U.S. EPA 2006. National Recommended Water Quality Criteria, Office of Water, Office of Science and Technology, 2006, available at: <http://epa.gov/waterscience/criteria/nrwqc-2006.pdf>
- U.S. EPA 2007. Integrated Risk Information System (IRIS), United States Environmental Protection Agency, Washington, D.C., last updated January 2007, available at: <http://www.epa.gov/iris>

**Table 8****Sampling Analytical Results -****Summary of BAPB Cluster Wells Indicator Parameters and Dissolved Metals**

Campus Bay, Richmond, CA

Lot/Area	Location	Sample Type	Sampled Date	Sample Horizon	Sample Location Relative to BAPB (Applicable to Lot 3 Wells Only)	Alkalinity, Bicarbonate	Ferrous Iron, Fe+2	pH	Sulfate	Sulfide	Oxidation Reduction Potential					
						mg/L	mg/L	SU	mg/L	mg/L	mV	µg/L	µg/L	µg/L	µg/L	
5x Aquatic Criteria, Lot 3 (Upper Horizon, Near BAPB)						-	-	-	-	-	-	1.80E+02	1.60E+01	4.10E+01	4.10E+01	4.10E+02
On-Site Groundskeeper/Maintenance Worker Lots 1, 2, and 3 (Upper Horizon)						-	-	-	-	-	-	1.10E+02	1.50E+07	-	9.30E+07	1.90E+08
Lot 3, Near BAPB	MW-02	Primary	4/6/2018	Upper	Immediately UG	440	79	6.12	760	<0.04	-57.3	190	<5	<5	5.6	<20
Lot 3, Near BAPB	MW-02	Primary	8/21/2018	Upper	Immediately UG	400	91	6.01	1400	<0.04	-80.1	290	<5	7.7	<5	<20
Lot 3, Near BAPB	MW-03	Primary	4/4/2018	Upper	In BAPB	450	15	6.4	450	3.9	-261.1	<10	<5	<5	5	<20
Lot 3, Near BAPB	MW-03	Primary	8/21/2018	Upper	In BAPB	760	2	6.34	610	9.6	-339.4	<10	<5	<5	<5	<20
Lot 3, Near BAPB	MW-04	Primary	4/4/2018	Upper	DG of BAPB	270	68	6.41	1400	0.04	-90.8	160	<5	<5	10	26
Lot 3, Near BAPB	MW-04	Duplicate	4/4/2018	Upper	DG of BAPB	270	75	6.41	1400	<0.04	-90.8	140	<5	<5	11	28
Lot 3, Near BAPB	MW-04	Primary	8/21/2018	Upper	DG of BAPB	420	84	6.46	2200	<0.04	-134.5	550	<5	<5	<5	<20
Lot 3, Near BAPB	MW-04	Duplicate	8/21/2018	Upper	DG of BAPB	450	87	6.46	2200	<0.04	-134.5	560	<5	<5	<5	<20
Lot 3, Near BAPB	MW-08	Primary	4/6/2018	Upper	Immediately UG	460	46	6.23	680	<0.04	-77.1	96	<5	<5	<5	70
Lot 3, Near BAPB	MW-08	Primary	8/22/2018	Upper	Immediately UG	360	140	6.0	1100	0.05	-58.8	92	<5	6.8	51	3600
Lot 3, Near BAPB	MW-09	Primary	4/6/2018	Upper	In BAPB	420	30	6.22	750	0.08	-89.3	430	<5	<5	<5	<20
Lot 3, Near BAPB	MW-09	Primary	8/22/2018	Upper	In BAPB	240	27	6.17	660	0.11	-113.8	440	<5	<5	<5	<20
Lot 3, Near BAPB	MW-28	Primary	4/4/2018	Upper	DG of BAPB	160	42	5.8	950	<0.04	-13.3	59	<5	<5	5.1	40
Lot 3, Near BAPB	MW-28	Primary	8/21/2018	Upper	DG of BAPB	110	96	5.63	2000	<0.04	0.2	120	<5	6	6.4	390
Lot 3, Near BAPB	MW-13	Primary	4/6/2018	Upper	Immediately UG	540	16	6.32	640	0.05	-47.2	30	<5	<5	21	350
Lot 3, Near BAPB	MW-13	Primary	8/22/2018	Upper	Immediately UG	<5	350	3.92	2900	<0.04	168.7	20	530	14	700	22000
Lot 3, Near BAPB	MW-14	Primary	4/5/2018	Upper	In BAPB	230	6.2	6.24	520	0.12	-116.4	21	<5	<5	<5	<20
Lot 3, Near BAPB	MW-14	Primary	8/22/2018	Upper	In BAPB	560	3.7	6.39	180	<0.04	-51.9	45	<5	<5	<5	<20
Lot 3, Near BAPB	MW-15	Primary	4/5/2018	Upper	DG of BAPB	240	2.6	6.19	430	<0.04	33.3	13	92	<5	<5	360
Lot 3, Near BAPB	MW-15	Primary	8/22/2018	Upper	DG of BAPB	210	10	5.96	640	<0.04	-35.2	17	<5	<5	<5	26

**Abbreviations:**

&lt;5.0 = Concentration not detected at or above indicated laboratory reporting limit.

- = Sample not analyzed or criteria not available.

BAPB = Biologically Active Permeable Barrier

UG = Upgradient

DG = Downgradient

mV = Millivolts

mg/L = Milligrams per liter

MW = Monitoring well

SU = Standard units

µg/L = Micrograms per liter

**Notes:**

This table summarizes data presented in Tables 3 through 6 for cluster wells upgradient, within, and downgradient of the BAPB. The indicator parameters presented in this table are measured in the BAPB cluster wells to evaluate the effectiveness of the BAPB in buffering the groundwater and creating reducing conditions necessary for the precipitation of dissolved metals in groundwater.

Field pH measurements reported in table.

Screening criteria and sources for screening criteria are summarized in Table 7.

If a screening criterion is exceeded, the analytical results are designated as follows:

Orange Box indicates a detection in upper horizon groundwater above 5 times the aquatic criterion

Pink Font indicates a detection in upper horizon groundwater above the groundskeeper/maintenance worker site-specific goal

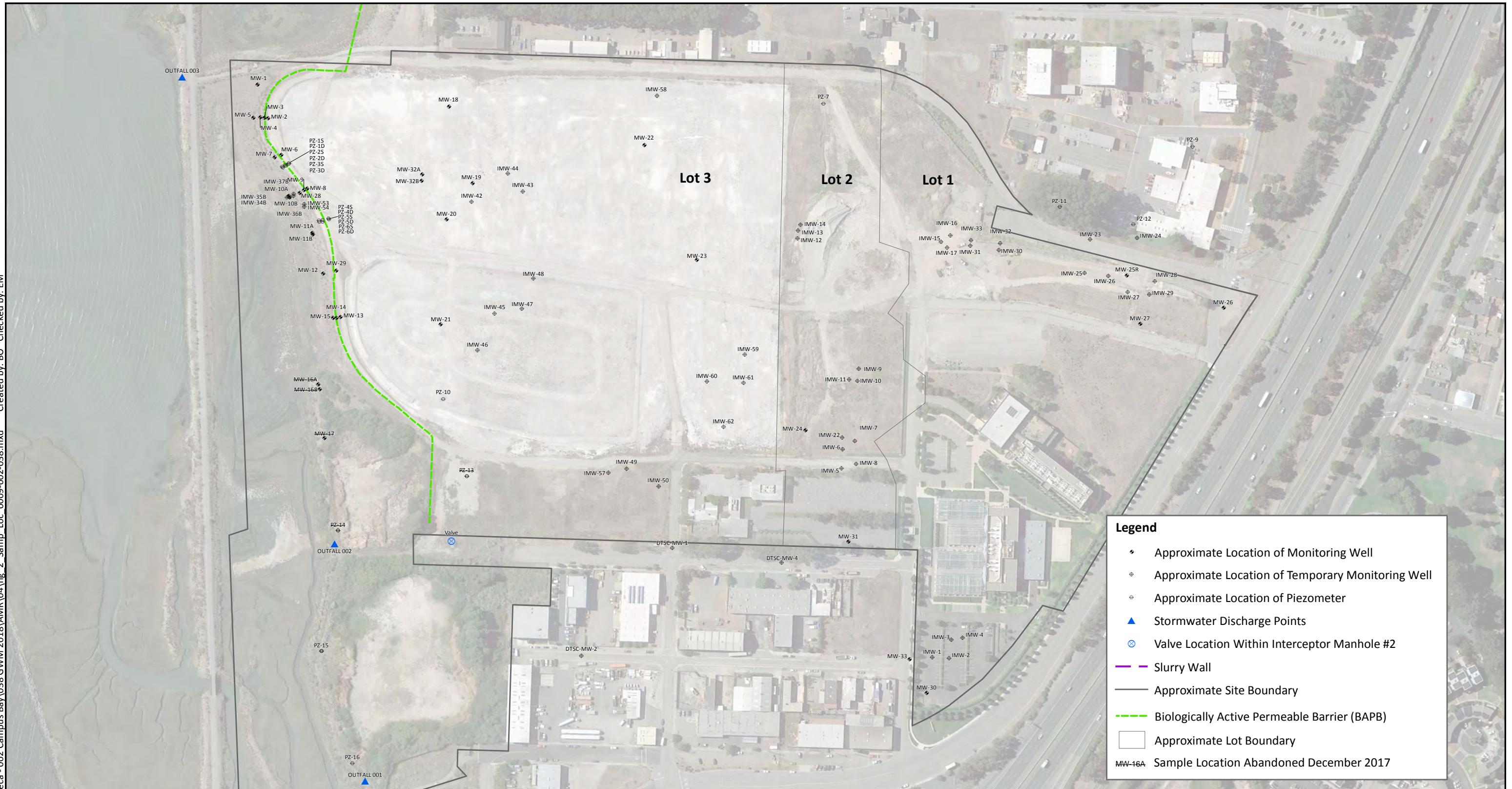
Underline indicates a concentration which is greater than 90% of an applicable screening criterion but does not exceed it

## **FIGURES**

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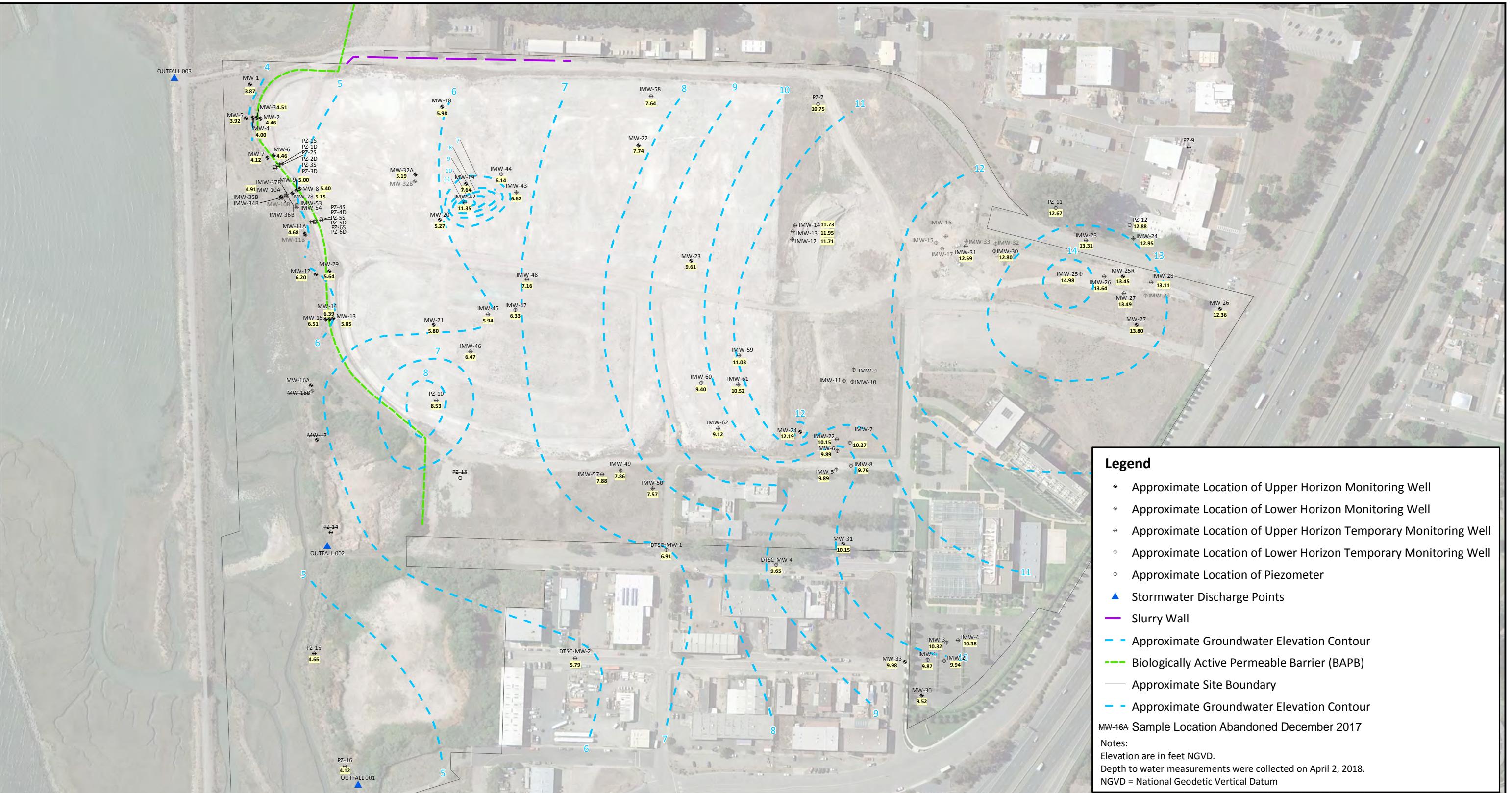


Aerial imagery captured on 10/1/2009 (Google, 2010)

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**Site Plan and Monitoring Well Locations**
**FIGURE 2**



Aerial imagery captured on 10/1/2009 (Google, 2010)

0 125 250 375 500  
Feet  
1 Inch = 250 Feet

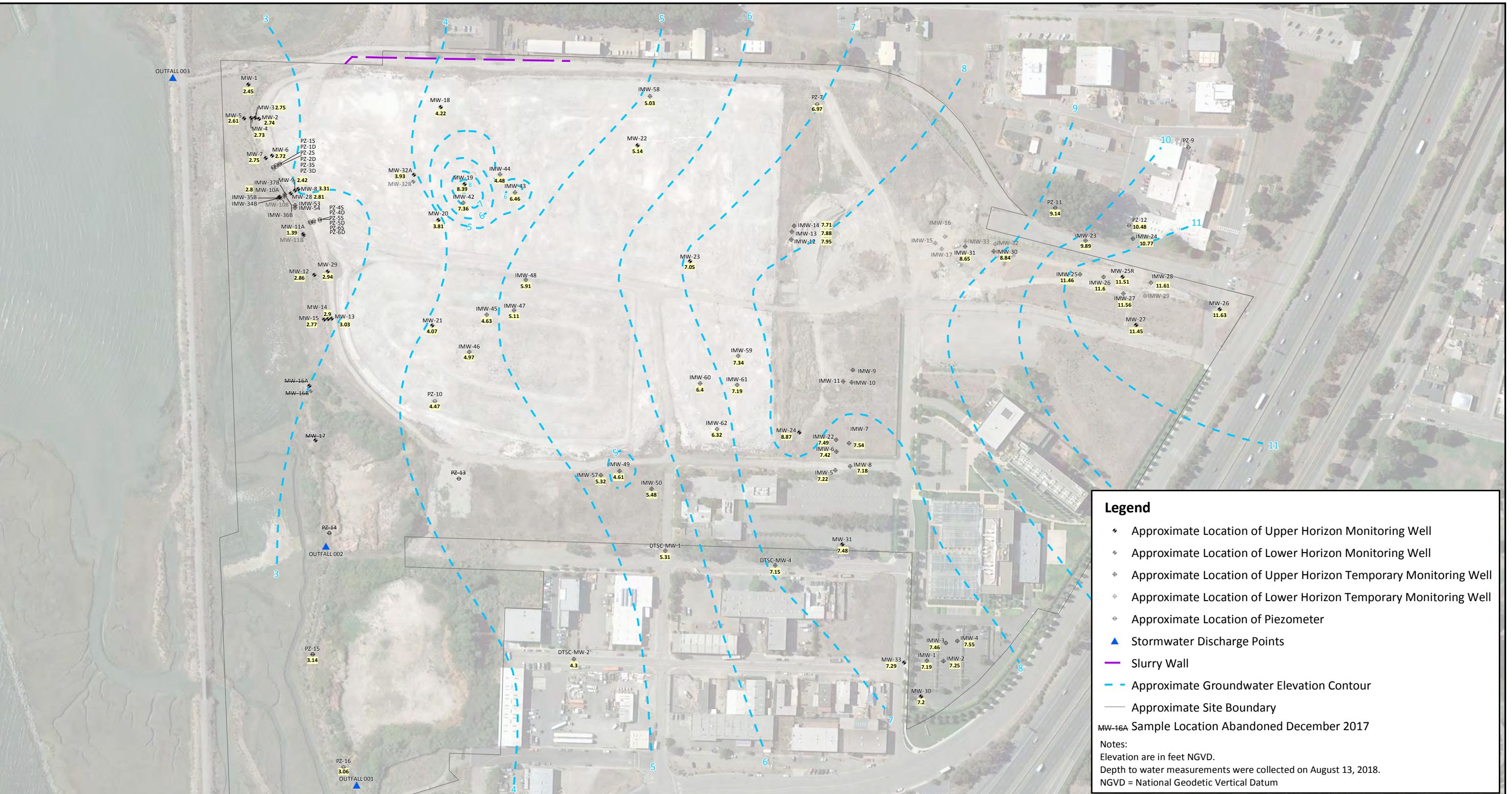


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**Groundwater Elevation Contours**  
**Upper Horizon**  
**April 2, 2018**

**FIGURE 3A**



#### Legend

- ◊ Approximate Location of Upper Horizon Monitoring Well
- ◊ Approximate Location of Lower Horizon Monitoring Well
- ◊ Approximate Location of Upper Horizon Temporary Monitoring Well
- ◊ Approximate Location of Lower Horizon Temporary Monitoring Well
- ◊ Approximate Location of Piezometer
- ▲ Stormwater Discharge Points
- Slurry Wall
- Approximate Groundwater Elevation Contour
- Approximate Site Boundary

MW-16A Sample Location Abandoned December 2017

Notes:

Elevation are in feet NGVD.

Depth to water measurements were collected on August 13, 2018.

NGVD = National Geodetic Vertical Datum

Aerial imagery captured on 10/1/2009 (Google, 2010)

0 125 250 375 500  
Feet  
1 Inch = 250 Feet



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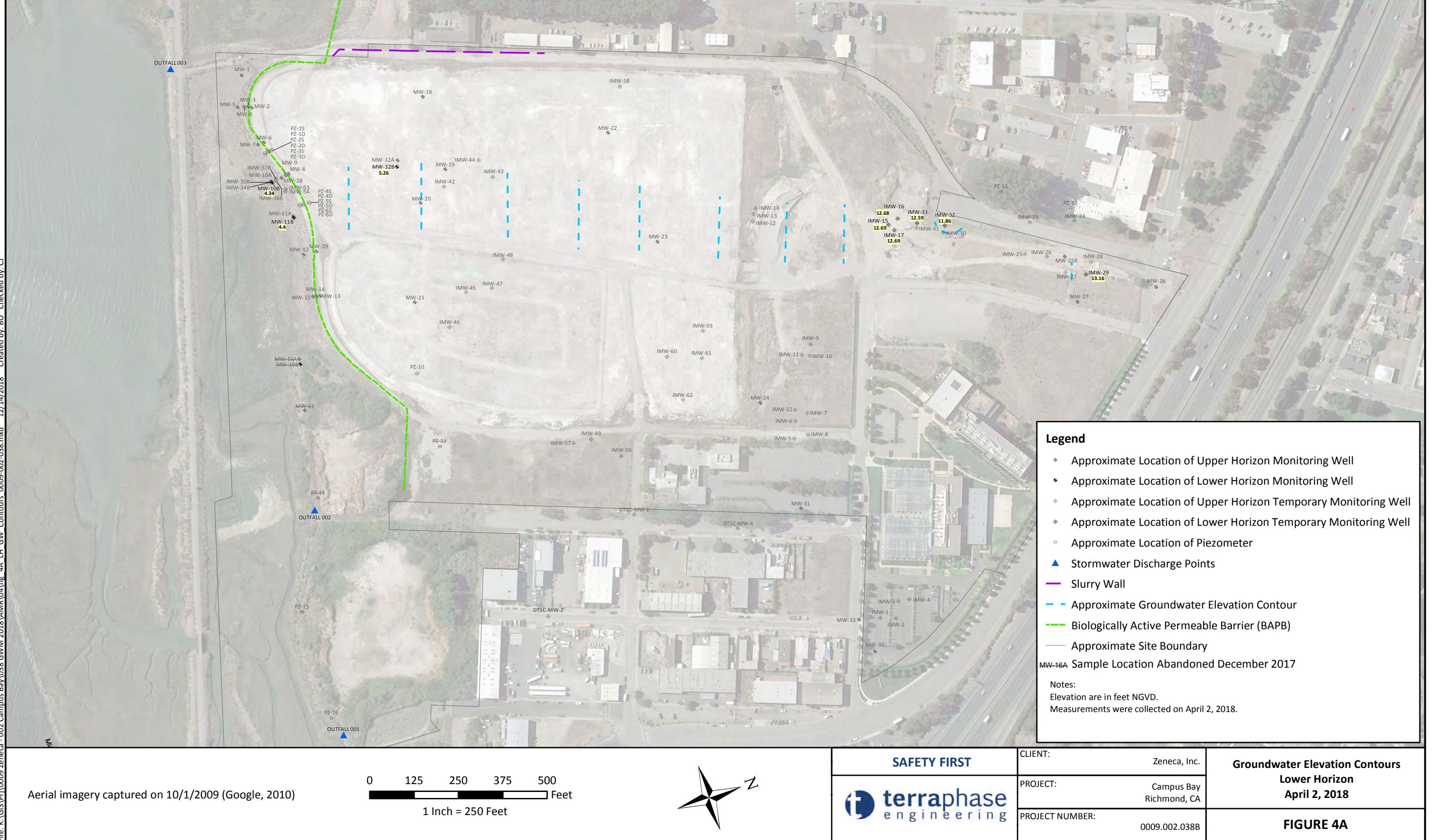
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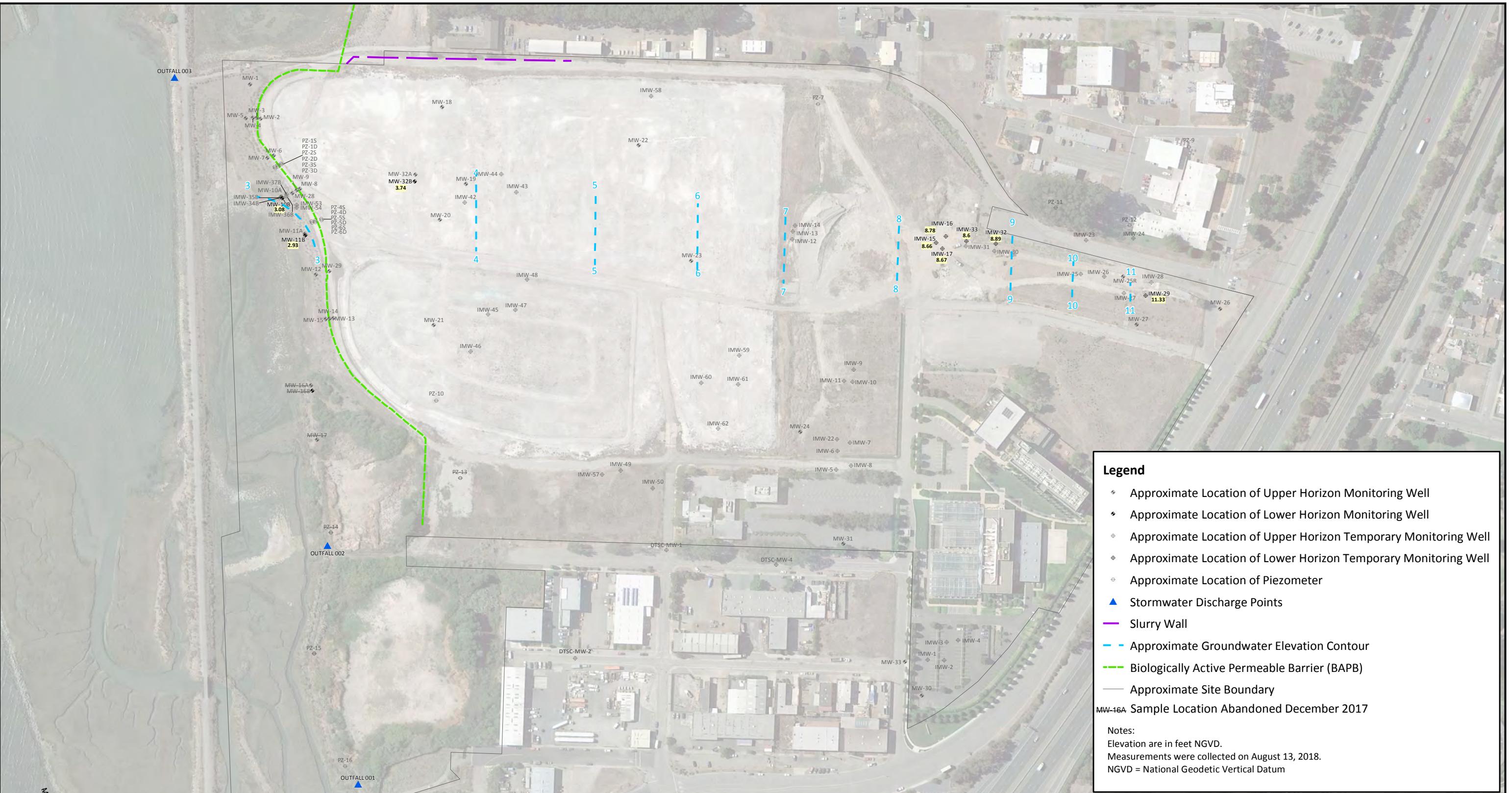
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Richmond, CA

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**Groundwater Elevation Contours**  
**Upper Horizon**  
**August 13, 2018**

**FIGURE 3B**





Aerial imagery captured on 10/1/2009 (Google, 2010)

0 125 250 375 500  
Feet  
1 Inch = 250 Feet

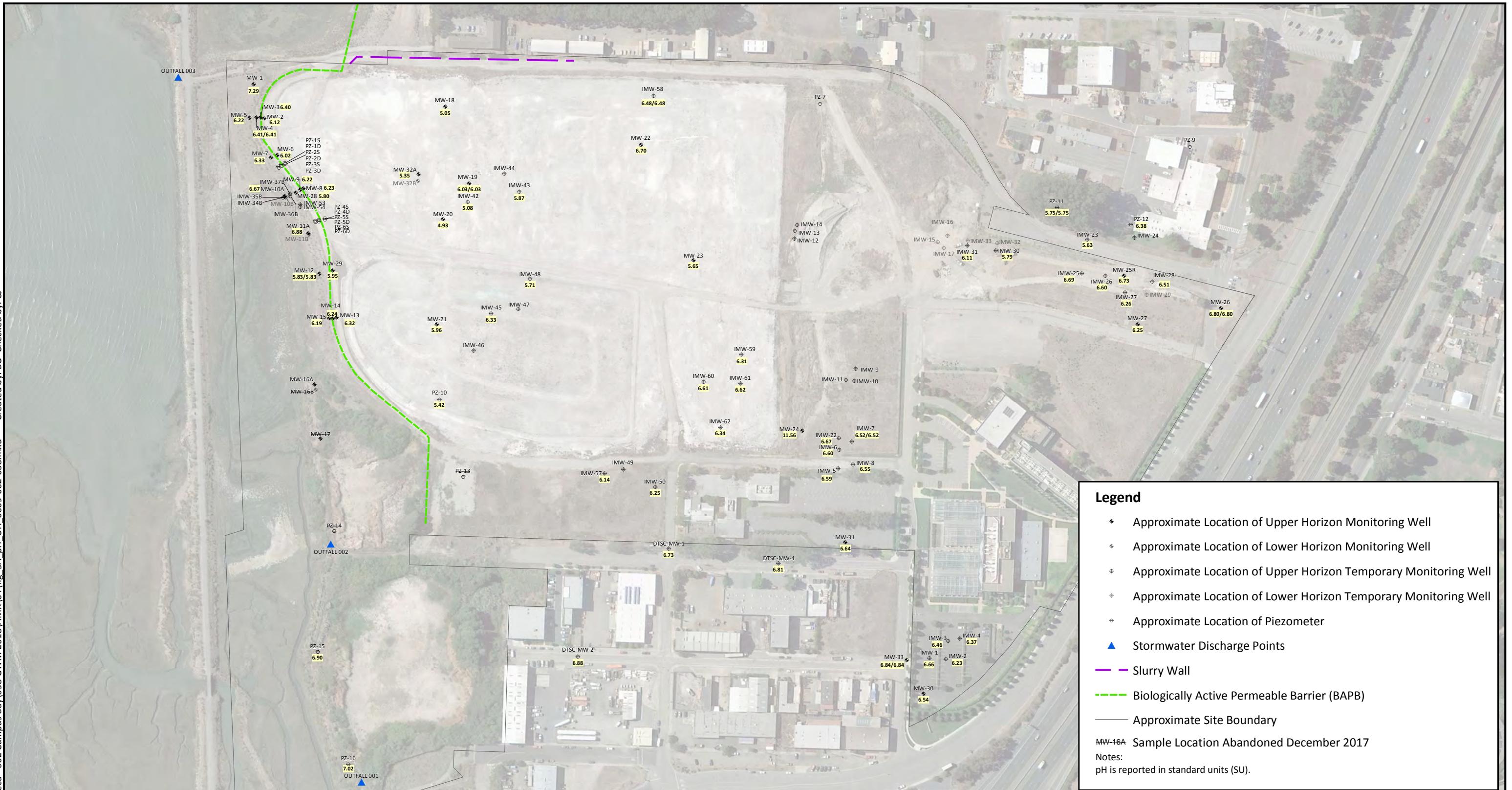


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**Groundwater Elevation Contours  
Lower Horizon  
August 13, 2018**

**FIGURE 4B**



Aerial imagery captured on 10/1/2009 (Google, 2010)

0 125 250 375 500  
1 Inch = 250 Feet

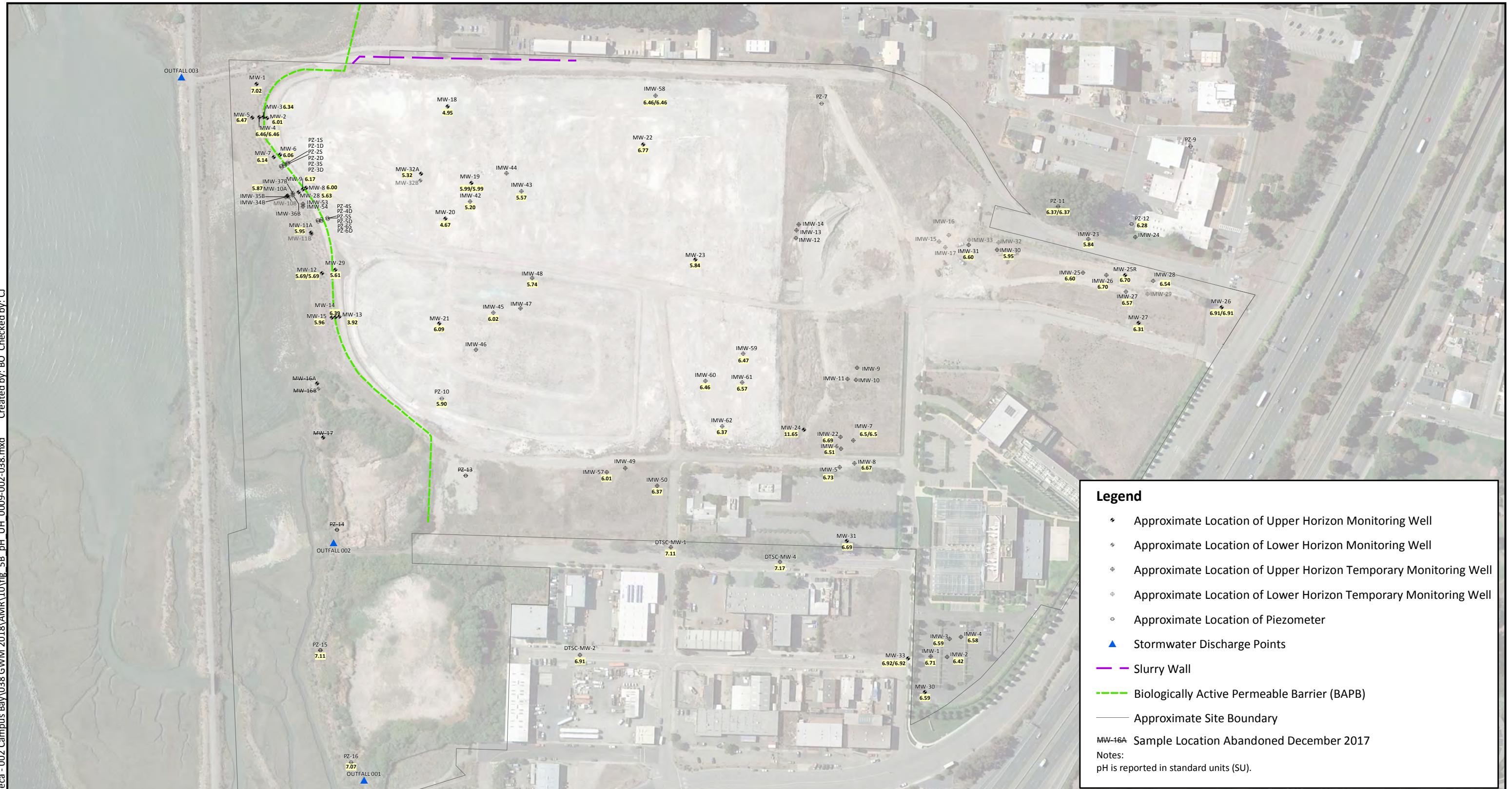


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pH in Upper Horizon Groundwater  
April 2018

**FIGURE 5A**



Aerial imagery captured on 10/1/2009 (Google, 2010)

0 125 250 375 500  
1 Inch = 250 Feet

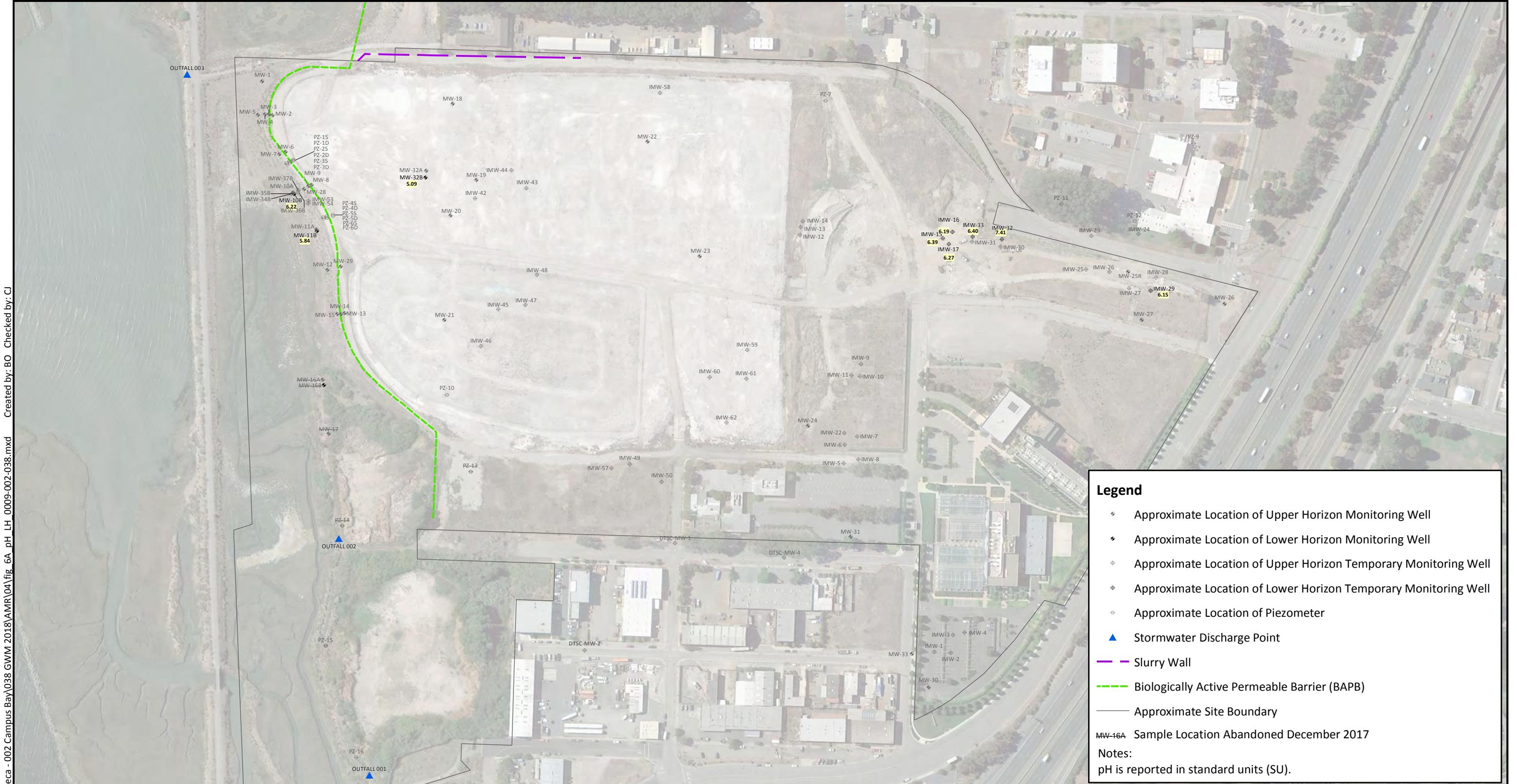


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pH in Upper Horizon Groundwater  
August 2018

**FIGURE 5B**



Aerial imagery captured on 10/1/2009 (Google, 2010)

0 125 250 375 500  
1 Inch = 250 Feet

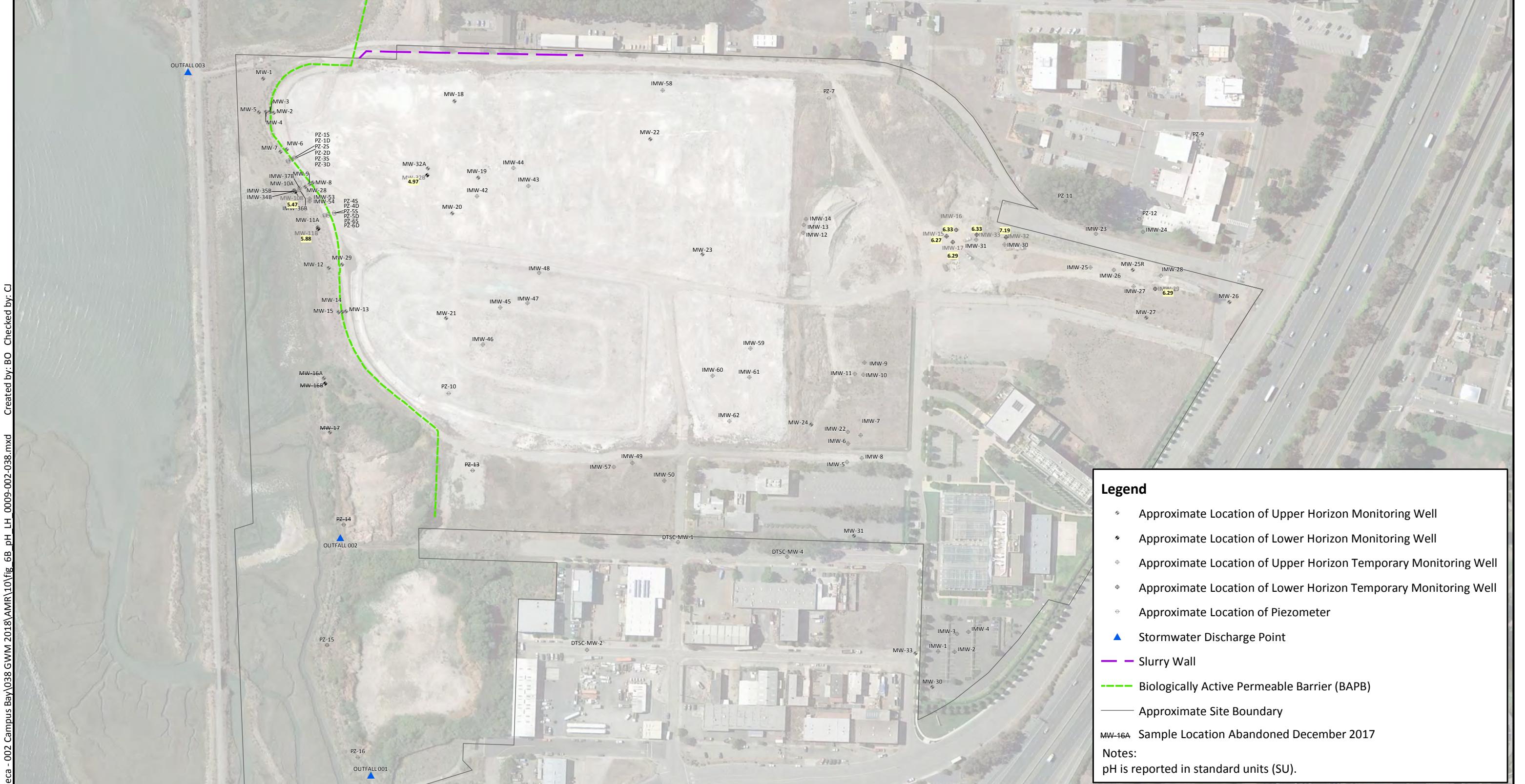


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pH in Lower Horizon Groundwater  
April 2018

**FIGURE 6A**



Aerial imagery captured on 10/1/2009 (Google, 2010)

0 125 250 375 500  
1 Inch = 250 Feet

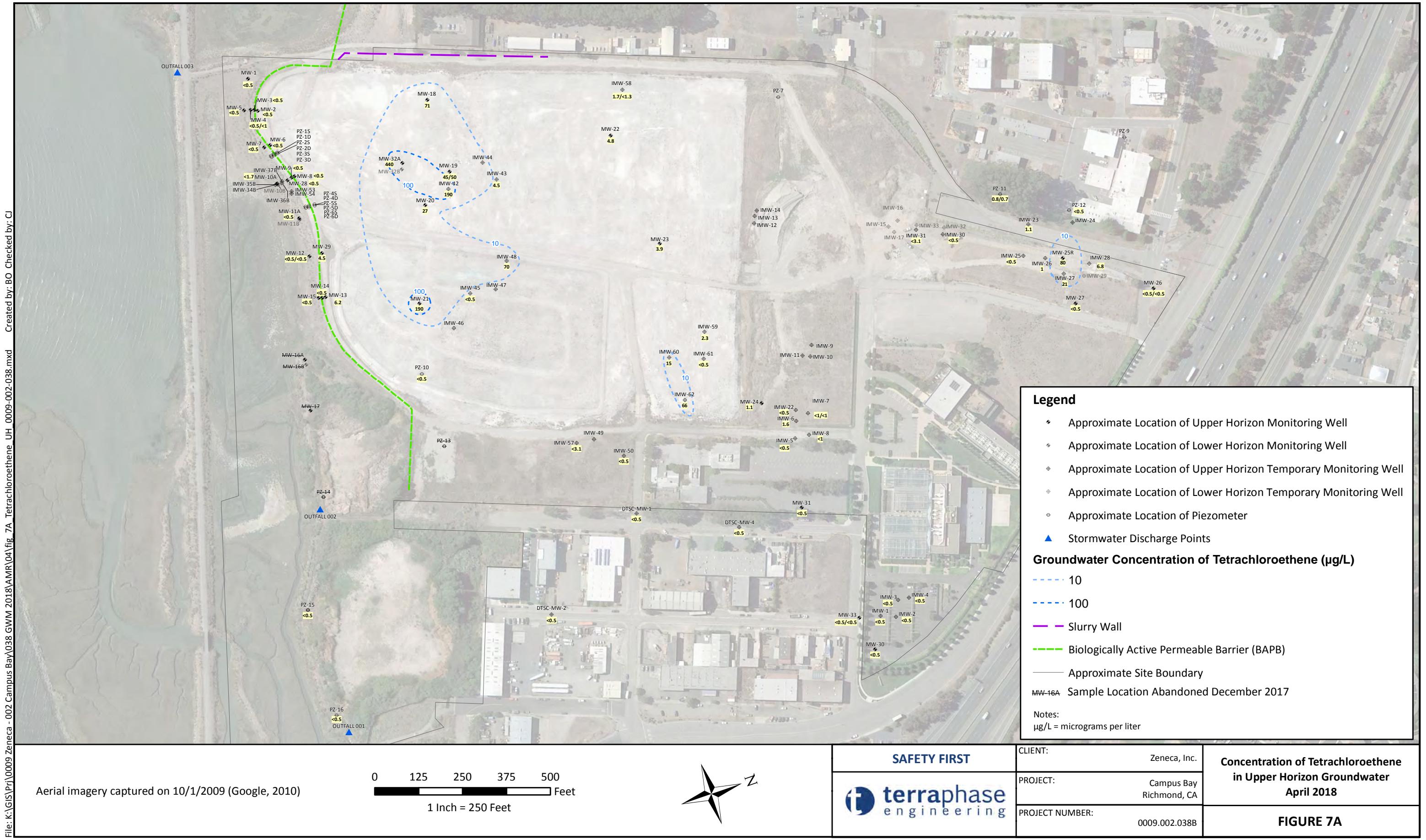


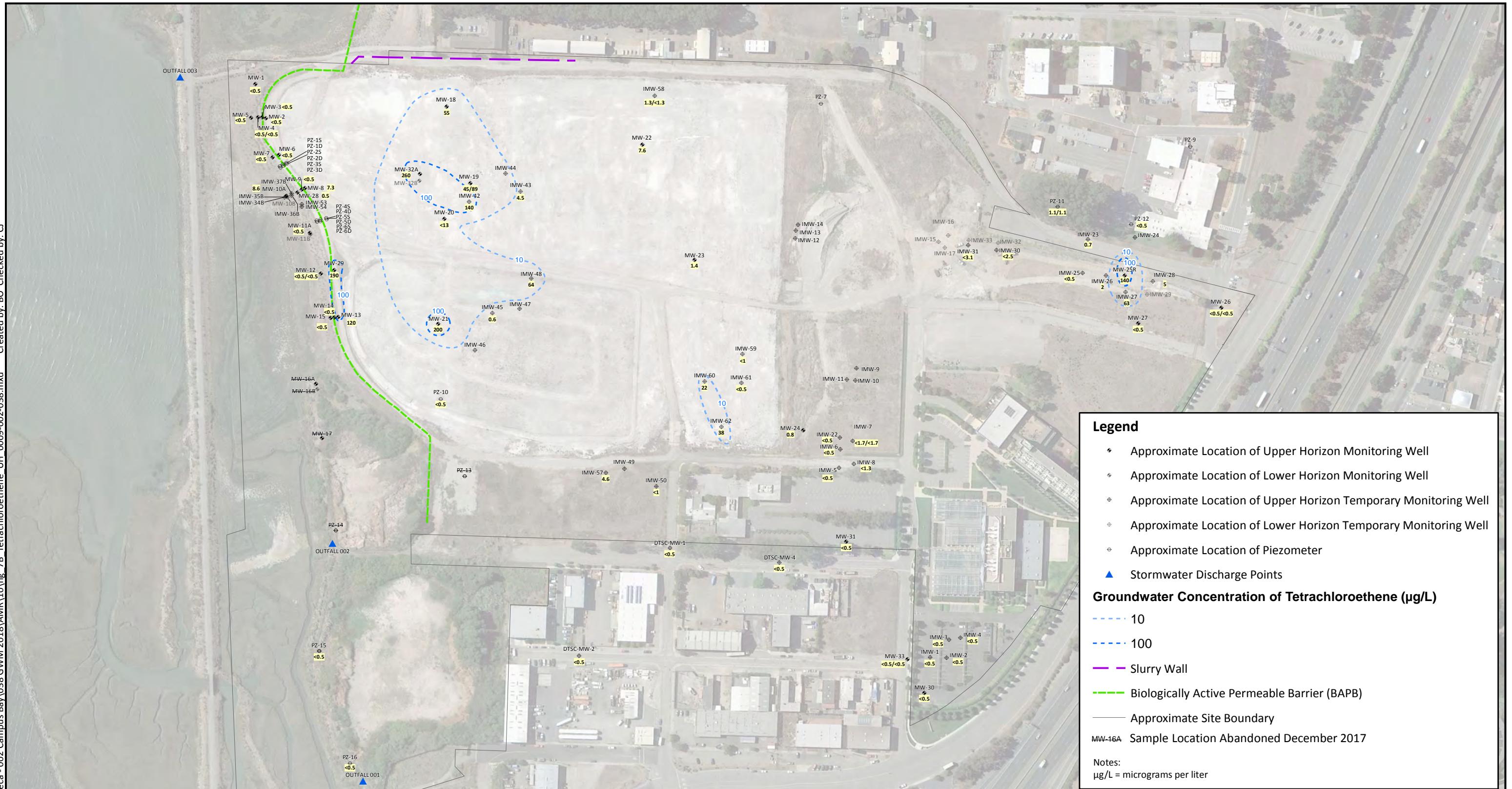
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pH in Lower Horizon Groundwater  
August 2018

**FIGURE 6B**





Aerial imagery captured on 10/1/2009 (Google, 2010)

0 125 250 375 500  
Feet  
1 Inch = 250 Feet

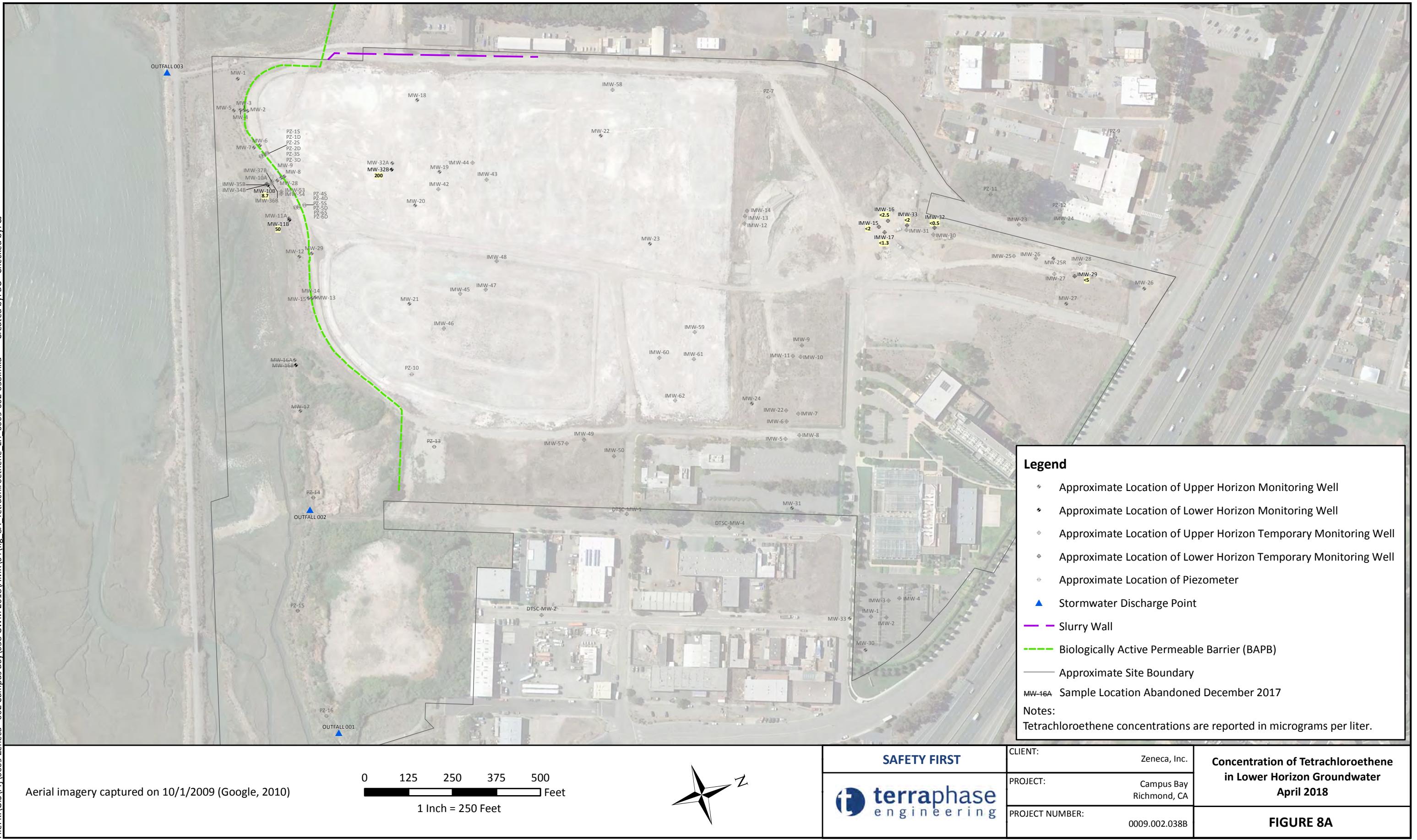


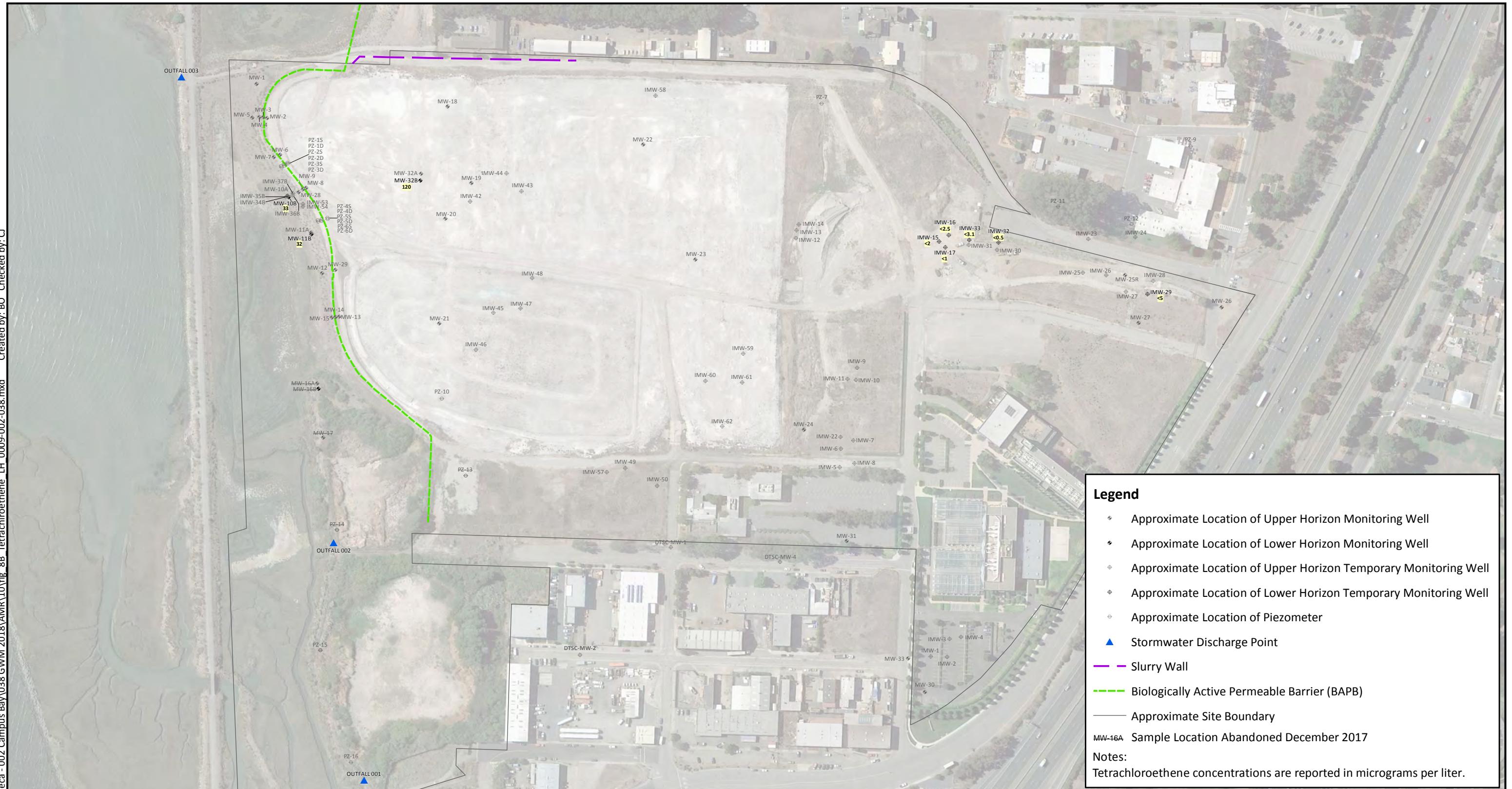
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Concentration of Tetrachloroethene  
in Upper Horizon Groundwater  
August 2018

**FIGURE 7B**





Aerial imagery captured on 10/1/2009 (Google, 2010)

0 125 250 375 500  
1 Inch = 250 Feet

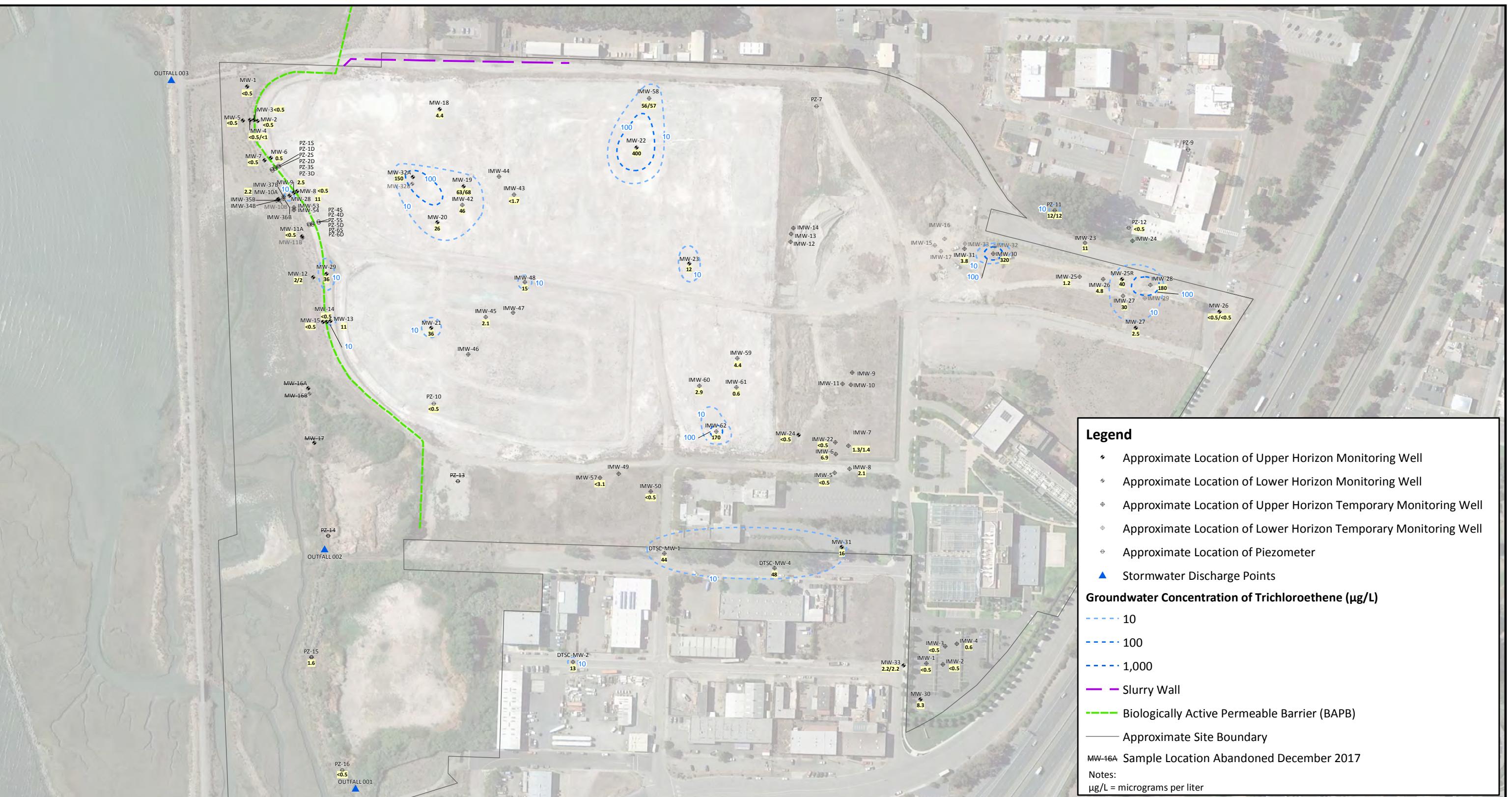


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**Concentration of Tetrachloroethene  
in Lower Horizon Groundwater  
August 2018**

**FIGURE 8B**



Aerial imagery captured on 10/1/2009 (Google, 2010)

0 125 250 375 500  
Feet  
1 Inch = 250 Feet

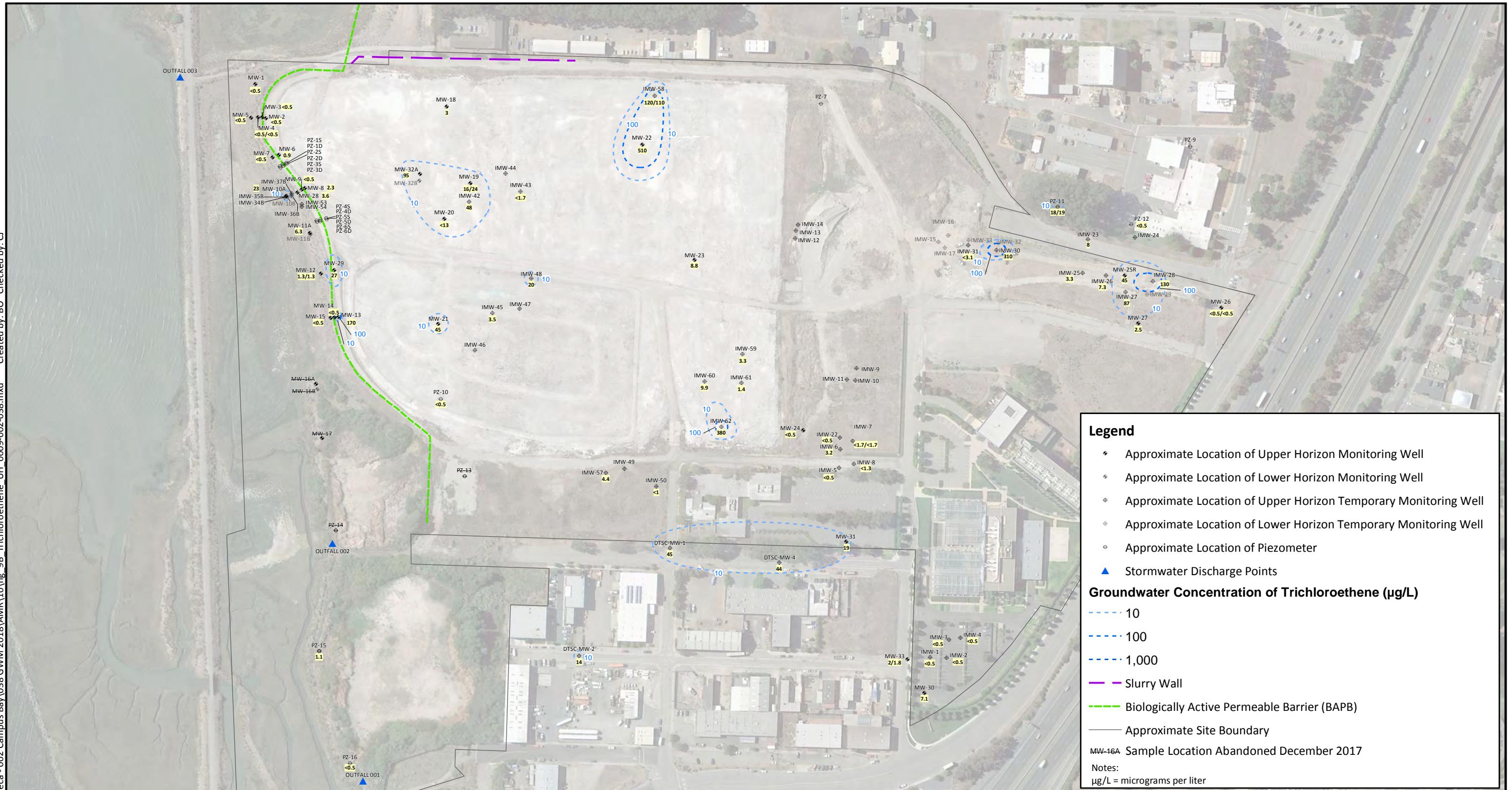


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Concentration of Trichloroethene  
in Upper Horizon Groundwater  
April 2018

**FIGURE 9A**



Aerial imagery captured on 10/1/2009 (Google, 2010)

0 125 250 375 500  
Feet  
1 Inch = 250 Feet

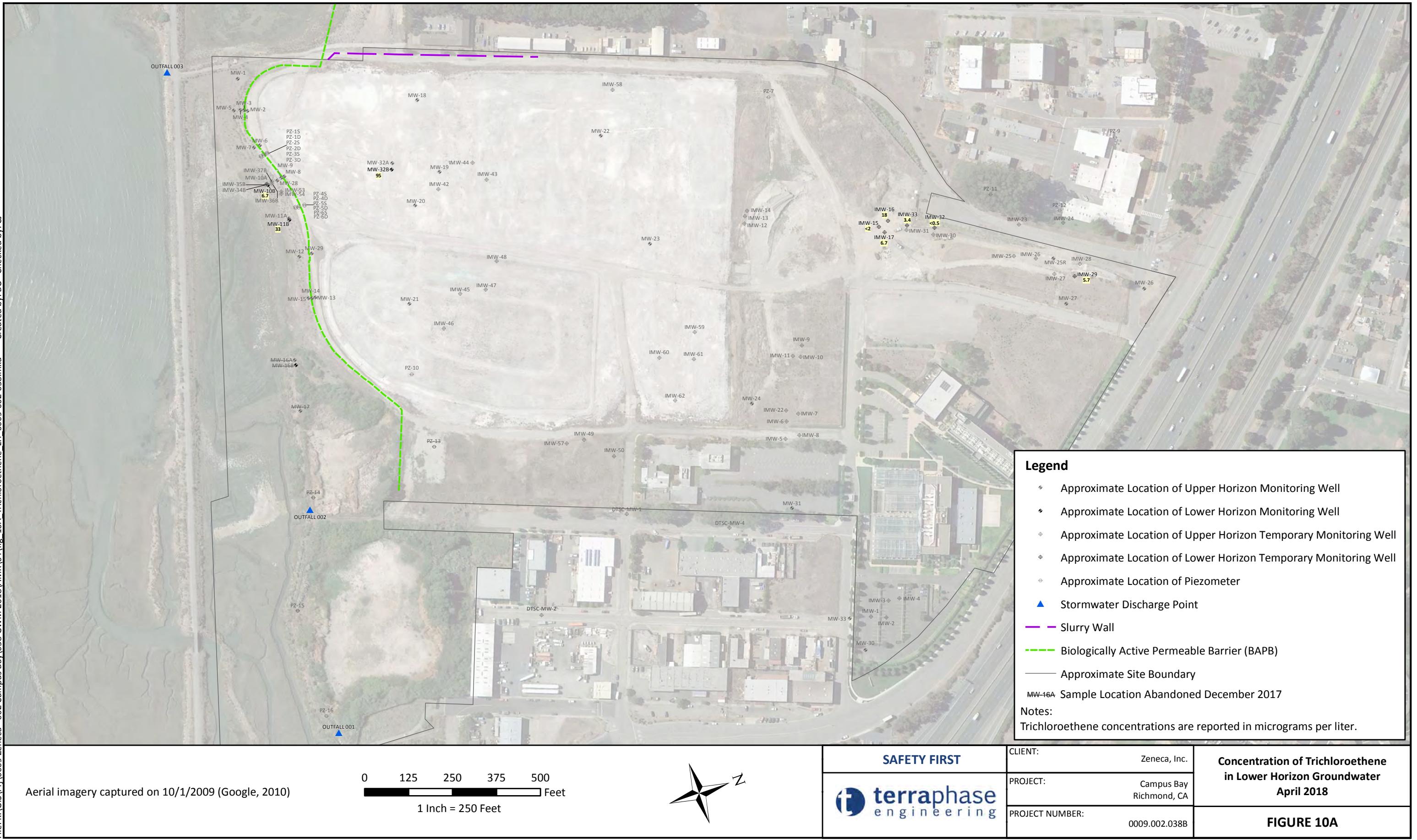


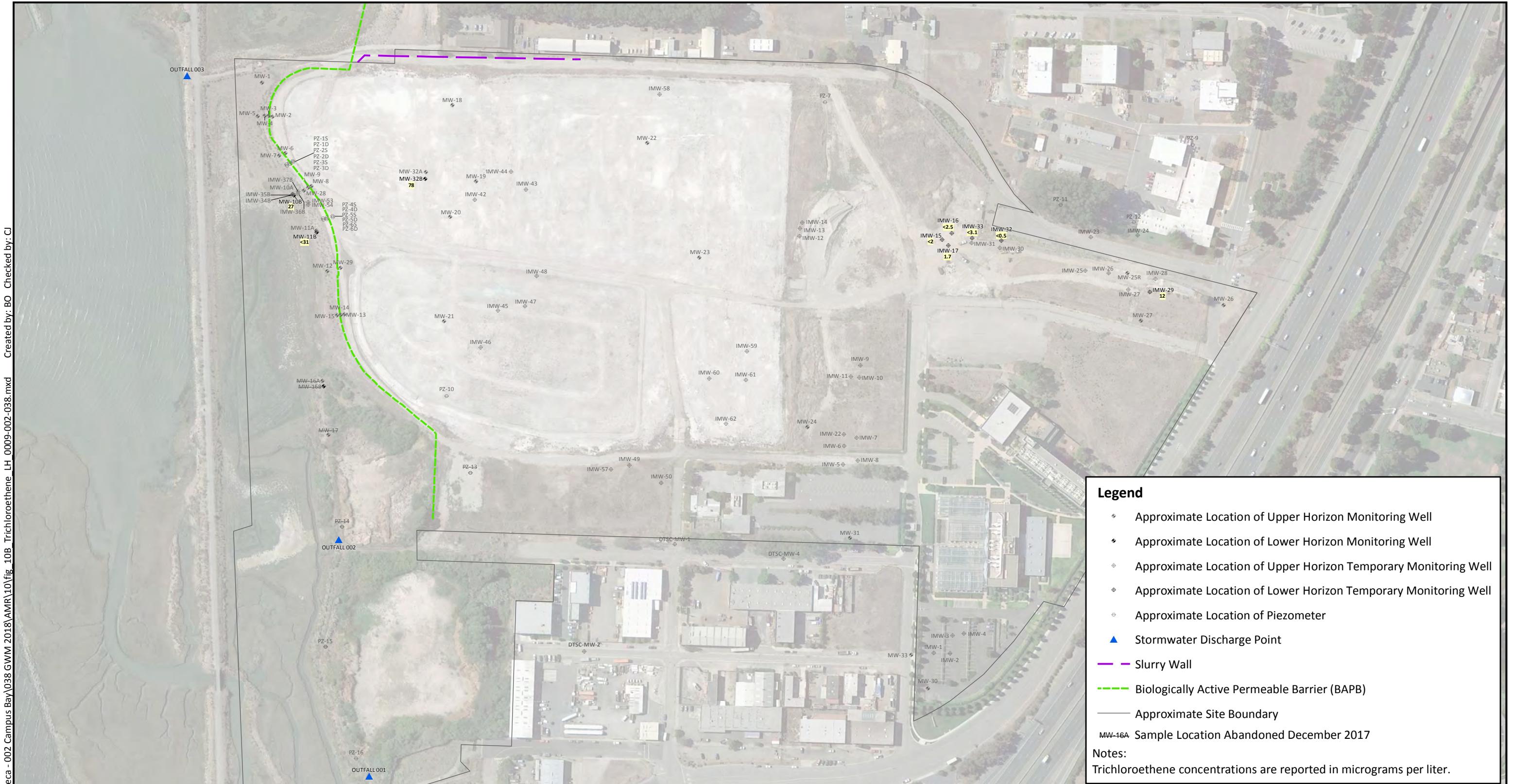
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Concentration of Trichloroethene  
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August 2018

**FIGURE 9B**





Aerial imagery captured on 10/1/2009 (Google, 2010)

0 125 250 375 500  
1 Inch = 250 Feet

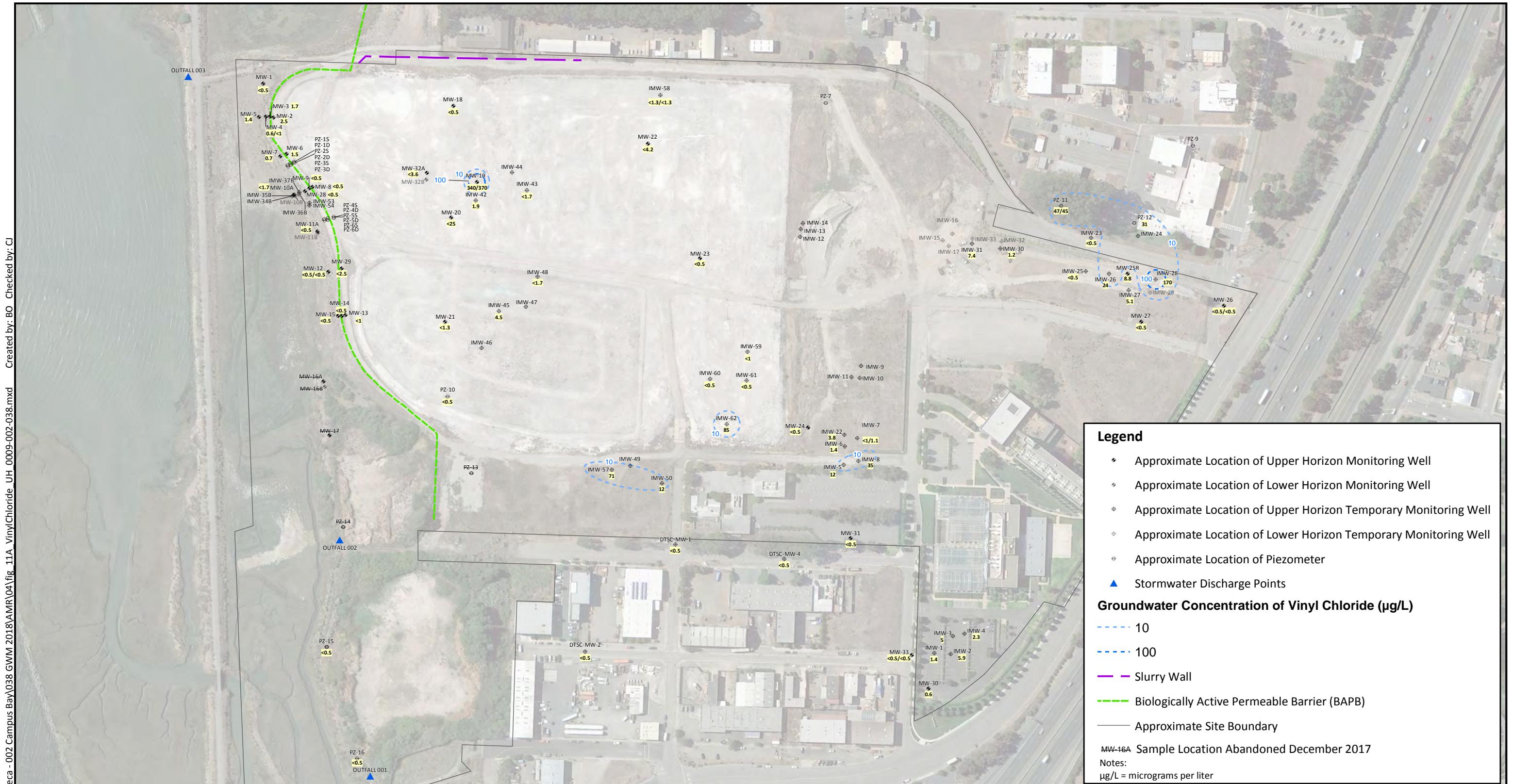


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**Concentration of Trichloroethene  
in Lower Horizon Groundwater  
August 2018**

**FIGURE 10B**



Aerial imagery captured on 10/1/2009 (Google, 2010)

0 125 250 375 500  
Feet  
1 Inch = 250 Feet

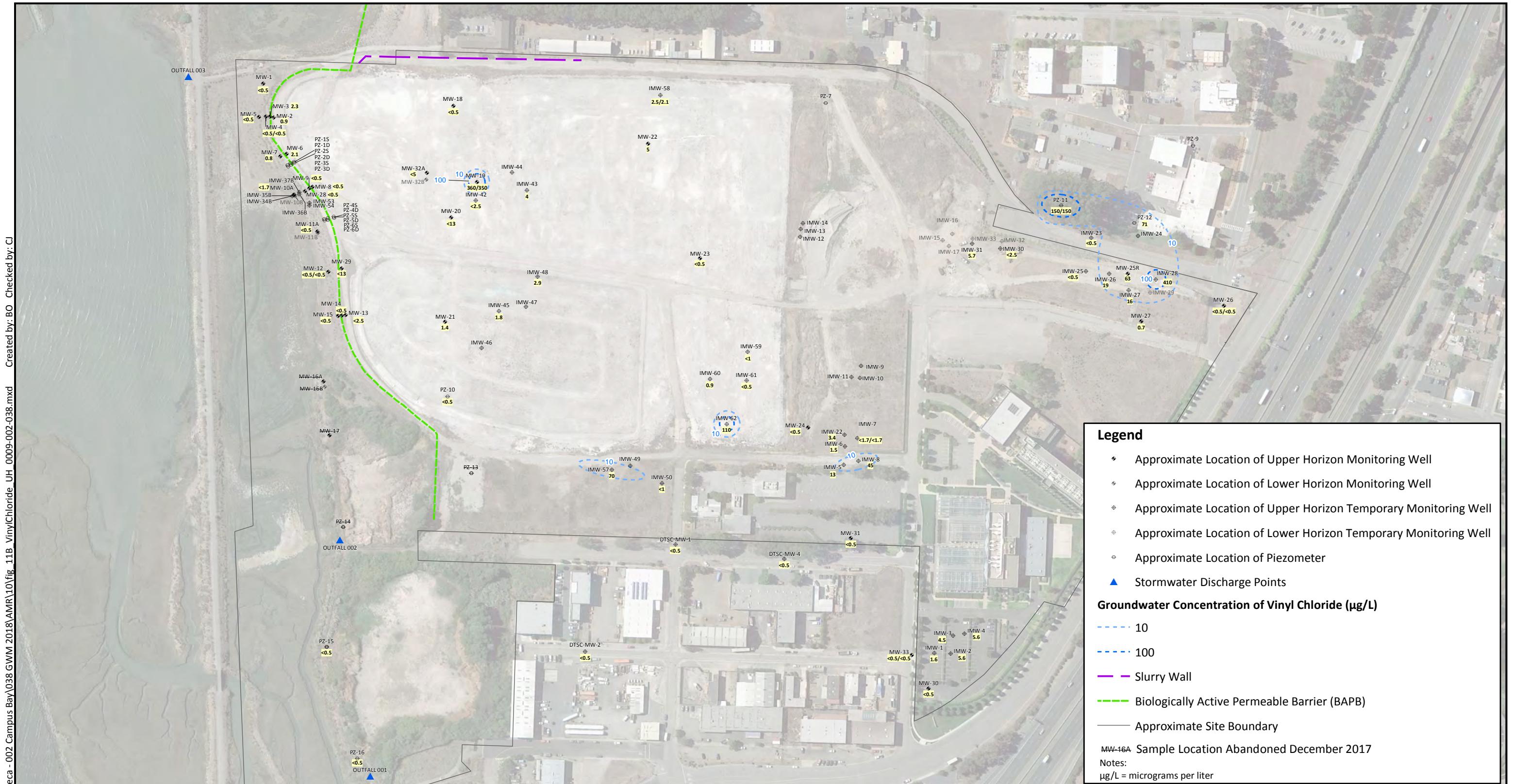


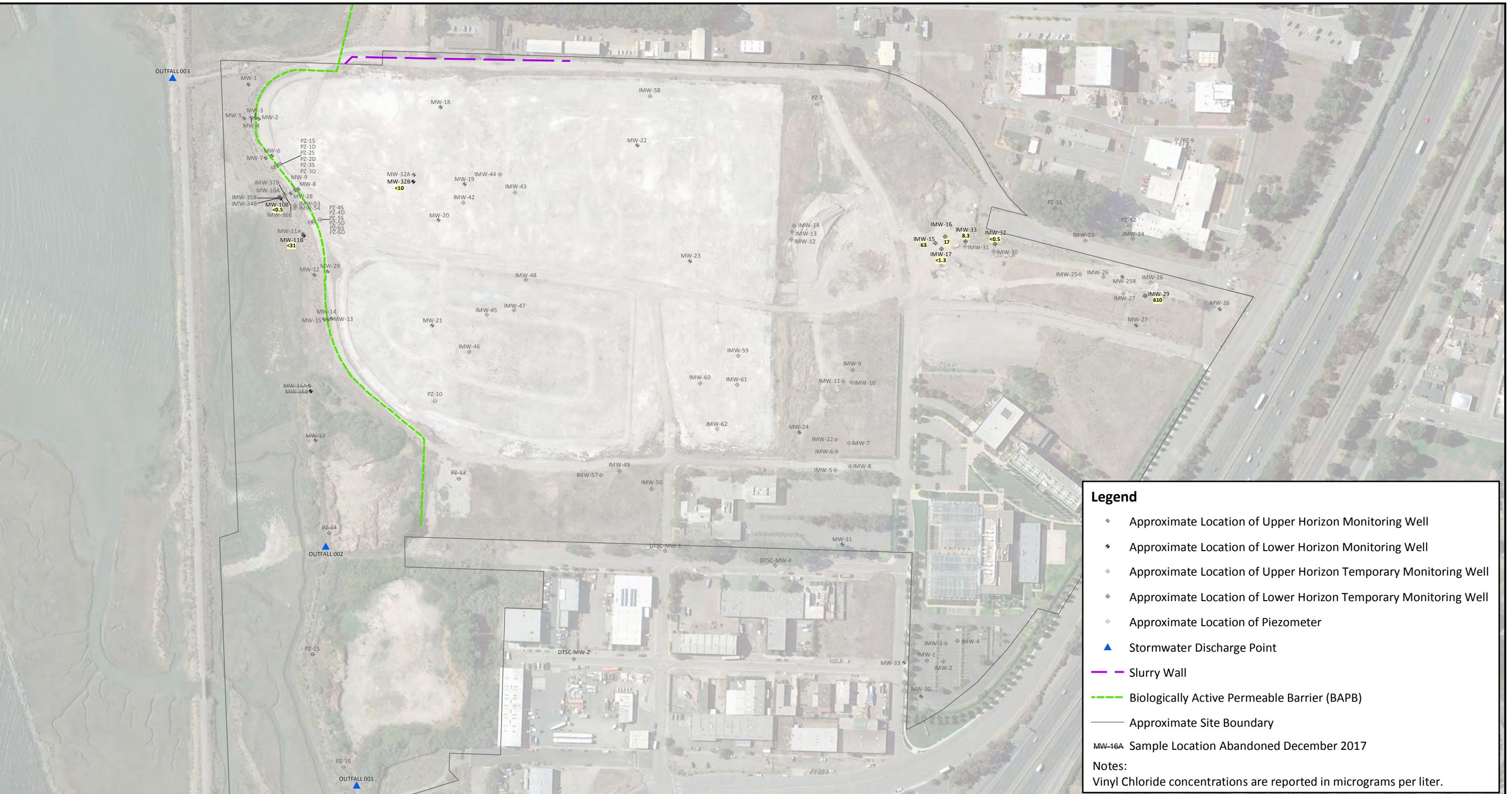
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Concentration of Vinyl Chloride  
in Upper Horizon Groundwater  
April 2018

FIGURE 11A





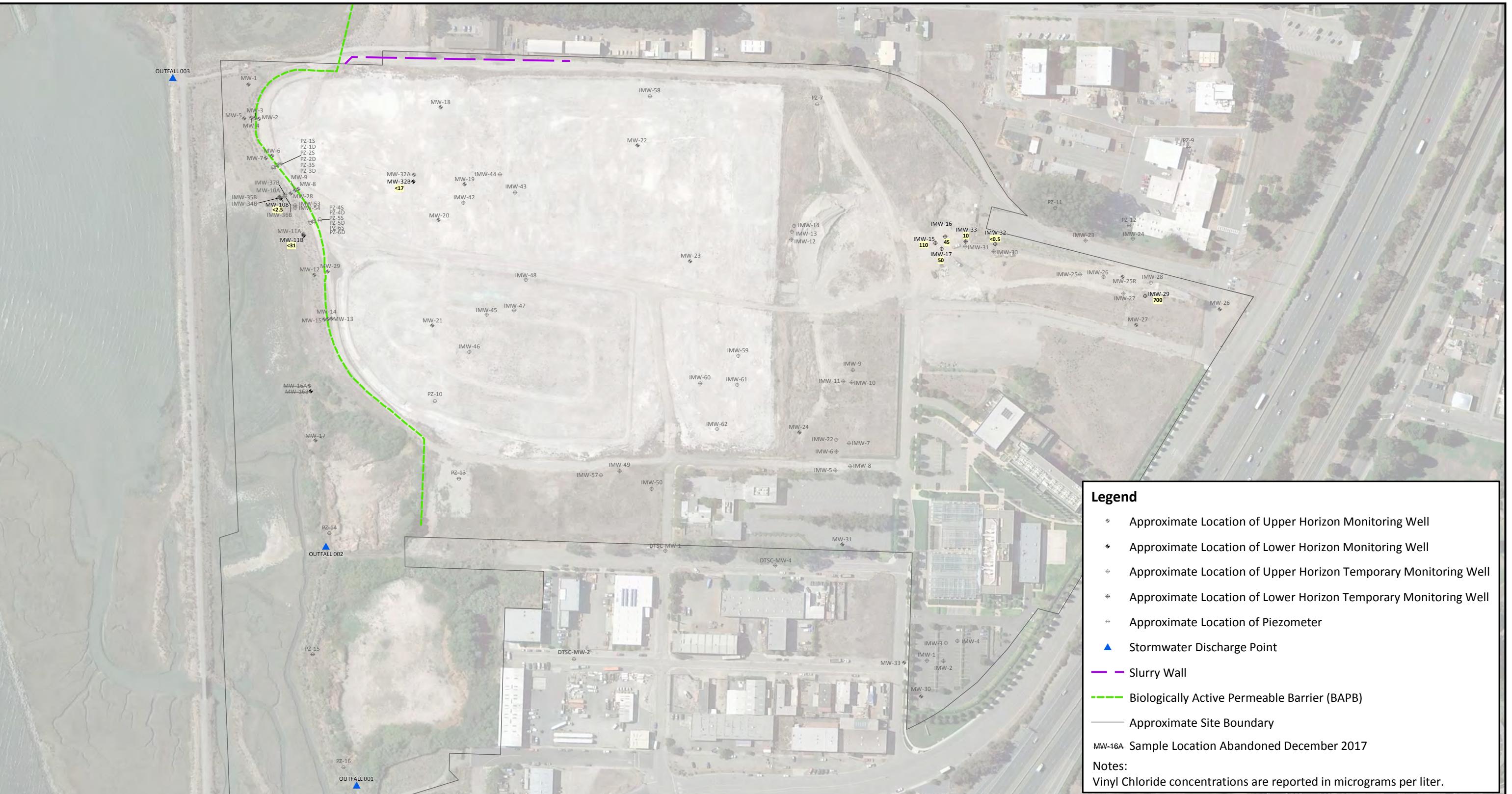
Aerial imagery captured on 10/1/2009 (Google, 2010)



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Concentration of Vinyl Chloride  
in Lower Horizon Groundwater  
April 2018  
**FIGURE 12A**



Aerial imagery captured on 10/1/2009 (Google, 2010)

0 125 250 375 500  
1 Inch = 250 Feet

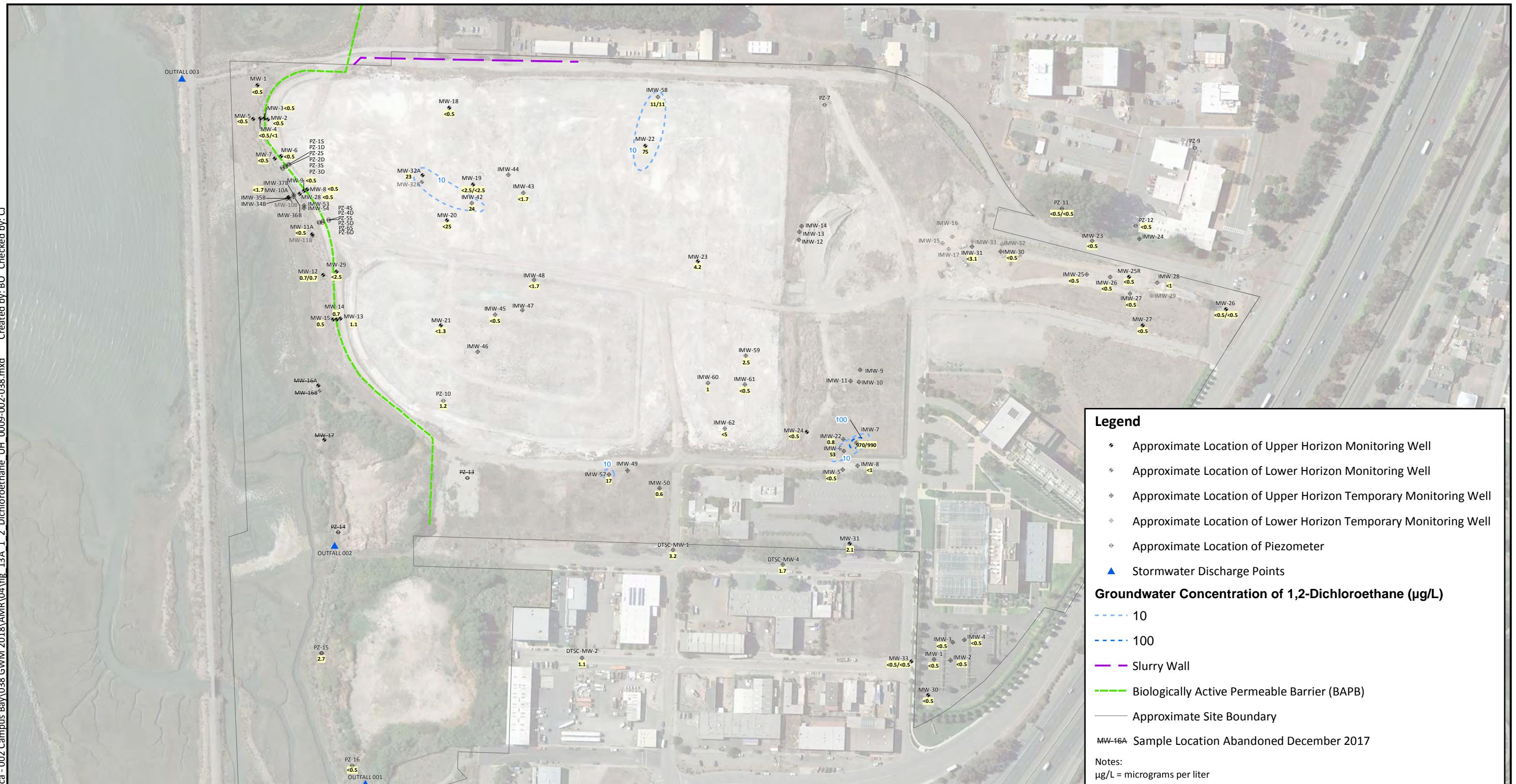


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**Concentration of Vinyl Chloride  
in Lower Horizon Groundwater  
August 2018**

**FIGURE 12B**



Aerial imagery captured on 10/1/2009 (Google, 2010)

A scale bar with markings at 0, 125, 250, 375, and 500 feet. Below the bar, the text "1 Inch = 250 Feet" is written.



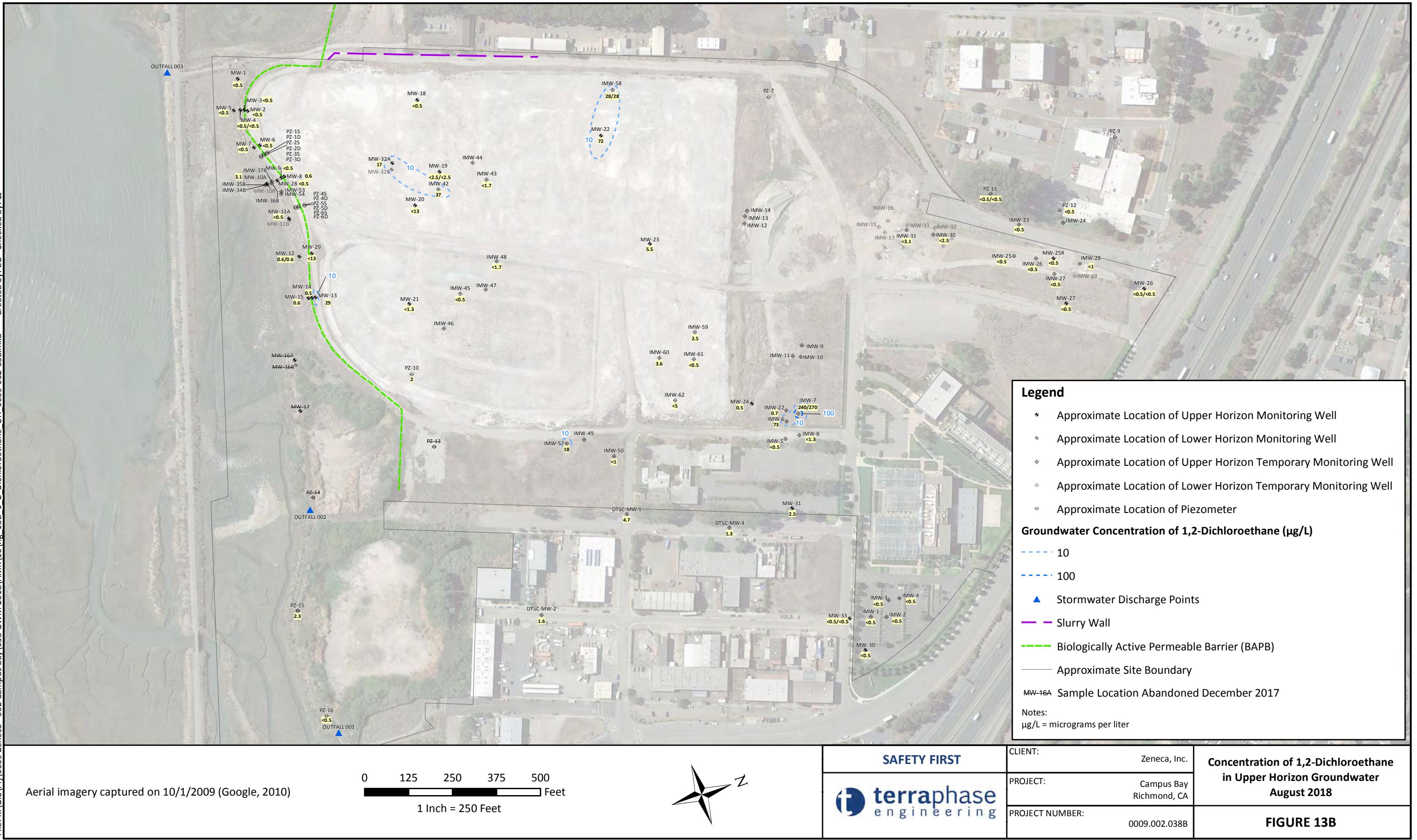
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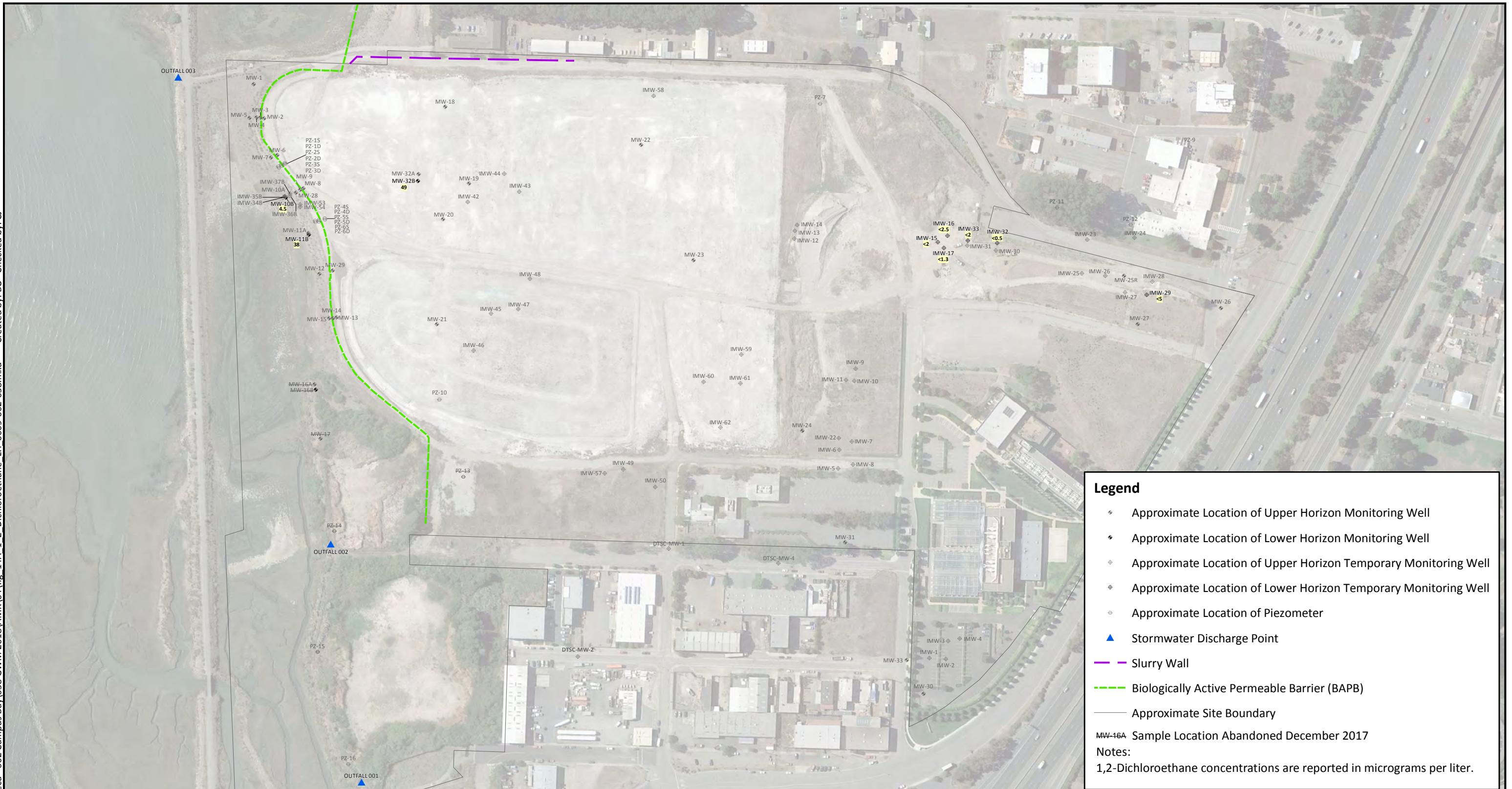
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## Concentration of 1,2-Dichloroethane in Upper Horizon Groundwater April 2018

FIGURE 13A





Aerial imagery captured on 10/1/2009 (Google, 2010)

0 125 250 375 500  
Feet  
1 Inch = 250 Feet

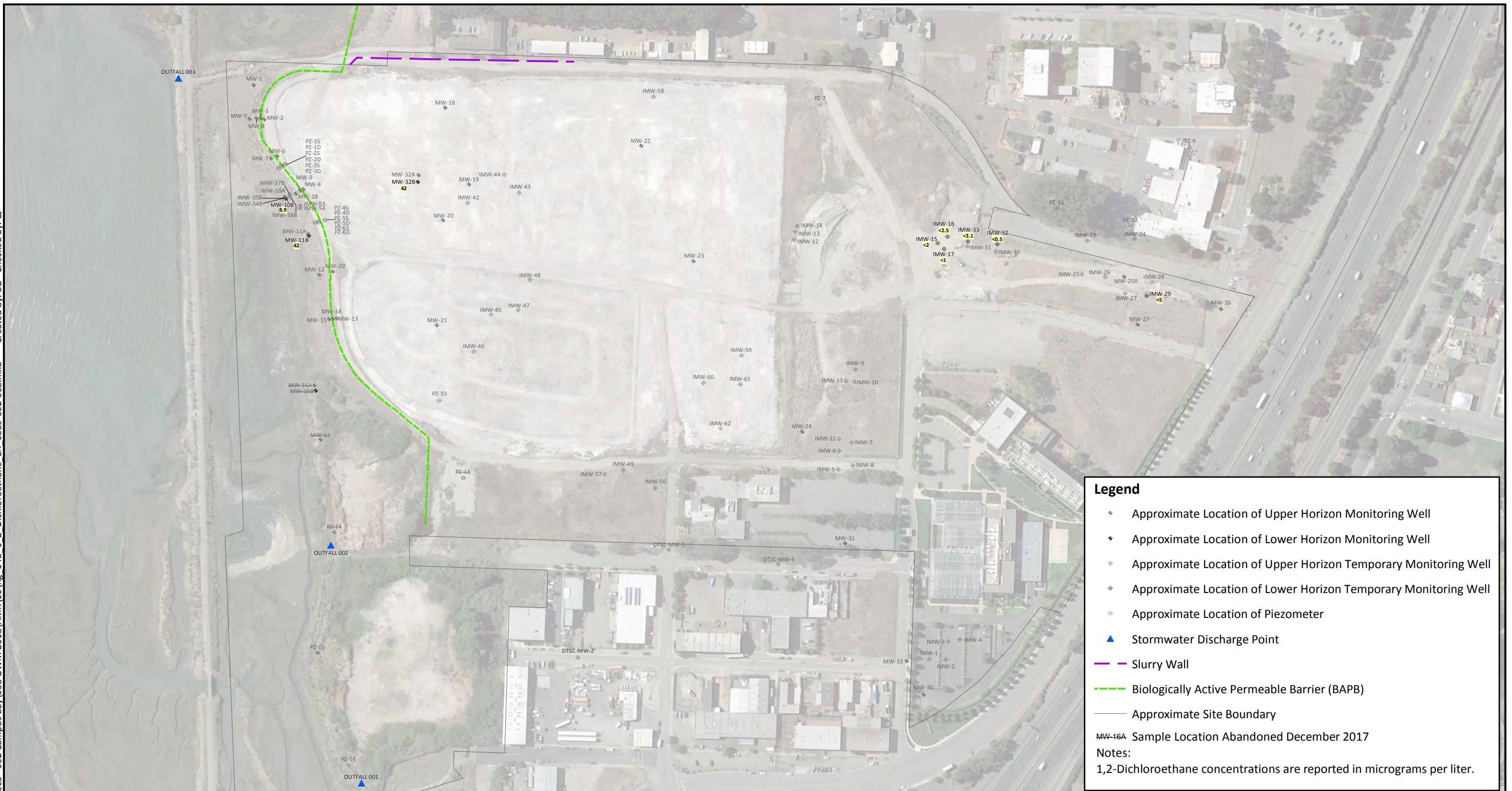


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**Concentration of 1,2-Dichloroethane  
in Lower Horizon Groundwater  
April 2018**

**FIGURE 14A**



Aerial imagery captured on 10/1/2009 (Google, 2010)

0 125 250 375 500  
1 Inch = 250 Feet

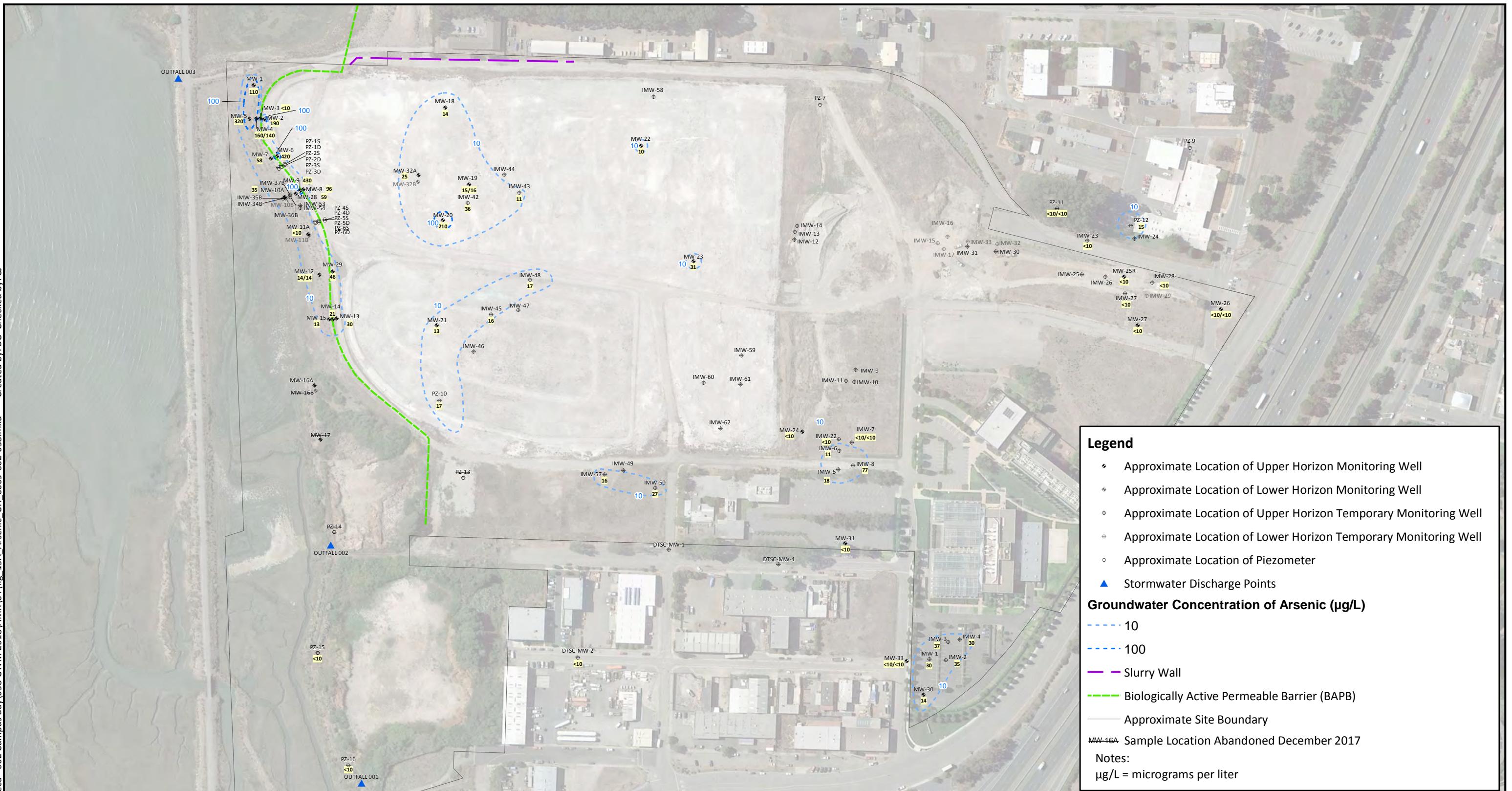


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**Concentration of 1,2-Dichloroethane  
in Lower Horizon Groundwater  
August 2018**

**FIGURE 14B**



Aerial imagery captured on 10/1/2009 (Google, 2010)

0 125 250 375 500  
Feet  
1 Inch = 250 Feet

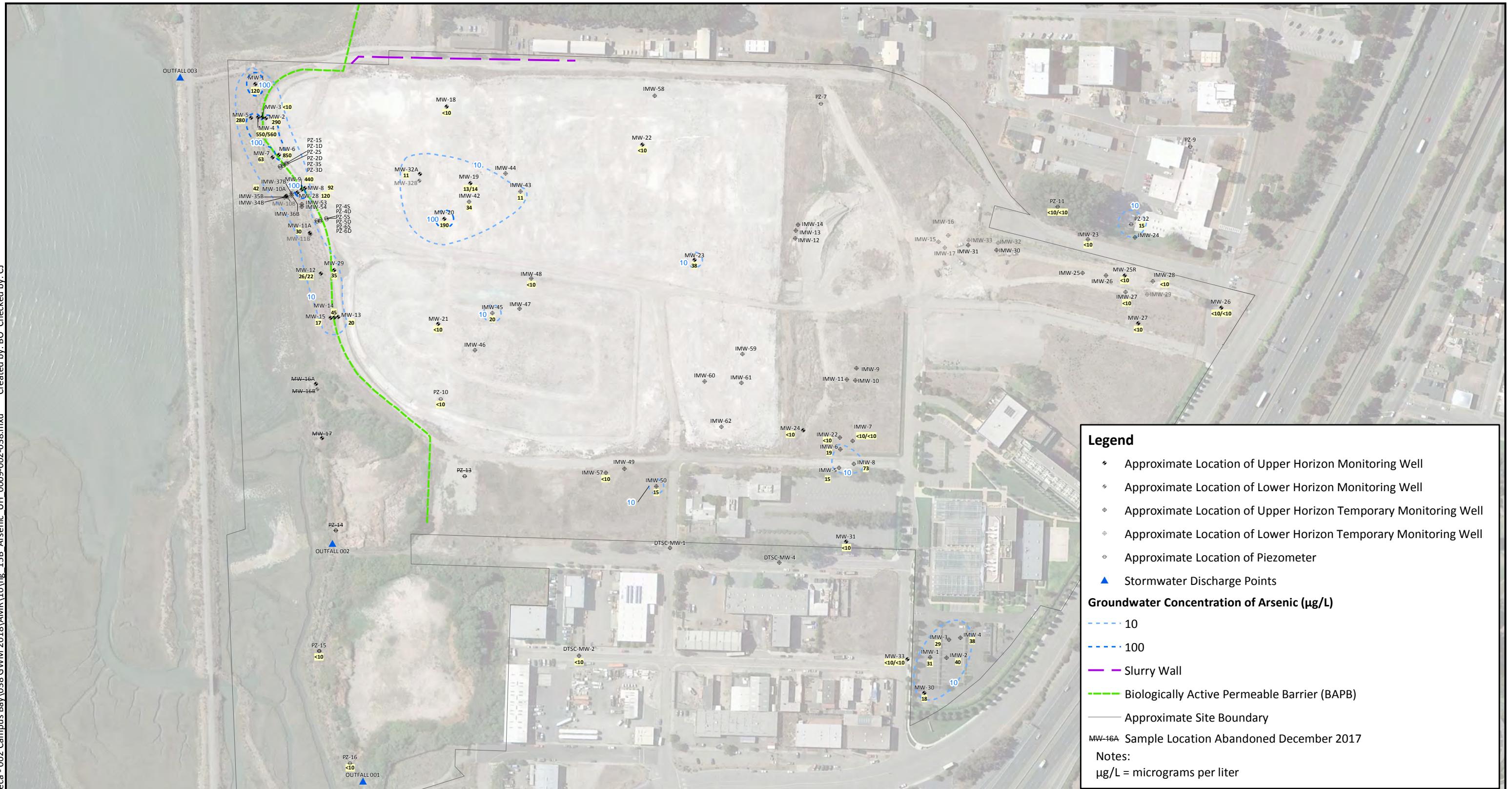


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**Concentration of Arsenic  
in Upper Horizon Groundwater  
April 2018**

**FIGURE 15A**



Aerial imagery captured on 10/1/2009 (Google, 2010)

0 125 250 375 500  
1 Inch = 250 Feet

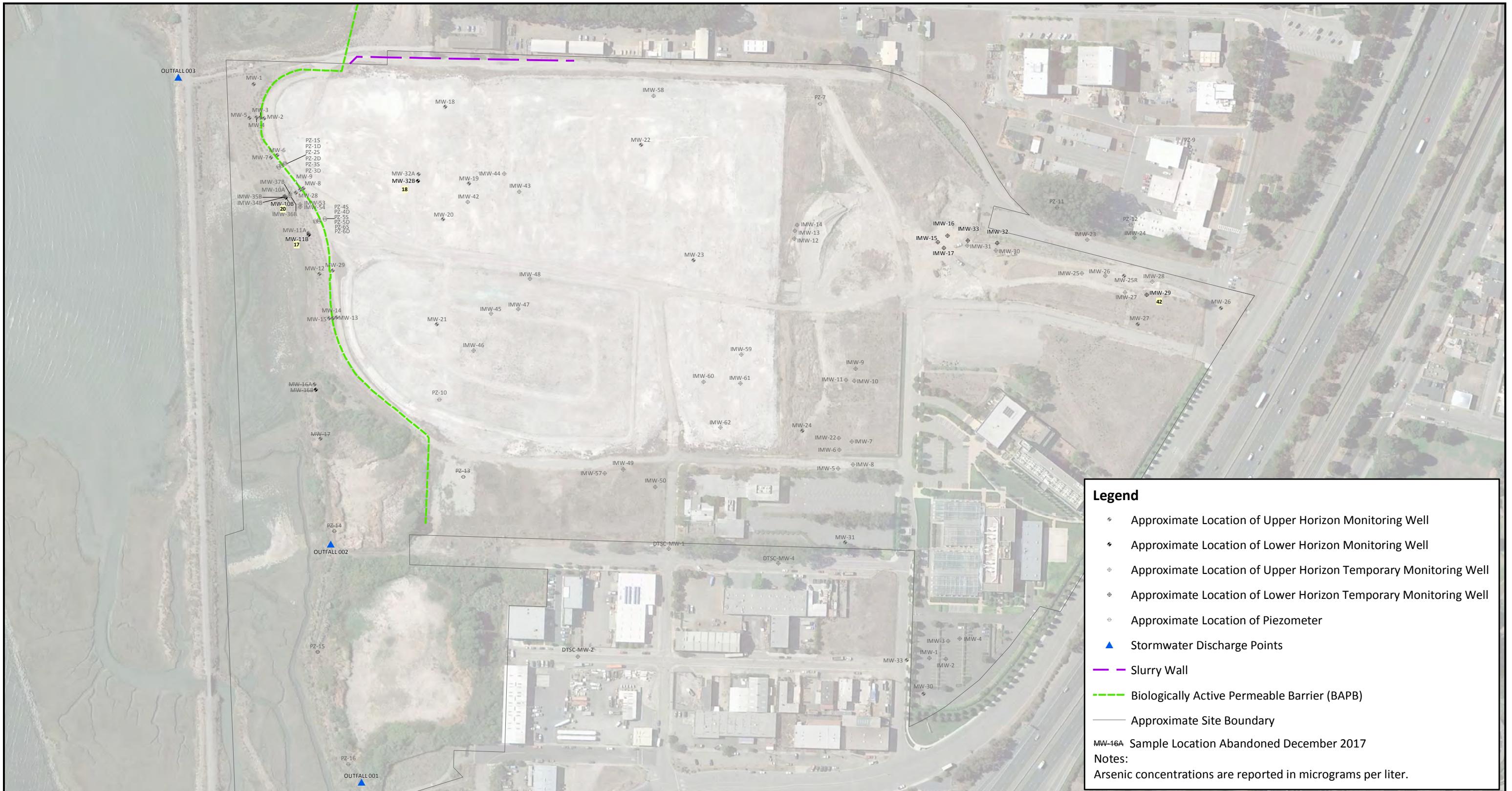


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**Concentration of Arsenic in Upper Horizon Groundwater August 2018**

**FIGURE 15B**



Aerial imagery captured on 10/1/2009 (Google, 2010)

0 125 250 375 500  
1 Inch = 250 Feet

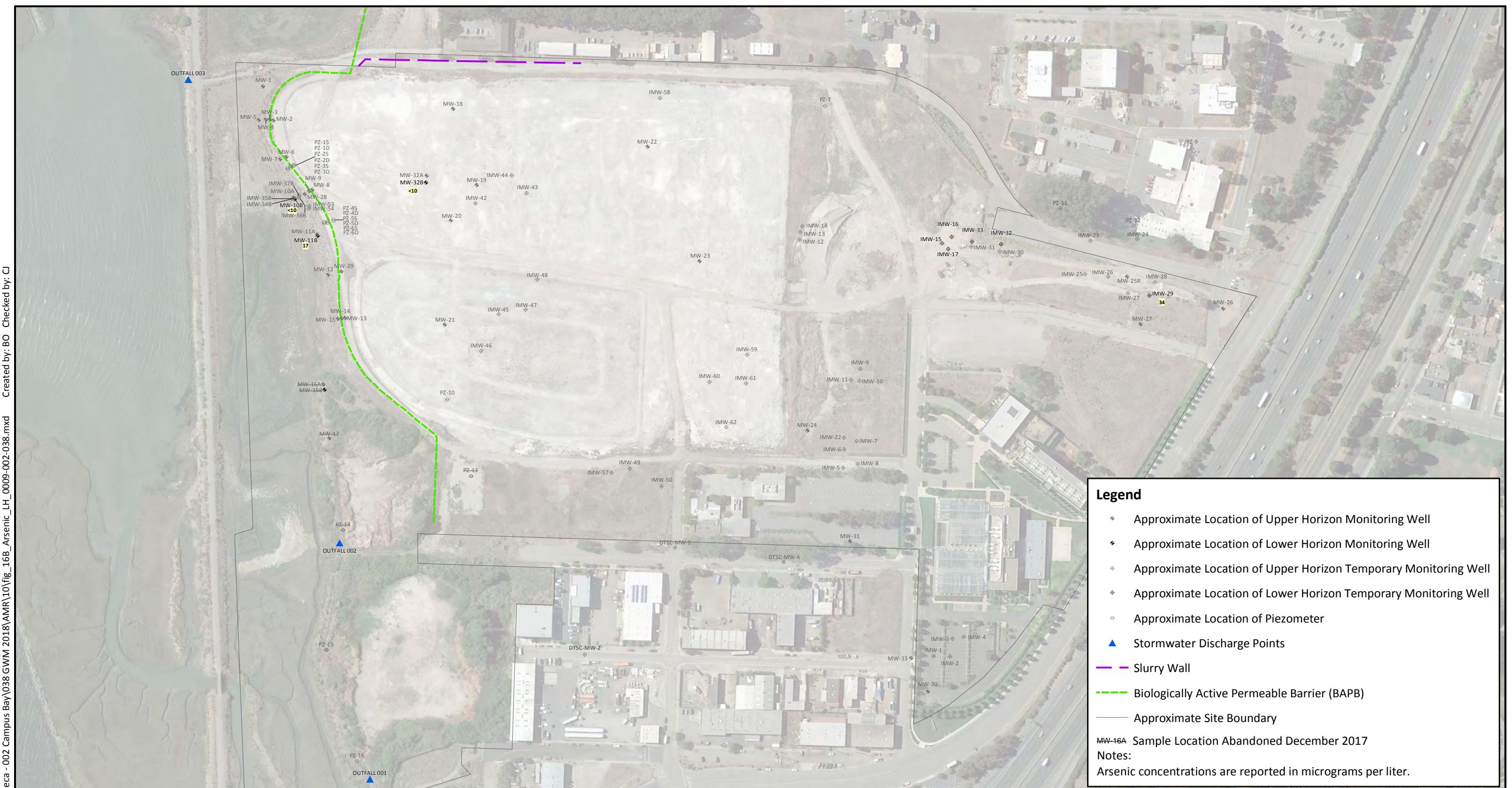


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**Concentration of Arsenic  
in Lower Horizon Groundwater  
April 2018**

**FIGURE 16A**



Aerial imagery captured on 10/1/2009 (Google, 2010)

0 125 250 375 500  
1 Inch = 250 Feet

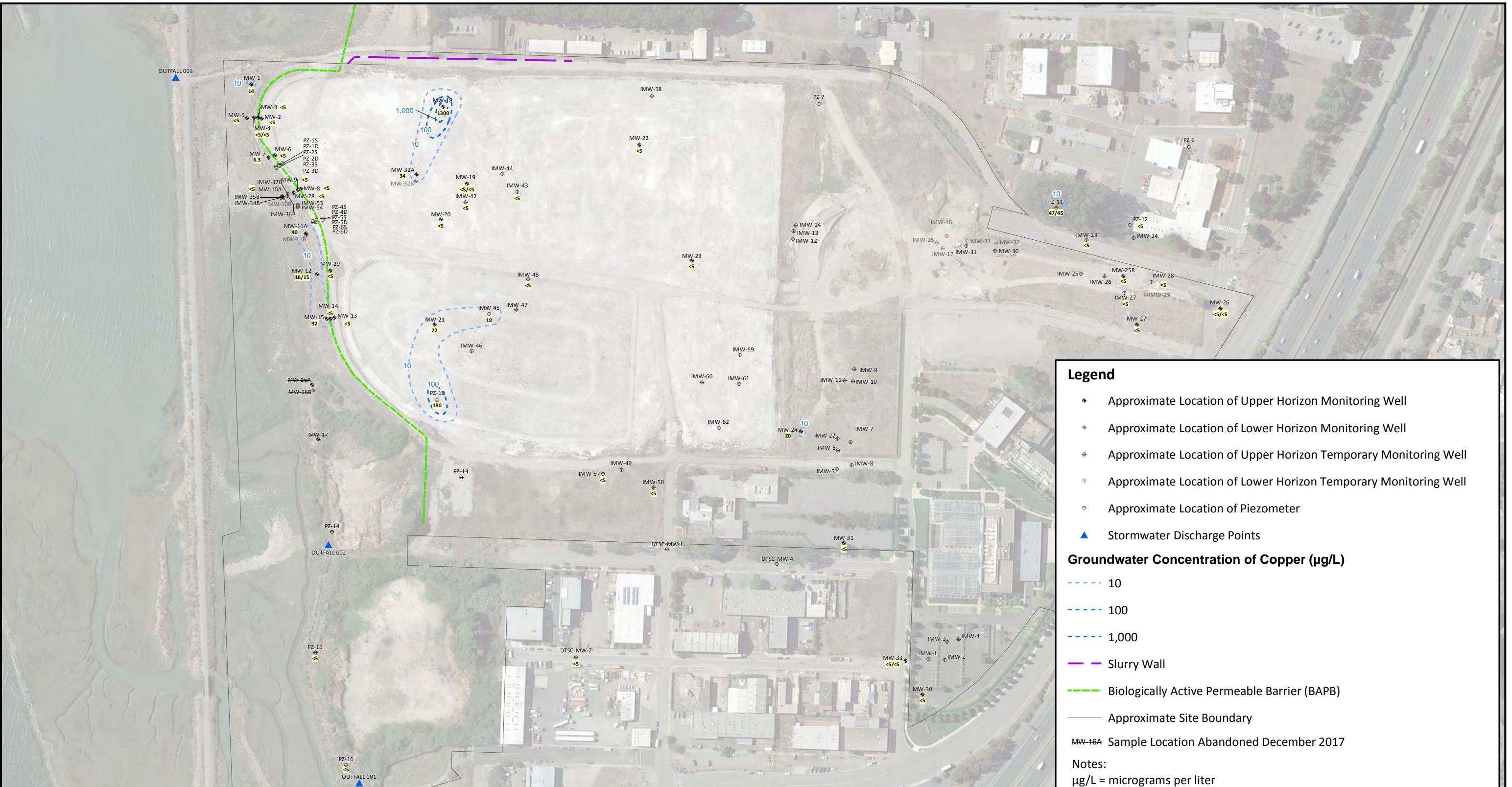


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PROJECT:	Campus Bay Richmond, CA
PROJECT NUMBER:	0009.002.038B

**Concentration of Arsenic  
in Lower Horizon Groundwater  
August 2018**

**FIGURE 16B**



Aerial imagery captured on 10/1/2009 (Google, 2010)

0 125 250 375 500  
Feet  
1 Inch = 250 Feet

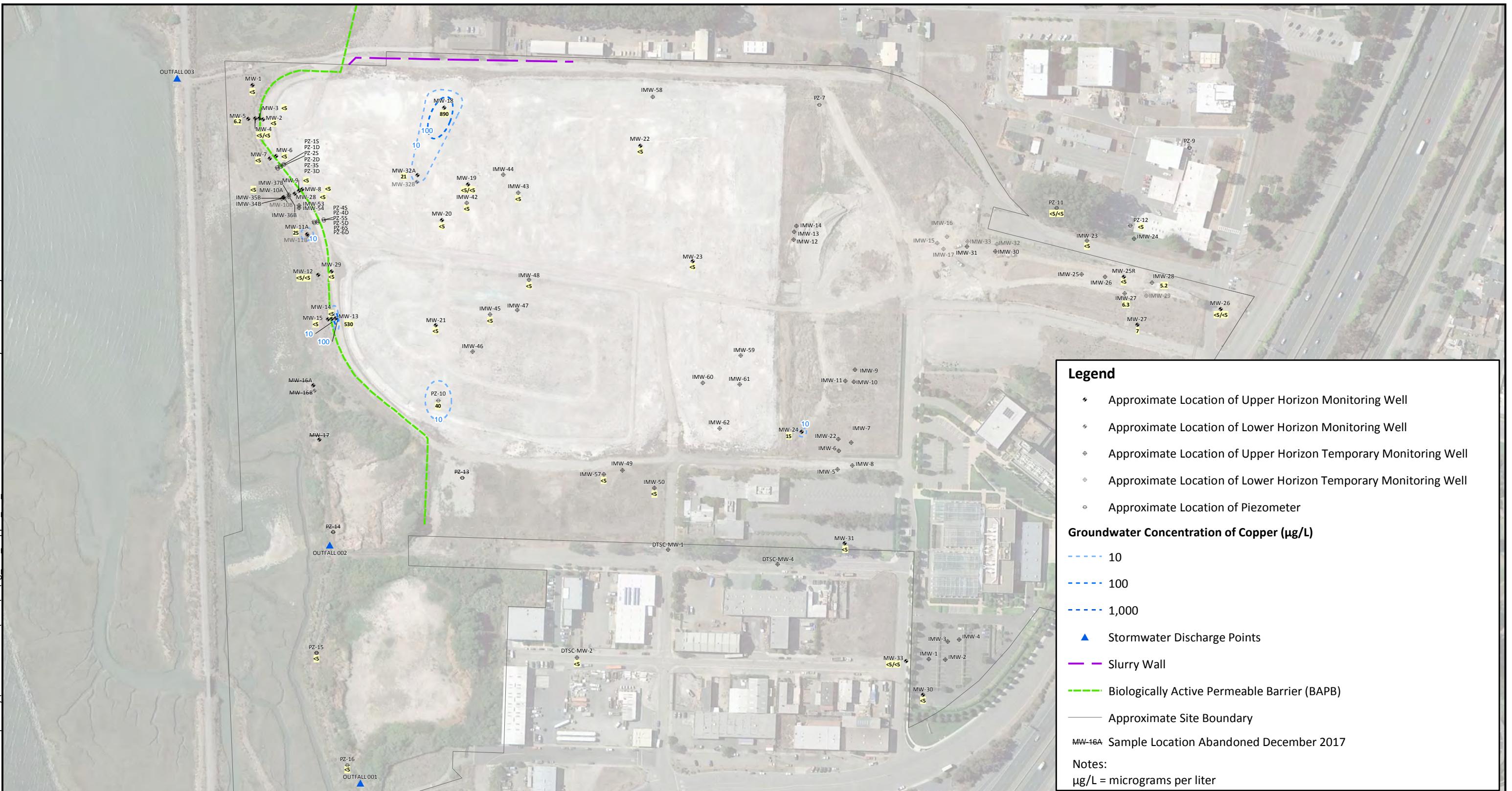


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**Concentration of Copper  
in Upper Horizon Groundwater  
April 2018**

**FIGURE 17A**



Aerial imagery captured on 10/1/2009 (Google, 2010)

0 125 250 375 500  
1 Inch = 250 Feet



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**Concentration of Copper  
in Upper Horizon Groundwater  
August 2018**

**FIGURE 17B**



Aerial imagery captured on 10/1/2009 (Google, 2010)

0 125 250 375 500  
1 Inch = 250 Feet

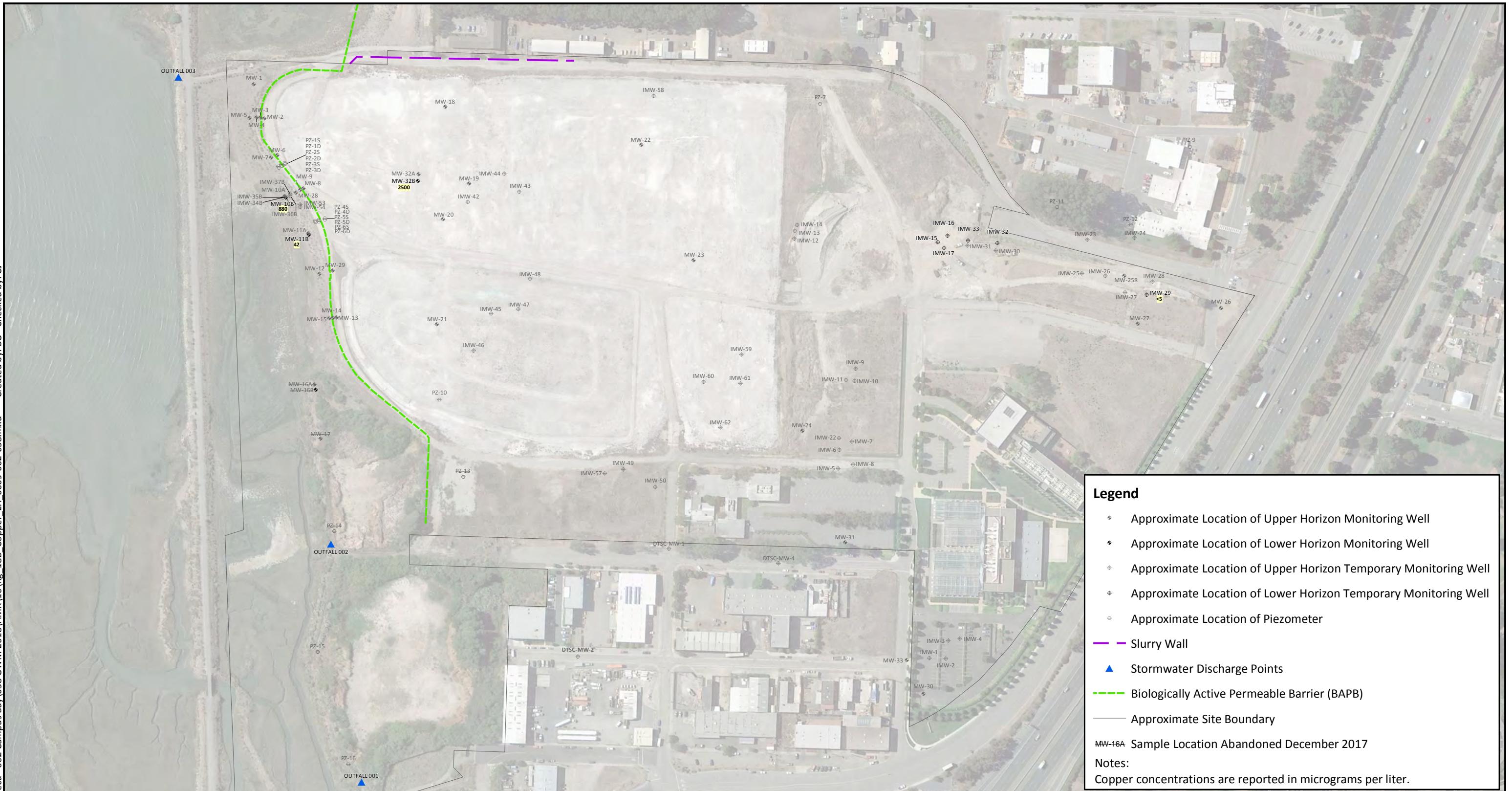


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**Concentration of Copper  
in Lower Horizon Groundwater  
April 2018**

**FIGURE 18A**



Aerial imagery captured on 10/1/2009 (Google, 2010)

0 125 250 375 500  
1 Inch = 250 Feet

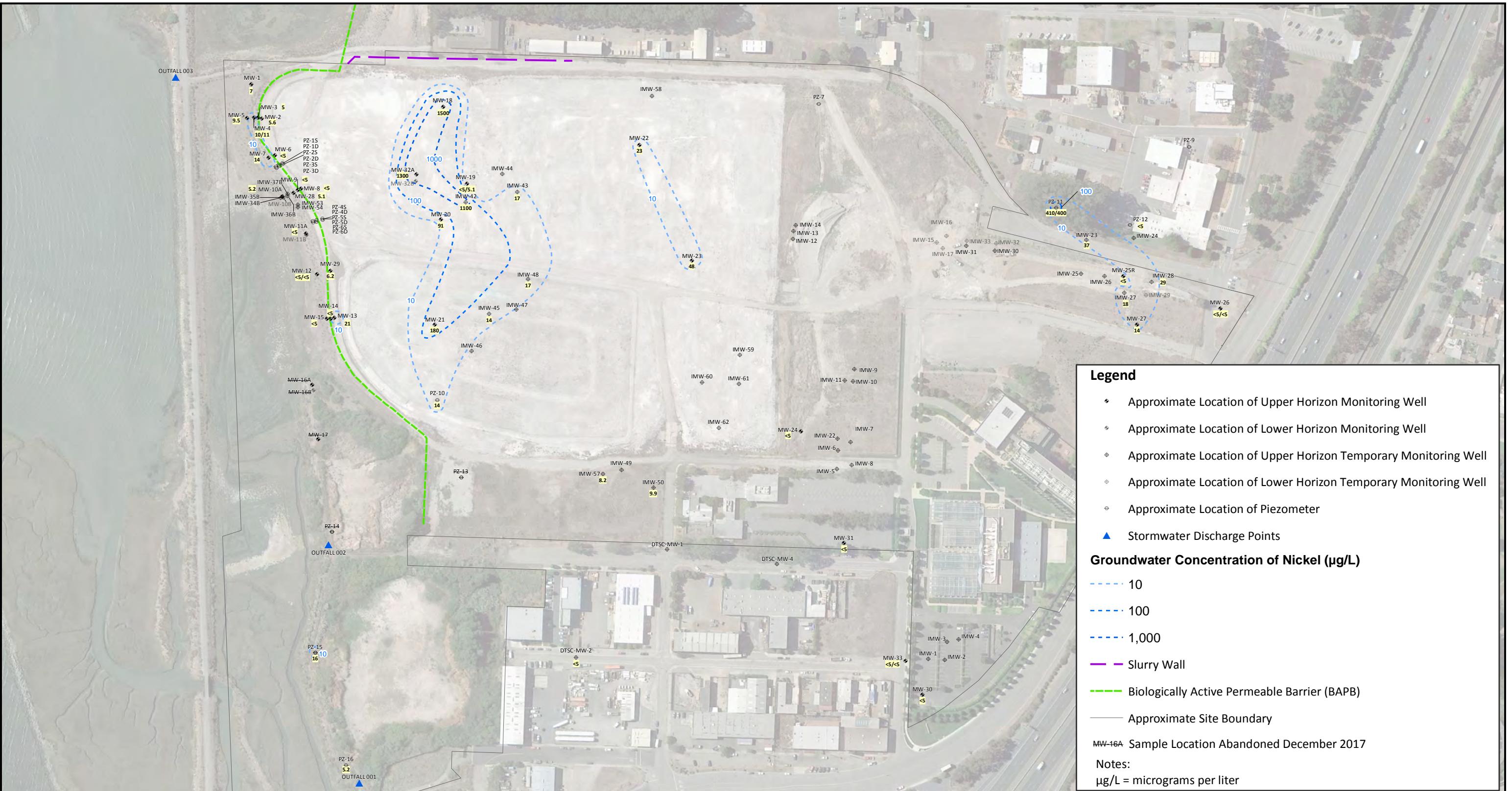


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Concentration of Copper  
in Lower Horizon Groundwater  
August 2018

**FIGURE 18B**



Aerial imagery captured on 10/1/2009 (Google, 2010)

0 125 250 375 500  
1 Inch = 250 Feet

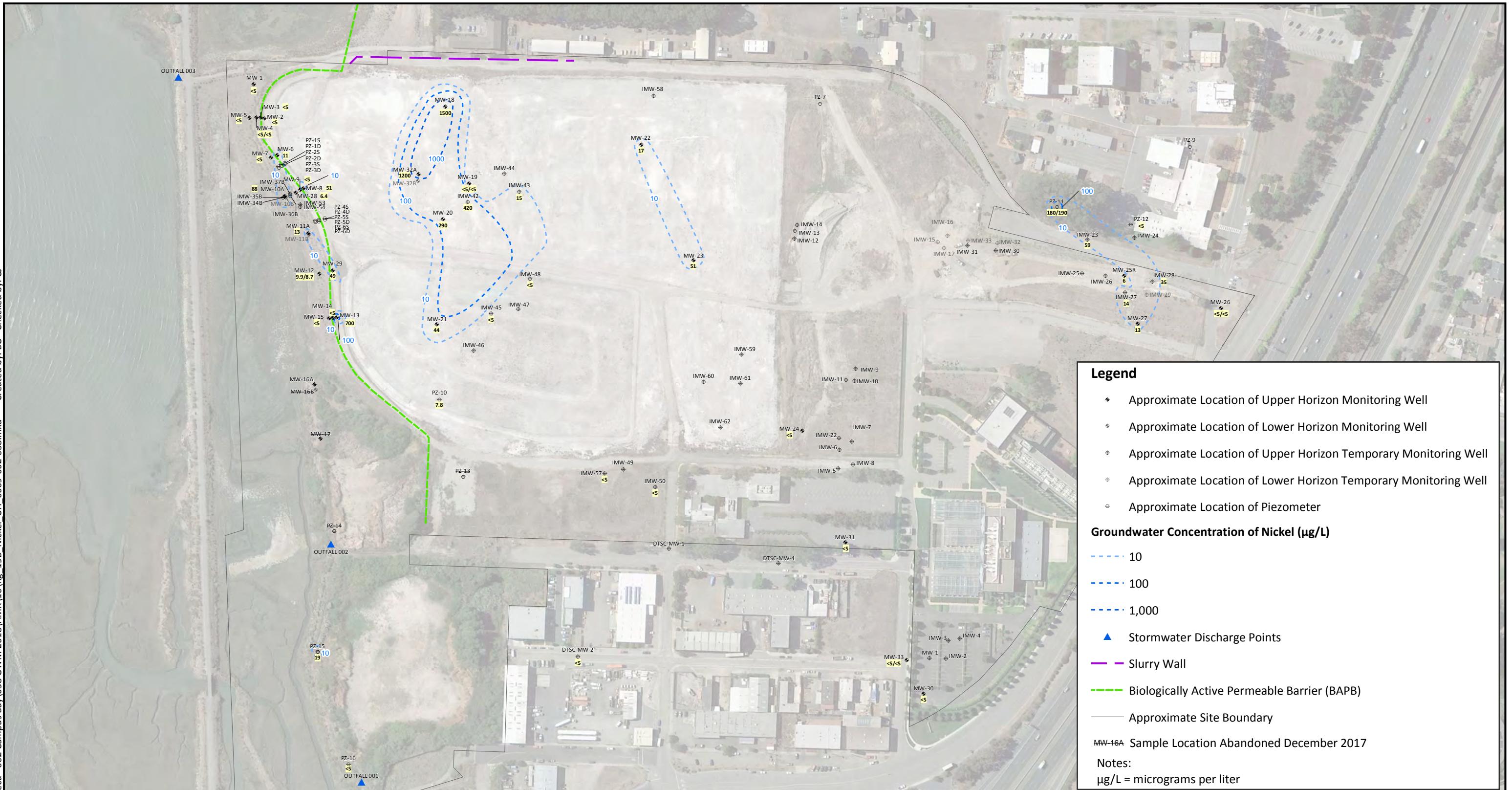


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PROJECT NUMBER:	0009.002.038B

**Concentration of Nickel  
in Upper Horizon Groundwater  
April 2018**

**FIGURE 19A**



Aerial imagery captured on 10/1/2009 (Google, 2010)

0 125 250 375 500  
1 Inch = 250 Feet

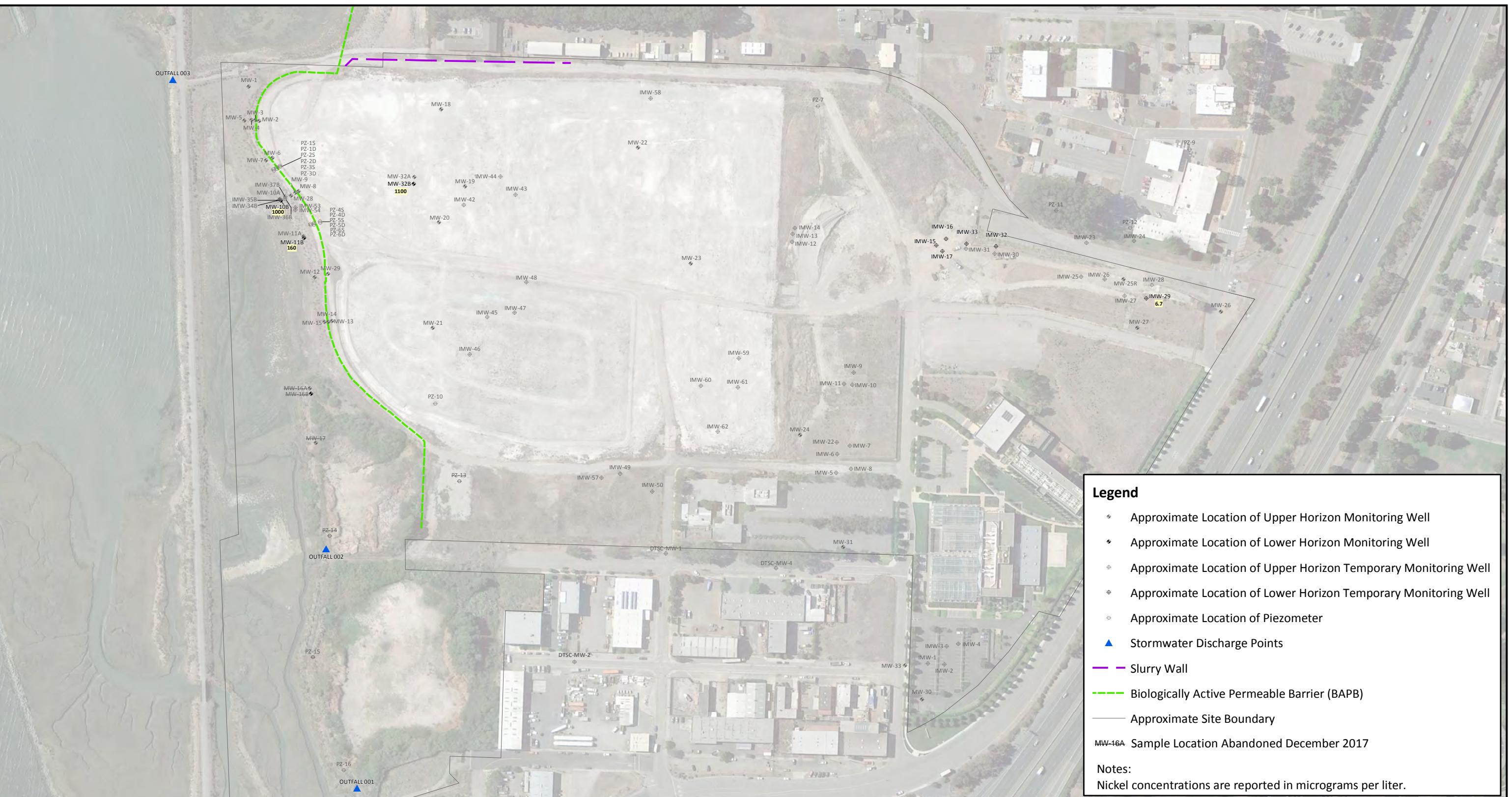


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**Concentration of Nickel  
in Upper Horizon Groundwater  
August 2018**

**FIGURE 19B**



Aerial imagery captured on 10/1/2009 (Google, 2010)

0 125 250 375 500  
1 Inch = 250 Feet

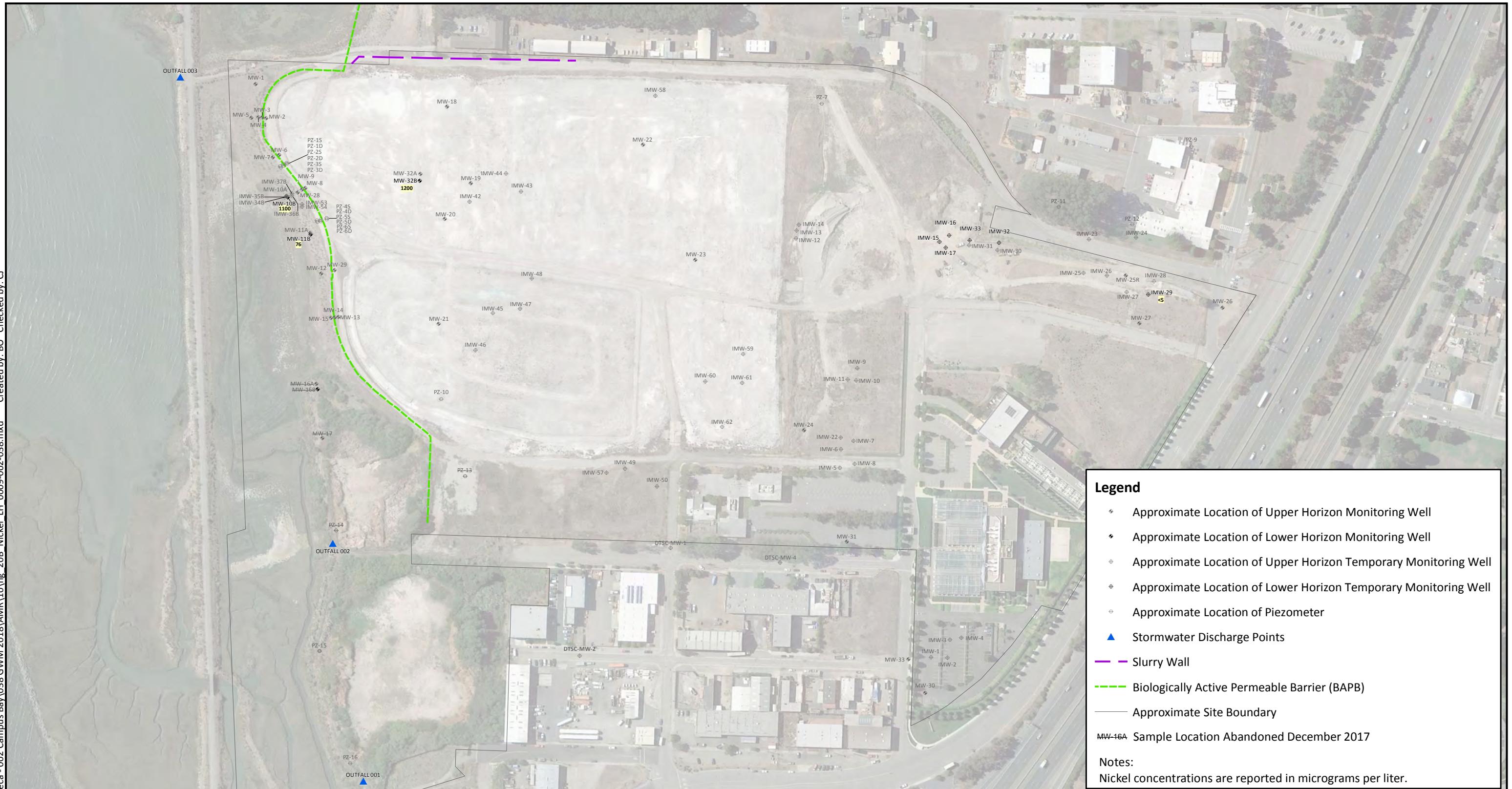


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**Concentration of Nickel  
in Lower Horizon Groundwater  
April 2018**

**FIGURE 20A**



Aerial imagery captured on 10/1/2009 (Google, 2010)

0 125 250 375 500  
Feet  
1 Inch = 250 Feet

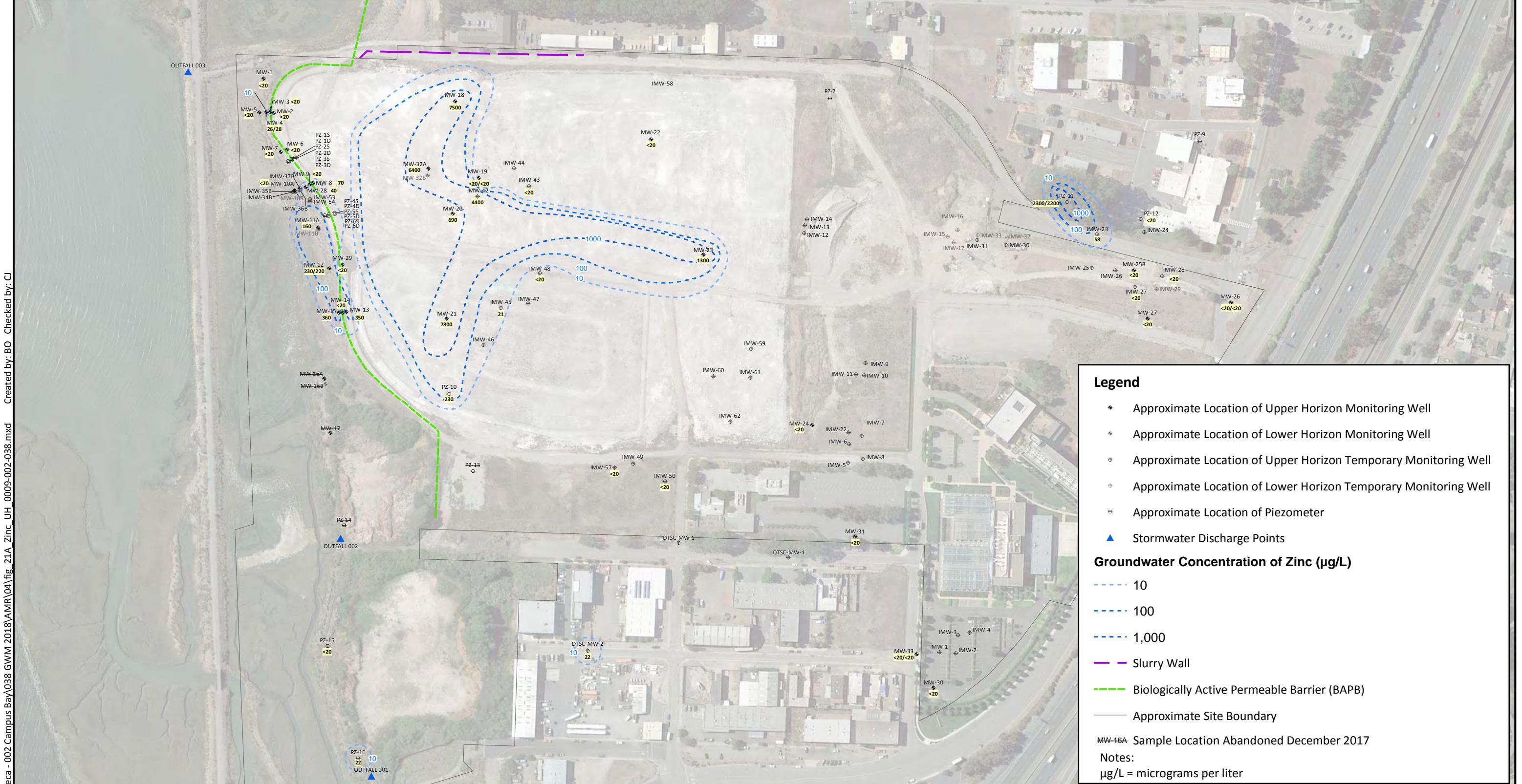


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Concentration of Nickel  
in Lower Horizon Groundwater  
August 2018

FIGURE 20B



Aerial imagery captured on 10/1/2009 (Google, 2010)

0 125 250 375 500  
1 Inch = 250 Feet

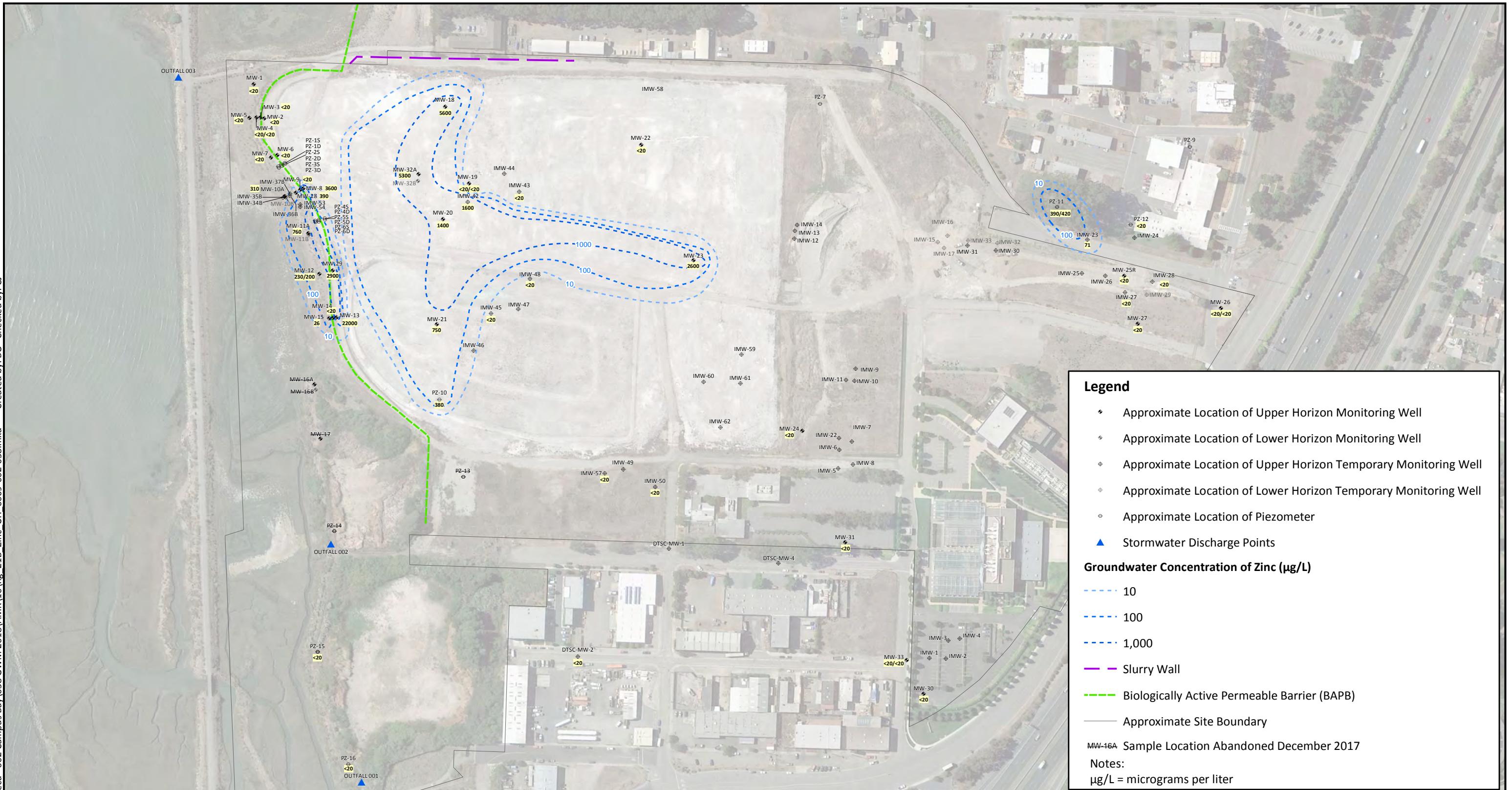


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**Concentration of Zinc  
in Upper Horizon Groundwater  
April 2018**

**FIGURE 21A**



Aerial imagery captured on 10/1/2009 (Google, 2010)

0 125 250 375 500  
1 Inch = 250 Feet

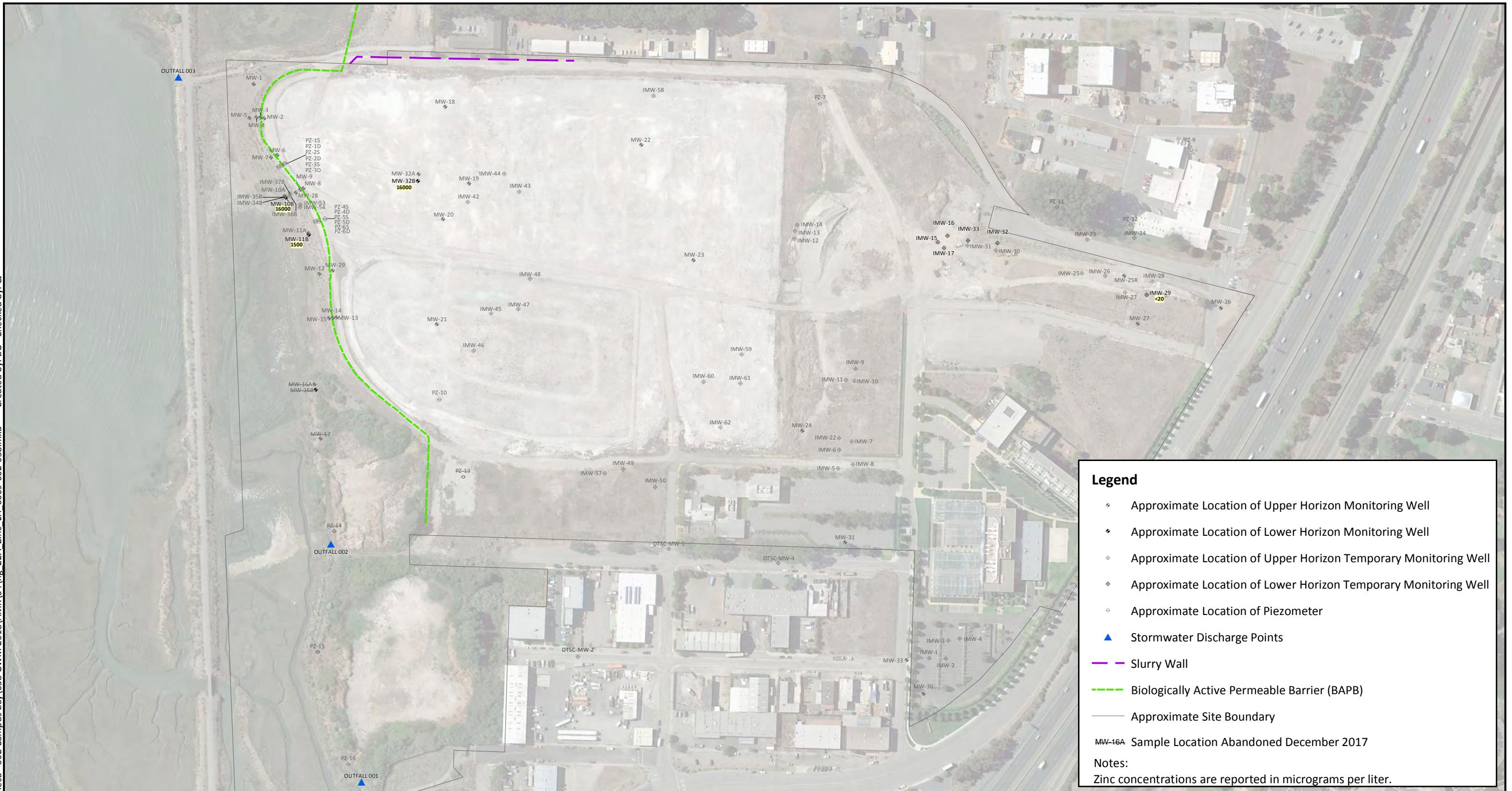


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**Concentration of Zinc  
in Upper Horizon Groundwater  
August 2018**

**FIGURE 21B**



Aerial imagery captured on 10/1/2009 (Google, 2010)

0 125 250 375 500  
1 Inch = 250 Feet

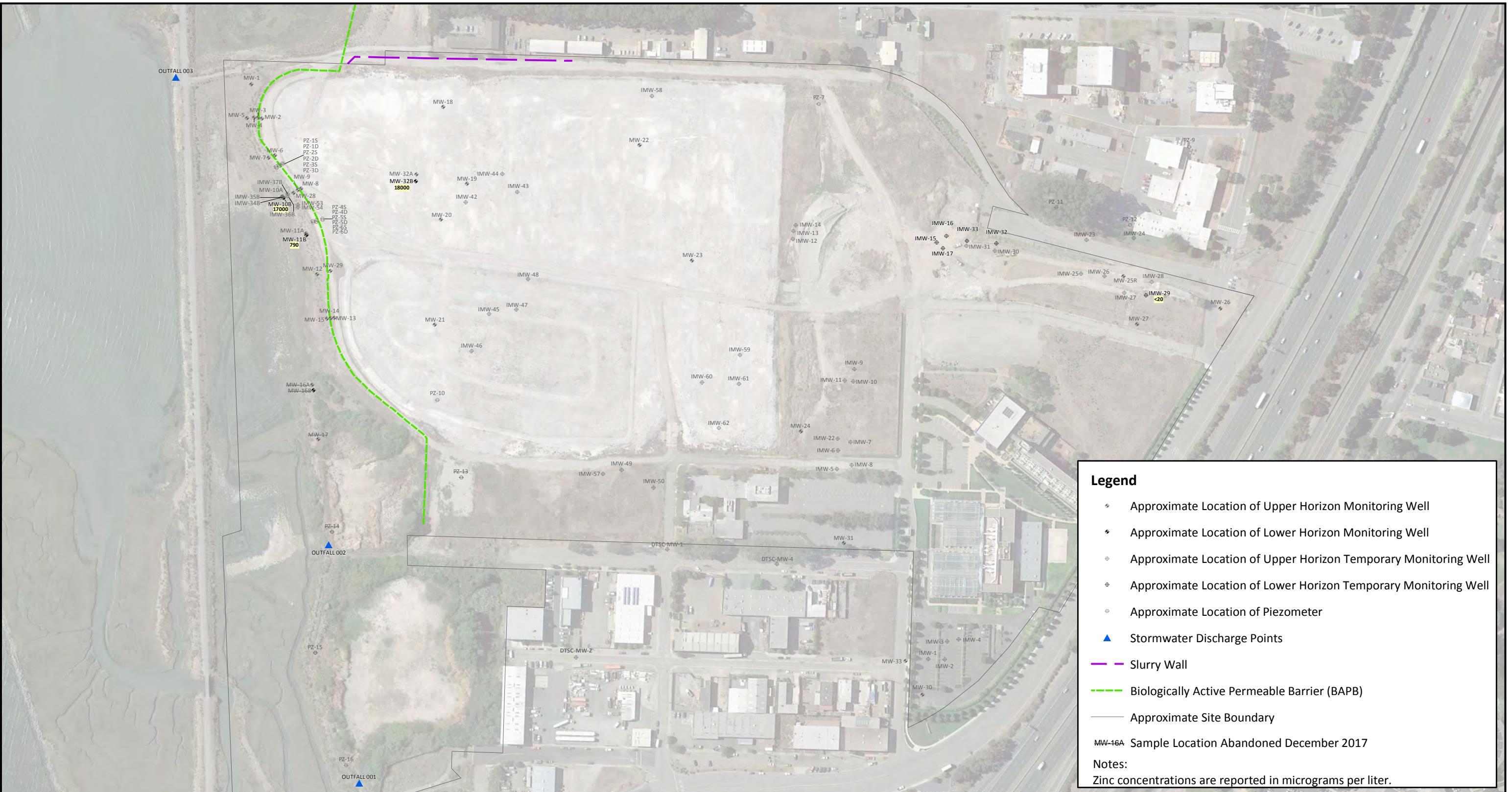


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Concentration of Zinc  
in Lower Horizon Groundwater  
April 2018

**FIGURE 22A**



Aerial imagery captured on 10/1/2009 (Google, 2010)

0 125 250 375 500  
1 Inch = 250 Feet



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**Concentration of Zinc  
in Lower Horizon Groundwater  
August 2018**

**FIGURE 22B**