



December 22, 2016

Mr. Morgan Muir  
6639 Forestland Way  
Oakland, CA 94611  
(Sent via electronic mail to: [morganmuir64@gmail.com](mailto:morganmuir64@gmail.com))

Subject: Closure Transmittal; Site Cleanup Program (SCP) Case RO0003177 and Geotracker Global ID T10000007146, Tidewater Subsite; 4723 Tidewater Avenue, Oakland, CA 94601

Dear Mr. Muir:

This letter confirms the completion of site investigation and remedial actions for the soil and groundwater investigation at the above referenced site. We are also transmitting the enclosed case closure summary. These documents confirm the completion of the investigation and cleanup of the reported releases at the subject site with the provision that the information provided to this agency was accurate and representative of existing conditions. The subject Site Cleanup Program (SCP) case is closed. This case closure letter and the case closure summary can also be viewed on the State Water Resources Control Board's Geotracker website (<http://geotracker.waterboards.ca.gov>) and the Alameda County Environmental Health website (<http://www.acgov.org/aceh/index.htm>).

#### Site Management Requirements

Case closure is granted for the current commercial land use.

Due to residual subsurface contamination remaining at the site, if any redevelopment occurs, or if a change in land use to residential, or other conservative land use, Alameda County Department of Environmental Health (ACDEH) must be notified as required by Government Code Section 65850.2.

Excavation or construction activities in areas of residual contamination require planning and implementation of appropriate health and safety procedures by the responsible party prior to and during excavation and construction activities.

This site is to be entered into the City of Oakland Permit Tracking System due to the residual contamination on site.

If you have any questions, please call Mark Detterman at (510) 567-6876. Thank you.

Sincerely,

A handwritten signature in blue ink that reads "Dilan Roe".

Dilan Roe, P.E.  
Chief, Land Water Division

Enclosures: Case Closure Summary

cc: Cheryl Prowell, San Francisco Bay Regional Water Quality Control Board, 1515 Clay Street, Suite 1400, Oakland, CA 94612, (Sent via electronic mail to: [cheryl.prowell@waterboards.ca.gov](mailto:cheryl.prowell@waterboards.ca.gov))

Gopakumar Nair, City of Oakland Public Works, 250 Frank H. Ogawa Plaza, Suite 4314, Oakland, CA 94612 (Sent via electronic mail to: [gnair@oaklandnet.com](mailto:gnair@oaklandnet.com))

Mr. Morgan Muir  
RO0003177  
December 22, 2016, Page 2

Mark Johannes Arniola, City of Oakland Public Works, 250 Frank H. Ogawa Plaza, Suite 5301, Oakland, CA 94612 (Sent via electronic mail to: [marniola@oaklandnet.com](mailto:marniola@oaklandnet.com))

Dilan Roe, ACDEH, (Sent via electronic mail to: [dilan.roe@acgov.org](mailto:dilan.roe@acgov.org))

Paresh Khatri, ACDEH; (Sent via electronic mail to: [paresh.khatri@acgov.org](mailto:paresh.khatri@acgov.org))

Mark Detterman, ACDEH, (Sent via electronic mail to: [mark.detterman@acgov.org](mailto:mark.detterman@acgov.org))

Electronic File; GeoTracker

# Case Closure Summary Form

**Agency Information**

Date: December 22, 2016

Alameda County Department of Environmental Health	Address: 1131 Harbor Bay Parkway
City/State/Zip: Alameda, CA 94502-6577	Phone: (510) 567-6876
Case Worker: Mark Detterman	Title: Senior Hazardous Materials Specialist

**Case Information**

Facility Name: Tidewater Subsite		
Facility Address: 4723 Tidewater Avenue, Oakland, CA 94601		
Regional Water Board LUSTIS Case No.: ----	Former ACDEH Case No.: ----	Current SCP Case No.: RO0003177
Unauthorized Release Form Filing Date: ----	State Water Board GeoTracker Global ID: T10000007146	
Assessor Parcel Number: 34-2300-19	Current Land Use: Commercial	
Responsible Party(s):	Address:	Phone:
Morgan Muir	6639 Forestland Way Oakland, CA 94611	----
Tidewater 2004 Real Estate Holdings LLC	4723 Tidewater Avenue Oakland, CA 94601	----
TRIN 2015 Real Estate Inc.	4723 Tidewater Avenue Oakland, CA 94601	----

**Tank Information**

Tank No.	Size (gal)	Contents	Closed in-Place / Removed	Date
---	----	----	----	----

# Case Closure Summary Form

## Site Closure Evaluation Summary

This case was opened in 2015 to address Total Petroleum Hydrocarbons as motor oil (TPHmo) contamination along an abandoned railroad spur located on the property. The contamination was discovered in a soil sampling event in June 1988 for a proposed redevelopment project (former case RO0002664) which documented historic rail spur contamination to be present in near surface soil at the site. Subsequent to sampling event, the proposed redevelopment site was subdivided into six smaller parcels and each redeveloped (34-2300-19, 34-2300-20, 34-2300-21, 34-2300-22, 34-2300-23, and 34-2300-24). This case (RO0003177 Tidewater Subsite, Global Id T10000007146) was opened subsequent to the parcel split to address the TPHmo contamination on APN 34-2300-19. Case number RO0002664 for the remaining five parcels was closed without further investigation.

This parcel is currently developed as a commercial property on fill marshlands along the bay margin. The subject parcel is entirely capped with pavement and a building, with a landscaped area in the eastern third of the parcel in the location of the former rail spur alignment.

Potential source areas associated with the former rail tracks were investigated and analyzed for petroleum hydrocarbons, volatile organic compounds (VOC; full analytical suite), semi-volatile organic compounds (SVOC), polychlorinated biphenyls (PCBs), and metals in soil and groundwater. Downgradient soil and grab groundwater samples were also collected.

The analytical results detected TPHmo, TPH as diesel, and metals in soil, and dissolved metals in groundwater. Although the site is not documented to have contained an underground storage tank (UST), this case has been evaluated for closure consistent with the State Water Board's Low-Threat Underground Storage Tank Closure Policy (LTCP) for petroleum related contaminants. The LTCP states that it is appropriate to apply the policy to other petroleum releases. Closure of the case under the LTCP for petroleum compounds appears appropriate with a commercial land use restriction to manage limited residual petroleum contamination at the site.

The non-petroleum contamination has been evaluated consistent with criteria described in the Regional Water Board's *Environmental Screening Level Tables*, in conjunction with *User's Guide: Derivation and Application of Environmental Screening Levels*, revised in March 2016.

Refer to Attachments 1 through 5 for analysis details.

## Site Management Requirements

Case closure is granted for the current commercial land use.

Due to limited residual subsurface contamination remaining at the site, if any redevelopment occurs, or if a change in land use to residential, or other conservative land use, Alameda County Department of Environmental Health (ACDEH) must be notified as required by Government Code Section 65850.2.

Excavation or construction activities in areas of residual contamination require planning and implementation of appropriate health and safety procedures by the responsible party prior to and during excavation and construction activities.

This site is to be entered into the City of Oakland Permit Tracking System due to the residual contamination on site.

## Institutional Controls

Not Applicable

## Engineering Controls



Not Applicable

# Case Closure Summary Form

## Case Closure Public Notification Information

Agency Type	Agency Name	Contact Information
Regional Water Board	San Francisco Bay	Cheryl Prowell 1515 Clay Street, Suite 1400, Oakland, CA 94612
Municipal and County Water Districts	East Bay Municipal Utility District	Chandra Johannesson P.O. Box 24055, MS 702 Oakland, CA 94623
Water Replenishment Districts	Not Applicable	----
Groundwater Basin Managers	Not Applicable	----
Planning Agency	City of Oakland	City of Oakland Planning & Building Division 250 Frank H. Ogawa Plaza, Suite 2114 Oakland, CA 94612
Public Works Agency	City of Oakland	City of Oakland Public Works Environmental Services 250 Frank H. Ogawa Plaza, Suite 5301 Oakland, CA 94612
Owners and Occupants of Property and Adjacent Parcels	See List in Attachment 7	----

## Local Agency Signatures

Mark Detterman	Case Worker: Senior Hazardous Materials Specialist
Signature: 	Date: 12/22/2016
Dilan Roe	Title: Chief, Land Water Division
Signature: 	Date: 12/22/2016

This Case Closure Summary along with the Case Closure Transmittal letter and the Remedial Action Completion Certification provides documentation of the case closure. This closure approval is based upon the available information and with the provision that the information provided to this agency was accurate and representative of site conditions. The Conceptual Site Model may not contain all available data. Additional information on the case can be viewed in the online case file. The entire case file can be viewed over the Internet on the Alameda County Environmental Health (ACDEH) website (<http://www.acgov.org/aceh/lop/ust.htm>) or the State of California Water Resources Control Board GeoTracker website (<http://geotracker.waterboards.ca.gov>). Not all historic documents for the fuel leak case may be available on GeoTracker. A more complete historic case file for this site is located on the ACDEH website.

**Geotracker Conceptual Site Model (Attachment 1, 1 page)**

**Groundwater Evaluation and Data (Attachment 2, 37 pages)**

**Vapor Intrusion Evaluation and Data (Attachment 3, 3 pages)**

**Soil Evaluation and Data (Attachment 4, 51 pages)**

**Responsible Party Information (Attachment 5, 2 pages)**

**Case Closure Public Notification Information (Attachment 6, 2 pgs)**

# ATTACHMENT 1

TIDEWATER SUBSITE (T10000007146) - MAP THIS SITE PUBLIC PAGE

4723 TIDEWATER AVENUE  
 OAKLAND, CA 94601  
 ALAMEDA COUNTY  
 CLEANUP PROGRAM SITE  
 STATUS: COMPLETED - CASE CLOSED

CLEANUP OVERSIGHT AGENCIES  
 ALAMEDA COUNTY LOP (LEAD) - CASE # R00003177 - MARK DETTERMAN  
 SAN FRANCISCO BAY RWQCB (REGION 2) - Regional Water Board

THERE ARE 1 OTHER CASES ASSOCIATED WITH THIS CASE - SHOW

THIS PROJECT WAS LAST MODIFIED BY MARK DETTERMAN ON 12/22/2016 5:13:21 PM - HISTORY

CSM REPORT - VIEW PUBLIC NOTICING VERSION OF THIS REPORT

UST CLEANUP FUND CLAIM INFORMATION (DATA PULLED FROM SCUFIS)

CLAIM NO	PRIORITY	CLAIMANT	SITE ADDRESS	AMT REIMB TO DATE	AGE OF LOC	IMPACTED WELLS?	REVIEW NUM	REVIEWER	FUND RECOMMENDATION	TO OVERSIGHT DATE	TO CLAIMANT DATE
----------	----------	----------	--------------	-------------------	------------	-----------------	------------	----------	---------------------	-------------------	------------------

PROJECT INFORMATION (DATA PULLED FROM GEOTRACKER) - MAP THIS SITE

SITE NAME / ADDRESS	STATUS	STATUS DATE	RELEASE REPORT DATE	AGE OF CASE	CLEANUP OVERSIGHT AGENCIES
TIDEWATER SUBSITE (Global ID: T10000007146) 4723 TIDEWATER AVENUE OAKLAND, CA 94601	Completed - Case Closed	12/20/2016	1/29/1990	27	ALAMEDA COUNTY LOP (LEAD) - CASE #: R00003177 CASEWORKER: MARK DETTERMAN - SUPERVISOR: DILAN ROE SAN FRANCISCO BAY RWQCB (REGION 2) CASEWORKER: Regional Water Board - SUPERVISOR: NONE SPECIFIED

**STAFF NOTES (INTERNAL)**  
 Not all historic documents for the fuel leak case may be available on GeoTracker. A complete case file for this site is located on the Alameda County Department of Environmental Health website at: <http://ehgis.acgov.org/dehpublic/dehpublic.jsp>.

**SITE HISTORY**  
 Not all historic documents for the fuel leak case may be available on GeoTracker. A complete case file for this site is located on the Alameda County Department Environmental Health website at: <http://ehgis.acgov.org/dehpublic/dehpublic.jsp>.

This case was opened in 2015 to address Total Petroleum Hydrocarbons as motor oil (TPHmo) contamination along an abandoned railroad spur located on the property. The contamination was discovered in a soil sampling event in June 1988 for a proposed redevelopment project (former case R00002664) which documented historic rail spur contamination to be present in near surface soil at the site. Subsequent to sampling event, the proposed redevelopment site was subdivided into six smaller parcels and each redeveloped (34-2300-19, 34-2300-20, 34-2300-21, 34-2300-22, 34-2300-23, and 34-2300-24. This case (R00003177 Tidewater Subsite, Global Id T10000007146) was opened subsequent to the parcel split to address the TPHmo contamination on APN 34-2300-19. Case number R00002664 for the remaining five parcels was closed without further investigation.

This parcel is currently developed as a commercial property on fill marshlands along the bay margin. The subject parcel is entirely capped with pavement and a building, with a landscaped area in the eastern third of the parcel in the location of the former rail spur alignment.

Potential source areas associated with the former rail tracks were investigated and analyzed for petroleum hydrocarbons, volatile organic compounds (VOC; full analytical suite), semi-volatile organic compounds (SVOC), polychlorinated biphenyls (PCBs), and metals in soil and groundwater. Downgradient soil and grab groundwater samples were also collected.

The analytical results detected TPHmo, TPH as diesel, and metals in soil, and dissolved metals in groundwater. Although the site is not documented to have contained an underground storage tank (UST), this case has been evaluated for closure consistent with the State Water Board's Low-Threat Underground Storage Tank Closure Policy (LTCP) for petroleum related contaminants. The LTCP states that it is appropriate to apply the policy to other petroleum releases. Closure of the case under the LTCP for petroleum compounds appears appropriate with a commercial land use restriction to manage limited residual petroleum contamination at the site.

The non-petroleum contamination has been evaluated consistent with criteria described in the Regional Water Board's Environmental Screening Level Tables, in conjunction with User's Guide: Derivation and Application of Environmental Screening Levels, revised in March 2016.

Case closure is granted for the current commercial land use.

Due to limited residual subsurface contamination remaining at the site, if any redevelopment occurs, or if a change in land use to residential, or other conservative land use, Alameda County Department of Environmental Health (ACDEH) must be notified as required by Government Code Section 65850.2.

Excavation or construction activities in areas of residual contamination require planning and implementation of appropriate health and safety procedures by the responsible party prior to and during excavation and construction activities.

This site is to be entered into the City of Oakland Permit Tracking System due to the residual contamination on site.

**RESPONSIBLE PARTIES**

NAME	ORGANIZATION	ADDRESS	CITY	EMAIL
MORGAN MUIR	TIDEWATER 2004 REAL ESTATE HOLDINGS LLC	4723 TIDEWATER AVENUE	OAKLAND	

**CLEANUP ACTION INFO**  
 NO CLEANUP ACTIONS HAVE BEEN REPORTED

RISK INFORMATION [VIEW CASE REVIEWS](#)

CONTAMINANTS OF CONCERN	CURRENT LAND USE	BENEFICIAL USE	DISCHARGE SOURCE	DATE REPORTED	STOP METHOD	NEARBY / IMPACTED WELLS
Total Petroleum Hydrocarbons (TPH)	Commercial		Other	1/29/1990		0

FREE PRODUCT	OTHER CONSTITUENTS	NAME OF WATER SYSTEM	LAST REGULATORY ACTIVITY	LAST ESI UPLOAD	LAST EDF UPLOAD	EXPECTED CLOSURE DATE	MOST RECENT CLOSURE REQUEST
			10/30/2015	12/7/2015	10/30/2015		

**CDPH WELLS WITHIN 1500 FEET OF THIS SITE**  
 NONE

**CALCULATED FIELDS (BASED ON LATITUDE / LONGITUDE)**

APN	GW BASIN NAME	WATERSHED NAME
034 230001900	Santa Clara Valley - East Bay Plain (2-9.04)	South Bay - East Bay Cities (204.20)

**COUNTY**  
 Alameda

**PUBLIC WATER SYSTEM(S)**  
 • EAST BAY MUD - 375 ELEVENTH STREET, OAKLAND, CA 94607

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN GROUNDWATER - [HIDE](#) [VIEW ESI SUBMITTALS](#)

FIELD PT NAME	DATE	TPHs	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	MTBE	TBA
B-2	7/29/2015	OTHER	ND	ND	ND	OTHER	ND	ND
B-4	7/29/2015	OTHER	ND	ND	ND	OTHER	ND	11 UG/L
B-5	7/29/2015	OTHER	ND	ND	ND	OTHER	ND	ND
B-6	7/29/2015	OTHER	ND	ND	ND	OTHER	ND	ND

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN SOIL - [HIDE](#) [VIEW ESI SUBMITTALS](#)

FIELD PT NAME	DATE	TPHs	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	MTBE	TBA
B-1	7/29/2015		ND	ND	ND		ND	ND
B-5	7/29/2015		ND	ND	ND		ND	ND
B-6	7/29/2015		ND	ND	ND		ND	ND

**MOST RECENT GEO\_WELL DATA - [HIDE](#) [VIEW ESI SUBMITTALS](#)**

NO GEO\_WELL DATA HAS BEEN SUBMITTED TO GEOTRACKER ESI FOR THIS SITE

# ATTACHMENT 2



## Attachment 2 – Groundwater Evaluation and Data

LTCP GROUNDWATER SPECIFIC CRITERIA - PETROLEUM						
Closure Scenario						
___ Site has not affected groundwater; <u>X</u> Scenario 1; ___ Scenario 2; ___ Scenario 3; ___ Scenario 4; ___ Scenario 5; ___ This case should be closed in spite of not meeting the groundwater specific media criteria						
Shading indicates Site Specific Data and Bold Text indicates Evaluation Criteria						
Site Specific Data		Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5
Plume Length	< 100 feet	<b>&lt;100 feet</b>	<250 feet	<1,000 feet	<1,000 feet	The site does not meet scenarios 1 through 4; however, a determination been made that under current and reasonably expected future scenarios, the contaminant plume poses a low threat to human health and safety and to the environment and water quality objectives will be achieved within a reasonable time frame.
Free Product	No free product	<b>No free product</b>	No free product	Removed to maximum extent practicable	No free product	
Plume Stable or Decreasing	Stable or decreasing	<b>Stable or decreasing</b>	Stable or decreasing	Stable or decreasing for minimum of 5 years	Stable or decreasing	
Distance to Nearest Water Supply Well (from plume boundary)	> 1,320 feet (ACPWA) >2,000 (GAMA)	<b>&gt;250 feet</b>	>1,000 feet	>1,000 feet	>1,000 feet	
Distance to Nearest Surface Water Body (from plume boundary)	Downgradient: 1,220 feet Cross Gradient: 830 feet Upgradient: 1,890 feet	<b>&gt;250 feet</b>	>1,000 feet	>1,000 feet	>1,000 feet	
Benzene Concentrations (µg/l)	Historic Max: < 0.5 Current Max: < 0.5	<b>No criteria</b>	<3,000	<1,000	<1,000	
MTBE Concentrations (µg/l)	Historic Max: < 1.0 Current Max: < 1.0	<b>No criteria</b>	<1,000	<1,000	<1,000	
Property Owner Willing to Accept a Land Use Restriction	Not applicable	<b>Not applicable</b>	Not applicable	Yes	Not applicable	

Notes: ACPWA = Alameda County Public Works Agency  
 GAMA = Groundwater Ambient Monitoring Assessment (GeoTracker)

## Attachment 2 – Groundwater Evaluation and Data

Analysis	
<b>Plume Length</b>	The site can be considered to be a soils only case for petroleum compounds. No detectable concentrations of petroleum hydrocarbons were detected in grab groundwater samples collected at the site; thus potential contaminants were defined to water quality objectives. All hydrocarbon detection reporting limits were at or below the February 2016 Environmental Screening Levels (ESLs) as promulgated by the San Francisco Bay Regional Water Quality Control Board (RWQCB). (The contaminant plume that exceeds water quality objectives is less than 100 feet.)
<b>Free Product</b>	Not observed at site.
<b>Plume Stability</b>	Not applicable. The site can be considered to be a soils only case for petroleum compounds. No detectable concentrations of petroleum hydrocarbons, at standard limits or reporting, were documented in grab groundwater samples. All hydrocarbon detection reporting limits were at or below the February 2016 ESLs.
<b>Water Supply Wells</b>	An Alameda County Public Works Agency (ACPWA) well survey indicates no public water supply wells, irrigation wells within 1,320 feet of the site. The closest well at 1,460 feet, is located to the north and is considered to be upgradient of any potential, undocumented, plume. The well survey results from the GeoTracker Groundwater Ambient Monitoring Assessment (GAMA) website indicates there are no public water supply wells, irrigation wells, California Department of Public Health wells, Department of Pesticide Regulation wells located within a 2,000 foot radius of the site.
<b>Surface Water Bodies</b>	Based on the flow direction established at vicinity sites, San Leandro Bay, a part of the San Francisco Bay is downgradient to the south at an approximate distance of 1,220 feet. San Francisco Bay also cross gradient at an approximate distance of 830 feet to the southwest. East Creek Slough is approximately 1,890 feet upgradient.

## Attachment 2 – Groundwater Evaluation and Data

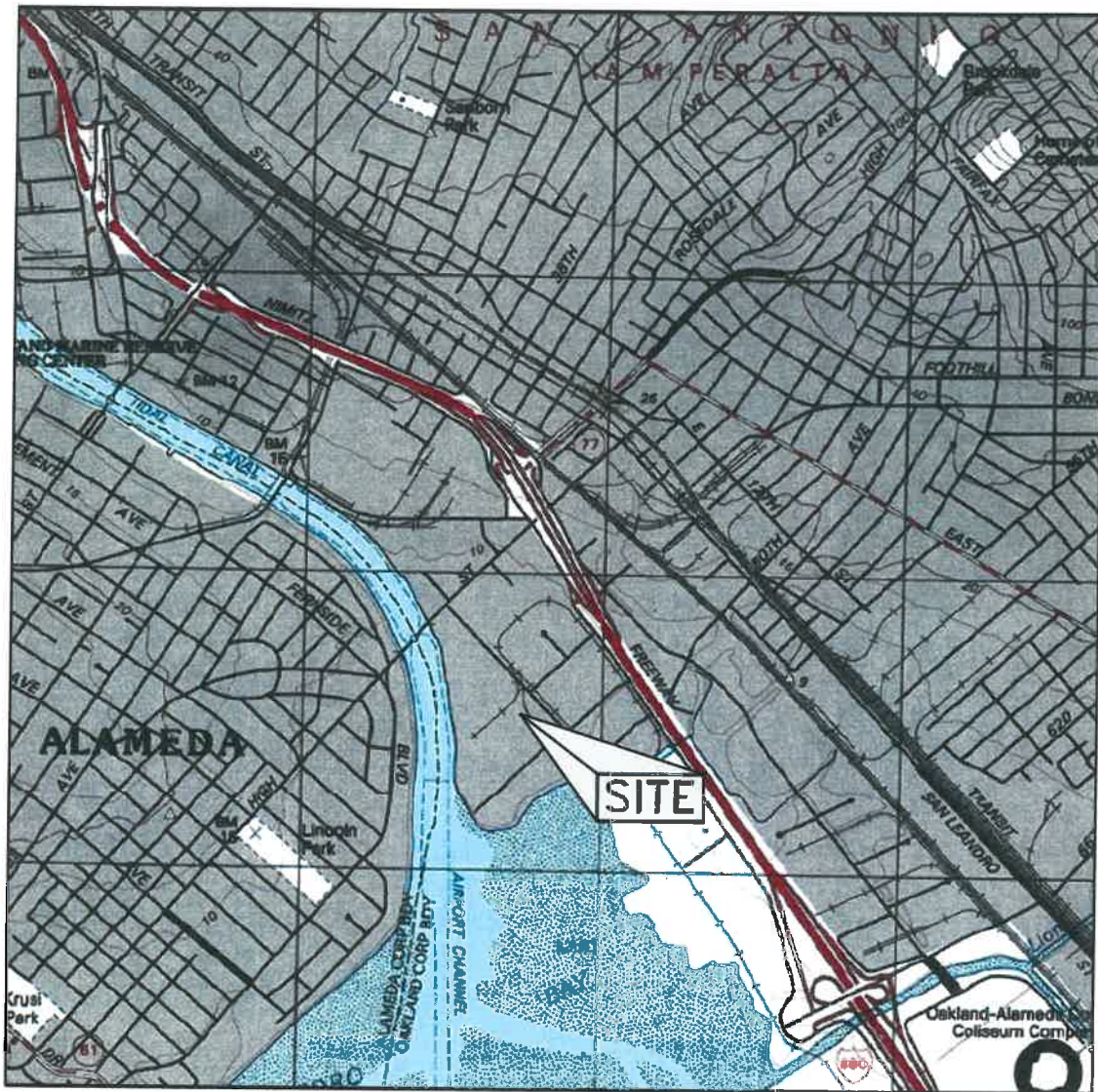
GROUNDWATER EVALUATION – NON-PETROLEUM			
Closure Guidance			
San Francisco Bay Regional Water Quality Control Board's <i>Environmental Screening Level (RWQCB ESL)</i> Tables, in conjunction with <i>User's Guide: Derivation and Application of Environmental Screening Levels</i> , revised in March 2016.			
Closure Scenario			
A determination has been made that under current land use scenarios, dissolved metal concentrations pose a low threat to human health and safety and to the environment.			
Groundwater Concentrations for Primary Constituents of Concern			
Barium (µg/l)	Historic Max: 1,200 Current Max: 1,200	Drinking Water ESL: 1,000 Human Health Risk ESL: 2,000 Gross Contamination ESL: 5,000	Source – The subject site is in a large area of Bay margin fill. It appears the metal concentrations are either high-biased grab groundwater or associated with fill material for the site or vicinity or both. (See below and Attachment 4).
Cobalt (µg/l)	Historic Max: 74 Current Max: 74	Drinking Water ESL: 6.0 Human Health Risk ESL: 6.0 Salt Water Ecotox ESL: 3.0	
Copper (µg/l)	Historic Max: 81 Current Max: 81	Drinking Water ESL: 1,000 Human Health Risk ESL: 300 Ceiling Value ESL: 5,000	
Nickel (µg/l)	Historic Max: 88 Current Max: 88	Drinking Water ESL: 100 Human Health Risk ESL: 12 Salt Water Ecotox ESL: 8.2	
Vanadium (µg/l)	Historic Max: 96 Current Max: 96	Drinking Water ESL: 5.0 Human Health Risk ESL: 5.0 Salt Water Ecotox ESL: 19	
Evaluation Criteria			
Criteria	Site Specific Data		
Plume Length	Based on a review of the analytical data for soil collected at the site (See Direct Contact Evaluation and Data - Attachment 4) the concentration of metals in soil do not exceed Tier 1 residential ESLs, or Direct Contact ESLs for residential or commercial properties. Limited areas were sampled to investigate the rail spur as a source of contamination and the potential for TPH impacts to groundwater. In areas sampled the five metals in groundwater listed above exceeded multiple ESLs as listed. Proper sample handling including filtering and preservation appear to have been observed in the collection of the grab groundwater samples from the site. While metal concentrations can be biased high in grab groundwater sample collection, it has also been established in peer reviewed technical articles that metal concentrations and metal mobility in marine sediment and fill materials will change and groundwater concentrations will increase beneath "reclaimed" land such as the subject site due to physico-chemical changes to the soils in the marine environment. This has been attributed to pH reductions and salinity. Additionally, analytical testing conducted in 1988 (Soil Sampling Activities, June 15, 1988, Baseline Environmental Consulting) on soil at the site indicate soluble fractions of some of these metals (lead, nickel, and vanadium) are present in site soils that produced laboratory soluble concentrations higher than those observed during the current investigation. Peer reviewed technical literature indicates reductions over time are typical beneath "reclaimed" land. Therefore, because the subject site is in a large area of Bay margin fill, it appears the metal concentrations are either high-biased grab groundwater or associated with fill material for the		

## Attachment 2 – Groundwater Evaluation and Data

	site or vicinity or both.
Estimated Age of Plume	Not Applicable
Non-Aqueous Phase Liquid (NAPL)	No NAPL
Plume Stability	The stability of a non-petroleum hydrocarbon plume has not been assessed.
Distance to Nearest Water Supply Well (from plume boundary)	Downgradient: > 1,320 feet Cross Gradient: > 1,320 feet Upgradient: 1,460 feet
Distance to Nearest Surface Water Body (from plume boundary)	Downgradient: 1,220 feet; San Francisco Bay, south Cross Gradient: 830 feet; San Francisco Bay, west Upgradient: 1,890 feet; East Creek Slough, north
<b>Groundwater Analysis</b>	
Pollutant Sources are Identified and Evaluated	Not applicable.
Site is Adequately Characterized	<p>Potential source areas associated with the former rail tracks were investigated and analyzed for petroleum hydrocarbons, volatile organic compounds (VOC; full analytical suite), semi-volatile organic compounds (SVOC), polychlorinated biphenyls (PCBs), and metals in soil and groundwater. Grab groundwater samples were also collected.</p> <p>In addition to no petroleum hydrocarbon compounds, no contaminant concentrations of concern were documented for VOCs, SVOCs, and PCBs in groundwater. Concentrations of metals in soil are all below residential ESLs. Concentrations of metals in groundwater over ESLs were documented in each bore from which grab groundwater was collected and appear to be related to the nature of grab groundwater sample collection (a general tendency to bias high) or are natural background concentrations as discussed above.</p>
Exposure Pathways, Receptors, and Potential Risks, Threats, and Other Environmental Concerns are Identified and Assessed	A water well survey was conducted and found no water supply wells within ¼-mile (1,320 feet) of the site. The closest distance to the bay / estuary is approximately 830 feet cross-gradient to the west; however, the presumed downgradient direction based on groundwater flow at vicinity sites is approximately 1,220 feet to the south. Due to the distance, the concentrations detected in the grab groundwater analytical results are not expected to be of concern to Bay waters.
Pollutant Sources Are Remediated to The Extent Possible	Not applicable; all non-petroleum (metal, VOC, SVOC, and PCBs) concentrations in soil are below residential ESLs. There appears to be no soil sources.
Unacceptable Risk to Human Health, Ecologic Health, and Sensitive Receptors, Considering Current Land Uses and Water Uses are Mitigated	<p>Unacceptable risks do not appear to be present at the site. Mitigation is not required.</p> <p>Land use in the site vicinity is commercial / industrial. No human sensitive receptors are present. A water well survey was conducted and found no water supply wells within ¼-mile (1,320 feet) of the site. The closest distance to the bay / estuary is approximately 830 feet cross-gradient to the west; however, the presumed downgradient direction based on groundwater flow at vicinity sites is approximately 1,220 feet to the south. Due to the distance, concentrations detected in the grab groundwater samples are not expected to be of concern to Bay waters.</p>

## Attachment 2 – Groundwater Evaluation and Data

Unacceptable Threats to Groundwater and Surface Water Resources, Considering Existing Beneficial Uses Are Mitigated	Unacceptable risks do not appear to be present at the site. Mitigation is not required.
Groundwater Plume is Decreasing	A non-petroleum hydrocarbon plume stability has not been assessed.
Cleanup Standards Can be Met in a Reasonable Timeframe	Not applicable. A groundwater plume does not appear to be documented. Metals concentrations appear to be either high-biased grab groundwater analytical results or are natural background concentrations.
Risk Management Measures are Appropriate, are Documented, and do not Require Further ACDEH Oversight	Yes; see <i>Site Management Requirements</i> above on page 2 of the Closure.



**REFERENCE:**

U.S.G.S. OAKLAND EAST,  
CALIFORNIA, 7.5 MINUTE  
SERIES TOPOGRAPHIC MAP,  
DATED 1997.



**Information  
To Build On**  
Engineering • Consulting • Testing

4703 Tidewater Avenue, Suite B  
Oakland, California 94601  
(510) 434-9200

Project Name:		Drawn By:	Date:	File No.:	Figure No.:
MORGAN MUIR 4725 TIDEWATER AVENUE, OAKLAND, CALIFORNIA		S.R.	7/16	872-001	1
Title:		Approved By:	Project No.:		
SITE LOCATION MAP		F.P.	575-872		

**GEOTRACKER**

MAP LAYERS

- Leaking Underground Storage Tank (LUST) Cleanup Sites
- Cleanup Program Sites
- Land Disposal Sites
- Military Sites
- MDR Sites
- Irrigated Lands Regulatory Program
- Permitted Underground Storage Tank (UST) Facilities
- Oil and Gas Monitoring / Non-Case Information / Project Sites
- Sampling Points - Private
- Sampling Points - Public
- Field Points
- DTSC Cleanup Sites
- DTSC Haz Waste Permit
- DWR Groundwater Basins - **NEO**
- Public Water Systems - **NEO**
- 1973 and 1974 Productive Limits - **NEO**

SHOWS A CLOSED SITE

CLEANUP STATUS FILTER  
All Cleanup Statuses

ONLY SHOW SITES WITH LAND USE RESTRICTIONS

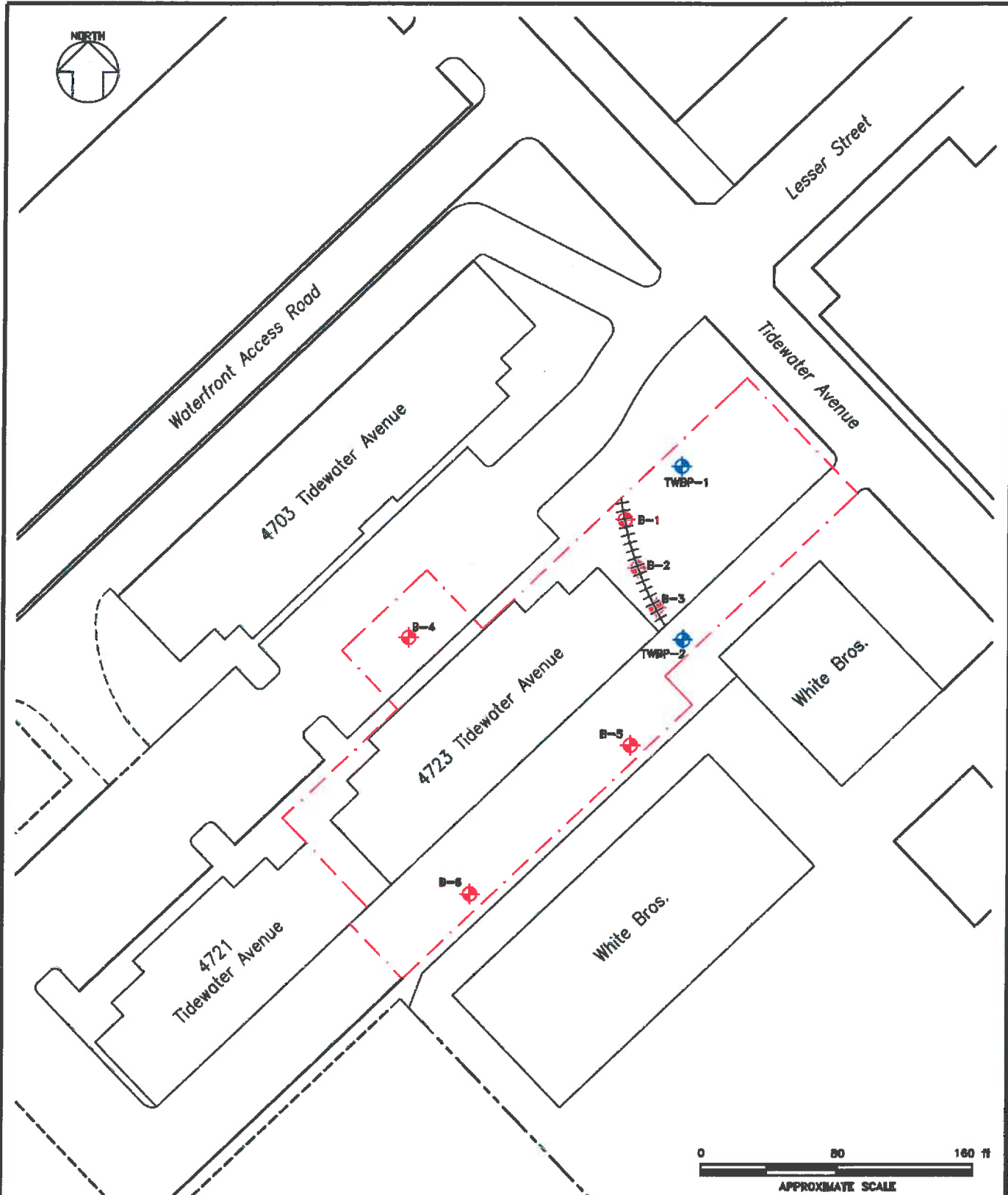
[Advanced Database](#)

Map Address




0 0.25 0.5 1 2 5 10 mi


© 2016 GeoTracker

SITES CURRENTLY VISIBLE ON MAP



**LEGEND**

-  SUBJECT PROPERTY BOUNDARY
-  BORING LOCATION (7/29/15)
-  PREVIOUS SOIL SAMPLE LOCATION (1988)

 <b>Information To Build On</b> <i>Engineering • Consulting • Testing</i>		<b>4703 Tidewater Avenue, Suite B</b> <b>Oakland, California 94601</b> <b>(510) 434-9200</b>		
		<i>Project Name:</i> <b>MORGAN MUIR</b> <b>4723 TIDEWATER AVENUE, OAKLAND, CALIFORNIA</b>	<i>Drawn By:</i> <b>S.R.</b>	<i>Date:</i> <b>8/15</b>
<i>Title:</i> <b>SITE PLAN AND BORING LOCATION MAP</b>		<i>Approved By:</i> <b>F.P.</b>	<i>Project No.:</i> <b>575-872</b>	





**GEOTRACKER GAMA** 6723 TIDEWATER AVENUE OAKLAND CA 94601 [Map Address](#)

SEARCH FOR WELLS

Wells With Results  
Any Criteria  
All Years **Go**

**1 WELLS FOUND (100% ABOVE COMPARISON CONCENTRATION)**  
\* The list of comparison concentrations can be found [here](#)

**DATASETS:**

**ENVIRONMENTAL MONITORING:**  
Monitoring Wells - Water Board Regulated  
Impaired Lands Regulatory Program

**SUPPLY WELLS:**  
 Public Supply Wells  
 GAMA - SWRCB Domestic  
 GAMA - USGS  
 GAMA - LULML  
 DPR  
 USGS - RWIS

[DOWNLOAD MAP DATA](#)  
[DOWNLOAD DATA BY COUNTY](#)  
[ADDITIONAL DATASET INFORMATION](#)

**GIS LAYERS**  
 ELEVATION  
 LOCAL INFORMATION  
[MEASURE A DISTANCE](#) [CONTACT US](#)

**LOCATIONS FOUND**  
 1 WELL - 100% ABOVE COMPARISON CONCENTRATION

[ZOOM IN ON LOCATION](#) [VIEW WELLS IN CLUSTER](#)

**TABLE 1**  
**SUMMARY OF ANALYTICAL RESULTS - ORGANICS**  
 Tidewater Business Park  
 4723 Tidewater Avenue, Oakland, California

SAMPLE NUMBER	SAMPLE MATRIX	DEPTH SAMPLED (FEET)	Total Petroleum Hydrocarbons as Gasoline	Total Petroleum Hydrocarbons as Diesel	Total Petroleum Hydrocarbons as Motor Oil	VOCs	SVOCs	PCBs
B-1-1.0	Soil	1.0	<10	<10	46	ND	ND	ND
B-2-1.0	Soil	1.0	<10	<10	<10	---	---	ND
B-3-1.0	Soil	1.0	<10	<10	<10	---	---	ND
B-3-5.0	Soil	5.0	<10	<10	<10	---	---	---
B-4-1.0	Soil	1.0	<10	<10	<10	---	---	---
B-5-1.0	Soil	1.0	<10	36	570	ND	ND	ND
B-5-2.5	Soil	2.5	<10	<10	<10	---	---	---
B-5-5.0	Soil	5.0	<10	<10	<10	---	---	---
B-6-1.0	Soil	1.0	<10	<10	110	ND	ND	ND
B-6-2.5	Soil	2.5	<10	65	630	---	---	---
B-6-5.0	Soil	5.0	<10	<10	<10	---	---	---
B-2	Groundwater	NA	<50	<50	<100	ND	8.9 Di-n-butyl phthalate	ND
B-4	Groundwater	NA	<50	<50	<100	ND	11 Tert butyl alcohol (TBA)	ND
B-5	Groundwater	NA	<50	<50	<100	ND	25 Di-n-butyl phthalate	ND
B-6	Groundwater	NA	<50	<50	<100	ND	29 Di-n-butyl phthalate	ND

Notes: Analytical results for soil are reported as total concentration in milligrams per kilogram (mg/kg)

Analytical results for water are reported as total concentration in micrograms per liter (µg/L)

< = not detected at presented laboratory reporting limit.

NA = Not applicable

ND = Not detected at laboratory reporting limits presented in Appendix D.

VOCs = Volatile Organic Compounds

SVOCs = Semi-Volatile Organic Compounds

PCBs = Polychlorinated Biphenyls

Soil and groundwater samples were collected on 7/29/2015

**TABLE 2**  
**SUMMARY OF ANALYTICAL RESULTS: METALS**  
 Tidewater Business Park  
 4723 Tidewater Avenue, Oakland, California

SAMPLE NUMBER	SAMPLE MATRX	DEPTH SAMPLED (FEET)	METALS																
			SB	AS	BA	BE	CD	CR	CO	CU	PB	HG	MO	NI	SE	AG	TL	V	ZN
B-1-1.0	Soil	1.0	<3.0	<5.0	72	<1.0	<1.0	5.8	5.0	26	<3.0	<0.1	<5.0	6.0	<5.0	<5.0	<2.0	27	28
B-2-1.0	Soil	1.0	<3.0	<5.0	150	<1.0	<1.0	28	10	28	<3.0	<0.1	<5.0	54	<5.0	<5.0	<2.0	22	38
B-3-1.0	Soil	1.0	<3.0	<5.0	120	<1.0	<1.0	26	8.3	23	<3.0	<0.1	<5.0	46	<5.0	<5.0	<2.0	20	34
B-5-1.0	Soil	1.0	<3.0	<5.0	94	<1.0	<1.0	16	5.5	20	41	0.11	<5.0	30	<5.0	<5.0	<2.0	25	150
B-6-1.0	Soil	1.0	<3.0	<5.0	85	<1.0	<1.0	21	6.9	15	32	<0.1	<5.0	33	<5.0	<5.0	<2.0	26	120
B-2	Groundwater	NA	<50	<50	90	<50	<50	<50	74	<50	<50	<0.5	<50	<50	<50	<50	<50	56	<50
B-4	Groundwater	NA	<50	<50	1,200	<50	<50	<50	<50	81	<50	<0.5	<50	88	<50	<50	<50	96	<50
B-5	Groundwater	NA	<50	<50	160	<50	<50	<50	<50	63	<50	<0.5	<50	<50	<50	<50	<50	50	<50
B-6	Groundwater	NA	<50	<50	110	<50	<50	<50	<50	<50	<50	<0.5	<50	<50	<50	<50	<50	58	<50
<b>TTLC</b>			500	500	10,000	75	100	500	8,000	2,500	1,000	20	3,500	2,000	100	500	700	2,400	5,000
<b>STLC</b>			15	5	100	0.75	1	5	80	25	5	0.2	350	20	1	5	7	24	250

**Notes:**

Depth is presented in feet below ground surface

< = not detected at presented laboratory reporting limit

Metals are designated by their symbol on the periodic table of elements.

Analytical results for soil are reported as total concentration in milligrams per kilogram (mg/kg)

Analytical results for water are reported as total concentration in micrograms per liter (µg/L)

TTLC = Total Threshold Limit Concentraiton for soil

STLC = Soluble Threshold Limit Concentraiton for soil

**TABLE 2**  
**ANALYTICAL RESULTS SUMMARY FOR METALS ANALYSES**  
**COMPOSITE SAMPLE 1**  
**PROPOSED TIDEWATER BUSINESS PARK**  
**Tidewater Avenue and Lesser Street**  
**Oakland, California**

Analyte	Results		Regulatory Limits	
	Total Metals (mg/kg) <sup>1</sup>	Soluble Metals (mg/l) <sup>2</sup>	STLC <sup>3</sup> (mg/l)	TTL <sup>4</sup> (mg/kg)
Antimony (Sb)	0.02	-- <sup>5</sup>	15.0	500.0
Arsenic (As)	4.79	--	5.0	500.0
Barium (Ba)	96.2	--	100.0	10,000.0
Beryllium (Be)	ND <sup>6</sup>	--	0.75	75.0
Cadmium (Cd)	ND	--	1.0	100.0
Chromium (Cr)	26.1	--	560.0	2,500.0
Cobalt (Co)	5.48	--	80.0	8,000.0
Copper (Cu)	17.5	--	25.0	2,500.0
Lead (Pb)	43.6	2.05	5.0	1,000.0
Mercury (Hg)	0.181	--	0.2	20.0
Molybdenum (Mo)	ND	--	350.0	3,500.0
Nickel (Ni)	28.8	0.57	20.0	2,000.0
Selenium (Se)	ND	--	1.0	100.0
Silver (Ag)	0.26	--	5.0	500.0
Thallium (Tl)	ND	--	7.0	700.0
Vanadium (V)	46.8	0.696	24.0	2,400.0
Zinc (Zn)	91.4	--	250.0	5,000.0

<sup>1</sup> Milligrams per kilogram (parts per million [ppm]).

<sup>2</sup> Milligrams per liter (parts per million [ppm]).

<sup>3</sup> Soluble Threshold Limit Concentration.

<sup>4</sup> Total Threshold Limit Concentration.

<sup>5</sup> Analyses not performed.

<sup>6</sup> Not detected.

PSI -- Oakland 4703 Tidewater Ave Ste B Oakland CA, 94601	Project: <b>Morgan Muir-Tidewater</b> Project Number: 575-872 Project Manager: Frank Poss	Reported: 08/21/15 15:23
---	---	-----------------------------

**B-2**  
**T151838-08 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Extractable Petroleum Hydrocarbons by 8015C**

C6-C12 (GRO)	ND	0.050	mg/l	1	5073101	07/31/15	07/31/15	EPA 8015C	SGEL
C13-C28 (DRO)	ND	0.050	"	"	"	"	"	"	SGEL
C29-C40 (MORO)	ND	0.10	"	"	"	"	"	"	SGEL
Surrogate: <i>p-Terphenyl</i>		79.9 %		65-135	"	"	"	"	SGEL

**Metals by EPA 6010B**

Antimony	ND	50	ug/l	1	5080112	08/01/15	08/06/15	EPA 6010b	FILT
Silver	ND	50	"	"	"	"	"	"	FILT
Arsenic	ND	50	"	"	"	"	"	"	FILT
<b>Barium</b>	<b>90</b>	50	"	"	"	"	"	"	FILT
Beryllium	ND	50	"	"	"	"	"	"	FILT
Cadmium	ND	50	"	"	"	"	"	"	FILT
Chromium	ND	50	"	"	"	"	"	"	FILT
Cobalt	ND	50	"	"	"	"	"	"	FILT
<b>Copper</b>	<b>74</b>	50	"	"	"	"	"	"	FILT
Lead	ND	50	"	"	"	"	"	"	FILT
Molybdenum	ND	50	"	"	"	"	"	"	FILT
Nickel	ND	50	"	"	"	"	"	"	FILT
Selenium	ND	50	"	"	"	"	"	"	FILT
Thallium	ND	50	"	"	"	"	"	"	FILT
<b>Vanadium</b>	<b>56</b>	50	"	"	"	"	"	"	FILT
Zinc	ND	50	"	"	"	"	"	"	FILT

**Cold Vapor Extraction EPA 7470/7471**

Mercury	ND	0.50	ug/l	1	5080110	08/01/15	08/06/15	EPA 7470A Water	FILT
---------	----	------	------	---	---------	----------	----------	--------------------	------

SunStar Laboratories, Inc.

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

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager

PSI -- Oakland  
4703 Tidewater Ave Ste B  
Oakland CA, 94601

Project: **Morgan Muir-Tidewater**  
Project Number: **575-872**  
Project Manager: **Frank Poss**

Reported:  
08/21/15 15:23

**B-2**  
**T151838-08 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Polychlorinated Biphenyls by EPA Method 8082**

PCB-1016	ND	2.00	ug/l	1	5080606	08/06/15	08/07/15	EPA 8082	O-05
PCB-1221	ND	2.00	"	"	"	"	"	"	O-05
PCB-1232	ND	2.00	"	"	"	"	"	"	O-05
PCB-1242	ND	2.00	"	"	"	"	"	"	O-05
PCB-1248	ND	2.00	"	"	"	"	"	"	O-05
PCB-1254	ND	2.00	"	"	"	"	"	"	O-05
PCB-1260	ND	2.00	"	"	"	"	"	"	O-05
<i>Surrogate: Tetrachloro-meta-xylene</i>		88.3 %	35-140	"	"	"	"	"	O-05
<i>Surrogate: Decachlorobiphenyl</i>		90.1 %	35-140	"	"	"	"	"	O-05

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

Bromobenzene	ND	1.0	ug/l	1	5073107	07/31/15	08/04/15	EPA 8260B	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.0	"	"	"	"	"	"	
Dibromomethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

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

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager

PSI -- Oakland 4703 Tidewater Ave Ste B Oakland CA, 94601	Project: Morgan Muir-Tidewater Project Number: 575-872 Project Manager: Frank Poss	Reported: 08/21/15 15:23
---	--	-----------------------------

**B-2  
T151838-08 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
1,4-Dichlorobenzene	ND	1.0	ug/l	1	5073107	07/31/15	08/04/15	EPA 8260B	
Dichlorodifluoromethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
Methylene chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

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

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager



PSI -- Oakland  
4703 Tidewater Ave Ste B  
Oakland CA, 94601

Project: Morgan Muir-Tidewater  
Project Number: 575-872  
Project Manager: Frank Poss

Reported:  
08/21/15 15:23

**B-2**  
**T151838-08 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Vinyl chloride	ND	1.0	ug/l	1	5073107	07/31/15	08/04/15	EPA 8260B
Benzene	ND	0.50	"	"	"	"	"	"
Toluene	ND	0.50	"	"	"	"	"	"
Ethylbenzene	ND	0.50	"	"	"	"	"	"
m,p-Xylene	ND	1.0	"	"	"	"	"	"
o-Xylene	ND	0.50	"	"	"	"	"	"
Tert-amyl methyl ether	ND	2.0	"	"	"	"	"	"
Tert-butyl alcohol	ND	10	"	"	"	"	"	"
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"
Methyl tert-butyl ether	ND	1.0	"	"	"	"	"	"
Surrogate: 4-Bromofluorobenzene		109 %	83.5-119	"	"	"	"	"
Surrogate: Dibromofluoromethane		97.4 %	81-136	"	"	"	"	"
Surrogate: Toluene-d8		95.6 %	88.8-117	"	"	"	"	"

**Semivolatile Organic Compounds by EPA Method 8270C**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Carbazole	ND	10	ug/l	1	5080109	08/03/15	08/07/15	EPA 8270C
Aniline	ND	10	"	"	"	"	"	"
Phenol	ND	10	"	"	"	"	"	"
Acenaphthylene	ND	10	"	"	"	"	"	"
2-Chlorophenol	ND	10	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	10	"	"	"	"	"	"
Anthracene	ND	10	"	"	"	"	"	"
N-Nitrosodi-n-propylamine	ND	5.0	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"
1-Methylnaphthalene	ND	10	"	"	"	"	"	"
4-Chloro-3-methylphenol	ND	10	"	"	"	"	"	"
2-Methylnaphthalene	ND	20	"	"	"	"	"	"
Benzo (a) anthracene	ND	10	"	"	"	"	"	"
Acenaphthene	ND	10	"	"	"	"	"	"
Benzo (b) fluoranthene	ND	10	"	"	"	"	"	"
4-Nitrophenol	ND	10	"	"	"	"	"	"

SunStar Laboratories, Inc.

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

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager

PSI – Oakland  
4703 Tidewater Ave Ste B  
Oakland CA, 94601

Project: **Morgan Muir-Tidewater**  
Project Number: 575-872  
Project Manager: Frank Poss

Reported:  
08/21/15 15:23

**B-2**  
**T151838-08 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Semivolatile Organic Compounds by EPA Method 8270C**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (k) fluoranthene	ND	10	ug/l	1	5080109	08/01/15	08/07/15	EPA 8270C	
2,4-Dinitrotoluene	ND	10	"	"	"	"	"	"	"
Benzo (g,h,i) perylene	ND	20	"	"	"	"	"	"	"
Pentachlorophenol	ND	10	"	"	"	"	"	"	"
Benzo (a) pyrene	ND	10	"	"	"	"	"	"	"
Pyrene	ND	10	"	"	"	"	"	"	"
Benzyl alcohol	ND	50	"	"	"	"	"	"	"
Bis(2-chloroethoxy)methane	ND	10	"	"	"	"	"	"	"
Bis(2-chloroethyl)ether	ND	5.0	"	"	"	"	"	"	"
Bis(2-chloroisopropyl)ether	ND	20	"	"	"	"	"	"	"
Bis(2-ethylhexyl)phthalate	ND	10	"	"	"	"	"	"	"
4-Bromophenyl phenyl ether	ND	5.0	"	"	"	"	"	"	"
Butyl benzyl phthalate	ND	10	"	"	"	"	"	"	"
4-Chloroaniline	ND	20	"	"	"	"	"	"	"
2-Chloronaphthalene	ND	10	"	"	"	"	"	"	"
4-Chlorophenyl phenyl ether	ND	20	"	"	"	"	"	"	"
Chrysene	ND	10	"	"	"	"	"	"	"
Dibenz (a,h) anthracene	ND	10	"	"	"	"	"	"	"
Dibenzofuran	ND	20	"	"	"	"	"	"	"
Di-n-butyl phthalate	8.9	5.0	"	"	"	"	"	"	"
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	"
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	"
2,4-Dichlorophenol	ND	10	"	"	"	"	"	"	"
Diethyl phthalate	ND	10	"	"	"	"	"	"	"
2,4-Dimethylphenol	ND	5.0	"	"	"	"	"	"	"
Dimethyl phthalate	ND	10	"	"	"	"	"	"	"
4,6-Dinitro-2-methylphenol	ND	5.0	"	"	"	"	"	"	"
2,4-Dinitrophenol	ND	10	"	"	"	"	"	"	"
2,6-Dinitrotoluene	ND	20	"	"	"	"	"	"	"
Di-n-octyl phthalate	ND	10	"	"	"	"	"	"	"
Fluoranthene	ND	5.0	"	"	"	"	"	"	"
Fluorene	ND	10	"	"	"	"	"	"	"

SunStar Laboratories, Inc.

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

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager

PSI -- Oakland 4703 Tidewater Ave Ste B Oakland CA, 94601	Project: Morgan Muir-Tidewater Project Number: 575-872 Project Manager: Frank Poss	Reported: 08/21/15 15:23
---	--	-----------------------------

**B-2  
T151838-08 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Semivolatile Organic Compounds by EPA Method 8270C**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Hexachlorobenzene	ND	20	ug/l	1	5080109	08/01/15	08/07/15	EPA 8270C	
Hexachlorobutadiene	ND	10	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	20	"	"	"	"	"	"	
Hexachloroethane	ND	5.0	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	10	"	"	"	"	"	"	
Isophorone	ND	10	"	"	"	"	"	"	
2-Methylphenol	ND	10	"	"	"	"	"	"	
4-Methylphenol	ND	20	"	"	"	"	"	"	
Naphthalene	ND	5.0	"	"	"	"	"	"	
2-Nitroaniline	ND	10	"	"	"	"	"	"	
3-Nitroaniline	ND	10	"	"	"	"	"	"	
4-Nitroaniline	ND	20	"	"	"	"	"	"	
Nitrobenzene	ND	20	"	"	"	"	"	"	
2-Nitrophenol	ND	10	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	10	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	25	"	"	"	"	"	"	
Phenanthrene	ND	10	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	20	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	10	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	10	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	10	"	"	"	"	"	"	
1,4-Dinitrobenzene	ND	10	"	"	"	"	"	"	
Pyridine	ND	10	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		33.4 %	15-121	"	"	"	"	"	
Surrogate: Phenol-d6		23.5 %	24-113	"	"	"	"	"	S-GC
Surrogate: Nitrobenzene-d5		69.6 %	14.7-110	"	"	"	"	"	
Surrogate: 2-Fluorobiphenyl		72.8 %	33.3-110	"	"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		104 %	12.9-110	"	"	"	"	"	
Surrogate: Terphenyl-d84		152 %	15.8-136	"	"	"	"	"	S-GC

SunStar Laboratories, Inc.

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

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager

PSI -- Oakland 4703 Tidewater Ave Ste B Oakland CA, 94601	Project: <b>Morgan Muir-Tidewater</b> Project Number: <b>575-872</b> Project Manager: <b>Frank Poss</b>	Reported: 08/21/15 15:23
---	---	-----------------------------

**B-4**  
**T151838-09 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Extractable Petroleum Hydrocarbons by 8015C**

C6-C12 (GRO)	ND	0.050	mg/l	1	5073101	07/31/15	07/31/15	EPA 8015C	SGEL
C13-C28 (DRO)	ND	0.050	"	"	"	"	"	"	SGEL
C29-C40 (MORO)	ND	0.10	"	"	"	"	"	"	SGEL
Surrogate: <i>p</i> -Terphenyl		83.0 %		65-135	"	"	"	"	SGEL

**Metals by EPA 6010B**

Antimony	ND	50	ug/l	1	5080112	08/01/15	08/06/15	EPA 6010b	FILT
Silver	ND	50	"	"	"	"	"	"	FILT
Arsenic	ND	50	"	"	"	"	"	"	FILT
Barium	1200	50	"	"	"	"	"	"	FILT
Beryllium	ND	50	"	"	"	"	"	"	FILT
Cadmium	ND	50	"	"	"	"	"	"	FILT
Chromium	ND	50	"	"	"	"	"	"	FILT
Cobalt	ND	50	"	"	"	"	"	"	FILT
Copper	81	50	"	"	"	"	"	"	FILT
Lead	ND	50	"	"	"	"	"	"	FILT
Molybdenum	ND	50	"	"	"	"	"	"	FILT
Nickel	88	50	"	"	"	"	"	"	FILT
Selenium	ND	50	"	"	"	"	"	"	FILT
Thallium	ND	50	"	"	"	"	"	"	FILT
Vanadium	96	50	"	"	"	"	"	"	FILT
Zinc	ND	50	"	"	"	"	"	"	FILT

**Cold Vapor Extraction EPA 7470/7471**

Mercury	ND	0.50	ug/l	1	5080110	08/01/15	08/06/15	EPA 7470A Water	FILT
---------	----	------	------	---	---------	----------	----------	--------------------	------

SunStar Laboratories, Inc.

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

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager

PSI -- Oakland  
4703 Tidewater Ave Ste B  
Oakland CA, 94601

Project: Morgan Muir-Tidewater  
Project Number: 575-872  
Project Manager: Frank Poss

Reported:  
08/21/15 15:23

**B-4  
T151838-09 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Polychlorinated Biphenyls by EPA Method 8082**

PCB-1016	ND	2.00	ug/l	1	5080606	08/06/15	08/07/15	EPA 8082	0-05
PCB-1221	ND	2.00	"	"	"	"	"	"	0-05
PCB-1232	ND	2.00	"	"	"	"	"	"	0-05
PCB-1242	ND	2.00	"	"	"	"	"	"	0-05
PCB-1248	ND	2.00	"	"	"	"	"	"	0-05
PCB-1254	ND	2.00	"	"	"	"	"	"	0-05
PCB-1260	ND	2.00	"	"	"	"	"	"	0-05
<i>Surrogate: Tetrachloro-meta-xylene</i>		90.5 %	35-140	"	"	"	"	"	0-05
<i>Surrogate: Decachlorobiphenyl</i>		90.0 %	35-140	"	"	"	"	"	0-05

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

Bromobenzene	ND	1.0	ug/l	1	5073107	07/31/15	08/01/15	EPA 8260B	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.0	"	"	"	"	"	"	
Dibromomethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

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

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager

PSI -- Oakland 4703 Tidewater Ave Ste B Oakland CA, 94601	Project: Morgan Muir-Tidewater Project Number: 575-872 Project Manager: Frank Poss	Reported: 08/21/15 15:23
---	--	-----------------------------

**B-4  
T151838-09 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
1,4-Dichlorobenzene	ND	1.0	ug/l	1	5073107	07/31/15	08/01/15	EPA 8260B	
Dichlorodifluoromethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
Methylene chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

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

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager

PSI -- Oakland 4703 Tidewater Ave Ste B Oakland CA, 94601	Project: Morgan Muir-Tidewater Project Number: 575-872 Project Manager: Frank Poss	Reported: 08/21/15 15:23
---	--	-----------------------------

**B-4  
T151838-09 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

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

Vinyl chloride	ND	1.0	ug/l	1	5073107	07/31/15	08/01/15	EPA 8260B	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	1.0	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	2.0	"	"	"	"	"	"	
Tert-butyl alcohol	11	10	"	"	"	"	"	"	
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.8 %	83.5-119	"	"	"	"	"	
Surrogate: Dibromofluoromethane		102 %	81-136	"	"	"	"	"	
Surrogate: Toluene-d8		92.5 %	88.8-117	"	"	"	"	"	

**Semivolatile Organic Compounds by EPA Method 8270C**

Carbazole	ND	10	ug/l	1	5080109	08/01/15	08/07/15	EPA 8270C	
Aniline	ND	10	"	"	"	"	"	"	
Phenol	ND	10	"	"	"	"	"	"	
Acenaphthylene	ND	10	"	"	"	"	"	"	
2-Chlorophenol	ND	10	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	10	"	"	"	"	"	"	
Anthracene	ND	10	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	10	"	"	"	"	"	"	
1-Methylnaphthalene	ND	10	"	"	"	"	"	"	
2-Methylnaphthalene	ND	20	"	"	"	"	"	"	
Acenaphthene	ND	10	"	"	"	"	"	"	
Benzo (a) anthracene	ND	10	"	"	"	"	"	"	
4-Nitrophenol	ND	10	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	10	"	"	"	"	"	"	

SunStar Laboratories, Inc.

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

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager

PSI -- Oakland  
4703 Tidewater Ave Ste B  
Oakland CA, 94601

Project: **Morgan Muir-Tidewater**  
Project Number: 575-872  
Project Manager: Frank Poss

Reported:  
08/21/15 15:23

**B-4**

**T151838-09 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Semivolatile Organic Compounds by EPA Method 8270C**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
2,4-Dinitrotoluene	ND	10	ug/l	1	5080109	08/01/15	08/07/15	EPA 8270C	
Benzo (k) fluoranthene	ND	10	"	"	"	"	"	"	
Pentachlorophenol	ND	10	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	20	"	"	"	"	"	"	
Benzo (a) pyrene	ND	10	"	"	"	"	"	"	
Pyrene	ND	10	"	"	"	"	"	"	
Benzyl alcohol	ND	50	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	10	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	5.0	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	20	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	10	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	5.0	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	10	"	"	"	"	"	"	
4-Chloroaniline	ND	20	"	"	"	"	"	"	
2-Chloronaphthalene	ND	10	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	20	"	"	"	"	"	"	
Chrysene	ND	10	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	10	"	"	"	"	"	"	
Dibenzofuran	ND	20	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	10	"	"	"	"	"	"	
Diethyl phthalate	ND	10	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	5.0	"	"	"	"	"	"	
Dimethyl phthalate	ND	10	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	5.0	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	10	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	20	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	10	"	"	"	"	"	"	
Fluoranthene	ND	5.0	"	"	"	"	"	"	
Fluorene	ND	10	"	"	"	"	"	"	

SunStar Laboratories, Inc.

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

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager



PSI -- Oakland  
4703 Tidewater Ave Ste B  
Oakland CA, 94601

Project: Morgan Muir-Tidewater  
Project Number: 575-872  
Project Manager: Frank Poss

Reported:  
08/21/15 15:23

**B-4  
T151838-09 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Semivolatile Organic Compounds by EPA Method 8270C**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Hexachlorobenzene	ND	20	ug/l	1	5080109	08/01/15	08/07/15	EPA 8270C	
Hexachlorobutadiene	ND	10	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	20	"	"	"	"	"	"	
Hexachloroethane	ND	5.0	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	10	"	"	"	"	"	"	
Isophorone	ND	10	"	"	"	"	"	"	
2-Methylphenol	ND	10	"	"	"	"	"	"	
4-Methylphenol	ND	20	"	"	"	"	"	"	
Naphthalene	ND	5.0	"	"	"	"	"	"	
2-Nitroaniline	ND	10	"	"	"	"	"	"	
3-Nitroaniline	ND	10	"	"	"	"	"	"	
4-Nitroaniline	ND	20	"	"	"	"	"	"	
Nitrobenzene	ND	20	"	"	"	"	"	"	
2-Nitrophenol	ND	10	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	10	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	25	"	"	"	"	"	"	
Phenanthrene	ND	10	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	20	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	10	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	10	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	10	"	"	"	"	"	"	
1,4-Dinitrobenzene	ND	10	"	"	"	"	"	"	
Pyridine	ND	10	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol	24.0 %	15-121	"	"	"	"	"	"	
Surrogate: Phenol-d6	18.1 %	24-113	"	"	"	"	"	"	S-GC
Surrogate: Nitrobenzene-d3	59.3 %	14.7-110	"	"	"	"	"	"	
Surrogate: 2-Fluorobiphenyl	64.4 %	33.3-110	"	"	"	"	"	"	
Surrogate: 2,4,6-Tribromophenol	91.0 %	12.9-113	"	"	"	"	"	"	
Surrogate: Terphenyl-d4	135 %	15.8-136	"	"	"	"	"	"	

SunStar Laboratories, Inc.

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

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager

PSI -- Oakland 4703 Tidewater Ave Ste B Oakland CA, 94601	Project: Morgan Muir-Tidewater Project Number: 575-872 Project Manager: Frank Poss	Reported: 08/21/15 15:23
---	--	-----------------------------

**B-5  
T151838-10 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Extractable Petroleum Hydrocarbons by 8015C**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C12 (GRO)	ND	0.050	mg/l	1	5073101	07/31/15	07/31/15	EPA 8015C	SGEL
C13-C28 (DRO)	ND	0.050	"	"	"	"	"	"	SGEL
C29-C40 (MORO)	ND	0.10	"	"	"	"	"	"	SGEL
Surrogate: p-Terphenyl		89.2 %	65-135		"	"	"	"	SGEL

**Metals by EPA 6010B**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Antimony	ND	50	ug/l	1	5080112	08/01/15	08/06/15	EPA 6010b	FILT
Silver	ND	50	"	"	"	"	"	"	FILT
Arsenic	ND	50	"	"	"	"	"	"	FILT
Barium	160	50	"	"	"	"	"	"	FILT
Beryllium	ND	50	"	"	"	"	"	"	FILT
Cadmium	ND	50	"	"	"	"	"	"	FILT
Chromium	ND	50	"	"	"	"	"	"	FILT
Cobalt	ND	50	"	"	"	"	"	"	FILT
Copper	63	50	"	"	"	"	"	"	FILT
Lead	ND	50	"	"	"	"	"	"	FILT
Molybdenum	ND	50	"	"	"	"	"	"	FILT
Nickel	ND	50	"	"	"	"	"	"	FILT
Selenium	ND	50	"	"	"	"	"	"	FILT
Thallium	ND	50	"	"	"	"	"	"	FILT
Vanadium	50	50	"	"	"	"	"	"	FILT
Zinc	ND	50	"	"	"	"	"	"	FILT

**Cold Vapor Extraction EPA 7470/7471**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.50	ug/l	1	5080110	08/01/15	08/06/15	EPA 7470A Water	FILT

SunStar Laboratories, Inc.

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

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager

PSI -- Oakland 4703 Tidewater Ave Ste B Oakland CA, 94601	Project: <i>Morgan Main-Tidewater</i> Project Number: 575-872 Project Manager: Frank Poss	Reported: 08/21/15 15:23
---	---	-----------------------------

**B-5  
T151838-10 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Polychlorinated Biphenyls by EPA Method 8082**

PCB-1016	ND	2.00	ug/l	1	5080606	08/06/15	08/07/15	EPA 8082	0-05
PCB-1221	ND	2.00	"	"	"	"	"	"	0-05
PCB-1232	ND	2.00	"	"	"	"	"	"	0-05
PCB-1242	ND	2.00	"	"	"	"	"	"	0-05
PCB-1248	ND	2.00	"	"	"	"	"	"	0-05
PCB-1254	ND	2.00	"	"	"	"	"	"	0-05
PCB-1260	ND	2.00	"	"	"	"	"	"	0-05
<i>Surrogate: Tetrachloro-meta-xylene</i>		93.5 %		35-140	"	"	"	"	0-05
<i>Surrogate: Decachlorobiphenyl</i>		86.7 %		35-140	"	"	"	"	0-05

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

Bromobenzene	ND	1.0	ug/l	1	5073107	07/31/15	08/01/15	EPA 8260B	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.0	"	"	"	"	"	"	
Dibromomethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

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

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager

PSI – Oakland  
4703 Tidewater Ave Ste B  
Oakland CA, 94601

Project: Morgan Muir-Tidewater  
Project Number: 575-872  
Project Manager: Frank Poss

Reported:  
08/21/15 15:23

**B-5  
T151838-10 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
1,4-Dichlorobenzene	ND	1.0	ug/l	1	5073107	07/31/15	08/01/15	EPA 8260B	
Dichlorodifluoromethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
Methylene chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

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

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager

PSI -- Oakland  
4703 Tidewater Ave Ste B  
Oakland CA, 94601

Project: Morgan Muir-Tidewater  
Project Number: 575-872  
Project Manager: Frank Poss

Reported:  
08/21/15 15:23

**B-5  
T151838-10 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Vinyl chloride	ND	1.0	ug/l	1	5073107	07/31/15	08/01/15	EPA 8260B
Benzene	ND	0.50	"	"	"	"	"	"
Toluene	ND	0.50	"	"	"	"	"	"
Ethylbenzene	ND	0.50	"	"	"	"	"	"
m,p-Xylene	ND	1.0	"	"	"	"	"	"
o-Xylene	ND	0.50	"	"	"	"	"	"
Tert-amyl methyl ether	ND	2.0	"	"	"	"	"	"
Tert-butyl alcohol	ND	10	"	"	"	"	"	"
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"
Methyl tert-butyl ether	ND	1.0	"	"	"	"	"	"
Surrogate: 4-Bromofluorobenzene	94.4 %	83.5-119	"	"	"	"	"	"
Surrogate: Dibromofluoromethane	95.6 %	81-136	"	"	"	"	"	"
Surrogate: Toluene-d8	100 %	88.8-117	"	"	"	"	"	"

**Semivolatile Organic Compounds by EPA Method 8270C**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Carbazole	ND	10	ug/l	1	5080109	08/01/15	08/07/15	EPA 8270C
Phenol	ND	10	"	"	"	"	"	"
Aniline	ND	10	"	"	"	"	"	"
2-Chlorophenol	ND	10	"	"	"	"	"	"
Acenaphthylene	ND	10	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	10	"	"	"	"	"	"
N-Nitrosodi-n-propylamine	ND	5.0	"	"	"	"	"	"
Anthracene	ND	10	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"
2-Methylnaphthalene	ND	20	"	"	"	"	"	"
1-Methylnaphthalene	ND	10	"	"	"	"	"	"
4-Chloro-3-methylphenol	ND	10	"	"	"	"	"	"
Acenaphthene	ND	10	"	"	"	"	"	"
Benzo (a) anthracene	ND	10	"	"	"	"	"	"
Benzo (b) fluoranthene	ND	10	"	"	"	"	"	"
4-Nitrophenol	ND	10	"	"	"	"	"	"

SunStar Laboratories, Inc.

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

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager

PSI – Oakland  
4703 Tidewater Ave Ste B  
Oakland CA, 94601

Project: **Morgan Muir-Tidewater**  
Project Number: **575-872**  
Project Manager: **Frank Poss**

Reported:  
08/21/15 15:23

**B-5**  
**T151838-10 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Semivolatile Organic Compounds by EPA Method 8270C**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
2,4-Dinitrotoluene	ND	10	ug/l	1	5080109	08/01/15	08/07/15	EPA 8270C	
Benzo (k) fluoranthene	ND	10	"	"	"	"	"	"	
Pentachlorophenol	ND	10	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	20	"	"	"	"	"	"	
Pyrene	ND	10	"	"	"	"	"	"	
Benzo (a) pyrene	ND	10	"	"	"	"	"	"	
Benzyl alcohol	ND	50	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	10	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	5.0	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	20	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	10	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	5.0	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	10	"	"	"	"	"	"	
4-Chloroaniline	ND	20	"	"	"	"	"	"	
2-Chloronaphthalene	ND	10	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	20	"	"	"	"	"	"	
Chrysene	ND	10	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	10	"	"	"	"	"	"	
Dibenzofuran	ND	20	"	"	"	"	"	"	
Di-n-butyl phthalate	25	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	10	"	"	"	"	"	"	
Diethyl phthalate	ND	10	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	5.0	"	"	"	"	"	"	
Dimethyl phthalate	ND	10	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	5.0	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	10	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	20	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	10	"	"	"	"	"	"	
Fluoranthene	ND	5.0	"	"	"	"	"	"	
Fluorene	ND	10	"	"	"	"	"	"	

SunStar Laboratories, Inc.

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

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager

PSI -- Oakland 4703 Tidewater Ave Ste B Oakland CA, 94601	Project: <b>Morgan Muir-Tidewater</b> Project Number: 575-872 Project Manager: Frank Poss	Reported: 08/21/15 15:23
---	---	-----------------------------

**B-5**  
**T151838-10 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Semivolatile Organic Compounds by EPA Method 8270C**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Hexachlorobenzene	ND	20	ug/l	1	5080109	08/01/15	08/07/15	EPA 8270C	
Hexachlorobutadiene	ND	10	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	20	"	"	"	"	"	"	
Hexachloroethane	ND	5.0	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	10	"	"	"	"	"	"	
Isophorone	ND	10	"	"	"	"	"	"	
2-Methylphenol	ND	10	"	"	"	"	"	"	
4-Methylphenol	ND	20	"	"	"	"	"	"	
Naphthalene	ND	5.0	"	"	"	"	"	"	
2-Nitroaniline	ND	10	"	"	"	"	"	"	
3-Nitroaniline	ND	10	"	"	"	"	"	"	
4-Nitroaniline	ND	20	"	"	"	"	"	"	
Nitrobenzene	ND	20	"	"	"	"	"	"	
2-Nitrophenol	ND	10	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	10	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	25	"	"	"	"	"	"	
Phenanthrene	ND	10	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	20	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	10	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	10	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	10	"	"	"	"	"	"	
1,4-Dinitrobenzene	ND	10	"	"	"	"	"	"	
Pyridine	ND	10	"	"	"	"	"	"	
<i>Surrogate: 2-Fluorophenol</i>		27.5 %	15-121		"	"	"	"	
<i>Surrogate: Phenol-d6</i>		21.2 %	24-113		"	"	"	"	S-GC
<i>Surrogate: Nitrobenzene-d5</i>		64.9 %	14.7-110		"	"	"	"	
<i>Surrogate: 2-Fluorobiphenyl</i>		72.4 %	33.3-110		"	"	"	"	
<i>Surrogate: 2,4,6-Trichlorophenol</i>		92.4 %	12.9-110		"	"	"	"	
<i>Surrogate: Terphenyl-d8</i>		137 %	15.8-136		"	"	"	"	S-GC

SunStar Laboratories, Inc.

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

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager

PSI -- Oakland  
4703 Tidewater Ave Ste B  
Oakland CA, 94601

Project: **Morgan Muir-Tidewater**  
Project Number: **575-872**  
Project Manager: **Frank Poss**

Reported:  
08/21/15 15:23

**B-6**  
**T151838-11 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Extractable Petroleum Hydrocarbons by 8015C**

C6-C12 (GRO)	ND	0.050	mg/l	1	5073101	07/31/15	07/31/15	EPA 8015C	SGEL
C13-C28 (DRO)	ND	0.050	"	"	"	"	"	"	SGEL
C29-C40 (MORO)	ND	0.10	"	"	"	"	"	"	SGEL
Surrogate: <i>p-Terphenyl</i>		83.2 %	65-135	"	"	"	"	"	SGEL

**Metals by EPA 6010B**

Antimony	ND	50	ug/l	1	5080112	08/01/15	08/06/15	EPA 6010b	FILT
Silver	ND	50	"	"	"	"	"	"	FILT
Arsenic	ND	50	"	"	"	"	"	"	FILT
Barium	110	50	"	"	"	"	"	"	FILT
Beryllium	ND	50	"	"	"	"	"	"	FILT
Cadmium	ND	50	"	"	"	"	"	"	FILT
Chromium	ND	50	"	"	"	"	"	"	FILT
Cobalt	ND	50	"	"	"	"	"	"	FILT
Copper	ND	50	"	"	"	"	"	"	FILT
Lead	ND	50	"	"	"	"	"	"	FILT
Molybdenum	ND	50	"	"	"	"	"	"	FILT
Nickel	ND	50	"	"	"	"	"	"	FILT
Selenium	ND	50	"	"	"	"	"	"	FILT
Thallium	ND	50	"	"	"	"	"	"	FILT
Vanadium	58	50	"	"	"	"	"	"	FILT
Zinc	ND	50	"	"	"	"	"	"	FILT

**Cold Vapor Extraction EPA 7470/7471**

Mercury	ND	0.50	ug/l	1	5080110	08/01/15	08/06/15	EPA 7470A Water	FILT
---------	----	------	------	---	---------	----------	----------	--------------------	------

SunStar Laboratories, Inc.

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

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager



PSI -- Oakland  
4703 Tidewater Ave Ste B  
Oakland CA, 94601

Project: Morgan Muir-Tidewater  
Project Number: 575-872  
Project Manager: Frank Poss

Reported:  
08/21/15 15:23

**B-6**  
**T151838-11 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Polychlorinated Biphenyls by EPA Method 8082**

PCB-1016	ND	2.00	ug/l	1	5080606	08/06/15	08/07/15	EPA 8082	0-05
PCB-1221	ND	2.00	"	"	"	"	"	"	0-05
PCB-1232	ND	2.00	"	"	"	"	"	"	0-05
PCB-1242	ND	2.00	"	"	"	"	"	"	0-05
PCB-1248	ND	2.00	"	"	"	"	"	"	0-05
PCB-1254	ND	2.00	"	"	"	"	"	"	0-05
PCB-1260	ND	2.00	"	"	"	"	"	"	0-05
<i>Surrogate: Tetrachloro-meta-xylene</i>		88.3 %	35-140	"	"	"	"	"	0-05
<i>Surrogate: Decachlorobiphenyl</i>		89.4 %	35-140	"	"	"	"	"	0-05

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

Bromobenzene	ND	1.0	ug/l	1	5073107	07/31/15	08/01/15	EPA 8260B	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.0	"	"	"	"	"	"	
Dibromomethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

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

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager

PSI -- Oakland  
4703 Tidewater Ave Ste B  
Oakland CA, 94601

Project: **Morgan Muir-Tidewater**  
Project Number: 575-872  
Project Manager: Frank Poss

Reported:  
08/21/15 15:23

**B-6**  
**T151838-11 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
1,4-Dichlorobenzene	ND	1.0	ug/l	1	5073107	07/31/15	08/01/15	EPA 8260B	
Dichlorodifluoromethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
Methylene chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

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

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager

PSI -- Oakland  
4703 Tidewater Ave Ste B  
Oakland CA, 94601

Project: Morgan Muir-Tidewater  
Project Number: 575-872  
Project Manager: Frank Poss

Reported:  
08/21/15 15:23

**B-6  
T151838-11 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Vinyl chloride	ND	1.0	ug/l	1	5073107	07/31/15	08/01/15	EPA 8260B
Benzene	ND	0.50	"	"	"	"	"	"
Toluene	ND	0.50	"	"	"	"	"	"
Ethylbenzene	ND	0.50	"	"	"	"	"	"
m,p-Xylene	ND	1.0	"	"	"	"	"	"
o-Xylene	ND	0.50	"	"	"	"	"	"
Tert-amyl methyl ether	ND	2.0	"	"	"	"	"	"
Tert-butyl alcohol	ND	10	"	"	"	"	"	"
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"
Methyl tert-butyl ether	ND	1.0	"	"	"	"	"	"
Surrogate: 4-Bromofluorobenzene		95.0 %	83.5-119	"	"	"	"	"
Surrogate: Dibromofluoromethane		107 %	81-136	"	"	"	"	"
Surrogate: Toluene-d8		95.9 %	88.8-117	"	"	"	"	"

**Semivolatile Organic Compounds by EPA Method 8270C**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Carbazole	ND	10	ug/l	1	5080109	08/01/15	08/07/15	EPA 8270C
Phenol	ND	10	"	"	"	"	"	"
Aniline	ND	10	"	"	"	"	"	"
Acenaphthylene	ND	10	"	"	"	"	"	"
2-Chlorophenol	ND	10	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	10	"	"	"	"	"	"
N-Nitrosodi-n-propylamine	ND	5.0	"	"	"	"	"	"
Anthracene	ND	10	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"
2-Methylnaphthalene	ND	20	"	"	"	"	"	"
1-Methylnaphthalene	ND	10	"	"	"	"	"	"
4-Chloro-3-methylphenol	ND	10	"	"	"	"	"	"
Benzo (a) anthracene	ND	10	"	"	"	"	"	"
Acenaphthene	ND	10	"	"	"	"	"	"
Benzo (b) fluoranthene	ND	10	"	"	"	"	"	"
4-Nitrophenol	ND	10	"	"	"	"	"	"

SunStar Laboratories, Inc.

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

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager

PSI – Oakland  
4703 Tidewater Ave Ste B  
Oakland CA, 94601

Project: Morgan Muir-Tidewater  
Project Number: 575-872  
Project Manager: Frank Poss

Reported:  
08/21/15 15:23

**B-6  
T151838-11 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Semivolatile Organic Compounds by EPA Method 8270C**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (k) fluoranthene	ND	10	ug/l	1	5080109	08/01/15	08/07/15	EPA 8270C	
2,4-Dinitrotoluene	ND	10	"	"	"	"	"	"	"
Benzo (g,h,i) perylene	ND	20	"	"	"	"	"	"	"
Pentachlorophenol	ND	10	"	"	"	"	"	"	"
Pyrene	ND	10	"	"	"	"	"	"	"
Benzo (a) pyrene	ND	10	"	"	"	"	"	"	"
Benzyl alcohol	ND	50	"	"	"	"	"	"	"
Bis(2-chloroethoxy)methane	ND	10	"	"	"	"	"	"	"
Bis(2-chloroethyl)ether	ND	5.0	"	"	"	"	"	"	"
Bis(2-chloroisopropyl)ether	ND	20	"	"	"	"	"	"	"
Bis(2-ethylhexyl)phthalate	ND	10	"	"	"	"	"	"	"
4-Bromophenyl phenyl ether	ND	5.0	"	"	"	"	"	"	"
Butyl benzyl phthalate	ND	10	"	"	"	"	"	"	"
4-Chloroaniline	ND	20	"	"	"	"	"	"	"
2-Chloronaphthalene	ND	10	"	"	"	"	"	"	"
4-Chlorophenyl phenyl ether	ND	20	"	"	"	"	"	"	"
Chrysene	ND	10	"	"	"	"	"	"	"
Dibenz (a,h) anthracene	ND	10	"	"	"	"	"	"	"
Dibenzofuran	ND	20	"	"	"	"	"	"	"
Di-n-butyl phthalate	29	5.0	"	"	"	"	"	"	"
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	"
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	"
2,4-Dichlorophenol	ND	10	"	"	"	"	"	"	"
Diethyl phthalate	ND	10	"	"	"	"	"	"	"
2,4-Dimethylphenol	ND	5.0	"	"	"	"	"	"	"
Dimethyl phthalate	ND	10	"	"	"	"	"	"	"
4,6-Dinitro-2-methylphenol	ND	5.0	"	"	"	"	"	"	"
2,4-Dinitrophenol	ND	10	"	"	"	"	"	"	"
2,6-Dinitrotoluene	ND	20	"	"	"	"	"	"	"
Di-n-octyl phthalate	ND	10	"	"	"	"	"	"	"
Fluoranthene	ND	5.0	"	"	"	"	"	"	"
Fluorene	ND	10	"	"	"	"	"	"	"

SunStar Laboratories, Inc.

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

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager

PSI -- Oakland  
4703 Tidewater Ave Ste B  
Oakland CA, 94601

Project: Morgan Muir-Tidewater  
Project Number: 575-872  
Project Manager: Frank Poss

Reported:  
08/21/15 15:23

**B-6**  
**T151838-11 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Semivolatile Organic Compounds by EPA Method 8270C**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Hexachlorobenzene	ND	20	ug/l	1	5080109	08/01/15	08/07/15	EPA 8270C	
Hexachlorobutadiene	ND	10	"	"	"	"	"	"	"
Hexachlorocyclopentadiene	ND	20	"	"	"	"	"	"	"
Hexachloroethane	ND	5.0	"	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	ND	10	"	"	"	"	"	"	"
Isophorone	ND	10	"	"	"	"	"	"	"
2-Methylphenol	ND	10	"	"	"	"	"	"	"
4-Methylphenol	ND	20	"	"	"	"	"	"	"
Naphthalene	ND	5.0	"	"	"	"	"	"	"
2-Nitroaniline	ND	10	"	"	"	"	"	"	"
3-Nitroaniline	ND	10	"	"	"	"	"	"	"
4-Nitroaniline	ND	20	"	"	"	"	"	"	"
Nitrobenzene	ND	20	"	"	"	"	"	"	"
2-Nitrophenol	ND	10	"	"	"	"	"	"	"
N-Nitrosodiphenylamine	ND	10	"	"	"	"	"	"	"
N-Nitrosodimethylamine	ND	25	"	"	"	"	"	"	"
Phenanthrene	ND	10	"	"	"	"	"	"	"
2,4,5-Trichlorophenol	ND	20	"	"	"	"	"	"	"
2,4,6-Trichlorophenol	ND	10	"	"	"	"	"	"	"
2,3,4,6-Tetrachlorophenol	ND	10	"	"	"	"	"	"	"
2,3,5,6-Tetrachlorophenol	ND	10	"	"	"	"	"	"	"
1,4-Dinitrobenzene	ND	10	"	"	"	"	"	"	"
Pyridine	ND	10	"	"	"	"	"	"	"
Surrogate: 2-Fluorophenol	34.2 %	15-121	"	"	"	"	"	"	
Surrogate: Phenol-d6	24.6 %	24-113	"	"	"	"	"	"	
Surrogate: Nitrobenzene-d3	73.3 %	14.7-110	"	"	"	"	"	"	
Surrogate: 2-Fluorobiphenyl	79.4 %	33.3-110	"	"	"	"	"	"	
Surrogate: 2,4,6-Tribromophenol	101 %	12.9-110	"	"	"	"	"	"	
Surrogate: Terphenyl-d14	145 %	15.8-136	"	"	"	"	"	"	S-GC

SunStar Laboratories, Inc.

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

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager

# ATTACHMENT 3

# Attachment 3 – Vapor Intrusion Evaluation and Data

LTCP VAPOR SPECIFIC CRITERIA - PETROLEUM								
Closure Scenario								
Exemption: <input type="checkbox"/> Active fueling station exempt from vapor specific criteria; Active as of date: _____								
<input type="checkbox"/> Scenario 1; <input type="checkbox"/> Scenario 2; <input type="checkbox"/> Scenario 3a; <input type="checkbox"/> Scenario 3b; <input type="checkbox"/> Scenario 4a without bioattenuation zone; <input type="checkbox"/> Scenario 4b with bioattenuation zone; <input type="checkbox"/> Site specific risk assessment demonstrates human health is protected; <input type="checkbox"/> Exposure controlled through use of mitigation measures or institutional controls; <input checked="" type="checkbox"/> <b>Case closed in spite of not meeting the vapor specific media criteria</b>								
Shading indicates Site Specific Data and Bold Text Indicates Evaluation Criteria								
Site Specific Data		Scenario 1	Scenario 2	Scenario 3A	Scenario 3B	Scenario 3C	Scenario 4a	Scenario 4b
Unweathered LNAPL	No LNAPL	LNAPL in gw	LNAPL in soil	No LNAPL	No LNAPL	No LNAPL	No criteria	No criteria
Thickness of Bioattenuation Zone Beneath Foundation	~ 2.5 feet	≥30 feet	≥30 feet	≥5 feet	≥10 feet	≥5 feet	No criteria	≥ 5 feet
Depth to Shallowest Groundwater	4 feet	≥30 feet	≥30 feet	≥5 feet	≥10 feet	≥ 5 feet	≥ 5 feet	≥ 5 feet
Total TPHg & TPHd in Soil in Bioattenuation Zone	65 mg/kg	<100 mg/kg	<100 mg/kg	<100 mg/kg	<100 mg/kg	<100 mg/kg	No criteria	<100 mg/kg
Maximum Current Benzene Concentration in Groundwater	< 0.5 µg/L	No criteria	No criteria	<100 µg/L	≥100 and <1,000 µg/L	<1,000 µg/L	No criteria	No criteria
Oxygen Data in Bioattenuation Zone	No oxygen data	No criteria	No criteria	No oxygen data or <4%	No oxygen data or <4%	≥4%	No criteria	≥4% at bottom of zone
Soil Vapor Depth Beneath Foundation	Not collected	No criteria	No criteria	No criteria	No criteria	No criteria	5 feet	5 feet
Benzene Concentrations (µg/m <sup>3</sup> )	Historic Max: Not Analyzed Current Max: Not Analyzed	No criteria	No criteria	No criteria	No criteria	No criteria	Res: < 85; Com: < 280	Res: < 85K; Com: < 280K
Ethylbenzene Concentrations (µg/m <sup>3</sup> )	Historic Max: Not Analyzed Current Max: Not Analyzed	No criteria	No criteria	No criteria	No criteria	No criteria	Res: < 1,100; Com: < 3,600	Res: < 1,100K; Com: < 3,600K
Naphthalene Concentrations (µg/m <sup>3</sup> )	Historic Max: Not Analyzed Current Max: Not Analyzed	No criteria	No criteria	No criteria	No criteria	No criteria	Res: < 93; Com: < 310	Res: < 93K; Com: < 310K

# Attachment 3 – Vapor Intrusion Evaluation and Data

<b>LTCP VAPOR SPECIFIC CRITERIA – PETROLEUM (cont.)</b>	
<b>Vapor Intrusion to Indoor Air Analysis</b>	
<b>Onsite</b>	The site does not meet the vapor specific criteria of the Low Threat Closure Policy due to the lack of a bioattenuation zone. However, there were no detectable concentrations of petroleum volatile organic compounds, including naphthalene, in soil or groundwater reported at the site that would pose a vapor intrusion risk at the site or downgradient of the site. The site can be considered to be a soils only case for petroleum compounds (TPH as diesel and TPH as motor oil). Therefore, the case is closed in spite of not meeting the vapor specific media criteria.
<b>Offsite</b>	A petroleum hydrocarbon groundwater plume does not appear to be present at the site based on the lack of detection of petroleum hydrocarbons and associated compounds at standard reporting limits in groundwater at the site, and thus does not extend offsite.



## Attachment 3 – Vapor Intrusion Evaluation and Data

VAPOR EVALUATION – NON-PETROLEUM			
<b>Closure Guidance</b> Groundwater Screening Levels for Evaluation of Potential Vapor Intrusion (Table E-1)			
San Francisco Bay Regional Water Quality Control Board's <i>Environmental Screening Level</i> Tables, in conjunction with <i>User's Guide: Derivation and Application of Environmental Screening Levels</i> , revised in March 2016.			
<b>Closure Scenario</b>			
A determination been made that under current commercial land use scenario, the potential for vapor intrusion poses a low threat to human health and safety and to the environment.			
<b>On-Site Vapor Concentrations for Primary Constituents of Concern</b>			
Land Use	Foundation Type	Depth to Water Below Foundational Element (> 10 feet for ESL use)	Depth of Soil Vapor Probe
Onsite: Commercial	Onsite: Slab	Onsite: ~2.5 feet	Onsite: NA
Offsite: Commercial	Offsite: Unknown	Offsite: Unknown	Offsite: NA
Contaminant	Maximum Concentrations	RWQCB ESLs	Source
<b>Vapor Intrusion to Indoor Air Analysis</b>			
Pollutant Sources are Identified and Evaluated		There are no documented non-petroleum hydrocarbon volatile compound sources at the site.	
Site is Adequately Characterized		<b>On-Site:</b> All detected non-petroleum compounds (metals) at the site are non volatile and hence do not have associated vapor ESLs. The site is adequately characterized.	
Exposure Pathways, Receptors, and Potential Risks, Threats, and Other Environmental Concerns are Identified and Assessed		<p><b>On-Site:</b> Multiple lines of evidence (soil and groundwater concentrations) support a low risk of vapor intrusion to indoor air for workers in the existing commercial building.</p> <p><b>Off-Site:</b> Multiple lines of evidence (soil and groundwater concentrations) support a low risk of vapor intrusion to indoor air for workers in the existing commercial building.</p>	
Maximum soil vapor concentrations less than relevant screening criteria		<p><b>On-Site:</b> All detected non-petroleum compounds (metals) at the site are non volatile and hence do not have associated vapor ESLs.</p> <p><b>Off-Site:</b> All detected non-petroleum compounds (metals) at the site are non volatile and hence do not have associated vapor ESLs.</p>	

# ATTACHMENT 4

# Attachment 4 – Direct Contact Evaluation and Data

LTCP DIRECT CONTACT AND OUTDOOR AIR EXPSURE CRITERIA						
Closure Scenario						
<p><input type="checkbox"/> Exemption (no petroleum hydrocarbons in upper 10 feet), <input checked="" type="checkbox"/> <b>Maximum concentrations of petroleum hydrocarbons are less than or equal to those in Table 1 below</b>, <input type="checkbox"/> Site-specific risk assessment, <input type="checkbox"/> A determination has been made that the concentrations of petroleum in soil will have no significant risk of adversely affecting human health, <input type="checkbox"/> A determination has been made that the concentrations of petroleum in soil will have no significant risk of adversely affecting human health as a result of controlling exposure through the use of mitigation measures or through the use of institutional controls, <input type="checkbox"/> This case should be closed in spite of not meeting the direct contact and outdoor air specific media criteria.</p>						
Shading indicates Site Specific Data and Bold Text indicates Evaluation Criteria						
Are maximum concentrations less than those in Table 1 below?			Yes; current land use; commercial only			
Constituent		Residential		Commercial/Industrial		Utility Worker
		0 to 5 feet bgs (mg/kg)	Volatilization to outdoor air (5 to 10 feet bgs) mg/kg	0 to 5 feet bgs (mg/kg)	Volatilization to outdoor air (5 to 10 feet bgs) mg/kg	0 to 10 feet bgs (mg/kg)
Site Maximum	Benzene	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
LTCP Criteria	Benzene	≤ 1.9	≤ 2.8	≤ 8.2	≤ 12	≤ 14
Site Maximum	Ethylbenzene	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
LTCP Criteria	Ethylbenzene	≤ 21	≤ 32	≤ 89	≤ 134	≤ 314
Site Maximum	Naphthalene	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30
LTCP Criteria	Naphthalene	≤ 9.7	≤ 9.7	≤ 45	≤ 45	≤ 219
Site Maximum	PAHs	< 0.525	< 0.629	< 0.525	< 0.629	< 0.629
LTCP Criteria	PAHs	≤ 0.063	NA	≤ 0.68	NA	≤ 4.5
Direct Contact and Outdoor Air Analysis						
<b>Onsite</b>		<p>While the site is not known to have contained an underground storage tank containing motor oil, the presence of shallow TPH as motor oil below residential ESLs suggests that the detectable concentrations of TPH as motor oil may require consideration as waste oil. Therefore, ACDEH has evaluated the potential for Poly-Nuclear Hydrocarbons (PAHs) to be present at the site.</p> <p>This site does not meet the residential LTCP criterion due to an elevated non-detectable concentration of PAHs in soil samples that yielded a calculated non-detectable benzo (a) pyrene toxicity equivalent (BaPe) above the residential LTCP value when calculated in accordance with LTCP guidance (non-detectable concentrations were conservatively set equal to the limit of detection). Under the current commercial land use, the LTCP indicates it is appropriate to close the site with these potential residual PAH concentrations.</p> <p>Excavation or construction activities in areas of potential residual contamination will be managed with a commercial land use restriction, that requires planning and implementation of appropriate health and safety procedures by the responsible party, or current property owner, prior to and during excavation and construction activities in the vicinity of residual contamination.</p>				
<b>Offsite</b>		<p>A petroleum hydrocarbon soil plume has not been established at the site, and therefore does not extend offsite.</p>				

# Attachment 4 – Direct Contact Evaluation and Data

DIRECT CONTACT – NON-PETROLEUM					
Closure Guidance					
San Francisco Bay Regional Water Quality Control Board's <i>Environmental Screening Level Tables</i> , in conjunction with <i>User's Guide: Derivation and Application of Environmental Screening Levels</i> , and, revised in March 2016.					
Closure Scenario					
<input checked="" type="checkbox"/> <b>Maximum concentrations of contaminants are less than or equal to those in Table 1 below</b> , <input type="checkbox"/> Site-specific risk assessment, <input type="checkbox"/> A determination has been made that the concentrations of contaminants in soil will have no significant risk of adversely affecting human health as a result of controlling exposure through the use of mitigation measures or through the use of institutional controls.					
Evaluation Criteria: Shading indicates criteria met.					
Are maximum concentrations less than those in Table 1 below?		Yes			
Constituent		Residential	Commercial / Industrial	Any Land Use / Construction Worker	Tier 1 ESL
		0 to 10 feet bgs (mg/kg)	0 to 10 feet bgs (mg/kg)	0 to 10 feet bgs (mg/kg)	0 to 10 feet bgs (mg/kg)
Site Maximum	PCBs	0.010	0.010	0.010	0.010
Direct Contact ESL	PCBs	<b>0.25</b>	<b>1.0</b>	<b>5.6</b>	<b>0.25</b>
Site Maximum	Barium	150	150	150	150
Direct Contact ESL	Barium	<b>15,000</b>	<b>3,000</b>	<b>3,000</b>	<b>3,000</b>
Site Maximum	Cobalt	10	10	10	10
Direct Contact ESL	Cobalt	<b>23</b>	<b>28</b>	<b>28</b>	<b>23</b>
Site Maximum	Copper	28	28	28	28
Direct Contact ESL	Copper	<b>3,100</b>	<b>14,000</b>	<b>14,000</b>	<b>3,100</b>
Site Maximum	Chromium III	28	28	28	28
Direct Contact ESL	Chromium III	<b>120,000</b>	<b>530,000</b>	<b>530,000</b>	<b>120,000</b>
Site Maximum	Lead	41	41	41	41
Direct Contact ESL	Lead	<b>80</b>	<b>160</b>	<b>160</b>	<b>80</b>
Site Maximum	Mercury	0.11	0.11	0.11	0.11
Direct Contact ESL	Mercury	<b>13</b>	<b>44</b>	<b>44</b>	<b>13</b>
Site Maximum	Nickel	54	54	54	54
Direct Contact ESL	Nickel	<b>820</b>	<b>86</b>	<b>86</b>	<b>86</b>
Site Maximum	Vanadium	27	27	27	27
Direct Contact ESL	Vanadium	<b>390</b>	<b>470</b>	<b>470</b>	<b>390</b>
Direct Contact Analysis					
Pollutant Sources are Identified and Evaluated		There do not appear to be non-petroleum hydrocarbon sources at the site.			
Site is Adequately Characterized		<p>On-Site: All concentrations of non-petroleum hydrocarbon sources in soil at the subject site are below the residential, commercial / industrial, and Any Land Use / Construction Worker ESLs. ACDEH concludes that under the current land use onsite metal concentrations do not pose threat to human health.</p> <p>Off-Site: There do not appear to be non-petroleum hydrocarbon sources at the site. Therefore, a soil plume does not extend offsite.</p>			

## Attachment 4 – Direct Contact Evaluation and Data

<p>Exposure Pathways, Receptors, and Potential Risks, Threats, and Other Environmental Concerns are Identified and Assessed</p>	<p>On-Site: Multiple lines of evidence support a low risk of direct contact for commercial / industrial workers or Any Land Use / Construction Worker at the site.</p> <p>Off-Site: All concentrations of non-petroleum hydrocarbon in soil at the subject site are below the residential, commercial / industrial, and Any Land Use / Construction Worker ESLs. There do not appear to be sources in soil at the site. Therefore, a soil plume does not extend offsite.</p>
<p>Are maximum soil concentrations less than relevant screening criteria?</p>	<p>On-Site: Yes. Onsite concentrations do not exceed ESLs. Based on available data, soil concentrations are below commercial direct contact or Any Land Use / Construction Worker ESLs.</p> <p>Off-Site: Yes. All concentrations of non-petroleum hydrocarbons in soil at the subject site are below the residential, commercial / industrial, and Any Land Use / Construction Worker ESLs. There do not appear to be sources in soil at the site. Therefore, a soil plume does not extend offsite.</p>

**TABLE 1**  
**SUMMARY OF ANALYTICAL RESULTS - ORGANICS**  
 Tidewater Business Park  
 4723 Tidewater Avenue, Oakland, California

SAMPLE NUMBER	SAMPLE MATRIX	DEPTH SAMPLED (FEET)	Total Petroleum Hydrocarbons as Gasoline	Total Petroleum Hydrocarbons as Diesel	Total Petroleum Hydrocarbons as Motor Oil	VOCs	SVOCs	PCBs
B-1-1.0	Soil	1.0	<10	<10	46	ND	ND	ND
B-2-1.0	Soil	1.0	<10	<10	<10	---	---	ND
B-3-1.0	Soil	1.0	<10	<10	<10	---	---	ND
B-3-5.0	Soil	5.0	<10	<10	<10	---	---	---
B-4-1.0	Soil	1.0	<10	<10	<10	---	---	---
B-5-1.0	Soil	1.0	<10	36	570	ND	ND	ND
B-5-2.5	Soil	2.5	<10	<10	<10	---	---	---
B-5-5.0	Soil	5.0	<10	<10	<10	---	---	---
B-6-1.0	Soil	1.0	<10	<10	110	ND	ND	ND
B-6-2.5	Soil	2.5	<10	65	630	---	---	---
B-6-5.0	Soil	5.0	<10	<10	<10	---	---	---
B-2	Groundwater	NA	<50	<50	<100	ND	8.9 Di-n-butyl phthalate	ND
B-4	Groundwater	NA	<50	<50	<100	ND	11 Tert butyl alcohol (TBA)	ND
B-5	Groundwater	NA	<50	<50	<100	ND	25 Di-n-butyl phthalate	ND
B-6	Groundwater	NA	<50	<50	<100	ND	29 Di-n-butyl phthalate	ND

**Notes:** Analytical results for soil are reported as total concentration in milligrams per kilogram (mg/kg)

Analytical results for water are reported as total concentration in micrograms per liter (µg/L)

< = not detected at presented laboratory reporting limit.

NA = Not applicable

ND = Not detected at laboratory reporting limits presented in Appendix D.

VOCs = Volatile Organic Compounds

SVOCs = Semi-Volatile Organic Compounds

PCBs = Polychlorinated Biphenyls

Soil and groundwater samples were collected on 7/29/2015

**TABLE 2**  
**SUMMARY OF ANALYTICAL RESULTS: METALS**  
 Tidewater Business Park  
 4723 Tidewater Avenue, Oakland, California

SAMPLE NUMBER	SAMPLE MATRIX	DEPTH SAMPLED (FEET)																	
			SB	AS	BA	BE	CD	CR	CO	CU	PB	HG	MO	NI	SE	AG	TL	V	ZN
B-1-1.0	Soil	1.0	<3.0	<5.0	72	<1.0	<1.0	5.8	5.0	26	<3.0	<0.1	<5.0	6.0	<5.0	<5.0	<2.0	27	28
B-2-1.0	Soil	1.0	<3.0	<5.0	150	<1.0	<1.0	28	10	28	<3.0	<0.1	<5.0	54	<5.0	<5.0	<2.0	22	38
B-3-1.0	Soil	1.0	<3.0	<5.0	120	<1.0	<1.0	26	8.3	23	<3.0	<0.1	<5.0	46	<5.0	<5.0	<2.0	20	34
B-5-1.0	Soil	1.0	<3.0	<5.0	94	<1.0	<1.0	16	5.5	20	41	0.11	<5.0	30	<5.0	<5.0	<2.0	25	150
B-6-1.0	Soil	1.0	<3.0	<5.0	85	<1.0	<1.0	21	6.9	15	32	<0.1	<5.0	33	<5.0	<5.0	<2.0	26	120
B-2	Groundwater	NA	<50	<50	90	<50	<50	<50	74	<50	<50	<0.5	<50	<50	<50	<50	<50	56	<50
B-4	Groundwater	NA	<50	<50	1,200	<50	<50	<50	<50	81	<50	<0.5	<50	88	<50	<50	<50	96	<50
B-5	Groundwater	NA	<50	<50	160	<50	<50	<50	<50	63	<50	<0.5	<50	<50	<50	<50	<50	50	<50
B-6	Groundwater	NA	<50	<50	110	<50	<50	<50	<50	<50	<50	<0.5	<50	<50	<50	<50	<50	58	<50
TTL			500	500	10,000	75	100	500	8,000	2,500	1,000	20	3,500	2,000	100	500	700	2,400	5,000
STLC			15	5	100	0.75	1	5	80	25	5	0.2	350	20	1	5	7	24	250

**Notes:**

Depth is presented in feet below ground surface

< = not detected at presented laboratory reporting limit.

Metals are designated by their symbol on the periodic table of elements.

Analytical results for soil are reported as total concentration in milligrams per kilogram (mg/kg)

Analytical results for water are reported as total concentration in micrograms per liter (µg/L)

TTL = Total Threshold Limit Concentration for soil

STLC = Soluble Threshold Limit Concentration for soil

PSI -- Oakland  
4703 Tidewater Ave Ste B  
Oakland CA, 94601

Project: Morgan Muir-Tidewater  
Project Number: 575-872  
Project Manager: Frank Poss

Reported:  
08/21/15 15:23

**B-1-1.0**  
**T151838-01 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Polychlorinated Biphenyls by EPA Method 8082**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
PCB-1016	ND	10	ug/kg	1	5080111	08/01/15	08/05/15	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	"
PCB-1232	ND	10	"	"	"	"	"	"	"
PCB-1242	ND	10	"	"	"	"	"	"	"
PCB-1248	ND	10	"	"	"	"	"	"	"
PCB-1254	ND	10	"	"	"	"	"	"	"
PCB-1260	ND	10	"	"	"	"	"	"	"
Surrogate: Tetrachloro-meta-xylene		64.9 %	35-140	"	"	"	"	"	"
Surrogate: Decachlorobiphenyl		58.3 %	35-140	"	"	"	"	"	"

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Bromobenzene	ND	5.0	ug/kg	1	5080708	08/10/15	08/10/15	EPA 8260B	
Bromochloromethane	ND	5.0	"	"	"	"	"	"	"
Bromodichloromethane	ND	5.0	"	"	"	"	"	"	"
Bromoform	ND	5.0	"	"	"	"	"	"	"
Bromomethane	ND	5.0	"	"	"	"	"	"	"
n-Butylbenzene	ND	5.0	"	"	"	"	"	"	"
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"	"
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"	"
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"	"
Chlorobenzene	ND	5.0	"	"	"	"	"	"	"
Chloroethane	ND	5.0	"	"	"	"	"	"	"
Chloroform	ND	5.0	"	"	"	"	"	"	"
Chloromethane	ND	5.0	"	"	"	"	"	"	"
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"	"
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"	"
Dibromochloromethane	ND	5.0	"	"	"	"	"	"	"
1,2-Dibromo-3-chloropropane	ND	10	"	"	"	"	"	"	"
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	"
Dibromomethane	ND	5.0	"	"	"	"	"	"	"
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	"
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	"

SunStar Laboratories, Inc.

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

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager



PSI -- Oakland  
4703 Tidewater Ave Ste B  
Oakland CA, 94601

Project: Morgan Muir-Tidewater  
Project Number: 575-872  
Project Manager: Frank Poss

Reported:  
08/21/15 15:23

**B-1-1.0**  
**T151838-01 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
1,4-Dichlorobenzene	ND	5.0	ug/kg	1	5080708	08/10/15	08/10/15	EPA 8260B	
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"	"
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"	"
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	"
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	"
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	"
1,3-Dichloropropane	ND	5.0	"	"	"	"	"	"	"
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	"
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	"
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	"
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	"
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	"
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	"
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	"
Methylene chloride	ND	5.0	"	"	"	"	"	"	"
Naphthalene	ND	5.0	"	"	"	"	"	"	"
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	"
Styrene	ND	5.0	"	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	"
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	"
Trichloroethene	ND	5.0	"	"	"	"	"	"	"
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	"
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	"

SunStar Laboratories, Inc.

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

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager

PSI – Oakland  
4703 Tidewater Ave Ste B  
Oakland CA, 94601

Project: Morgan Muir-Tidewater  
Project Number: 575-872  
Project Manager: Frank Poss

Reported:  
08/21/15 15:23

**B-1-1.0**  
**T151838-01 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

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

Vinyl chloride	ND	5.0	ug/kg	1	5080708	08/10/15	08/10/15	EPA 8260B	
Benzene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	10	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	20	"	"	"	"	"	"	
Tert-butyl alcohol	ND	50	"	"	"	"	"	"	
Di-isopropyl ether	ND	20	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	20	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	20	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.4 %	81.2-123	"	"	"	"	"	
Surrogate: Dibromofluoromethane		114 %	95.7-135	"	"	"	"	"	
Surrogate: Toluene-d8		103 %	85.5-116	"	"	"	"	"	

**Semivolatile Organic Compounds by EPA Method 8270C**

Carbazole	ND	300	ug/kg	1	5081026	08/10/15	08/11/15	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	

SunStar Laboratories, Inc.

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

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager

PSI -- Oakland  
4703 Tidewater Ave Ste B  
Oakland CA, 94601

Project: Morgan Muir-Tidewater  
Project Number: 575-872  
Project Manager: Frank Poss

Reported:  
08/21/15 15:23

**B-1-1.0**  
**T151838-01 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Semivolatile Organic Compounds by EPA Method 8270C**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	300	ug/kg	1	5081026	08/10/15	08/11/15	EPA 8270C	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	
Benzo (a) pyrene	ND	300	"	"	"	"	"	"	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	

SunStar Laboratories, Inc.

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

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager

PSI -- Oakland  
4703 Tidewater Ave Ste B  
Oakland CA, 94601

Project: Morgan Muir-Tidewater  
Project Number: 575-872  
Project Manager: Frank Poss

Reported:  
08/21/15 15:23

**B-1-1.0**  
**T151838-01 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Semivolatile Organic Compounds by EPA Method 8270C**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Hexachlorobenzene	ND	1500	ug/kg	1	5081026	08/10/15	08/11/15	EPA 8270C	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	"
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	"
Hexachloroethane	ND	300	"	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	"
Isophorone	ND	300	"	"	"	"	"	"	"
2-Methylphenol	ND	1000	"	"	"	"	"	"	"
4-Methylphenol	ND	1000	"	"	"	"	"	"	"
Naphthalene	ND	300	"	"	"	"	"	"	"
2-Nitroaniline	ND	300	"	"	"	"	"	"	"
3-Nitroaniline	ND	300	"	"	"	"	"	"	"
4-Nitroaniline	ND	300	"	"	"	"	"	"	"
Nitrobenzene	ND	1000	"	"	"	"	"	"	"
2-Nitrophenol	ND	1000	"	"	"	"	"	"	"
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	"
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	"
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	"
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	"
Phenanthrene	ND	300	"	"	"	"	"	"	"
Azobenzene	ND	300	"	"	"	"	"	"	"
Pyridine	ND	300	"	"	"	"	"	"	"
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	"
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	"
Surrogate: 2-Fluorophenol		60.1 %	15-121	"	"	"	"	"	"
Surrogate: Phenol-d6		66.4 %	24-113	"	"	"	"	"	"
Surrogate: Nitrobenzene-d5		67.8 %	21.3-119	"	"	"	"	"	"
Surrogate: 2-Fluorobiphenyl		76.7 %	32.4-102	"	"	"	"	"	"
Surrogate: 2,4,6-Tribromophenol		102 %	18.1-105	"	"	"	"	"	"
Surrogate: Terphenyl-d14		100 %	29.1-130	"	"	"	"	"	"

SunStar Laboratories, Inc.

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

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager

PSI -- Oakland 4703 Tidewater Ave Ste B Oakland CA, 94601	Project: Morgan Muir-Tidewater Project Number: 575-872 Project Manager: Frank Poss	Reported: 08/21/15 15:23
---	--	-----------------------------

**B-2-1.0**  
**T151838-02 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	--------------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Extractable Petroleum Hydrocarbons by 8015C**

C6-C12 (GRO)	ND	10	mg/kg	1	5073029	07/30/15	08/01/15	EPA 8015C	SGEL
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	SGEL
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	SGEL
Surrogate: <i>p</i> -Terphenyl		95.3 %	65-135	"	"	"	"	"	SGEL

**Metals by EPA 6010B**

Antimony	ND	3.0	mg/kg	1	5080429	08/04/15	08/05/15	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	150	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	28	2.0	"	"	"	"	"	"	
Cobalt	10	2.0	"	"	"	"	"	"	
Copper	28	1.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	54	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	22	5.0	"	"	"	"	"	"	
Zinc	38	1.0	"	"	"	"	"	"	

**Cold Vapor Extraction EPA 7470/7471**

Mercury	ND	0.10	mg/kg	1	5080108	08/03/15	08/04/15	EPA 7471A Soil	
---------	----	------	-------	---	---------	----------	----------	-------------------	--

SunStar Laboratories, Inc.

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

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager

PSI -- Oakland  
4703 Tidewater Ave Ste B  
Oakland CA, 94601

Project: Morgan Muir-Tidewater  
Project Number: 575-872  
Project Manager: Frank Poss

Reported:  
08/21/15 15:23

**B-2-1.0**

**T151838-02 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Polychlorinated Biphenyls by EPA Method 8082**

PCB-1016	ND	10	ug/kg	1	5080111	08/01/15	08/05/15	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	"
PCB-1232	ND	10	"	"	"	"	"	"	"
PCB-1242	ND	10	"	"	"	"	"	"	"
PCB-1248	ND	10	"	"	"	"	"	"	"
PCB-1254	ND	10	"	"	"	"	"	"	"
PCB-1260	ND	10	"	"	"	"	"	"	"
Surrogate: Tetrachloro-meta-xylene		69.7 %		35-140	"	"	"	"	"
Surrogate: Decachlorobiphenyl		67.6 %		35-140	"	"	"	"	"

SunStar Laboratories, Inc.

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

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager

PSI – Oakland 4703 Tidewater Ave Ste B Oakland CA, 94601	Project: Morgan Muir-Tidewater Project Number: 575-872 Project Manager: Frank Poss	Reported: 08/21/15 15:23
--	--	-----------------------------

**B-3-1.0**  
**T151838-03 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Metals by EPA 6010B**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Antimony	ND	3.0	mg/kg	1	5080429	08/04/15	08/05/15	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	"
Arsenic	ND	5.0	"	"	"	"	"	"	"
Barium	120	1.0	"	"	"	"	"	"	"
Beryllium	ND	1.0	"	"	"	"	"	"	"
Cadmium	ND	2.0	"	"	"	"	"	"	"
Chromium	26	2.0	"	"	"	"	"	"	"
Cobalt	8.3	2.0	"	"	"	"	"	"	"
Copper	23	1.0	"	"	"	"	"	"	"
Lead	ND	3.0	"	"	"	"	"	"	"
Molybdenum	ND	5.0	"	"	"	"	"	"	"
Nickel	46	2.0	"	"	"	"	"	"	"
Selenium	ND	5.0	"	"	"	"	"	"	"
Thallium	ND	2.0	"	"	"	"	"	"	"
Vanadium	20	5.0	"	"	"	"	"	"	"
Zinc	34	1.0	"	"	"	"	"	"	"

**Cold Vapor Extraction EPA 7470/7471**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.10	mg/kg	1	5080108	08/01/15	08/04/15	EPA 7471A Soil	

**Polychlorinated Biphenyls by EPA Method 8082**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
PCB-1016	ND	10	ug/kg	1	5080111	08/01/15	08/05/15	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	"
PCB-1232	ND	10	"	"	"	"	"	"	"
PCB-1242	ND	10	"	"	"	"	"	"	"
PCB-1248	ND	10	"	"	"	"	"	"	"
PCB-1254	ND	10	"	"	"	"	"	"	"
PCB-1260	ND	10	"	"	"	"	"	"	"

Surrogate: Tetrachloro-meta-xylene	68.8 %	35-140	"	"	"	"	"	"	"
Surrogate: Decachlorobiphenyl	64.0 %	35-140	"	"	"	"	"	"	"

SunStar Laboratories, Inc.

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

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager

PSI -- Oakland 4703 Tidewater Ave Ste B Oakland CA, 94601	Project: Morgan Muir-Tidewater Project Number: 575-872 Project Manager: Frank Poss	Reported: 08/21/15 15:23
---	--	-----------------------------

**B-3-5.0**  
**T151838-04 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	--------------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Extractable Petroleum Hydrocarbons by 8015C**

C6-C12 (GRO)	ND	10	mg/kg	1	5073029	07/30/15	08/01/15	EPA 8015C	SGEL
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	SGEL
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	SGEL
<i>Surrogate: p-Terphenyl</i>		96.4 %		65-135	"	"	"	"	SGEL

*Katherine RunningCrane*



PSI – Oakland 4703 Tidewater Ave Ste B Oakland CA, 94601	Project: Morgan Muir-Tidewater Project Number: 575-872 Project Manager: Frank Poss	Reported: 08/21/15 15:23
--	--	-----------------------------

**B-4-1.0**  
**T151838-05 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	--------------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

Extractable Petroleum Hydrocarbons by 8015C

C6-C12 (GRO)	ND	10	mg/kg	1	5073029	07/30/15	08/01/15	EPA 8015C	SGEL
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	SGEL
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	SGEL
<i>Surrogate: p-Terphenyl</i>		91.6 %	65-135		"	"	"	"	SGEL

SunStar Laboratories, Inc.

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

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager

PSI – Oakland 4703 Tidewater Ave Ste B Oakland CA, 94601	Project: Morgan Muir-Tidewater Project Number: 575-872 Project Manager: Frank Poss	Reported: 08/21/15 15:23
--	--	-----------------------------

**B-5-1.0  
T151838-06 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Extractable Petroleum Hydrocarbons by 8015C**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C12 (GRO)	ND	10	mg/kg	1	5073029	07/30/15	08/01/15	EPA 8015C	SGEL
C13-C28 (DRO)	36	10	"	"	"	"	"	"	SGEL
C29-C40 (MORO)	570	10	"	"	"	"	"	"	SGEL
Surrogate: p-Terphenyl		91.4%	65-135	"	"	"	"	"	SGEL

**Metals by EPA 6010B**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Antimony	ND	3.0	mg/kg	1	5081029	08/10/15	08/10/15	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	"
Arsenic	ND	5.0	"	"	"	"	"	"	"
Barium	94	1.0	"	"	"	"	"	"	"
Beryllium	ND	1.0	"	"	"	"	"	"	"
Cadmium	ND	2.0	"	"	"	"	"	"	"
Chromium	16	2.0	"	"	"	"	"	"	"
Cobalt	5.5	2.0	"	"	"	"	"	"	"
Copper	20	1.0	"	"	"	"	"	"	"
Lead	41	3.0	"	"	"	"	"	"	"
Molybdenum	ND	5.0	"	"	"	"	"	"	"
Nickel	30	2.0	"	"	"	"	"	"	"
Selenium	ND	5.0	"	"	"	"	"	"	"
Thallium	ND	2.0	"	"	"	"	"	"	"
Vanadium	25	5.0	"	"	"	"	"	"	"
Zinc	150	1.0	"	"	"	"	"	"	"

**Cold Vapor Extraction EPA 7470/7471**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	0.11	0.10	mg/kg	1	5081030	08/10/15	08/11/15	EPA 7471A Soil	

SunStar Laboratories, Inc.

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

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager

PST -- Oakland 4703 Tidewater Ave Ste B Oakland CA, 94601	Project: Morgan Muir-Tidewater Project Number: 575-872 Project Manager: Frank Pess	Reported: 08/21/15 15:23
---	--	-----------------------------

**B-5-1.0  
T151838-06 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Polychlorinated Biphenyls by EPA Method 8082**

PCB-1016	ND	10	ug/kg	1	5081028	08/10/15	08/11/15	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		78.7 %	35-140		"	"	"	"	
Surrogate: Decachlorobiphenyl		69.9 %	35-140		"	"	"	"	

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

Bromobenzene	ND	5.0	ug/kg	1	5080708	08/10/15	08/10/15	EPA 8260B	
Bromochloromethane	ND	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	5.0	"	"	"	"	"	"	
Bromoform	ND	5.0	"	"	"	"	"	"	
Bromomethane	ND	5.0	"	"	"	"	"	"	
n-Butylbenzene	ND	5.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"	
Chlorobenzene	ND	5.0	"	"	"	"	"	"	
Chloroethane	ND	5.0	"	"	"	"	"	"	
Chloroform	ND	5.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
Dibromochloromethane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	10	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
Dibromomethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

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

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager

PST – Oakland  
4703 Tidewater Ave Ste B  
Oakland CA, 94601

Project: Morgan Muir-Tidewater  
Project Number: 575-872  
Project Manager: Frank Poss

Reported:  
08/21/15 15:23

**B-5-1.0**  
**T151838-06 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
1,4-Dichlorobenzene	ND	5.0	ug/kg	1	5080708	08/10/15	08/10/15	EPA 8260B	
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	5.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	
Methylene chloride	ND	5.0	"	"	"	"	"	"	
Naphthalene	ND	5.0	"	"	"	"	"	"	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
Trichloroethene	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

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

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager

PSI -- Oakland  
4703 Tidewater Ave Ste B  
Oakland CA, 94601

Project: Morgan Muir-Tidewater  
Project Number: 575-872  
Project Manager: Frank Poss

Reported:  
08/21/15 15:23

**B-5-1.0  
T151838-06 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Vinyl chloride	ND	5.0	ug/kg	1	5080708	08/10/15	08/10/15	EPA 8260B	
Benzene	ND	5.0	"	"	"	"	"	"	"
Toluene	ND	5.0	"	"	"	"	"	"	"
Ethylbenzene	ND	5.0	"	"	"	"	"	"	"
m,p-Xylene	ND	10	"	"	"	"	"	"	"
o-Xylene	ND	5.0	"	"	"	"	"	"	"
Tert-amyl methyl ether	ND	20	"	"	"	"	"	"	"
Tert-butyl alcohol	ND	50	"	"	"	"	"	"	"
Di-isopropyl ether	ND	20	"	"	"	"	"	"	"
Ethyl tert-butyl ether	ND	20	"	"	"	"	"	"	"
Methyl tert-butyl ether	ND	20	"	"	"	"	"	"	"
Surrogate: 4-Bromofluorobenzene		92.9 %	81.2-123	"	"	"	"	"	"
Surrogate: Dibromofluoromethane		115 %	95.7-135	"	"	"	"	"	"
Surrogate: Toluene-d8		104 %	85.5-116	"	"	"	"	"	"

**Semivolatile Organic Compounds by EPA Method 8270C**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Carbazole	ND	300	ug/kg	1	5081026	08/10/15	08/11/15	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	"
Aniline	ND	300	"	"	"	"	"	"	"
2-Chlorophenol	ND	1000	"	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	"
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	"
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	"
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	"
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	"
Acenaphthene	ND	300	"	"	"	"	"	"	"
4-Nitrophenol	ND	1000	"	"	"	"	"	"	"
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	"
Pentachlorophenol	ND	1000	"	"	"	"	"	"	"
Pyrene	ND	300	"	"	"	"	"	"	"
Acenaphthylene	ND	300	"	"	"	"	"	"	"

SunStar Laboratories, Inc.

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

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager

PSI – Oakland  
4703 Tidewater Ave Ste B  
Oakland CA, 94601

Project: Morgan Muir-Tidewater  
Project Number: 575-872  
Project Manager: Frank Poss

Reported:  
08/21/15 15:23

**B-5-1.0**  
**T151838-06 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Semivolatile Organic Compounds by EPA Method 8270C**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	300	ug/kg	1	5081026	08/10/15	08/11/15	EPA 8270C	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	"
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	"
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	"
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	"
Benzo (a) pyrene	ND	300	"	"	"	"	"	"	"
Benzyl alcohol	ND	300	"	"	"	"	"	"	"
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	"
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	"
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	"
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	"
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	"
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	"
4-Chloroaniline	ND	300	"	"	"	"	"	"	"
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	"
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	"
Chrysene	ND	300	"	"	"	"	"	"	"
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	"
Dibenzofuran	ND	300	"	"	"	"	"	"	"
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	"
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	"
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	"
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	"
Diethyl phthalate	ND	300	"	"	"	"	"	"	"
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	"
Dimethyl phthalate	ND	300	"	"	"	"	"	"	"
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	"
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	"
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	"
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	"
Fluoranthene	ND	300	"	"	"	"	"	"	"
Fluorene	ND	300	"	"	"	"	"	"	"

SunStar Laboratories, Inc.

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

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager

PSI -- Oakland  
4703 Tidewater Ave Ste B  
Oakland CA, 94601

Project: **Morgan Muir-Tidewater**  
Project Number: **575-872**  
Project Manager: **Frank Poss**

Reported:  
08/21/15 15:23

**B-5-1.0**  
**T151838-06 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Semivolatile Organic Compounds by EPA Method 8270C**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Hexachlorobenzene	ND	1500	ug/kg	1	5081026	08/10/15	08/11/15	EPA 8270C	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	"
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	"
Hexachloroethane	ND	300	"	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	"
Isophorone	ND	300	"	"	"	"	"	"	"
2-Methylphenol	ND	1000	"	"	"	"	"	"	"
4-Methylphenol	ND	1000	"	"	"	"	"	"	"
Naphthalene	ND	300	"	"	"	"	"	"	"
2-Nitroaniline	ND	300	"	"	"	"	"	"	"
3-Nitroaniline	ND	300	"	"	"	"	"	"	"
4-Nitroaniline	ND	300	"	"	"	"	"	"	"
Nitrobenzene	ND	1000	"	"	"	"	"	"	"
2-Nitrophenol	ND	1000	"	"	"	"	"	"	"
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	"
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	"
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	"
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	"
Phenanthrene	ND	300	"	"	"	"	"	"	"
Azobenzene	ND	300	"	"	"	"	"	"	"
Pyridine	ND	300	"	"	"	"	"	"	"
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	"
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	"
Surrogate: 2-Fluorophenol		57.0 %	15-121	"	"	"	"	"	"
Surrogate: Phenol-d6		53.7 %	24-113	"	"	"	"	"	"
Surrogate: Nitrobenzene-d5		63.6 %	21.3-119	"	"	"	"	"	"
Surrogate: 2-Fluorobiphenyl		68.5 %	32.4-102	"	"	"	"	"	"
Surrogate: 2,4,6-Tribromophenol		74.4 %	18.1-105	"	"	"	"	"	"
Surrogate: Terphenyl-d14		68.9 %	29.1-130	"	"	"	"	"	"

SunStar Laboratories, Inc.

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

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager

PSI – Oakland  
4703 Tidewater Ave Ste B  
Oakland CA, 94601

Project: Morgan Muir-Tidewater  
Project Number: 575-872  
Project Manager: Frank Poss

Reported:  
08/21/15 15:23

**B-6-1.0**  
**T151838-07 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Extractable Petroleum Hydrocarbons by 8015C**

C6-C12 (GRO)	ND	10	mg/kg	1	5073029	07/30/15	08/01/15	EPA 8015C	SGEL
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	SGEL
C29-C40 (MORO)	110	10	"	"	"	"	"	"	SGEL
Surrogate: p-Terphenyl		93.2 %	65-135	"	"	"	"	"	SGEL

**Metals by EPA 6010B**

Antimony	ND	3.0	mg/kg	1	5081029	08/10/15	08/10/15	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	85	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	21	2.0	"	"	"	"	"	"	
Cobalt	6.9	2.0	"	"	"	"	"	"	
Copper	15	1.0	"	"	"	"	"	"	
Lead	32	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	33	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	26	5.0	"	"	"	"	"	"	
Zinc	120	1.0	"	"	"	"	"	"	

**Cold Vapor Extraction EPA 7470/7471**

Mercury	ND	0.10	mg/kg	1	5081030	08/10/15	08/11/15	EPA 7471A Soil	
---------	----	------	-------	---	---------	----------	----------	-------------------	--

SunStar Laboratories, Inc.

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

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager



PSI -- Oakland  
4703 Tidewater Ave Ste B  
Oakland CA, 94601

Project: Morgan Muir-Tidewater  
Project Number: 575-872  
Project Manager: Frank Poss

Reported:  
08/21/15 15:23

**B-6-1.0**  
**T151838-07 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Polychlorinated Biphenyls by EPA Method 8082**

PCB-1016	ND	10	ug/kg	1	5081028	08/10/15	08/11/15	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		94.5 %	35-140	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		78.8 %	35-140	"	"	"	"	"	

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

Bromobenzene	ND	5.0	ug/kg	1	5080708	08/10/15	08/10/15	EPA 8260B	
Bromochloromethane	ND	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	5.0	"	"	"	"	"	"	
Bromoform	ND	5.0	"	"	"	"	"	"	
Bromomethane	ND	5.0	"	"	"	"	"	"	
n-Butylbenzene	ND	5.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"	
Chlorobenzene	ND	5.0	"	"	"	"	"	"	
Chloroethane	ND	5.0	"	"	"	"	"	"	
Chloroform	ND	5.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
Dibromochloromethane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	10	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
Dibromomethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

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

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager

PSI - Oakland  
4703 Tidewater Ave Ste B  
Oakland CA, 94601

Project: Morgan Muir-Tidewater  
Project Number: 575-872  
Project Manager: Frank Poss

Reported:  
08/21/15 15:23

**B-6-1.0**

**T151838-07 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
1,4-Dichlorobenzene	ND	5.0	ug/kg	1	5080708	08/10/15	08/10/15	EPA 8260B	
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"	"
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"	"
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	"
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	"
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	"
1,3-Dichloropropane	ND	5.0	"	"	"	"	"	"	"
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	"
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	"
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	"
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	"
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	"
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	"
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	"
Methylene chloride	ND	5.0	"	"	"	"	"	"	"
Naphthalene	ND	5.0	"	"	"	"	"	"	"
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	"
Styrene	ND	5.0	"	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	"
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	"
Trichloroethene	ND	5.0	"	"	"	"	"	"	"
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	"
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	"

SunStar Laboratories, Inc.

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

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager

PSI -- Oakland  
4703 Tidewater Ave Ste B  
Oakland CA, 94601

Project: Morgan Muir-Tidewater  
Project Number: 575-872  
Project Manager: Frank Poss

Reported:  
08/21/15 15:23

**B-6-1.0**  
**T151838-07 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Vinyl chloride	ND	5.0	ug/kg	1	5080708	08/10/15	08/10/15	EPA 8260B	
Benzene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	10	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	20	"	"	"	"	"	"	
Tert-butyl alcohol	ND	50	"	"	"	"	"	"	
Di-isopropyl ether	ND	20	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	20	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	20	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		90.8 %	81.2-123		"	"	"	"	
Surrogate: Dibromofluoromethane		118 %	95.7-135		"	"	"	"	
Surrogate: Toluene-d8		98.1 %	85.5-116		"	"	"	"	

**Semivolatile Organic Compounds by EPA Method 8270C**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Carbazole	ND	300	ug/kg	1	5081026	08/10/15	08/11/15	EPA 8270C	
Aniline	ND	300	"	"	"	"	"	"	
Phenol	ND	1000	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	

SunStar Laboratories, Inc.

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

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager

PSI -- Oakland 4703 Tidewater Ave Ste B Oakland CA, 94601	Project: Morgan Muir-Tidewater Project Number: 575-872 Project Manager: Frank Poss	Reported: 08/21/15 15:23
---	--	-----------------------------

**B-6-1.0  
T151838-07 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Semivolatile Organic Compounds by EPA Method 8270C**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	300	ug/kg	1	5081026	08/10/15	08/11/15	EPA 8270C	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	"
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	"
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	"
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	"
Benzo (a) pyrene	ND	300	"	"	"	"	"	"	"
Benzyl alcohol	ND	300	"	"	"	"	"	"	"
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	"
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	"
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	"
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	"
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	"
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	"
4-Chloroaniline	ND	300	"	"	"	"	"	"	"
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	"
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	"
Chrysene	ND	300	"	"	"	"	"	"	"
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	"
Dibenzofuran	ND	300	"	"	"	"	"	"	"
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	"
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	"
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	"
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	"
Diethyl phthalate	ND	300	"	"	"	"	"	"	"
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	"
Dimethyl phthalate	ND	300	"	"	"	"	"	"	"
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	"
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	"
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	"
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	"
Fluoranthene	ND	300	"	"	"	"	"	"	"
Fluorene	ND	300	"	"	"	"	"	"	"

SunStar Laboratories, Inc.

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

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager

PSI -- Oakland 4703 Tidewater Ave Ste B Oakland CA, 94601	Project: Morgan Muir-Tidewater Project Number: 575-872 Project Manager: Frank Poss	Reported: 08/21/15 15:23
---	--	-----------------------------

**B-6-1.0**  
**T151838-07 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Semivolatile Organic Compounds by EPA Method 8270C**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Hexachlorobenzene	ND	1500	ug/kg	1	5081026	08/10/15	08/11/15	EPA 8270C	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	"
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	"
Hexachloroethane	ND	300	"	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	"
Isophorone	ND	300	"	"	"	"	"	"	"
2-Methylphenol	ND	1000	"	"	"	"	"	"	"
4-Methylphenol	ND	1000	"	"	"	"	"	"	"
Naphthalene	ND	300	"	"	"	"	"	"	"
2-Nitroaniline	ND	300	"	"	"	"	"	"	"
3-Nitroaniline	ND	300	"	"	"	"	"	"	"
4-Nitroaniline	ND	300	"	"	"	"	"	"	"
Nitrobenzene	ND	1000	"	"	"	"	"	"	"
2-Nitrophenol	ND	1000	"	"	"	"	"	"	"
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	"
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	"
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	"
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	"
Phenanthrene	ND	300	"	"	"	"	"	"	"
Azobenzene	ND	300	"	"	"	"	"	"	"
Pyridine	ND	300	"	"	"	"	"	"	"
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	"
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	"
Surrogate: 2-Fluorophenol	62.9 %		15-121	"	"	"	"	"	"
Surrogate: Phenol-d5	62.1 %		24-113	"	"	"	"	"	"
Surrogate: Nitrobenzene-d5	70.4 %		21.3-119	"	"	"	"	"	"
Surrogate: 2-Fluorobiphenyl	80.7 %		32.4-102	"	"	"	"	"	"
Surrogate: 2,4,6-Tribromophenol	103 %		18.1-105	"	"	"	"	"	"
Surrogate: Terphenyl-d14	101 %		29.1-130	"	"	"	"	"	"

SunStar Laboratories, Inc.

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

*Katherine RunningCrane*

Katherine RunningCrane, Project Manager

# ATTACHMENT 5



COUNTY OF ALAMEDA  
**Assessor's Office**

[Help](#)

[New Query](#)

**Property Value System**

[History](#)   [Value](#)   [Transfer](#)   [Map](#)   [Glossary](#)

Parcel Number: **34-2300-19**   Inactive: **N**   Lien Date: **01/01/2016**   Owner: **TRIN 2015 REAL ESTATE INC**  
 Property Address: **4723 TIDEWATER AVE, OAKLAND, CA 94601-4900**

[Parcel History](#)

Mailing Name		Historical Mailing Address	Document Date	Document Number	Value From Trans Tax	Parcel Count	Use
TRIN 2015 REAL ESTATE INC	<a href="#">List</a> <a href="#">Owners</a>	4723 TIDEWATER AVE , OAKLAND, CA 94601-4900	10/14/2015	2015-277592	\$2,050,000	1	<a href="#">4100</a>
TIDEWATER 2004 REAL ESTATE HOLDINGS LLC	<a href="#">List</a> <a href="#">Owners</a>	4723 TIDEWATER AVE # A, OAKLAND, CA 94601-4900	07/14/2004	2004-320705	\$1,750,000	1	<a href="#">4100</a>
GREEN & SCHMITT PARTNERSHIP	<a href="#">List</a> <a href="#">Owners</a>	1569 PEBBLEBROOK CT # 3, WALNUT CREEK, CA 94596-6457	09/04/1998	1998-308682		5	<a href="#">4100</a>
CIVICBANK OF COMMERCE	<a href="#">List</a> <a href="#">Owners</a>	2101 WEBSTER ST FL 14, OAKLAND, CA 94612-3027	05/29/1998	1998-179369		6	<a href="#">4100</a>
CITY OF OAKLAND	<a href="#">List</a> <a href="#">Owners</a>	TIDEWATER AVE , OAKLAND, CA 94601	07/01/1982	1982-98658		7	<a href="#">4100</a>

All information on this site is to be assumed accurate for property assessment purposes only, and is based upon the

Assessor's knowledge of each property. Caution is advised for use other than its intended purpose.

The Alameda County Intranet site is best viewed in Internet Explorer Version 5.5 or later.  
 Click [here](#) for more information regarding supported browsers.

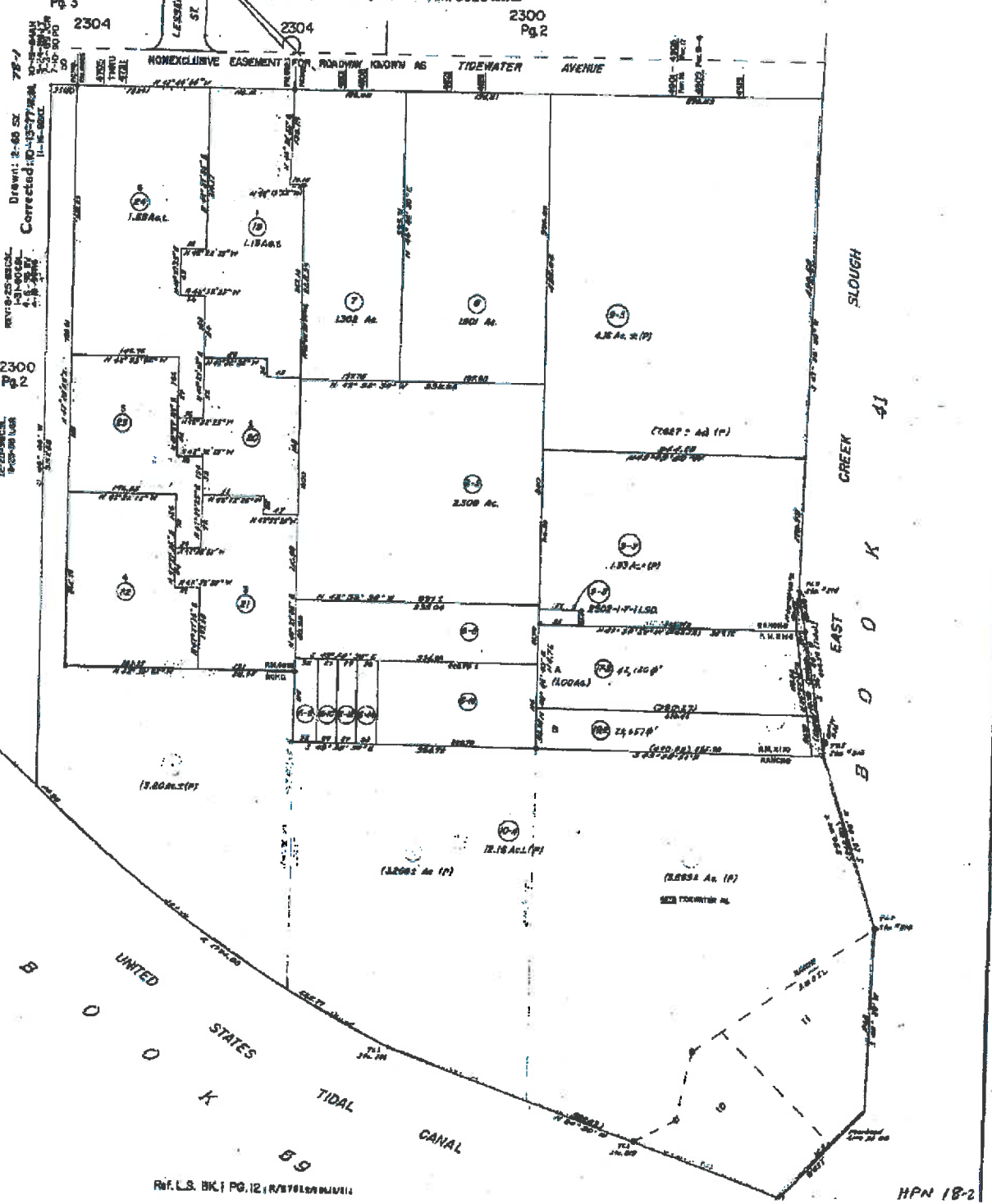
Copyright © 2001 Alameda County

**ASSESSOR'S MAP 34**

Code Area Nos. 17-032

**2300** Scale: 1" = 100'  
Pg. 3

RANCHO SAN ANTONIO (A.M. PERALTA et. al.) (Pat. Bk. A. Pg. 669)  
SALE MAP NO. 10 SALT MARSH AND TIDE LANDS (Bk. 17 Pg. 30)  
P.M. 2110 (Bk. 97 Pg. 81) P.M. 6825 (Bk. 97)



Ref. L.S. Bk. 1 Pg. 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

HPN 18-2



# ATTACHMENT 6



ENVIRONMENTAL HEALTH SERVICES  
ENVIRONMENTAL PROTECTION  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577  
(510) 567-6700  
FAX (510) 337-9335

**INVITATION TO COMMENT – POTENTIAL CASE CLOSURE**

**TIDEWATER SUBSITE  
4723 TIDEWATER AVENUE, OAKLAND, CA 94601  
SITE CLEANUP PROGRAM CASE RO0003177  
GEOTRACKER GLOBAL ID T1000007146**

**October 12, 2015**

The above referenced site is a Site Cleanup Program (SCP) case that is under the regulatory oversight of the Alameda County Environmental Health (ACEH) for the investigation of the presence of petroleum hydrocarbons, and metal concentrations in soil and groundwater from prior site use. Site investigation and cleanup activities have been completed and it does not appear that residual contamination presents a risk to human health and the environment. Therefore, ACEH is considering closure of the case. Due to the residual contamination on site, the site would be closed with site management requirements that require the use of a health and safety plan for subsurface excavations (utilities, etc.) or, further evaluation if the site is to be redeveloped in the future.

This notice is being sent to the current occupants and landowners of adjacent properties and known interested parties for this site. The public is invited to review and comment on the potential closure of the case. The entire case file can be viewed over the Internet on the ACEH website (<http://www.acgov.org/aceh/lop/ust.htm>) or the State of California Water Resources Control Board GeoTracker website (<http://geotracker.waterboards.ca.gov>). Please send written comments to Mark Detterman at ACEH, 1131 Harbor Bay Parkway, Alameda, CA 94502; all comments will be forwarded to the responsible parties. Comments **received by November 15, 2015** will be considered and responded to prior to a final determination on the proposed case closure.

If you have comments or questions regarding this site, please contact the ACEH caseworker, Mark Detterman at 510-567-6876 or by email at [mark.detterman@acgov.org](mailto:mark.detterman@acgov.org). Please refer to ACEH case RO0003177 in any correspondence.

EGGEN NORMAN J & MARGARET M TRS  
PARCEL #: 34-2300-20  
PO BOX 1883  
ORINDA CA 94563-6883

NOHR THERESE L  
PARCEL #: 34-2300-8  
124 CATHERINE CT  
ORINDA CA 94563-3103

NOHR THERESELEE T  
PARCEL #: 34-2300-6-2  
124 CATHERINE CT  
ORINDA CA 94563-3103

OCCUPANT  
PARCEL #: 34-2300-24  
4703 TIDEWATER AVE  
OAKLAND CA 94601

OCCUPANT  
PARCEL #: 34-2300-7  
4801 TIDEWATER AVE  
OAKLAND CA 94601

OCCUPANT  
PARCEL #: 34-2300-23  
TIDEWATER AVE  
OAKLAND CA 94601

OCCUPANT  
PARCEL #: 34-2300-20  
TIDEWATER AVE  
OAKLAND CA 94601

OCCUPANT  
PARCEL #: 34-2304-15  
414 LESSER ST  
OAKLAND CA 94601

OCCUPANT  
PARCEL #: 34-2300-6-2  
4831 TIDEWATER AVE  
OAKLAND CA 94601

OCCUPANT  
PARCEL #: 34-2300-21  
TIDEWATER AVE  
OAKLAND CA 94601

OCCUPANT  
PARCEL #: 34-2300-22  
TIDEWATER AVE  
OAKLAND CA 94601

OCCUPANT  
PARCEL #: 34-2300-8  
4821 TIDEWATER AVE  
OAKLAND CA 94601

SCHMITT WILLIAM W & JACQUILINE M TRS & I  
PARCEL #: 34-2300-24  
1569 PEBBLEBROOK CT  
WALNUT CREEK CA 94596-6457

TIDEWATER 2004 REAL ESTATE HOLDINGS L  
PARCEL #: 34-2300-19  
4723 TIDEWATER AVE #A  
OAKLAND CA 94601-4900

TIDEWATER GROUP LLC  
PARCEL #: 34-2300-23  
1840 EMBARCADERO  
OAKLAND CA 94606-5220

TIDEWATER GROUP LLC  
PARCEL #: 34-2300-21  
1840 EMBARCADERO  
OAKLAND CA 94606-5220

TIDEWATER GROUP LLC  
PARCEL #: 34-2300-22  
1840 EMBARCADERO  
OAKLAND CA 94606-5220

WHITE BROTHERS  
PARCEL #: 34-2300-7  
430 LESSER ST  
OAKLAND CA 94601-4902

Z SQUARE PROPERTIES CO  
PARCEL #: 34-2304-15  
252 CREEDON CIR  
ALAMEDA CA 94502-7791