



# LIMITED PHASE II SUBSURFACE INVESTIGATION REPORT

**3037, 3101 & 3115 Adeline Street** Oakland, California 94608

May 24, 2013 Partner Project Number 13-99891.2 Client Reference Number WF-SF-13-005073-03-1



Prepared for

WELLS FARGO BANK - RETECHS 4601 Graywood Avenue Long Beach, California 90808



May 24, 2013

Mr. William Bater Wells Fargo Bank - RETECHS 4601 Graywood Avenue Long Beach, California 90808

Subject: Limited Phase II Subsurface Investigation

3037, 3101 & 3115 Adeline Street

Oakland, California 94608

Partner Project Number 13-99891.2

Client Project Number WF-SF-13-005073-03-1

Dear Mr. Bater:

The following letter report describes the field activities, methods, and findings of the Limited Phase II Subsurface Investigation conducted by Partner Engineering and Science, Inc. (Partner) at the above-referenced property. The purpose of the investigation was to provisionally investigate the potential impact of petroleum hydrocarbons, volatile organic compounds (VOCs), and/or metals to soil and/or groundwater as a consequence of a release or releases from former foundry and/or machine shop operations. Wells Fargo Bank provided project authorization electronically through Direct Award Number WF-SF-13-005073-03-1 and email authorization on May 14, 2013.

### **Site Description**

The subject property consists of three contiguous parcels of land totaling approximately 0.64 acre located on the west side of Adeline Street between 32<sup>nd</sup> Street and 30<sup>th</sup> Street in a mixed commercial and residential area of Oakland, California. The subject property is improved with three vacant commercial office and warehouse buildings which were constructed between 1961 and 1984. The buildings were most recently occupied by Creative Stone Works, a fabricator of stone products. The remainder of the property is improved with asphalt-paved parking areas.

The subject property is bound by several single-family residences to the northwest; a vacant lot to the northeast; Adeline Street beyond which is a multi-family residential building, The Steel Works Lofts, a parking lot, and two single family residences to the southeast; and Champion Scaffold Services to the southwest.

Please see Figures 1 and 2 for a site vicinity map and site plan.

# **Site History**

According to a previous March 2013 Partner Phase I Environmental Site Assessment (Phase I) report, the central and southern portions of the subject property were formerly developed with a bronze foundry and machine shops from at least 1951 through 1959. Although not identified in

the regulatory database for the storage and/or handling of hazardous materials, it should be noted that these tenants operated during a time of little to no regulatory oversight. Foundry and machine shop operations typically involve the use of petroleum products, solvents, and/or metals. No documentation of subsurface sampling was found during the course of the Phase I. Based on the nature of materials typically utilized in these operations, the length and time period of occupancy, and the absence of subsurface sampling, Partner concluded that the former foundry and machine shop operations represent a recognized environmental condition (REC).

## Local Geology and Hydrogeology

Based on a review of the United States Geological Survey (USGS) *Oakland West, California* Quadrangle 7.5-minute series topographic map, the subject property is situated approximately 20 feet above mean sea level (amsl), and the local topography is sloping gently to the southwest.

The subject property is situated within the San Francisco Bay Plain, within approximately one mile of San Francisco Bay. The area occupies a late Pliocene structural depression that has been flooded several times in response to Pleistocene glacial cycles. A thick Plio-Pleistocene deposit (the Merced formation) occurs here, of which the lower 4,500 feet are marine and the upper 500 feet are mostly non-marine. The portion contains heavy minerals, indicating locally derived sediment. Approximately 100 feet above the marine-non-marine transition, the mineral assemblage changes abruptly to one identical with that carried by the Sacramento River system and derived primarily from the Sierra Nevada. The Property is underlain by up to fifty feet of unconsolidated to weakly consolidated Pleistocene and Holocene beach sand, marine muds, alluvium and artificial fill interbedded with marine and marsh deposits. Alluvium overlies Quaternary and Tertiary sedimentary rocks.

Based on borings advanced during this investigation, the underlying subsurface consists predominantly of dark gray, medium stiff, damp clay (CL) from the ground surface to approximately six feet bgs. From six to 11 feet bgs, the subsurface consists predominantly of medium brown, very stiff, damp clay (CL) with varying percentages of sand. From 11 to 15 feet bgs, the subsurface consists predominantly of medium brown, very stiff, sandy to clayey silt (ML), and from 15 to 20 feet bgs, the subsurface consists predominantly of medium brown, stiff, moist, gravelly clay of high plasticity (CH). Please refer to Appendix A for boring logs from this investigation.

According to subsurface investigations for a nearby closed Leaking Underground Storage Tank (LUST) site (Modern Mail Express, Inc. at 2836 Union Street, located approximately 0.2 mile southwest of the subject property) as reported on the State Water Resources Control Board (SWRCB) GeoTracker website, groundwater in the vicinity of the subject property is anticipated at a depth of approximately 20 to 25 feet below ground surface (bgs) with a southwesterly flow direction and under confined or semi-confined conditions. Groundwater was encountered at the subject property from 17.5 to 19.5 feet bgs during this investigation.

### **Field Activities**

To provisionally investigate the potential impact of petroleum hydrocarbons, VOCs, and/or metals to soil and/or groundwater as a consequence of a release or releases from former foundry and/or machine shop operations, Partner conducted a Limited Phase II Subsurface Investigation. The investigation scope included 5 soil borings (PES-B1 through PES-B5).

# Utility Clearance

Partner delineated the work area with white spray paint and notified Underground Services Alert North (USAN) to clear public utility lines as required by law at least 48 hours prior to drilling activities. USAN issued ticket number 0158570 for the project.

# Permitting

Prior to drilling, Partner secured Well Permit Number W2013-0332 from the Alameda County Public Works Agency (ACPWA) – Water Resources Well Permit. Please see Appendix B for a copy of the permit acquired for this investigation.

# Health and Safety Plan

Partner reviewed a site-specific Health and Safety Plan with on-site personnel involved in the project prior to the commencement of drilling activities.

### **Drilling Equipment**

On May 1, 2013, Partner subcontracted with EnProbe (State of California C57 Water Well Drilling Contractor License Number 777007) to provide and operate drilling equipment. EnProbe, under the direction of Partner, advanced borings PES-B1 through PES-B5 with a truckmounted Geoprobe Model 5400 drill rig. Drilling rods and sampling equipment were decontaminated between samples and borings to prevent cross-contamination.

### **Boring Locations**

Borings PES-B1 through PES-B3 were advanced within the southwestern, northern, and southern portions of the subject property parking lot, respectively, where former foundry operations were performed. Boring PES-B4 was advanced in the northwestern portion of the subject property parking lot, where the former foundry machine shop was located. Boring PES-B5 was advanced in the southwestern interior of the subject property warehouse building, where machine shop operations were formerly conducted. Boring PES-B2 placement was limited due to the location of the current office building on the western portion of the property, and boring PES-B5 placement was limited due to numerous pallets of stacked stone material within the warehouse area. Please see Figure 2 for a site plan indicating boring locations.

# Sampling Depths

Boring PES-B1, PES-B3, and PES-B4 were advanced to a terminal depth of 20 feet below ground surface (bgs). Boring PES-B2 was advanced to a terminal depth of 19 feet bgs, and boring PES-B5 was advanced to drilling refusal, which was encountered at a depth of approximately 18.2 feet bgs. Soil samples were collected continuously from each boring to the terminal depth. Based on field-screening results, four soil samples per boring were prepared for laboratory analyses. With the exception of boring PES-B5, a groundwater sample was collected from each boring at the terminal depth. Groundwater was not encountered within boring PES-B5 prior to drilling refusal.

# Soil Sampling Methodology

Borings PES-B1 through PES-B4 was overlain by asphalt, which was penetrated using a punch bit attachment advanced by the drill rig. PES-B5 was overlain by concrete, which was penetrated using a concrete coring attachment advanced by the direct-push drill rig. Soil samples were collected using a 4-foot long by 2-inch diameter MacroCore sampler with a 4-foot long acetate liner, which was advanced by the direct-push drill rig using 4-foot long by 1.5-inch diameter drill rods. The sampler was driven into the subsurface to allow undisturbed soil to enter the open MacroCore barrel and retrieved in 4-foot intervals to recover the soil-filled liners.

A lengthwise section of each acetate liner was removed using a splitting tool to expose the soil. The soil column was visually inspected for discoloration, monitored for odors, and classified in accordance with the Unified Soil Classification System (USCS). Select intervals were placed in sealable plastic bags and field-screened with a photoionization detector (PID) calibrated to isobutylene. None of the samples exhibited visual staining, discoloration, or odor. PID readings ranged from 0.0 to 101.6 parts per million (ppm). Please refer to the boring logs in Appendix A for specific borings and depths where elevated PID readings were observed.

Soil depths selected for laboratory analysis were sampled directly from the liners using a disposable plastic syringe and retained in one methanol-preserved and two sodium bisulfate-preserved volatile organics analysis vials (VOAs) in accordance with EPA Method 5035 sampling protocol. A sample was also collected by transferring soil into a laboratory-supplied, 4-ounce, wide-mouth, unpreserved glass jar, which was sealed with a threaded, Teflon-lined lid. The jars were filled with soil to capacity to minimize headspace and reduce the potential for volatilization. The jars and VOAs were labeled for identification and stored in an iced cooler.

# *Groundwater Sampling Methodology*

After soil sampling to the terminal depth, groundwater samples were collected by withdrawing the drill rods from the subsurface and installing ¾-inch diameter temporary monitoring wells within the open boreholes. Each monitoring well consisted of a 10-foot long, 0.010-inch factory-slotted polyvinyl chloride (PVC) screen at the terminal end and blank PVC risers from the top of the screen interval to the ground surface.

Groundwater samples were retrieved from each monitoring well using new 1/2-inch diameter bailers and conveyed into six hydrochloric acid-preserved VOA containers. Each vial was filled with no observable headspace or air bubbles to minimize the potential for volatilization, labeled for identification, and stored in an iced cooler.

New screens and bailers were used for each monitoring well. The risers were decontaminated between boreholes to prevent cross-contamination.

Probes were removed from the subsurface and the boreholes were backfilled with cement grout and capped with a concrete patch or asphalt to match existing ground cover after sampling.

Generated soil cuttings were containerized in a properly labeled and sealed 55-gallon drum and stored on-site. The derived waste will be profiled and transported under proper waste manifest to an appropriate licensed off-site facility for recycling and/or disposal pending the necessary laboratory analysis results.

# **Laboratory Analyses**

Partner collected 20 soil and 4 groundwater samples on May 1, 2013, which were transported in an iced cooler under proper chain-of-custody protocol to SunStar Laboratories, Inc. (SunStar), a state-certified laboratory [California Department of Health Services (DHS) Environmental Laboratory Accreditation Program (ELAP) certificate number 2250] in the City of Lake Forest, California, for analysis on May 3, 2013. Based on field-screening results, one groundwater sample from boring PES-B1 and one soil sample from each of borings PES-B2 through PES-B5 (4 samples total) was initially analyzed for carbon chain total petroleum hydrocarbons (TPH-cc) in accordance with EPA Method 8015M and VOCs in accordance with EPA Method 8260B. One soil sample per boring was additionally analyzed for California Administrative Manual (CAM) 17 Metals in accordance with EPA Method 6010B/7471A. Based on review of preliminary laboratory analytical results, the remaining soil samples from boring PES-B2 (3 samples total) were additionally analyzed for TPH – diesel-range organics/oil-range organics (TPH-DRO/ORO) in accordance with EPA Method 8015M, naphthalene in accordance with EPA Method 8260B, and lead and copper in accordance with EPA Method 6010. groundwater sample from boring PES-B2 was also analyzed for TPH-DRO/ORO in accordance with EPA Method 8015M and naphthalene in accordance with EPA Method 8260B. Based on the review of the cumulative laboratory analytical results, Soluble Threshold Limit Concentration (STLC) extraction was conducted on samples PES-B2-3 and analyzed for lead and copper for waste profiling purposes.

*Investigation Scope Summary* 

Please see Table 1 for a summary of the borings, sampling schedule, and laboratory analyses for this investigation.

# **Laboratory Analysis Results**

SunStar reported the laboratory analysis results on May 10, 2013 and May 20, 2013. Please see Tables 2 through 4 for a summary of the soil sample TPH-cc, VOCs, and CAM 17 Metals laboratory analysis results, respectively, and their regulatory screening levels. Please see Tables 5 and 6 for a summary of the groundwater TPH-cc and VOCs laboratory results, respectively, and their regulatory screening levels. Please see Table 7 for a comparison of the lead and copper laboratory results and 10 times STLC and Total Threshold Limit Concentration (TTLC) guidelines. Please see Table 8 for a comparison of the STLC extract lead and copper laboratory results and STLC guidelines.

Please see Appendix B for the full laboratory analysis reports, which includes chain-of-custody and laboratory quality assurance/quality control (QA/QC) documentation. Laboratory QA/QC data were within acceptable limits.

### **Discussion**

Two of the analyzed soil samples (PES-B2-3 and PES-B2-7) contained detectable concentrations of total petroleum hydrocarbon – gasoline-range organics (TPH-GRO), TPH-DRO, TPH-ORO, n-butylbenzene, sec-butylbenzene, naphthalene, and/or n-propylbenzene. No other VOCs were detected in any of the soil samples.

Five soil samples were initially analyzed for CAM 17 Metals. Based on review of the preliminary results, the remaining soil samples from boring PES-B2 (three samples total) were additionally analyzed for total lead and total copper. Of the analyzed soil samples, three samples (PES-B1-3, PES-B2-3, PES-B5-3) contained concentrations of copper, lead and/or zinc exceeding back background concentrations for typical California soils (Kearney, 1996). No other metals were detected above background concentrations.

Based on review of the analytical results, sample PES-B2-3 was further subjected to STLC extraction and analyzed for lead and copper. This sample contained detectable concentrations of copper and lead.

None of the analyzed groundwater samples contained detectable concentrations of TPH-cc or VOCs.

# Environmental Screening Levels

The San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) has established Environmental Screening Levels (ESLs) as an initial screening level evaluation. ESLs aid in assessing the potential threats to human health, terrestrial/aquatic habitats, and/or drinking water resources due to contaminants in soil, soil gas, and/or groundwater. Under most circumstances, the presence of contamination below applicable ESLs can be assumed to not pose a significant, chronic (i.e., long-term) adverse risk to the applicable receptor of concern. Conversely, sites that exceed ESLs generally require further evaluation and/or remediation. Please note that the ESLs

were developed using default assumptions (e.g., standard exposure factors) and, consequently, are only meant for screening level assessments. The ESLs should not be considered enforceable regulatory standards. Cleanup levels ultimately dependent on site-specific factors and are established by the regulatory agencies on a case-by-case basis. Please see Tables 2 and 4 for a comparison of detected soil TPH-cc and CAM 17 Metals concentrations, respectively, and available residential and commercial/industrial ESLs. Please see Table 5 for a comparison of detected groundwater TPH-cc and VOC concentrations, respectively, and available groundwater ESLs. According to information obtained from the RWQCB Geotracker website, groundwater in the vicinity of the subject property is utilized as a source of municipal and domestic supply and not as a potential source of drinking water. Detected soil and groundwater concentrations were accordingly compared to the ESLs for which groundwater is not a potential source of drinking water.

The detected TPH-GRO, n-butylbenzene, sec-butylbenzene, naphthalene, and/or n-propylbenzene concentrations did not exceed their respective residential or commercial/industrial ESLs. Two of the analyzed soil samples (PES-B2-3 and PES-B2-7) contained concentrations of TPH-DRO exceeding both residential and commercial/industrial ESLs, and concentrations of TPH-ORO exceeding residential ESLs only. Soil sample PES-B2-3 also contained an elevated concentration of naphthalene exceeding both residential and commercial/industrial ESLs.

None of the other analyzed soil samples contained detectable concentrations of TPH-cc or VOCs.

Of the metals exceeding background concentrations, one soil sample (PES-B2-3) contained concentrations of copper exceeding both residential and commercial/industrial ESLs. This sample also contained a concentration of lead exceeding residential ESLs, but was below commercial/industrial ESLs. The detected zinc concentration was below its respective residential and commercial/industrial ESLs.

The two analyzed groundwater samples, PES-B1-GW and PES-B2-GW, did not contain detectable levels of TPH-cc or VOCs.

Total Threshold Limit Concentrations/Soluble Threshold Limit Concentrations

Total Threshold Limit Concentrations (TTLCs) are established regulatory limits to determine if a waste would be considered hazardous due to toxicity. Generated wastes exceeding TTLCs require special handling procedures and can only be disposed at designated facilities. Soluble Threshold Limit Concentrations (STLCs) are established regulatory limits to determine if leachate resulting from a waste would be considered hazardous due to toxicity. A factor of 10 is generally applied to solid waste to account for the leachability of the waste. Please see Table 7 for a comparison of detected metals above background concentrations and their respective TTLCs and 10 times STLCs.

Each of the metals detected above background concentrations were below their respective TTLCs. The copper and lead concentrations in sample PES-B2-3 exceeded their respective 10 time STLCs. As such, STLC extraction was conducted on sample PES-B2-3 and analyzed for lead and copper. The extracted sample contained concentrations of lead and copper exceeding their respective STLC guidelines.

# **Summary and Conclusions**

Partner conducted a Limited Phase II Subsurface Investigation at the subject property to provisionally investigate the potential impact of petroleum hydrocarbons, VOCs, and/or metals to soil and/or groundwater as a consequence of a release or releases from former foundry and/or machine shop operations. The scope of the investigation included five soil borings (PES-B1 through PES-B5), four of which were converted into temporary wells (PEs-B1 through PES-B5). Based on field-screening results, one groundwater sample and four soil samples were initially analyzed for TPH-cc and VOCs, and five samples were initially analyzed for CAM 17 Metals. Based on review of preliminary laboratory analytical results, the remaining soil samples from boring PES-B2 (3 samples total) were additionally analyzed for TPH-DRO/ORO, naphthalene, and lead and copper. The groundwater sample from boring PES-B2 was also analyzed for TPH-DRO/ORO and naphthalene. Based on the review of the cumulative laboratory analytical results, STLC extraction was conducted on samples PES-B2-3 and analyzed for lead and copper for waste profiling purposes.

Two of the analyzed soil samples contained detectable concentrations of TPH-GRO, TPH-DRO, TPH-ORO, n-butylbenzene, sec-butylbenzene, naphthalene, and/or n-propylbenzene. The detected TPH-GRO, n-butylbenzene, sec-butylbenzene, naphthalene, and/or n-propylbenzene concentrations were below their respective residential or commercial/industrial ESLs. Two of the analyzed soil samples (PES-B2-3 and PES-B2-7) contained concentrations of TPH-DRO exceeding both residential and commercial/industrial ESLs, and concentrations of TPH-ORO exceeding residential ESLs only. Soil sample PES-B2-3 also contained an elevated concentration of naphthalene exceeding both residential and commercial/industrial ESLs.

None of the other analyzed soil samples contained detectable concentrations of TPH-cc or VOCs.

Of the metal concentrations exceeding background concentrations, one soil sample (PES-B2-3) contained concentrations of copper exceeding both residential and commercial/industrial ESLs. This sample also contained a concentration of lead exceeding residential ESLs, but was below commercial/industrial ESLs. Each of the metals detected above background concentrations were below their respective TTLCs. The copper and lead concentrations in sample PES-B2-3 exceeded their respective 10 time STLCs. As such, STLC extraction was conducted on sample PES-B2-3 and analyzed for lead and copper. The extracted sample contained concentrations of lead and copper exceeding their respective STLC guidelines. Based on the exceedence of lead and copper STLCs, soil in the vicinity of boring PES-B2 would be classified as a hazardous waste.

None of the analyzed groundwater samples contained detectable concentrations of TPH-cc or VOCs.

Based on the results of this investigation, soil in the vicinity of boring PES-B2 has been impacted by TPH-DRO, TPH-ORO, naphthalene, lead and copper. Based on this limited assessment, the impacts appear to be relatively limited in vertical extent; however, the full extent of the impacts is currently unknown. Partner recommends that additional investigation be conducted in order to assess the extent of the documented impacts.

#### Limitations

This Report presents a summary of work conducted by Partner. The work includes observations of site conditions encountered and the analytical results provided by an independent third party laboratory of samples collected during the course of the project. The number and location of samples were selected to provide the required information. However, it cannot be assumed that the limited available data are representative of subsurface conditions in areas not sampled.

Conclusions and/or recommendations are based on the observations, laboratory analyses, and the governing regulations. Conclusions and/or recommendations beyond those stated and reported herein should not be inferred from this document.

Partner warrants that the environmental consulting services contained herein were accomplished in accordance with generally accepted practices in the environmental engineering, geology, and hydrogeology fields that existed at the time and location of work. No other warranties are implied or expressed.

Reports, both verbal and written, as they pertain to the property located at 3037, 3101, and 3115 Adeline Street in the City of Oakland, California, are for the sole use and benefit of Wells Fargo Bank. This report has no other purpose and may not be relied upon by another person or entity without the written consent of Partner.

# **Signatures of Participating Professionals**

Thank you for the opportunity to be of service. If you have questions regarding this investigation, please contact the undersigned at (310) 615-4500.

C055476

Sincerely,

Elizabeth French Staff Geologist

Terri Men

Project Manager

Joseph P. Derhake, PE

Principal

### **Attachments:**

#### **Tables**

- 1. Summary of Investigation Scope
- 2. Soil Sample TPH-cc Laboratory Results
- 3. Soil Sample VOCs Laboratory Results
- 4. Soil Sample CAM 17 Metals Laboratory Results (mg/kg)
- 5. Groundwater Sample TPH-cc Laboratory Results
- 6. Groundwater Sample VOCs Laboratory Results
- 7. Comparison of Metal Laboratory Results and STLC/TTLC (mg/kg)
- 8. Comparison of Metal Laboratory Results and STLCs (mg/L)

### **Figures**

- 1. Site Vicinity Map
- 2. Site Plan

# Appendices

- A. Boring Logs
- B. ACPWA Permit
- C. Laboratory Results

Qualifications

# References

Kearney Foundation of Soil Science, *Background Concentrations of Trace and Major Elements in California Soils*, March 1996

Duverge, Dylan Jacques, Thesis submitted to San Francisco State University (SFSU): Establishing Background Arsenic in Soil of the Urbanized San Francisco Bay Region, December 2011

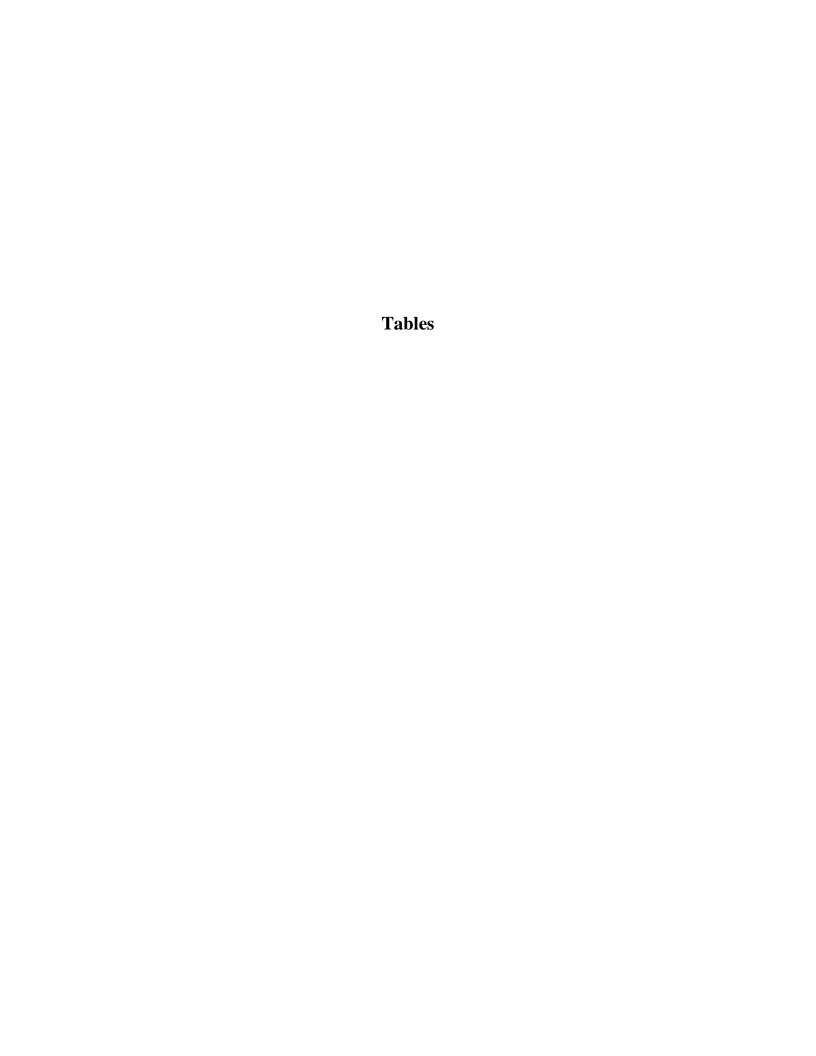


Table 1: Summary of Investigation Scope

Borehole Identification	Location	Terminal Depth (feet bgs)	Matrix Sampled	Sampling Depths* (feet bgs)	Target Contaminants
PES-B1	Southwestern Portion of	20**	Soil	<u>3,</u> 7, 13, 19	Metals
FES-B1	Parking Lot / Former Foundry	20**	Groundwater	17.5	TPH-cc, VOCs
PES-B2	Northern Portion of Parking		Soil	$\frac{3}{18}$ , $7^{1,2}$ , $12^{1,2}$ , $18^{1,2}$	TPH-cc, VOCs, Metals
FES-B2	Lot / Former Foundry	19**	Groundwater	18.8 <sup>1</sup>	TPH-cc, VOCs
PES-B3	Southern Portion of Parking	20**	Soil	<u>3</u> , 8, 13, 17	TPH-cc, VOCs, Metals
TES-B3	Lot / Former Foundry	20	Groundwater	18.4	NA
PES-B4	Northwestern Portion of Parking Lot / Former Foundry	20**	Soil	<u>3</u> , 7, <b>11</b> , 13	TPH-cc, VOCs, Metals
FES-D4	Machine Shop	20**	Groundwater	19.5	NA
PES-B5	Southwestern Interior of Subject Property Warehouse/ Former Machine Shop	18.2***	Soil	<u>3,</u> 7, 11, 15	TPH-cc, VOCs, Metals

bgs = below ground surface

NA = not analyzed

<sup>\*</sup>Depths in **bold** analyzed for carbon chain total petroleum hydrocarbons (TPH-cc) in accordance with Environmental Protection Agency (EPA) Method 8015M. Depths in *italics* analyzed for volatile organic compounds (VOCs) in accordance with EPA Method 8260B. <u>Underlined</u> depths analyzed for California Administrative Manual (CAM) 17 Metals in accordance with EPA Method 6010B/7471A. <sup>1</sup>Sample analyzed for total petroleum hydrocarbons - diesel-range organics/oil-range organics (TPH-DRO/ORO) in accordance with EPA Method 8015M, napthalene in accordance with EPA Method 8260B. <sup>2</sup>Sample analyzed for lead and copper in accordance with EPA Method 6010.

<sup>\*\*</sup>Boring Terminated at the terminal depth after groundwater was encountered

<sup>\*\*\*</sup>Refusal encountered at the terminal depth

Table 2: Soil Sample TPH-cc Laboratory Results

EPA Method	TPH-cc via 8015M					
Units		(mg/kg)				
Sample Identification	TPH-g	TPH-d	ТРН-о			
PES-B2-3	46	<u>1200</u>	950			
PES-B2-7	NA	<u>1600</u>	860			
PES-B2-12	NA	< 10	< 10			
PES-B2-18	NA	< 10	< 10			
PES-B3-3	< 10	< 10	< 10			
PES-B4-11	< 10	< 10	< 10			
PES-B5-7	< 10	< 10	< 10			
Residential ESLs	100	100	500			
Industrial ESLs	420	500	2,500			

TPH-cc = carbon chain total petroleum hydrocarbons

EPA = Environmental Protection Agency

TPH-g = total petroleum hydrocarbons as gasoline

TPH-d = total petroleum hydrocarbons as diesel

TPH-o = total petroleum hydrocarbons as oil

mg/kg = milligrams per kilogram

< = not detected above indicated laboratory Method Detection Limit (MDL)

ESLs = Environmental Screening Levels (EPA Region 9 - 2013)

Italicized values exceed residential ESLs

<u>Underlined</u> values exceed both residential and industrial ESLs

NA = not applicable

Table 3: Soil Sample VOCs Laboratory Results

EPA Method		VOCs via 8260B							
Units		(μg/kg)							
Sample Identification	n-Butylbenzene	sec- Butylbenzene	Napthalene	n- Propylbenzene	Other VOCs				
PES-B2-3	19	5.4	<u>5300</u>	7.6	ND				
PES-B2-7	NA	NA	ND	NA	NA				
PES-B2-12	NA	NA	ND	NA	NA				
PES-B2-18	NA	NA	ND	NA	NA				
PES-B3-3	ND	ND	ND	ND	ND				
PES-B4-11	ND	ND	ND	ND	ND				
PES-B5-7	ND	ND	ND	ND	ND				
Residential Soil ESL	540	540	1,700	540					
Industrial Soil ESL	1,200	1,200	4,800	1,200					

VOCs = volatile organic compounds

EPA = Environmental Protection Agency

 $\mu g/kg = micrograms per kilogram$ 

ND = not detected above laboratory Method Detection Limit (MDL)

ESLs = Environmental Screening Levels

NA = not applicable

<u>Underlined</u> values exceed both residential and industrial ESLs

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Table 4: Soil Sample CAM 17 Metals Laboratory Results (mg/kg)

Element	PES-B1-3	PES-B2-3	PES-B2-7	PES-B2-12	PES-B2-18	PES-B3-3	PES-B4-3	PES-B5-3	Background Concentrations*	Residential ESL	Commercial/ Industrial ESL
Antimony (Sb)	< 3.0	< 3.0	NA	NA	NA	< 3.0	< 3.0	< 3.0	0.21 - 0.99	20	40
Arsenic (As)	< 5.0	< 5.0	NA	NA	NA	< 5.0	< 5.0	< 5.0	11**	.39	40
Barium (Ba)	180	160	NA	NA	NA	160	68	170	299 - 719	750	1500
Beryllium (Be)	< 1.0	< 1.0	NA	NA	NA	< 1.0	< 1.0	< 1.0	0.76 - 1.8	4	8
Cadmium (Cd)	< 2.0	2.8	NA	NA	NA	< 2.0	< 2.0	< 2.0	0.05 - 0.67	12	12
Chromium (Cr)	20	20	NA	NA	NA	21	16	23	0 - 345	8	8
Cobalt (Co)	9.1	8.9	NA	NA	NA	7.7	7.5	9.0	5.7 - 24.1	.33	1.6
Copper (Cu)	160	1200	15	11	17	17	11	18	9.4 - 48	230	230
Lead (Pb)	43	140	< 3.0	8.3	< 3.0	< 3.0	< 3.0	44	10.1 - 37.7	80	320
Mercury (Hg)	< 0.10	< 0.10	NA	NA	NA	< 0.10	< 0.10	< 0.10	0.05 - 0.47	40	40
Molybdenum (Mo)	< 5.0	< 5.0	NA	NA	NA	< 5.0	< 5.0	< 5.0	0 - 2.8	150	150
Nickel (Ni)	24	26	NA	NA	NA	33	17	25	0 - 137	10	10
Selenium (Se)	< 5.0	< 5.0	NA	NA	NA	< 5.0	< 5.0	< 5.0	0 - 0.142	20	40
Silver (Ag)	< 2.0	< 2.0	NA	NA	NA	< 2.0	< 2.0	< 2.0	0 - 2.23	.78	10
Thallium (Tl)	< 2.0	< 2.0	NA	NA	NA	< 2.0	< 2.0	< 2.0	0.37 - 0.75	200	200
Vanadium (V)	28	30	NA	NA	NA	26	17	31	59 - 165	600	600
Zinc (Zn)	140	530	NA	NA	NA	25	14	29	117 - 181	6.7	10

 $CAM = California\ Administrative\ Manual$ 

mg/kg = milligrams per kilogram

< = not detected above indicated laboratory Method Detection Limit (MDL)</pre>

NA = Not Applicable

<sup>\*</sup>From Kearney Foundation of Soil Science March 1996 report *Background Concentrations of Trace and Major Elements in California Soils*. Background concentrations of metals are considered to be within one standard deviation from the mean metal concentrations determined by the study. Concentrations indicated in milligrams per kilogram (mg/kg).

<sup>\*\*</sup>From a thesis submitted to the Faculty of San Francisco State University and the San Francisco Bay RWQCB December 2011 report Establishing Background Arsenic in Soil of the Urbanized San Francisco Bay Region.

Table 5: Groundwater Sample TPH-cc Laboratory Results

EPA Method		TPH-cc via 8015C				
Units	(mg/L)					
Sample Identification	ТРН-д	ТРН-о				
PES-B1-GW	< 0.50	< 0.50	< 0.50			
PES-B2-GW	NA	< 0.50	< 0.50			
Groundwater ESL	0.5	0.64	0.64			

TPH-cc = carbon chain total petroleum hydrocarbons

EPA = Environmental Protection Agency

TPH-g = total petroleum hydrocarbons as gasoline

TPH-d = total petroleum hydrocarbons as diesel

TPH-o = total petroleum hydrocarbons as oil

 $mg/L = milligrams \ per \ liter$ 

< = not detected above indicated laboratory Method Detection Limit (MDL)</pre>

NA = Not Applicable

Table 6: Groundwater Sample VOCs Laboratory Results

EPA Method		VOCs via 8260B							
Units		(μg/L)							
Sample Identification	Benzene	Benzene Toluene Ethyl-benzene Xylenes Napthalene T							
PES-B1-GW	ND	ND	ND	ND	NA	ND	ND		
PES-B2-GW	NA	NA	NA	NA	ND	NA	NA		
Groundwater ESL	27	130	43	100	63	130	NA		

VOCs = volatile organic compounds

EPA = Environmental Protection Agency

 $\mu g/L = micrograms per liter$ 

< = not detected above indicated laboratory Method Detection Limit (MDL)</pre>

ND = not detected above laboratory PQLs

ESLs = Environmental Screening Levels (EPA Region 9 - 2013)

NA = not applicable

Limited Phase II Subsurface Investigation 3037, 3101, and 3115 Adeline Street Oakland, California 94608 Partner Project Number 13-99891.2 WFB RETECHS Numnber WF-SF-13-005073-01-1 May 2013

Table 7: Comparison of Metal Laboratory Results and STLC/TTLC (mg/kg)

Metal Exceeding Background*	PES-B2-3	10xSTLC	TTLC	
Copper (Cu)	1200	250	2,500	
Lead (Pb)	140	50	1,000	
Zinc (Zn)	530	2,500	5,000	

\*From Kearney Foundation of Soil Science March 1996 report *Background Concentrations of Trace and Major Elements in California Soils.* 

mg/kg = milligrams per kilogram

STLC = Soluble Threshold Limit Concentration

TTLC = Total Threshold Limit Concentration

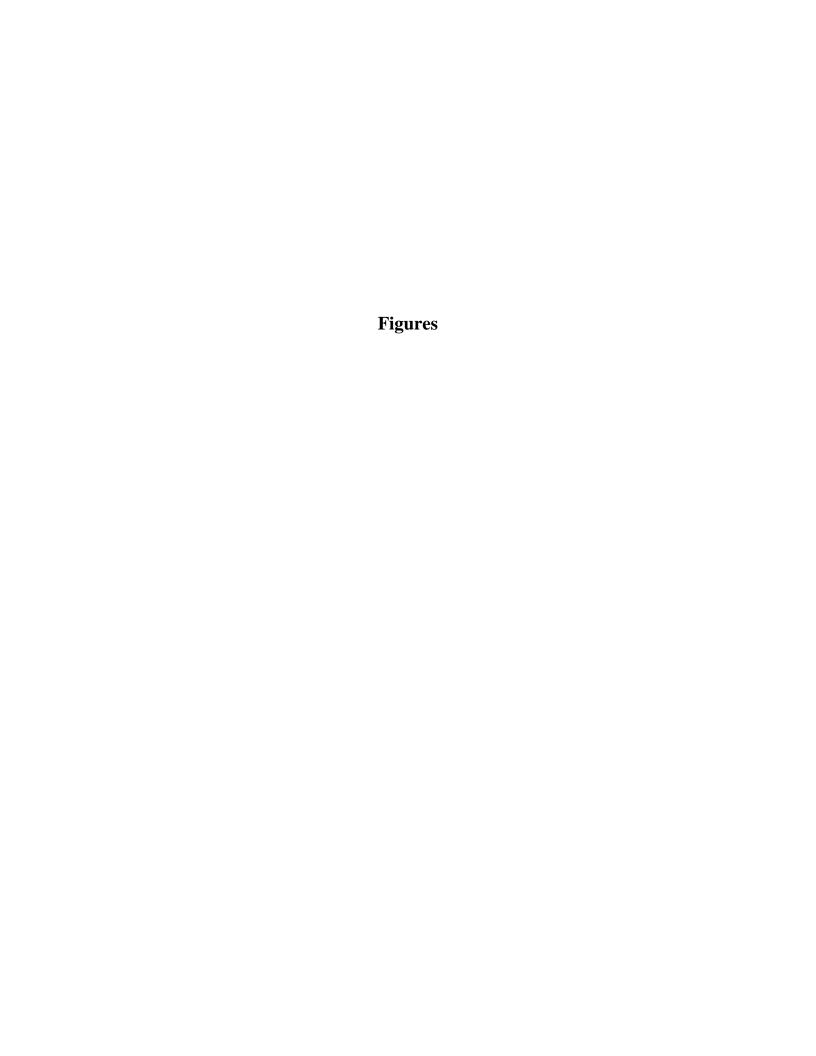
Limited Phase II Subsurface Investigation 3037, 3101, and 3115 Adeline Street Oakland, California 94608 Partner Project Number 13-99891.2 WFB RETECHS Numnber WF-SF-13-005073-01-1 May 2013

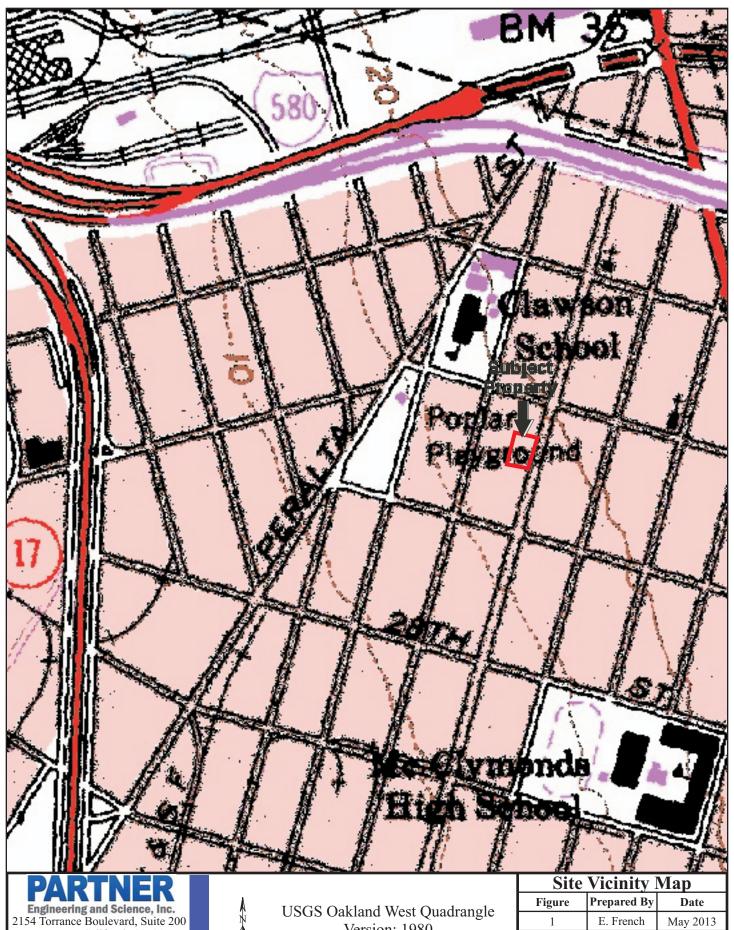
Table 8: Comparison of Metal Laboratory Results and STLCs (mg/L)

Element	PES-B2-3	STLC
Copper (Cu)	81	25
Lead (Pb)	9.8	5

mg/L = milligrams per liter

STLC = Soluble Threshold Limit Concentration

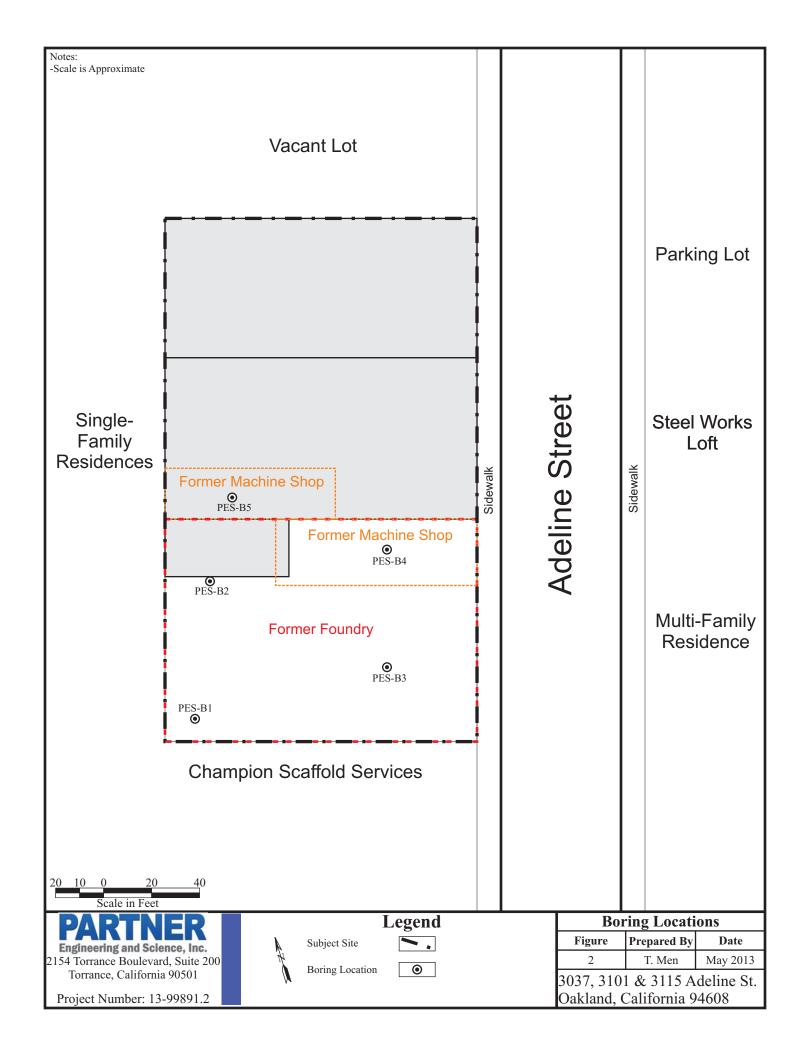




Torrance, California 90501 Project Number: 13-99891.2 USGS Oakland West Quadrangle Version: 1980

Sitt	VICINITY I	viap
Figure	Prepared By	Date
1	E. French	May 2013

3037, 3101 & 3115 Adeline Street Oakland, California 94608



Appendix A:

**Boring Logs** 

Boring N	Number:	PES-B1	_			Page 1 of 1
Location				dry Location	Date Started:	5/1/2013
C': 4 I	1			3115 Adeline Street	Date Completed:	5/1/2013
Site Add	iress:	Oaklar	nd, Calif	fornia 94608	Depth to Groundwater:	17.5
Project	Number:	13-998	391.2		Field Technician:	ESF
Drill Rig	Туре:	Direct-	Push G	eoProbe	Partner Engineering	and Science
Sampling	g Equipment:	Acetat	e Liner	S	2154 Torrance Bouleva	ard, Suite 200
Borehole	Diameter:	2"			Torrance, Californ	ia 90501
Depth	Sample	PID	USCS	Description	Notes	
1					Concrete at surface	
				Approximately 95% CLAY, 5% sand, dark gray, medium		
2			CL	stiff, damp.		
3	PES-B1-3	0.4				
4						
_						
5						
6						
7	PES-B1-7	0.2		$\bigvee$		
8			CL	Approximately 95% CLAY, 5% sand, dark brown,		
				medium stiff, damp.		
9				$\downarrow$		
10			ML	Approximately 85% SILT, 5% sand, light brown,		
10			IVIL	medium stiff, damp, with trace gravel.		
11		0.1				
12						
13	PES-B1-13	0.1				
				₩ SILTY SAND,light brown, with approximately 10% sub-	Annyayimatay 2 inch sub angular	reaval layer at 14 foot
14			SM	rounded gravel, medium stiff, moist to wet.	Approximatey 2-inch sub-angular g bgs.	graver layer at 14 leet
15						
15				Ψ		
16			CL	CLAY, with appoximately 10%, sub-angular, 5-10mm gravel and 5% to 8% sand. Clay is light to medium		
				brown, medium stiff, moist.		
17	PES-B1-GW				▼ Groundwater encountered at 1	.7.5 feet bgs.
18						
				Ψ		
19	PES-B1-19	0.1	СН	CLAY, medium brown, wet, soft.		
30						
20	<u> </u>			Ψ		
21					Boring terminated at 19 feet bgs. backfilled with cement grout and o	
					surrounding cover upon conclusion	
22						
23						
24						
35						
25						

Boring N	lumber:	PES-B2	)			Page 1 of 1
Location				dry Location	Date Started:	5/1/2013
a				3115 Adeline Street	Date Completed:	5/1/2013
Site Add	ress:			fornia 94608	Depth to Groundwater:	18.8
Project I	Number:	13-998	391.2		Field Technician:	ESF
Drill Rig	Туре:	Direct-	·Push G	GeoProbe	Partner Engineering	and Science
		Acetat	e Liner	S	2154 Torrance Bouleva	
	Diameter:	2"			Torrance, Californ	ia 90501
Depth	Sample	PID	USCS	Description	Notes	
1					Concrete at surface	
2		17.2	CL	Approximately 95% CLAY, 5% sand, dark gray, medium stiff, damp.		
3	PES-B2-3	101.6				
4						
5						
6				$\downarrow$		
7	PES-B2-7	57.3	CL	CLAY, medium brown, medium stiff, damp, trace gravel.		
8						
9		6.2				
10			CL	CLAY,approximately 8% sub-angular5mm-8mm gravel, dark to medium brown, stiff to very stiff.		
11						
12	PES-B2-12	3.2				
13				CLAY, approximately 10% sub-angular, 5mm -10mm		
14				gravel clasts. Clay is medium brown, stiff, moist.		
15						
16 17						
17	PES-B2-18	0.0			▼ Groundwater encountered at 1	L8.8 feet bgs
19						-0-
20	<u> </u>	<u> </u>		<u>'</u>	Boring terminated at 19 feet bgs.	
21					backfilled with cement grout and o surrounding cover upon conclusion	
22						
23						
24						
25						

Boring N	Number:	PES-B3	}			Page 1 of 1
Location				dry Location	Date Started:	5/1/2013
				3115 Adeline Street	Date Completed:	5/1/2013
Site Add	iress:			fornia 94608	Depth to Groundwater:	18.4
Project	Number:	13-998	91.2		Field Technician:	ESF
Drill Rig	Туре:	Direct-	Push G	eoProbe	Partner Engineering	and Science
Sampling	g Equipment:	Acetat	e Liner:	S	2154 Torrance Bouleva	ard, Suite 200
Borehole	e Diameter:	2"			Torrance, Californ	ia 90501
Depth	Sample	PID	USCS	Description	Notes	
1					Concrete at surface	
2			CL	CLAY, dark gray, medium stiff to stiff, damp.		
3	PES-B1-3	0.0				
4				$\downarrow$		
5			CL	CLAY, medium brown, with approximately 20% sub- rounded to sub-angular 5mm-15mm gravel clasts,		
6				very stiff, damp.		
7			SC	Approximately 75% SAND with 25% clay. Sand contains angular approximately 4mm grains, medium brown, very stiff, damp.		
8	PES-B3-8	0.0		brown, very stirr, damp.		
9						
10						
11						
12						
13	PES-B3-13	0.0	911	$\bigvee$ CLAY, medium brown, stiff to very stiff, sligtly moist to		
14 15			СН	moist.		
16						
17	PES-B3-17	0.0	СН	CLAY, medium brown, soft, moist.		
18					▼ Groundwater encountered at 1	18.4 feet bgs
19						
20				$\downarrow$		
21					Boring terminated at 20 feet bgs. backfilled with concrete and cappe	ed to match
22					surrounding cover upon conclusion	n ot sampling.
23						
24						
25						

Boring Number:		PES-B4	1			Page 1 of 1
Location:				dry Machine Shop Location	Date Started:	5/1/2013
a				3115 Adeline Street	Date Completed:	5/1/2013
Site Add	Site Address:			fornia 94608	Depth to Groundwater:	19.55
Project Number:		13-998	391.2		Field Technician:	ESF
Drill Rig Type:		Direct-	Push G	GeoProbe	Partner Engineering and Science	
Sampling Equipment:		Acetat	e Liner	S	2154 Torrance Boulevard, Suite 200	
Borehole Diameter:		2"			Torrance, California 90501	
Depth	Depth Sample PID USO		USCS	Description	Notes	
1					Concrete at surface	
2			CL	CLAY, dark gray, medium stiff, damp. Trace sand.		
3	PES-B4-3	13.2				
4						
5				CLAY, with approximately 5% sand, medium brown,		
6			CL	very stiff, damp.		
7	PES-B4-7	5.3				
8						
9						
10	PES-B4-11	16.8	ML	$oldsymbol{\mathbb{V}}$ CLAY/ SILT with trace sand, medium brown, very stiff,		
12	123-54-11	10.0	IVIE	damp.		
13	PES-B4-13	3.1				
14					14' to 20' - soil wet to saturated	
15				$\downarrow$		
16				CLAY, approximately 10% sub-angular, 5mm -10mm gravel clasts. Clay is medium brown, stiff, saturated.		
17						
18			СН	CLAY, medium brown, soft, saturated, trace sand.		
19					▼ Groundwater encountered at 1	19.5 feet bgs
20			I	<u> </u>	Boring terminated at 20 feet bgs.	Rorehole was
21					backfilled with cement grout and c surrounding cover upon conclusion	capped to match
22						
23						
24						
25						

Boring Number:		PES-B5	5			Page 1 of 1
Location:				ine Shop Location	Date Started:	5/1/2013
		3101,	3037 &	3115 Adeline Street	Date Completed:	5/1/2013
Site Address:		Oaklar	nd, Calif	fornia 94608	Depth to Groundwater:	N/A
Project Number:		13-998	391.2		Field Technician:	ESF
Drill Rig Type:		Direct-	Push G	ieoProbe	Partner Engineering and Science	
		Acetat	e Liner	S	2154 Torrance Boulevard, Suite 200	
Borehole Diameter:		2"			Torrance, California 90501	
Depth	Sample	PID	USCS	Description	Notes	
1					Concrete at surface	
2			CL	CLAY, dark gray, firm, damp.		
3	PES-B5-3	0.9				
4						
5				$\downarrow$		
6				CLAY, medium brown, approximately 5% sand and silt, very stiff, damp.		
7	PES-B5-7	2.9				
8						
9						
10						
11	PES-B5-11	1.7				
12						
13						
14				CLAY, medium brown, very stiff, damp to slightly		
15	PES-B5-15	2.5	СН	moist.		
16						
17					F	
18				<b>V</b>	Encountered refusal at 18.2 feet b Boring terminated at 18.2 feet bgs	
19					backfilled with cement grout and of surrounding cover upon conclusion	capped to match
20					2	· · · · · · · · · · · · · · · · · · ·
21						
22						
23						
24						
25						

**Appendix B:** 

**ACPWA Permit** 

# Alameda County Public Works Agency - Water Resources Well Permit



Site Location:

399 Elmhurst Street Hayward, CA 94544-1395 Telephone: (510)670-6633 Fax:(510)782-1939

Application Approved on: 04/29/2013 By jamesy

Permit Numbers: W2013-0332

Permits Valid from 05/01/2013 to 05/01/2013

City of Project Site: Oakland

Application Id: 1366157249239

3101, 3037, 3115 Adeline St, Oakland, CA

**Project Start Date:** Completion Date: 05/01/2013 05/01/2013

Assigned Inspector: Contact Steve Miller at (510) 670-5517 or stevem@acpwa.org

Applicant: Partner ESI - Elizabeth French

400 2nd St #415, San Francisco, CA 94107

**Property Owner:** Full Moon Partners -Keith Hembree

3109 Adeline St, Oakland, CA 94608 Client: \*\* same as Property Owner \*\*

Phone: 415-534-0272

Phone: 510-908-9197

Total Due: **Total Amount Paid:**  \$265.00

Receipt Number: WR2013-0154

<u>\$265.00</u> **PAID IN FULL** 

Payer Name : Elizabeth Sehn Paid By: VISA

**Works Requesting Permits:** 

Borehole(s) for Investigation-Environmental/Monitorinig Study - 5 Boreholes

Driller: EnProbe - Lic #: 777007 - Method: other Work Total: \$265.00

**Specifications** 

Issued Dt Expire Dt Hole Diam Max Depth Permit

Number **Boreholes** 

W2013-04/29/2013 07/30/2013 5 2.00 in. 30.00 ft

0332

#### **Specific Work Permit Conditions**

- 1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site. The containers shall be clearly labeled to the ownership of the container and labeled hazardous or non-hazardous.
- 2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.
- 3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.
- 4. Applicant shall contact Steve Miller for an inspection time at (510) 670-5517 or email to stevem@acpwa.org at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.
- 5. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of \$500.00.
- 6. Prior to any drilling activities onto any public right-of-ways, it shall be the applicants responsibilities to contact and

# Alameda County Public Works Agency - Water Resources Well Permit

coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that City or to the County and follow all City or County Ordinances. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County a Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

7. Permit is valid only for the purpose specified herein. No changes in construction procedures, as described on this permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.

**Appendix C:** 

**Laboratory Reports** 





10 May 2013

Terri Men Partner Engineering & Science, Inc.--San Francisco 400 Second St., Suite 415 San Francisco, CA 94107

RE: 3037-3115 Adeline Street, Oakland

Enclosed are the results of analyses for samples received by the laboratory on 05/03/13 10:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

**Daniel Chavez** 

**Project Manager** 

Saniel & Chivy



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

Partner Engineering & Science, Inc.--San Francisco Project: 3037-3115 Adeline Street, Oakland

400 Second St., Suite 415Project Number: 13-99891.2Reported:San Francisco CA, 94107Project Manager: Terri Men05/10/13 12:26

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PES-B1-3	T131024-01	Soil	05/01/13 09:08	05/03/13 10:00
PES-B1-GW	T131024-05	Water	05/01/13 13:40	05/03/13 10:00
PES-B2-3	T131024-06	Soil	05/01/13 10:50	05/03/13 10:00
PES-B3-3	T131024-11	Soil	05/01/13 12:26	05/03/13 10:00
PES-B4-3	T131024-16	Soil	05/01/13 15:02	05/03/13 10:00
PES-B4-11	T131024-18	Soil	05/01/13 15:18	05/03/13 10:00
PES-B5-3	T131024-21	Soil	05/01/13 16:20	05/03/13 10:00
PES-B5-7	T131024-22	Soil	05/01/13 16:40	05/03/13 10:00

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.



Partner Engineering & Science, Inc.--San Francisco Project: 3037-3115 Adeline Street, Oakland

400 Second St., Suite 415 Project Number: 13-99891.2 **Reported:**San Francisco CA, 94107 Project Manager: Terri Men 05/10/13 12:26

## PES-B1-3 T131024-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		SunStar L	aborator	ries, Inc.					
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	3050320	05/03/13	05/06/13	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	180	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	20	2.0	"	"	"	"	"	"	
Cobalt	9.1	2.0	"	"	"	"	"	"	
Copper	160	1.0	"	"	"	"	"	"	
Lead	43	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	24	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	28	5.0	"	"	"	"	"	"	
Zinc	140	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	3050321	05/03/13	05/09/13	EPA 7471A Soil	

SunStar Laboratories, Inc.



Partner Engineering & Science, Inc.--San Francisco Project: 3037-3115 Adeline Street, Oakland

400 Second St., Suite 415Project Number: 13-99891.2Reported:San Francisco CA, 94107Project Manager: Terri Men05/10/13 12:26

## PES-B1-GW T131024-05 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		SunStar La	aborato	ries, Inc.					
Extractable Petroleum Hydrocark	oons by 8015C								
C6-C12 (GRO)	ND	0.50	mg/l	1	3050326	05/03/13	05/10/13	EPA 8015C	
C13-C28 (DRO)	ND	0.50	"	"	"	"	"	"	
C29-C40 (MORO)	ND	0.50	"	"	"	"	"	"	
Surrogate: p-Terphenyl		87.0 %	65-	135	"	"	"	"	
<b>Volatile Organic Compounds by I</b>	EPA Method 826	0B							
Bromobenzene	ND	1.0	ug/l	1	3050626	05/06/13	05/08/13	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	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.



Partner Engineering & Science, Inc.--San Francisco Project: 3037-3115 Adeline Street, Oakland

400 Second St., Suite 415Project Number: 13-99891.2Reported:San Francisco CA, 94107Project Manager: Terri Men05/10/13 12:26

## PES-B1-GW T131024-05 (Water)

	Reporting							
Analyte Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

#### SunStar Laboratories, Inc.

s-1,2-Dichloroethene	ND	1.0	ug/l	1	3050626	05/06/13	05/08/13	EPA 8260E
ans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"
2-Dichloropropane	ND	1.0	"	"	"	"	"	"
3-Dichloropropane	ND	1.0	"	"	"	"	"	"
2-Dichloropropane	ND	1.0	"	"	"	"	"	"
1-Dichloropropene	ND	1.0	"	"	"	"	"	"
s-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"
ans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"
exachlorobutadiene	ND	1.0	"	"	"	"	"	"
opropylbenzene	ND	1.0	"	"	"	"	"	"
Isopropyltoluene	ND	1.0	"	"	"	"	"	"
lethylene chloride	ND	1.0	"	"	"	"	"	"
aphthalene	ND	1.0	"	"	"	"	"	"
Propylbenzene	ND	1.0	"	"	"	"	"	"
yrene	ND	1.0	"	"	"	"	"	"
1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"
1,1,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"
etrachloroethene	ND	1.0	"	"	"	"	"	"
2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"
2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"
1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"
1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"
richloroethene	ND	1.0	"	"	"	"	"	"
richlorofluoromethane	ND	1.0	"	"	"	"	"	"
2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"
3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"
2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"
inyl chloride	ND	1.0	"	"	"	"	"	"
enzene	ND	0.50	"	"	"	"	"	"
oluene	ND	0.50	"	"	"	"	"	"
thylbenzene	ND	0.50	"	"	"	"	"	"
,p-Xylene	ND	1.0	"	"	"	"	"	"

SunStar Laboratories, Inc.



Partner Engineering & Science, Inc.--San Francisco Project: 3037-3115 Adeline Street, Oakland

400 Second St., Suite 415Project Number: 13-99891.2Reported:San Francisco CA, 94107Project Manager: Terri Men05/10/13 12:26

## PES-B1-GW T131024-05 (Water)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

#### SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

o-Xylene	ND	0.50	ug/l 1	3050626	05/06/13	05/08/13	EPA 8260B
Surrogate: 4-Bromofluorobenzene		108 %	83.5-119	"	"	"	"
Surrogate: Dibromofluoromethane		108 %	81-136	"	"	"	"
Surrogate: Toluene-d8		102 %	88.8-117	"	"	"	"

SunStar Laboratories, Inc.



Partner Engineering & Science, Inc.--San Francisco Project: 3037-3115 Adeline Street, Oakland

400 Second St., Suite 415Project Number: 13-99891.2Reported:San Francisco CA, 94107Project Manager: Terri Men05/10/13 12:26

### PES-B2-3 T131024-06 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		SunStar L	aborator	ies, Inc.					
Extractable Petroleum Hydroc	arbons by 8015C								
C6-C12 (GRO)	46	10	mg/kg	1	3050319	05/03/13	05/10/13	EPA 8015C	
C13-C28 (DRO)	1200	10	"	"	"	"	"	"	
C29-C40 (MORO)	950	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		109 %	65	135	"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	3050320	05/03/13	05/06/13	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	160	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	2.8	2.0	"	"	"	"	"	"	
Chromium	20	2.0	"	"	"	"	"	"	
Cobalt	8.9	2.0	"	"	"	"	"	"	
Copper	1200	1.0	"	"	"	"	"	"	
Lead	140	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	26	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	30	5.0	"	"	"	"	"	"	
Zinc	530	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 74	70/7471								
Mercury	ND	0.10	mg/kg	1	3050321	05/03/13	05/09/13	EPA 7471A Soil	

SunStar Laboratories, Inc.



Partner Engineering & Science, Inc.--San Francisco Project: 3037-3115 Adeline Street, Oakland

400 Second St., Suite 415Project Number: 13-99891.2Reported:San Francisco CA, 94107Project Manager: Terri Men05/10/13 12:26

### PES-B2-3 T131024-06 (Soil)

	Reporting							
Analyte Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

#### SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA M	ethod 8260B							
Bromobenzene	ND	5.0	ug/kg	1	3050327	05/03/13	05/04/13	EPA 8260B/5035
Bromochloromethane	ND	5.0	"	"	"	"	"	II .
Bromodichloromethane	ND	5.0	"	"	"	"	"	II .
Bromoform	ND	5.0	"	"	"	"	"	II .
Bromomethane	ND	5.0	"	"	"	"	"	II .
n-Butylbenzene	19	5.0	"	"	"	"	"	II .
sec-Butylbenzene	5.4	5.0	"	"	"	"	"	II .
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	5.0	"	"	"	"	"	"
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"
Dibromomethane	ND	5.0	"	"	"	"	"	"
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"
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	"	"	"	"	"	II .
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	II .
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"

SunStar Laboratories, Inc.



Partner Engineering & Science, Inc.--San Francisco Project: 3037-3115 Adeline Street, Oakland

400 Second St., Suite 415Project Number: 13-99891.2Reported:San Francisco CA, 94107Project Manager: Terri Men05/10/13 12:26

### PES-B2-3 T131024-06 (Soil)

	Reporting							
Analyte Resul	t Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

#### SunStar Laboratories, Inc.

is-1,3-Dichloropropene	ND	5.0	ug/kg	1	3050327	05/03/13	05/04/13	EPA 8260B/5035
ans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"
Iexachlorobutadiene	ND	5.0	"	"	"	"	"	"
sopropylbenzene	ND	5.0	"	"	"	"	"	"
-Isopropyltoluene	ND	5.0	"	"	"	"	"	"
Iethylene chloride	ND	5.0	"	"	"	"	"	"
aphthalene	5300	250	"	50	"	"	"	"
-Propylbenzene	7.6	5.0	"	1	"	"	"	"
tyrene	ND	5.0	"	"	"	"	"	"
,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"
,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"
etrachloroethene	ND	5.0	"	"	"	"	"	"
,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"
,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"
,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"
,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"
richloroethene	ND	5.0	"	"	"	"	"	"
richlorofluoromethane	ND	5.0	"	"	"	"	"	"
,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"
,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"
,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"
inyl chloride	ND	5.0	"	"	"	"	"	"
Senzene	ND	5.0	"	"	"	"	"	"
oluene	ND	5.0	"	"	"	"	"	"
thylbenzene	ND	5.0	"	"	"	"	"	"
n,p-Xylene	ND	5.0	"	"	"	"	"	"
-Xylene	ND	5.0	"	"	"	"	"	"
urrogate: Toluene-d8		102 %	85.5-1	116	"	"	"	"
urrogate: 4-Bromofluorobenzene		100 %	81.2-1	123	"	"	"	"
urrogate: Dibromofluoromethane		109 %	95.7-1	135	"	"	"	"

SunStar Laboratories, Inc.



Partner Engineering & Science, Inc.--San Francisco Project: 3037-3115 Adeline Street, Oakland

400 Second St., Suite 415Project Number: 13-99891.2Reported:San Francisco CA, 94107Project Manager: Terri Men05/10/13 12:26

### PES-B3-3 T131024-11 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		SunStar L	aborator	ies, Inc.					
Extractable Petroleum Hydrocarbons	by 8015C								
C6-C12 (GRO)	ND	10	mg/kg	1	3050319	05/03/13	05/10/13	EPA 8015C	
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		110 %	65	135	"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	3050320	05/03/13	05/06/13	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	160	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	21	2.0	"	"	"	"	"	"	
Cobalt	7.7	2.0	"	"	"	"	"	"	
Copper	17	1.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	33	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	26	5.0	"	"	"	"	"	"	
Zinc	25	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/747	1								
Mercury	ND	0.10	mg/kg	1	3050321	05/03/13	05/09/13	EPA 7471A Soil	

SunStar Laboratories, Inc.



Partner Engineering & Science, Inc.--San Francisco Project: 3037-3115 Adeline Street, Oakland

400 Second St., Suite 415Project Number: 13-99891.2Reported:San Francisco CA, 94107Project Manager: Terri Men05/10/13 12:26

### PES-B3-3 T131024-11 (Soil)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

#### SunStar Laboratories, Inc.

<b>Volatile Organic Compounds by E</b>	CPA Method 8260B	1						
Bromobenzene	ND	4.3	ug/kg	1	3050327	05/03/13	05/04/13	EPA 8260B/5035
Bromochloromethane	ND	4.3	"	"	"	"	"	"
Bromodichloromethane	ND	4.3	"	"	"	"	"	"
Bromoform	ND	4.3	"	"	"	"	"	"
Bromomethane	ND	4.3	"	"	"	"	"	"
n-Butylbenzene	ND	4.3	"	"	"	"	"	"
sec-Butylbenzene	ND	4.3	"	"	"	"	"	"
tert-Butylbenzene	ND	4.3	"	"	"	"	"	"
Carbon tetrachloride	ND	4.3	"	"	"	"	"	"
Chlorobenzene	ND	4.3	"	"	"	"	"	"
Chloroethane	ND	4.3	"	"	"	"	"	"
Chloroform	ND	4.3	"	"	"	"	"	"
Chloromethane	ND	4.3	"	"	"	"	"	"
2-Chlorotoluene	ND	4.3	"	"	"	"	"	"
4-Chlorotoluene	ND	4.3	"	"	"	"	"	"
Dibromochloromethane	ND	4.3	"	"	"	"	"	"
1,2-Dibromo-3-chloropropane	ND	4.3	"	"	"	"	"	"
1,2-Dibromoethane (EDB)	ND	4.3	"	"	"	"	"	"
Dibromomethane	ND	4.3	"	"	"	"	"	"
1,2-Dichlorobenzene	ND	4.3	"	"	"	"	"	"
1,3-Dichlorobenzene	ND	4.3	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	4.3	"	"	"	"	"	"
Dichlorodifluoromethane	ND	4.3	"	"	"	"	"	"
1,1-Dichloroethane	ND	4.3	"	"	"	"	"	"
1,2-Dichloroethane	ND	4.3	"	"	"	"	"	"
1,1-Dichloroethene	ND	4.3	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	4.3	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	4.3	"	"	"	"	"	"
1,2-Dichloropropane	ND	4.3	"	"	"	"	"	"
1,3-Dichloropropane	ND	4.3	"	"	"	"	"	"
22 D: 11	MD	4.0						

ND

4.3

SunStar Laboratories, Inc.

2,2-Dichloropropane



Partner Engineering & Science, Inc.--San Francisco Project: 3037-3115 Adeline Street, Oakland

400 Second St., Suite 415Project Number: 13-99891.2Reported:San Francisco CA, 94107Project Manager: Terri Men05/10/13 12:26

### PES-B3-3 T131024-11 (Soil)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

#### SunStar Laboratories, Inc.

,1-Dichloropropene	ND	4.3	ug/kg	1	3050327	05/03/13	05/04/13	EPA 8260B/5035
ris-1,3-Dichloropropene	ND	4.3	"	"	"	"	"	"
rans-1,3-Dichloropropene	ND	4.3	"	"	"	"	"	"
Hexachlorobutadiene	ND	4.3	"	"	"	"	"	"
sopropylbenzene	ND	4.3	"	"	"	"	"	"
o-Isopropyltoluene	ND	4.3	"	"	"	"	"	"
Methylene chloride	ND	4.3	"	"	"	"	"	"
Naphthalene	ND	4.3	"	"	"	"	"	"
n-Propylbenzene	ND	4.3	"	"	"	"	"	"
Styrene	ND	4.3	"	"	"	"	"	"
,1,2,2-Tetrachloroethane	ND	4.3	"	"	"	"	"	"
,1,1,2-Tetrachloroethane	ND	4.3	"	"	"	"	"	"
Tetrachloroethene	ND	4.3	"	"	"	"	"	"
,2,3-Trichlorobenzene	ND	4.3	"	"	"	"	"	"
,2,4-Trichlorobenzene	ND	4.3	"	"	"	"	"	"
,1,2-Trichloroethane	ND	4.3	"	"	"	"	"	"
,1,1-Trichloroethane	ND	4.3	"	"	"	"	"	"
Trichloroethene	ND	4.3	"	"	"	"	"	"
Trichlorofluoromethane	ND	4.3	"	"	"	"	"	"
,2,3-Trichloropropane	ND	4.3	"	"	"	"	"	"
,3,5-Trimethylbenzene	ND	4.3	"	"	"	"	"	"
,2,4-Trimethylbenzene	ND	4.3	"	"	"	"	"	"
Vinyl chloride	ND	4.3	"	"	"	"	"	"
Benzene	ND	4.3	"	"	"	"	"	"
Toluene	ND	4.3	"	"	"	"	"	"
Ethylbenzene	ND	4.3	"	"	"	"	"	"
n,p-Xylene	ND	4.3	"	"	"	"	"	"
o-Xylene	ND	4.3	"	"	"	"	"	"
Gurrogate: Toluene-d8		87.5 %	85.5-	116	"	"	"	"
Gurrogate: 4-Bromofluorobenzene		83.1 %	81.2-	123	"	"	"	"
Surrogate: Dibromofluoromethane		124 %	95.7-	135	"	"	"	"

SunStar Laboratories, Inc.



Partner Engineering & Science, Inc.--San Francisco Project: 3037-3115 Adeline Street, Oakland

Project Number: 13-99891.2

Reported:

400 Second St., Suite 415 San Francisco CA, 94107

Project Manager: Terri Men

05/10/13 12:26

### PES-B3-3 T131024-11 (Soil)

		Reporting							
	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

SunStar Laboratories, Inc.



400 Second St., Suite 415

San Francisco CA, 94107

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

Partner Engineering & Science, Inc.--San Francisco

Project: 3037-3115 Adeline Street, Oakland

Project Number: 13-99891.2 Project Manager: Terri Men

Reported:

05/10/13 12:26

### **PES-B4-3** T131024-16 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		SunStar L	aborator	ries, Inc.					
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	3050320	05/03/13	05/06/13	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	68	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	05/06/13	"	
Cadmium	ND	2.0	"	"	"	"	05/06/13	"	
Chromium	16	2.0	"	"	"	"	"	"	
Cobalt	7.5	2.0	"	"	"	"	"	"	
Copper	11	1.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	17	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	17	5.0	"	"	"	"	"	"	
Zinc	14	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	3050321	05/03/13	05/09/13	EPA 7471A Soil	

SunStar Laboratories, Inc.



Partner Engineering & Science, Inc.--San Francisco Project: 3037-3115 Adeline Street, Oakland

400 Second St., Suite 415Project Number: 13-99891.2Reported:San Francisco CA, 94107Project Manager: Terri Men05/10/13 12:26

### PES-B4-11 T131024-18 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
		SunStar L	aborator	ies, Inc.	_				
Extractable Petroleum Hydrocarl	oons by 8015C								
C6-C12 (GRO)	ND	10	mg/kg	1	3050319	05/03/13	05/10/13	EPA 8015C	
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		107 %	65	135	"	"	"	"	
Volatile Organic Compounds by I	EPA Method 8260	)B							
Bromobenzene	ND	5.0	ug/kg	1	3050327	05/03/13	05/04/13	EPA 8260B/5035	
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	"	"	"	"	"	"	
ert-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	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
Dibromomethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethene	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.

Saviel & Chivy



Partner Engineering & Science, Inc.--San Francisco Project: 3037-3115 Adeline Street, Oakland

400 Second St., Suite 415Project Number: 13-99891.2Reported:San Francisco CA, 94107Project Manager: Terri Men05/10/13 12:26

## PES-B4-11 T131024-18 (Soil)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

#### SunStar Laboratories, Inc.

	Su	nStar L	aboratori	es, Inc.				
Volatile Organic Compounds by	EPA Method 8260B							
cis-1,2-Dichloroethene	ND	5.0	ug/kg	1	3050327	05/03/13	05/04/13	EPA 8260B/5035
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	11
1,3-Dichloropropane	ND	5.0	"	"	"	"	"	11
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	"	"	"	"	"	II .
Methylene chloride	ND	5.0	"	"	"	"	"	"
Naphthalene	ND	5.0	"	"	"	"	"	"
n-Propylbenzene	ND	5.0	"	"	"	"	"	II .
Styrene	ND	5.0	"	"	"	"	"	u .
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	u .
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	u .
Tetrachloroethene	ND	5.0	"	"	"	"	"	II .
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	II .
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	II .
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	II .
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	u .
Trichloroethene	ND	5.0	"	"	"	"	"	II .
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	II .
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	II .
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	II .
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	II .
Vinyl chloride	ND	5.0	"	"	"	"	"	u .
Benzene	ND	5.0	"	"	"	"	"	u .
Toluene	ND	5.0	"	"	"	"	"	u .
Ethylbenzene	ND	5.0	"	"	"	"	"	11

SunStar Laboratories, Inc.



Partner Engineering & Science, Inc.--San Francisco Project: 3037-3115 Adeline Street, Oakland

Project Number: 13-99891.2

400 Second St., Suite 415 San Francisco CA, 94107 Project Manager: Terri Men

Reported: 05/10/13 12:26

### **PES-B4-11** T131024-18 (Soil)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

#### SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

m,p-Xylene	ND	5.0	ug/kg	1	3050327	05/03/13	05/04/13	EPA 8260B/5035	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Surrogate: Toluene-d8		86.4 %	85.5-1	16	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		85.1 %	81.2-1	23	"	"	"	"	
Surrogate: Dibromofluoromethane		115 %	95.7-1	35	"	"	"	"	

SunStar Laboratories, Inc.

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Partner Engineering & Science, Inc.--San Francisco Project: 3037-3115 Adeline Street, Oakland

400 Second St., Suite 415Project Number: 13-99891.2Reported:San Francisco CA, 94107Project Manager: Terri Men05/10/13 12:26

### PES-B5-3 T131024-21 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		SunStar L	aborator	ries, Inc.					
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	3050320	05/03/13	05/06/13	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	170	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	05/06/13	"	
Cadmium	ND	2.0	"	"	"	"	05/06/13	"	
Chromium	23	2.0	"	"	"	"	"	"	
Cobalt	9.0	2.0	"	"	"	"	"	"	
Copper	18	1.0	"	"	"	"	"	"	
Lead	44	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	25	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	31	5.0	"	"	"	"	"	"	
Zinc	29	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	3050321	05/03/13	05/09/13	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.

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Partner Engineering & Science, Inc.--San Francisco Project: 3037-3115 Adeline Street, Oakland

400 Second St., Suite 415Project Number: 13-99891.2Reported:San Francisco CA, 94107Project Manager: Terri Men05/10/13 12:26

## PES-B5-7 T131024-22 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		SunStar L	aborator	ries, Inc.					
Extractable Petroleum Hydrocarbo	ns by 8015C								
C6-C12 (GRO)	ND	10	mg/kg	1	3050319	05/03/13	05/10/13	EPA 8015C	
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		107 %	65-	135	"	"	"	"	
Volatile Organic Compounds by EF	PA Method 8260	)B							
Bromobenzene	ND	3.8	ug/kg	1	3050327	05/03/13	05/04/13	EPA 8260B/5035	
Bromochloromethane	ND	3.8	"	"	"	"	"	"	
Bromodichloromethane	ND	3.8	"	"	"	"	"	"	
Bromoform	ND	3.8	"	"	"	"	"	"	
Bromomethane	ND	3.8	"	"	"	"	"	"	
n-Butylbenzene	ND	3.8	"	"	"	"	"	"	
sec-Butylbenzene	ND	3.8	"	"	"	"	"	"	
tert-Butylbenzene	ND	3.8	"	"	"	"	"	"	
Carbon tetrachloride	ND	3.8	"	"	"	"	"	"	
Chlorobenzene	ND	3.8	"	"	"	"	"	"	
Chloroethane	ND	3.8	"	"	"	"	"	"	
Chloroform	ND	3.8	"	"	"	"	"	"	
Chloromethane	ND	3.8	"	"	"	"	"	"	
2-Chlorotoluene	ND	3.8	"	"	"	"	"	"	
4-Chlorotoluene	ND	3.8	"	"	"	"	"	"	
Dibromochloromethane	ND	3.8	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	3.8	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	3.8	"	"	"	"	"	"	
Dibromomethane	ND	3.8	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	3.8	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	3.8	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	3.8	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	3.8	"	"	"	"	"	"	
1,1-Dichloroethane	ND	3.8	"	"	"	"	"	"	
1,2-Dichloroethane	ND	3.8	"	"	"	"	"	"	
1,1-Dichloroethene	ND	3.8	"	"	"	"	"	"	

SunStar Laboratories, Inc.



Partner Engineering & Science, Inc.--San Francisco Project: 3037-3115 Adeline Street, Oakland

400 Second St., Suite 415Project Number: 13-99891.2Reported:San Francisco CA, 94107Project Manager: Terri Men05/10/13 12:26

### PES-B5-7 T131024-22 (Soil)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

#### SunStar Laboratories, Inc.

Volatile Organic Compounds by E	PA Method 8260B	<b>;</b>						
cis-1,2-Dichloroethene	ND	3.8	ug/kg	1	3050327	05/03/13	05/04/13	EPA 8260B/5035
trans-1,2-Dichloroethene	ND	3.8	"	"	"	"	"	"
1,2-Dichloropropane	ND	3.8	"	"	"	"	"	n .
1,3-Dichloropropane	ND	3.8	"	"	"	"	"	n .
2,2-Dichloropropane	ND	3.8	"	"	"	"	"	"
1,1-Dichloropropene	ND	3.8	"	"	"	"	"	"
cis-1,3-Dichloropropene	ND	3.8	"	"	"	"	"	"
trans-1,3-Dichloropropene	ND	3.8	"	"	"	"	"	"
Hexachlorobutadiene	ND	3.8	"	"	"	"	"	"
Isopropylbenzene	ND	3.8	"	"	"	"	"	"
p-Isopropyltoluene	ND	3.8	"	"	"	"	"	"
Methylene chloride	ND	3.8	"	"	"	"	"	"
Naphthalene	ND	3.8	"	"	"	"	"	"
n-Propylbenzene	ND	3.8	"	"	"	"	"	"
Styrene	ND	3.8	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	ND	3.8	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	ND	3.8	"	"	"	"	"	"
Tetrachloroethene	ND	3.8	"	"	"	"	"	"
1,2,3-Trichlorobenzene	ND	3.8	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	3.8	"	"	"	"	"	"
1,1,2-Trichloroethane	ND	3.8	"	"	"	"	"	"
1,1,1-Trichloroethane	ND	3.8	"	"	"	"	"	"
Trichloroethene	ND	3.8	"	"	"	"	"	"
Trichlorofluoromethane	ND	3.8	"	"	"	"	"	"
1,2,3-Trichloropropane	ND	3.8	"	"	"	"	"	"
1,3,5-Trimethylbenzene	ND	3.8	"	"	"	"	"	"
1,2,4-Trimethylbenzene	ND	3.8	"	"	"	"	"	"
Vinyl chloride	ND	3.8	"	"	"	"	"	"
Benzene	ND	3.8	"	"	"	"	"	"
Toluene	ND	3.8	"	"	"	"	"	"
Ethylbenzene	ND	3.8	"	"	"	"	"	"

SunStar Laboratories, Inc.



Partner Engineering & Science, Inc.--San Francisco

Project: 3037-3115 Adeline Street, Oakland

400 Second St., Suite 415 San Francisco CA, 94107 Project Number: 13-99891.2 Project Manager: Terri Men **Reported:** 05/10/13 12:26

PES-B5-7 T131024-22 (Soil)

Reporting

Analyte Result Limit Units Dilution Batch Prepared Analyzed Method Note:

SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

m,p-Xylene	ND	3.8	ug/kg	1	3050327	05/03/13	05/04/13	EPA 8260B/5035
o-Xylene	ND	3.8	"	"	"	"	"	"
Surrogate: Toluene-d8		85.9 %	85.5-	116	"	"	"	"
Surrogate: 4-Bromofluorobenzene		87.9 %	81.2-	123	"	"	"	"
Surrogate: Dibromofluoromethane		121 %	95.7-	135	"	"	"	"

SunStar Laboratories, Inc.



Partner Engineering & Science, Inc.--San Francisco

Project: 3037-3115 Adeline Street, Oakland

400 Second St., Suite 415 San Francisco CA, 94107 Project Number: 13-99891.2 Project Manager: Terri Men **Reported:** 05/10/13 12:26

# Extractable Petroleum Hydrocarbons by 8015C - Quality Control SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Analyte	Result	Lillit	Ollits	Level	Result	70 KEC	Lillits	KFD	Lillit	Notes
Batch 3050319 - EPA 3550B GC										
Blank (3050319-BLK1)				Prepared:	05/03/13	Analyzed	1: 05/10/13			
C6-C12 (GRO)	ND	10	mg/kg							
C13-C28 (DRO)	ND	10	"							
C29-C40 (MORO)	ND	10	"							
Surrogate: p-Terphenyl	112		"	100		112	65-135			
LCS (3050319-BS1)				Prepared:	05/03/13	Analyzed	1: 05/10/13			
C13-C28 (DRO)	490	10	mg/kg	500		97.8	75-125			
Surrogate: p-Terphenyl	114		"	100		114	65-135			
Matrix Spike (3050319-MS1)	So	<b>Source: T131024-06</b> Prepared: 05/03/13 Analyzed: 05/10/13								
C13-C28 (DRO)	1800	10	mg/kg	500	1200	118	75-125			
Surrogate: p-Terphenyl	118		"	100		118	65-135			
Matrix Spike Dup (3050319-MSD1)	So	urce: T13102	24-06	Prepared:	05/03/13	Analyzed	1: 05/10/13			
C13-C28 (DRO)	1800	10	mg/kg	500	1200	120	75-125	0.817	20	
Surrogate: p-Terphenyl	119		"	100		119	65-135			
Batch 3050326 - EPA 3510C GC										
Blank (3050326-BLK1)				Prepared:	: 05/03/13	Analyzed	1: 05/10/13			
C6-C12 (GRO)	ND	0.50	mg/l							
C13-C28 (DRO)	ND	0.50	"							
C29-C40 (MORO)	ND	0.50	"							
Surrogate: p-Terphenyl	2.98		"	4.00		74.4	65-135			
LCS (3050326-BS1)				Prepared:	: 05/03/13	Analyzed	1: 05/10/13			
C13-C28 (DRO)	19.7	0.50	mg/l	20.0		98.5	75-125			
Surrogate: p-Terphenyl	3.00		"	4.00		74.9	65-135			

SunStar Laboratories, Inc.



Reported:

05/10/13 12:26

Partner Engineering & Science, Inc.--San Francisco

Project: 3037-3115 Adeline Street, Oakland

400 Second St., Suite 415 San Francisco CA, 94107 Project Number: 13-99891.2 Project Manager: Terri Men

# Extractable Petroleum Hydrocarbons by 8015C - Quality Control SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
· ·	resure	Emit	Cints	Ecrei	resur	,vitee	Limits	Iu D	Emm	110103
Batch 3050326 - EPA 3510C GC										
Matrix Spike (3050326-MS1)	Sour	rce: T13102	4-05	Prepared:	05/03/13	Analyzed	1: 05/10/13			
C13-C28 (DRO)	19.5	0.50	mg/l	20.0	ND	97.6	75-125			
Surrogate: p-Terphenyl	2.62		"	4.00		65.5	65-135			
Matrix Spike Dup (3050326-MSD1)	Sour	rce: T13102	4-05	Prepared:	05/03/13	Analyzed	1: 05/10/13			
C13-C28 (DRO)	19.9	0.50	mg/l	20.0	ND	99.6	75-125	2.07	20	
Surrogate: p-Terphenyl	2.88		"	4.00		72.1	65-135			

SunStar Laboratories, Inc.



Reported:

05/10/13 12:26

RPD

%REC

Partner Engineering & Science, Inc.--San Francisco

Project: 3037-3115 Adeline Street, Oakland

400 Second St., Suite 415 San Francisco CA, 94107 Project Number: 13-99891.2 Project Manager: Terri Men

Spike

Source

# $Metals\ by\ EPA\ 6010B\ -\ Quality\ Control$

#### SunStar Laboratories, Inc.

Reporting

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 3050320 - EPA 3051										
Blank (3050320-BLK1)				Prepared:	05/03/13	Analyzed	: 05/06/13			
Antimony	ND	3.0	mg/kg							
Silver	ND	2.0	"							
Arsenic	ND	5.0	"							
Barium	ND	1.0	"							
Beryllium	ND	1.0	"							
Cadmium	ND	2.0	"							
Chromium	ND	2.0	"							
Cobalt	ND	2.0	"							
Copper	ND	1.0	"							
Lead	ND	3.0	"							
Molybdenum	ND	5.0	"							
Nickel	ND	2.0	"							
Selenium	ND	5.0	"							
Thallium	ND	2.0	"							
Vanadium	ND	5.0	"							
Zinc	ND	1.0	"							
LCS (3050320-BS1)				Prepared:	05/03/13	Analyzed	: 05/06/13			
Arsenic	91.5	5.0	mg/kg	100		91.5	75-125			
Barium	94.8	1.0	"	100		94.8	75-125			
Cadmium	93.2	2.0	"	100		93.2	75-125			
Chromium	94.5	2.0	"	100		94.5	75-125			
Lead	97.8	3.0	"	100		97.8	75-125			
Matrix Spike (3050320-MS1)	Sour	ce: T13102	24-01	Prepared:	05/03/13	Analyzed	: 05/06/13			
Arsenic	79.3	5.0	mg/kg	100	1.42	77.9	75-125			
Barium	260	1.0	"	100	183	77.5	75-125			
Cadmium	82.7	2.0	"	100	ND	82.7	75-125			
Chromium	108	2.0	"	100	20.1	88.3	75-125			
Lead	176	3.0	"	100	43.3	133	75-125			QM-0

SunStar Laboratories, Inc.

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Partner Engineering & Science, Inc.--San Francisco

Project: 3037-3115 Adeline Street, Oakland

Spike

Source

400 Second St., Suite 415 San Francisco CA, 94107 Project Number: 13-99891.2 Project Manager: Terri Men **Reported:** 05/10/13 12:26

RPD

%REC

## Metals by EPA 6010B - Quality Control

### SunStar Laboratories, Inc.

Reporting

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 3050320 - EPA 3051										
Matrix Spike Dup (3050320-MSD1)	Sour	ce: T13102	24-01	Prepared:	05/03/13	Analyzed	1: 05/06/13			
Arsenic	87.9	5.0	mg/kg	100	1.42	86.5	75-125	10.3	20	
Barium	268	1.0	"	100	183	85.0	75-125	2.83	20	
Cadmium	89.1	2.0	"	100	ND	89.1	75-125	7.38	20	
Chromium	115	2.0	"	100	20.1	95.4	75-125	6.39	20	
Lead	184	3.0	"	100	43.3	141	75-125	4.28	20	QM-05

SunStar Laboratories, Inc.

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Partner Engineering & Science, Inc.--San Francisco

Project: 3037-3115 Adeline Street, Oakland

400 Second St., Suite 415 San Francisco CA, 94107 Project Number: 13-99891.2 Project Manager: Terri Men **Reported:** 05/10/13 12:26

# Cold Vapor Extraction EPA 7470/7471 - Quality Control SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3050321 - EPA 7471A Soil										
Blank (3050321-BLK1)				Prepared:	05/03/13	Analyzed	1: 05/09/13			
Mercury	ND	0.10	mg/kg							
LCS (3050321-BS1)				Prepared:	05/03/13	Analyzed	1: 05/09/13			
Mercury	0.448	0.10	mg/kg	0.417		107	80-120			
Matrix Spike (3050321-MS1)	So	urce: T13102	24-01	Prepared:	05/03/13	Analyzed	1: 05/09/13			
Mercury	0.454	0.10	mg/kg	0.417	0.0362	100	75-125			
Matrix Spike Dup (3050321-MSD1)	So	urce: T13102	24-01	Prepared:	05/03/13	Analyzed	1: 05/09/13			
Mercury	0.589	0.10	mg/kg	0.417	0.0362	133	75-125	25.9	20	QM-07

SunStar Laboratories, Inc.



Partner Engineering & Science, Inc.--San Francisco Pr

Project: 3037-3115 Adeline Street, Oakland

400 Second St., Suite 415Project Number: 13-99891.2Reported:San Francisco CA, 94107Project Manager: Terri Men05/10/13 12:26

# Volatile Organic Compounds by EPA Method 8260B - Quality Control SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3050327 - EPA 5030 GCMS										

Blank (3050327-BLK1)				Prepared: 05/03/13 Analyzed: 05/04/13
Bromobenzene	ND	5.0	ug/kg	
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	5.0	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	
Dibromomethane	ND	5.0	"	
1,2-Dichlorobenzene	ND	5.0	"	
1,3-Dichlorobenzene	ND	5.0	"	
1,4-Dichlorobenzene	ND	5.0	"	
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	"	

SunStar Laboratories, Inc.



Reported:

05/10/13 12:26

RPD

%REC

Partner Engineering & Science, Inc.--San Francisco

Project: 3037-3115 Adeline Street, Oakland

400 Second St., Suite 415 San Francisco CA, 94107 Project Number: 13-99891.2 Project Manager: Terri Men

Spike

Source

# Volatile Organic Compounds by EPA Method 8260B - Quality Control SunStar Laboratories, Inc.

Reporting

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 3050327 - EPA 5030 GCMS										
Blank (3050327-BLK1)				Prepared:	05/03/13	Analyzed	1: 05/04/13			
p-Isopropyltoluene	ND	5.0	ug/kg							
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	"							
Vinyl chloride	ND	5.0	"							
Benzene	ND	5.0	"							
Toluene	ND	5.0	"							
Ethylbenzene	ND	5.0	"							
m,p-Xylene	ND	5.0	"							
o-Xylene	ND	5.0	"							
Surrogate: Toluene-d8	39.0		"	40.0		97.4	85.5-116			
Surrogate: 4-Bromofluorobenzene	42.4		"	40.0		106	81.2-123			
Surrogate: Dibromofluoromethane	45.0		"	40.0		113	95.7-135			
LCS (3050327-BS1)				Prepared:	05/03/13	Analyzed	1: 05/07/13			
Chlorobenzene	98.2	5.0	ug/kg	100		98.2	75-125			
1,1-Dichloroethene	104	5.0	"	100		104	75-125			
Trichloroethene	116	5.0	"	100		116	75-125			
Benzene	105	5.0	"	100		105	75-125			
Toluene	96.7	5.0	"	100		96.7	75-125			
Surrogate: Toluene-d8	39.6		"	40.0		99.0	85.5-116			
Surrogate: 4-Bromofluorobenzene	42.6		"	40.0		106	81.2-123			
Surrogate: Dibromofluoromethane	47.9		"	40.0		120	95.7-135			

SunStar Laboratories, Inc.



RPD

Partner Engineering & Science, Inc.--San Francisco

Project: 3037-3115 Adeline Street, Oakland

Spike

400 Second St., Suite 415 San Francisco CA, 94107 Project Number: 13-99891.2 **Reported:**Project Manager: Terri Men 05/10/13 12:26

%REC

Source

# Volatile Organic Compounds by EPA Method 8260B - Quality Control SunStar Laboratories, Inc.

Reporting

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 3050327 - EPA 5030 GCMS										
LCS Dup (3050327-BSD1)				Prepared:	05/03/13	Analyzed	1: 05/07/13			
Chlorobenzene	111	5.0	ug/kg	100		111	75-125	12.5	20	
1,1-Dichloroethene	124	5.0	"	100		124	75-125	17.4	20	
Trichloroethene	120	5.0	"	100		120	75-125	2.76	20	
Benzene	119	5.0	"	100		119	75-125	12.1	20	
Toluene	111	5.0	"	100		111	75-125	13.5	20	
Surrogate: Toluene-d8	38.9		"	40.0		97.2	85.5-116			
Surrogate: 4-Bromofluorobenzene	40.6		"	40.0		101	81.2-123			
Surrogate: Dibromofluoromethane	45.7		"	40.0		114	95.7-135			
Batch 3050626 - EPA 5030 GCMS										
Blank (3050626-BLK1)				Prepared:	05/06/13	Analyzed	1: 05/08/13			
Bromobenzene	ND	1.0	ug/l	_						
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	"							
1,4-Dichlorobenzene	ND	1.0	"							
Dichlorodifluoromethane	ND	0.50	"							
1,1-Dichloroethane	ND	1.0	"							

SunStar Laboratories, Inc.



RPD

Partner Engineering & Science, Inc.--San Francisco

Project: 3037-3115 Adeline Street, Oakland

Spike

400 Second St., Suite 415 San Francisco CA, 94107 Project Number: 13-99891.2 **Reported:**Project Manager: Terri Men 05/10/13 12:26

%REC

Source

# Volatile Organic Compounds by EPA Method 8260B - Quality Control SunStar Laboratories, Inc.

Reporting

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 3050626 - EPA 5030 GCMS										
Blank (3050626-BLK1)				Prepared:	05/06/13	Analyzed	: 05/08/13			
1,2-Dichloroethane	ND	0.50	ug/l			·				
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	"							
Vinyl chloride	ND	1.0	"							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
m,p-Xylene	ND	1.0	"							
o-Xylene	ND	0.50	"							
Methyl tert-butyl ether	ND	1.0	"							

SunStar Laboratories, Inc.



Partner Engineering & Science, Inc.--San Francisco

Project: 3037-3115 Adeline Street, Oakland

400 Second St., Suite 415 San Francisco CA, 94107 Project Number: 13-99891.2 Project Manager: Terri Men

**Reported:** 05/10/13 12:26

# Volatile Organic Compounds by EPA Method 8260B - Quality Control SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3050626 - EPA 5030 GCMS										
Blank (3050626-BLK1)				Prepared:	05/06/13	Analyzed	1: 05/08/13			
C6-C12 (GRO)	ND	50	ug/l							
Surrogate: 4-Bromofluorobenzene	8.78		"	8.00		110	83.5-119			
Surrogate: Dibromofluoromethane	8.62		"	8.00		108	81-136			
Surrogate: Toluene-d8	8.20		"	8.00		102	88.8-117			
LCS (3050626-BS1)				Prepared:	05/06/13	Analyzed	1: 05/09/13			
Chlorobenzene	16.3	1.0	ug/l	20.0		81.7	75-125			
1,1-Dichloroethene	16.2	1.0	"	20.0		80.8	75-125			
Trichloroethene	18.1	1.0	"	20.0		90.6	75-125			
Benzene	16.6	0.50	"	20.0		83.0	75-125			
Гoluene	16.5	0.50	"	20.0		82.4	75-125			
Surrogate: 4-Bromofluorobenzene	8.79		"	8.00		110	83.5-119			
Surrogate: Dibromofluoromethane	9.24		"	8.00		116	81-136			
Surrogate: Toluene-d8	8.10		"	8.00		101	88.8-117			
Matrix Spike (3050626-MS1)	So	urce: T13102	Prepared:	05/06/13						
Chlorobenzene	17.3	1.0	ug/l	20.0	ND	86.7	75-125			
,1-Dichloroethene	17.9	1.0	"	20.0	ND	89.4	75-125			
Γrichloroethene	19.5	1.0	"	20.0	0.520	94.8	75-125			
Benzene	17.7	0.50	"	20.0	ND	88.6	75-125			
Гoluene	17.8	0.50	"	20.0	ND	89.0	75-125			
Surrogate: 4-Bromofluorobenzene	8.36		"	8.00		104	83.5-119			
Surrogate: Dibromofluoromethane	9.22		"	8.00		115	81-136			
Surrogate: Toluene-d8	7.99		"	8.00		99.9	88.8-117			
Matrix Spike Dup (3050626-MSD1)	So	urce: T13102	5-19	Prepared:	05/06/13	Analyzed	1: 05/09/13			
Chlorobenzene	15.5	1.0	ug/l	20.0	ND	77.4	75-125	11.3	20	
1,1-Dichloroethene	15.6	1.0	"	20.0	ND	78.1	75-125	13.5	20	
Trichloroethene	16.9	1.0	"	20.0	0.520	82.0	75-125	14.1	20	
Benzene	16.5	0.50	"	20.0	ND	82.6	75-125	7.01	20	
Гoluene	15.7	0.50	"	20.0	ND	78.5	75-125	12.5	20	
Surrogate: 4-Bromofluorobenzene	8.53		"	8.00		107	83.5-119		<del>.</del>	
Surrogate: Dibromofluoromethane	9.24		"	8.00		116	81-136			
Surrogate: Toluene-d8	8.03		"	8.00		100	88.8-117			

SunStar Laboratories, Inc.



Partner Engineering & Science, Inc.--San Francisco Project: 3037-3115 Adeline Street, Oakland

400 Second St., Suite 415Project Number: 13-99891.2Reported:San Francisco CA, 94107Project Manager: Terri Men05/10/13 12:26

#### **Notes and Definitions**

QM-07 The spike recovery and or RPD was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable

LCS recovery.

QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to possible matrix interference. The LCS was within

acceptance criteria. The data is acceptable as no negative impact on data is expected.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

SunStar Laboratories, Inc.

# **Chain of Custody Record**

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

Client: Partner Engineering + Science, Inc. Address: 400 2nd Street Vinte 415 S.E.C.A  Phone: (415) 534-0272 Fax: 415-889-4020  Project Manager: Tern Men										Nan	<u>3 n</u>	ς, 1 ς, 1	3	1-: en 4					eline Stre at Project #: 13-			
Sample ID	Date Samples	Time	Sample Type	Container Type	8260	8260 + OXY	8260 BTEX, OXY only	8270	8021 BTEX	8015M (gasoline)	8015M (diesel)	ğ	6010/7000 Title 22 Metals					aboratory ID#	Comments/Pr	eservativ	e	Total # of containers
Sample ID	5-1-13	0908		VOAS/JAK	8	8	-	- 0	-	<del>"</del>	8	<del>~</del>	-6	<del></del> t	$\dashv$	+	-	01	Commenter	000,741,7		4
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PES-B1-13		0953								$\neg$ †								03				4
PES-BI-19		1019		V				-										04				4
PES-BI-GW			WATER	VOAS														05				6
PES-B2-3				VOAS/JAR														06				4
PES- B2-7		1111															_	07				,4
PES- B2-12		1122															-+	08				4
PES-B2-18		1150	V.									_				1	_	09				4
PES-B2-6W		1435	WATER	VOAS								_	$\longrightarrow$					10				14
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Sample disposal Instructions: D	isposal @ \$2.00	each	Return	to client		Pic	ckup		_													

# **Chain of Custody Record**

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

Client: Partner I	Znaine	enus	+ Sc	ien ce									13					je:0t		
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Phone: 45-534-0	2272	Fax:																nt Project #: 13-		
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	Data Commiss	Time	Sample	Container	8260	8260	8260	8270	8021 BTEX	2	8015M (diesel)	8015M Ext./Carbon	6010/7000 Title	- [			Laboratory ID	Comments/Pr	eservative	l da
Sample ID	Date Samples	Time 1502	SoiL	Type  WA/JAP		8	~		<del>~</del>	<del>~</del>	<u>~</u>		18	-	-	+	16	Commentor	CSCIVALIVE	Trotal # of containers
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PES-84-6W			WATER	VOAS												1	20			4
PEJ-BJ-3		1620		WAS/JAR													21			4
PES-85-7		1640		1					$\perp$	_				_	_		22	<u> </u>		4
PEJ-BJ-11		1650							_						_		23	STD	Et 1929	4
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Sample disposal Instructions:	Disposal @ \$2.00	each	Return	to client		Pi	ckup													



# SAMPLE RECEIVING REVIEW SHEET

BATCH # <u>7/3/024</u>		
Client Name: <u>PARTNER ENG - S.F.</u>	Project: <u>3037 - 3115 Ao</u>	ELINE STREET, DAKLA
Received by: Sunny	Date/Time Received: 5	3.13 / 10:00
Delivered by: Client SunStar Courier GSC	O FedEx Other	
Total number of coolers received Temp	criteria = 6°C > 0°C (no <u>fro</u>	<u>zen</u> containers)
Temperature: cooler #1 _2.0 °C +/- the CF (-0.2°C) =	/.8 °C corrected temperature	
cooler #2°C +/- the CF (- 0.2°C) =	oC corrected temperature	
cooler #3°C +/- the CF (-0.2°C) =	°C corrected temperature	
Samples outside temp. but received on ice, w/in 6 hours of	inal sampling. 🛮 Yes [	□No* □N/A
Custody Seals Intact on Cooler/Sample	⊠Yes [	□No* □N/A
Sample Containers Intact	∑Yes [	□No*
Sample labels match COC ID's	∑Yes [	□No*
Total number of containers received match COC	∑Yes [	□No*
Proper containers received for analyses requested on COC	∑Yes [	□No*
Proper preservative indicated on COC/containers for analys	es requested Yes	□No* □N/A
Complete shipment received in good condition with correct preservatives and within method specified holding times.		ls, volumes
* Complete Non-Conformance Receiving Sheet if checked	Cooler/Sample Review - Initials	and date <u>\$2 5.3.13</u>
Comments:		
	·····	





22 May 2013

Terri Men Partner Engineering & Science, Inc.--San Francisco 400 Second St., Suite 415 San Francisco, CA 94107

RE: 3037-3115 Adeline Street, Oakland

Enclosed are the results of analyses for samples received by the laboratory on 05/03/13 10:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

**Daniel Chavez** 

Saniel & Chivy

**Project Manager** 



Partner Engineering & Science, Inc.--San Francisco Project: 3037-3115 Adeline Street, Oakland

400 Second St., Suite 415Project Number: 13-99891.2Reported:San Francisco CA, 94107Project Manager: Terri Men05/22/13 17:09

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PES-B2-3	T131024-06	Soil	05/01/13 10:50	05/03/13 10:00
PES-B2-7	T131024-07	Soil	05/01/13 11:11	05/03/13 10:00
PES-B2-12	T131024-08	Soil	05/01/13 11:22	05/03/13 10:00
PES-B2-18	T131024-09	Soil	05/01/13 11:50	05/03/13 10:00
PES-B2-GW	T131024-10	Water	05/01/13 14:35	05/03/13 10:00

SunStar Laboratories, Inc.



Partner Engineering & Science, Inc.--San Francisco Project: 3037-3115 Adeline Street, Oakland

400 Second St., Suite 415Project Number: 13-99891.2Reported:San Francisco CA, 94107Project Manager: Terri Men05/22/13 17:09

## PES-B2-3 T131024-06 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	S	unStar La	aborato	ries, Inc.					
STLC Metals by 6000/7000	0 Series Methods								
Copper	81	0.10	mg/l	1	3052020	05/20/13	05/22/13	STLC EPA 6010	
Lead	9.8	0.10	"	"	"	"	"	"	

SunStar Laboratories, Inc.



Reported:

05/22/13 17:09

Partner Engineering & Science, Inc.--San Francisco

Project: 3037-3115 Adeline Street, Oakland Project Number: 13-99891.2

400 Second St., Suite 415 San Francisco CA, 94107

Project Manager: Terri Men

PES-B2-7 T131024-07 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		SunStar L	aborator	ies, Inc.					
Extractable Petroleum Hydrocarb	ons by 8015C								O-05
C13-C28 (DRO)	1600	10	mg/kg	1	3051628	05/15/13	05/19/13	EPA 8015C	
C29-C40 (MORO)	860	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		130 %	65-	135	"	"	"	"	
Metals by EPA 6010B									
Copper	15	1.0	mg/kg	1	3051509	05/15/13	05/15/13	EPA 6010B	
Lead	ND	3.0	"	"	"	"	"	"	
Volatile Organic Compounds by <b>E</b>	EPA Method 8260	)B							
Naphthalene	ND	5.7	ug/kg	1	3051634	05/03/13	05/17/13	EPA 8260B/5035	
Surrogate: Toluene-d8	·	86.3 %	85.5	-116	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.3 %	81.2	-123	"	"	"	"	
Surrogate: Dibromofluoromethane		123 %	95.7	-135	"	"	"	"	

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.



Partner Engineering & Science, Inc.--San Francisco Project: 3037-3115 Adeline Street, Oakland

400 Second St., Suite 415Project Number: 13-99891.2Reported:San Francisco CA, 94107Project Manager: Terri Men05/22/13 17:09

## PES-B2-12 T131024-08 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		SunStar L	aborator	ries, Inc.					
<b>Extractable Petroleum Hydrocarb</b>	ons by 8015C								O-05
C13-C28 (DRO)	ND	10	mg/kg	1	3051628	05/15/13	05/19/13	EPA 8015C	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		100 %	65-	135	"	"	"	"	
Metals by EPA 6010B									
Copper	11	1.0	mg/kg	1	3051509	05/15/13	05/15/13	EPA 6010B	
Lead	8.3	3.0	"	"	"	"	"	"	
<b>Volatile Organic Compounds by E</b>	PA Method 8260	В							
Naphthalene	ND	5.7	ug/kg	1	3051634	05/03/13	05/17/13	EPA 8260B/5035	
Surrogate: Toluene-d8		90.1 %	85.5	-116	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.8 %	81.2	-123	"	"	"	"	
Surrogate: Dibromofluoromethane		135 %	95.7	-135	"	"	"	"	

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.



Partner Engineering & Science, Inc.--San Francisco

Project: 3037-3115 Adeline Street, Oakland

400 Second St., Suite 415 San Francisco CA, 94107 Project Number: 13-99891.2 Project Manager: Terri Men

Reported:

05/22/13 17:09

## PES-B2-18 T131024-09 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		SunStar L	aborator	ies, Inc.					
Extractable Petroleum Hydrocark	ons by 8015C								O-05
C13-C28 (DRO)	ND	10	mg/kg	1	3051628	05/15/13	05/19/13	EPA 8015C	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		116 %	65-	135	"	"	"	"	
Metals by EPA 6010B									
Copper	17	1.0	mg/kg	1	3051509	05/15/13	05/15/13	EPA 6010B	
Lead	ND	3.0	"	"	"	"	"	"	
Volatile Organic Compounds by I	EPA Method 8260	В							
Naphthalene	ND	4.4	ug/kg	1	3051634	05/03/13	05/17/13	EPA 8260B/5035	
Surrogate: Toluene-d8		92.4 %	85.5	-116	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		88.9 %	81.2	-123	"	"	"	"	
Surrogate: Dibromofluoromethane		154 %	95.7	-135	"	"	"	"	S-GC

SunStar Laboratories, Inc.

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Partner Engineering & Science, Inc.--San Francisco Project: 3037-3115 Adeline Street, Oakland

400 Second St., Suite 415Project Number: 13-99891.2Reported:San Francisco CA, 94107Project Manager: Terri Men05/22/13 17:09

## PES-B2-GW T131024-10 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		SunStar La	borator	ies, Inc.					
Extractable Petroleum Hydrocarb	ons by 8015C								
C13-C28 (DRO)	ND	0.50	mg/l	1	3051519	05/15/13	05/18/13	EPA 8015C	O-05
C29-C40 (MORO)	ND	0.50	"	"	"	"	"	"	O-05
Surrogate: p-Terphenyl		65.3 %	65-1	35	"	"	"	"	O-05
<b>Volatile Organic Compounds by E</b>	EPA Method 8260	В							
Naphthalene	ND	1.0	ug/l	1	3051635	05/02/13	05/03/13	EPA 8260B	
Surrogate: 4-Bromofluorobenzene		109 %	83.5-	119	"	"	"	"	
Surrogate: Dibromofluoromethane		101 %	81-1	36	"	"	"	"	
Surrogate: Toluene-d8		99.1 %	88.8-	117	"	"	"	"	

SunStar Laboratories, Inc.

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Partner Engineering & Science, Inc.--San Francisco

Project: 3037-3115 Adeline Street, Oakland

400 Second St., Suite 415 San Francisco CA, 94107 Project Number: 13-99891.2 Project Manager: Terri Men **Reported:** 05/22/13 17:09

# Extractable Petroleum Hydrocarbons by 8015C - Quality Control SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3051519 - EPA 3510C GC										
Blank (3051519-BLK1)				Prepared:	05/15/13	Analyzed	1: 05/18/13			
C13-C28 (DRO)	ND	0.50	mg/l							
C29-C40 (MORO)	ND	0.50	"							
Surrogate: p-Terphenyl	3.12		"	4.00		77.9	65-135			
LCS (3051519-BS1)				Prepared:	05/15/13	Analyzed	1: 05/18/13			
C13-C28 (DRO)	18.3	0.50	mg/l	20.0		91.4	75-125			
Surrogate: p-Terphenyl	3.21		"	4.00		80.2	65-135			
<b>Matrix Spike (3051519-MS1)</b>	Sour	ce: T13102	24-10	Prepared:	05/15/13	Analyzed	1: 05/18/13			
C13-C28 (DRO)	18.8	0.50	mg/l	20.0	ND	93.8	75-125			
Surrogate: p-Terphenyl	3.18		"	4.00		79.5	65-135			
Matrix Spike Dup (3051519-MSD1)	Sour	ce: T13102	24-10	Prepared:	05/15/13	Analyzed	1: 05/18/13			
C13-C28 (DRO)	18.8	0.50	mg/l	20.0	ND	93.9	75-125	0.0731	20	
Surrogate: p-Terphenyl	3.08		"	4.00		77.1	65-135			
Batch 3051628 - EPA 3550B GC										
Blank (3051628-BLK1)				Prepared:	05/16/13	Analyzed	1: 05/19/13			
C13-C28 (DRO)	ND	10	mg/kg							
C29-C40 (MORO)	ND	10	"							
Surrogate: p-Terphenyl	84.5		"	100		84.5	65-135			
LCS (3051628-BS1)				Prepared:	05/16/13	Analyzed	1: 05/19/13			
C13-C28 (DRO)	500	10	mg/kg	500		99.5	75-125			
Surrogate: p-Terphenyl	129		"	100		129	65-135			

SunStar Laboratories, Inc.



Partner Engineering & Science, Inc.--San Francisco

Project: 3037-3115 Adeline Street, Oakland

400 Second St., Suite 415 San Francisco CA, 94107 Project Number: 13-99891.2 Project Manager: Terri Men **Reported:** 05/22/13 17:09

# Extractable Petroleum Hydrocarbons by 8015C - Quality Control SunStar Laboratories, Inc.

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 3051628 - EPA 3550B GC										
<b>Matrix Spike (3051628-MS1)</b>	Sour	rce: T13112	6-01	Prepared:	05/16/13	Analyzed	1: 05/19/13			
C13-C28 (DRO)	500	10	mg/kg	500	ND	100	75-125			
Surrogate: p-Terphenyl	121		"	100		121	65-135			
Matrix Spike Dup (3051628-MSD1)	Sour	rce: T13112	6-01	Prepared:	05/16/13	Analyzed	1: 05/19/13			
C13-C28 (DRO)	500	10	mg/kg	500	ND	100	75-125	0.227	20	
Surrogate: p-Terphenyl	127		"	100		127	65-135			

SunStar Laboratories, Inc.



Partner Engineering & Science, Inc.--San Francisco

Project: 3037-3115 Adeline Street, Oakland

400 Second St., Suite 415 San Francisco CA, 94107 Project Number: 13-99891.2 Project Manager: Terri Men

**Reported:** 05/22/13 17:09

## Metals by EPA 6010B - Quality Control

## SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3051509 - EPA 3051										
Blank (3051509-BLK1)				Prepared	& Analyz	ed: 05/15/	13			
Copper	ND	1.0	mg/kg							
Lead	ND	3.0	"							
LCS (3051509-BS1)				Prepared	& Analyz	ed: 05/15/	13			
Lead	122	3.0	mg/kg	100		122	75-125			
LCS Dup (3051509-BSD1)				Prepared	& Analyz	ed: 05/15/	13			
Lead	105	3.0	mg/kg	100		105	75-125	14.3	20	

SunStar Laboratories, Inc.



Partner Engineering & Science, Inc.--San Francisco

Project: 3037-3115 Adeline Street, Oakland

400 Second St., Suite 415 San Francisco CA, 94107 Project Number: 13-99891.2 Project Manager: Terri Men **Reported:** 05/22/13 17:09

# STLC Metals by 6000/7000 Series Methods - Quality Control SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3052020 - STLC Metals										
Blank (3052020-BLK1)				Prepared:	05/20/13	Analyzed	: 05/22/13			
Lead	ND	0.10	mg/l							
LCS (3052020-BS1)				Prepared:	05/20/13	Analyzed	: 05/22/13			
Lead	9.07	0.10	mg/l	10.0		90.7	75-125			
Matrix Spike (3052020-MS1)	Sor	ırce: T13102	4-06	Prepared:	05/20/13	Analyzed	: 05/22/13			
Lead	18.7	0.10	mg/l	10.0	9.79	89.2	75-125			
Matrix Spike Dup (3052020-MSD1)	Sor	ırce: T13102	4-06	Prepared:	05/20/13	Analyzed	: 05/22/13			
Lead	18.2	0.10	mg/l	10.0	9.79	84.2	75-125	2.75	30	

SunStar Laboratories, Inc.



Partner Engineering & Science, Inc.--San Francisco

Project: 3037-3115 Adeline Street, Oakland

400 Second St., Suite 415 San Francisco CA, 94107 Project Number: 13-99891.2 **Reported:**Project Manager: Terri Men 05/22/13 17:09

# Volatile Organic Compounds by EPA Method 8260B - Quality Control SunStar Laboratories, Inc.

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
										<u>-</u>

Batch 3051634 - EPA 5035 GCM	S
------------------------------	---

Blank (3051634-BLK1)				Prepared: 05/03/13 Analyzed: 05/17/13
Bromobenzene	ND	5.0	ug/kg	
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	5.0	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	
Dibromomethane	ND	5.0	"	
1,2-Dichlorobenzene	ND	5.0	"	
1,3-Dichlorobenzene	ND	5.0	"	
1,4-Dichlorobenzene	ND	5.0	"	
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	"	

SunStar Laboratories, Inc.



Partner Engineering & Science, Inc.--San Francisco

Project: 3037-3115 Adeline Street, Oakland

Spike

Source

400 Second St., Suite 415 San Francisco CA, 94107 Project Number: 13-99891.2 Project Manager: Terri Men **Reported:** 05/22/13 17:09

RPD

%REC

# Volatile Organic Compounds by EPA Method 8260B - Quality Control SunStar Laboratories, Inc.

Reporting

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 3051634 - EPA 5035 GCMS										
Blank (3051634-BLK1)				Prepared:	05/03/13	Analyzed	: 05/17/13			
p-Isopropyltoluene	ND	5.0	ug/kg							
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	"							
Vinyl chloride	ND	5.0	"							
Benzene	ND	5.0	"							
Toluene	ND	5.0	"							
Ethylbenzene	ND	5.0	"							
m,p-Xylene	ND	5.0	"							
o-Xylene	ND	5.0	"							
Surrogate: Toluene-d8	40.1		"	40.0		100	85.5-116			
Surrogate: 4-Bromofluorobenzene	43.2		"	40.0		108	81.2-123			
Surrogate: Dibromofluoromethane	43.6		"	40.0		109	95.7-135			
LCS (3051634-BS1)				Prepared:	05/03/13	Analyzed	: 05/17/13			
Chlorobenzene	82.8	5.0	ug/kg	100		82.8	75-125			
1,1-Dichloroethene	81.6	5.0	"	100		81.6	75-125			
Trichloroethene	89.6	5.0	"	100		89.6	75-125			
Benzene	87.8	5.0	"	100		87.8	75-125			
Toluene	103	5.0	"	100		103	75-125			
Surrogate: Toluene-d8	39.9		"	40.0		99.8	85.5-116			
Surrogate: 4-Bromofluorobenzene	42.1		"	40.0		105	81.2-123			
Surrogate: Dibromofluoromethane	47.3		"	40.0		118	95.7-135			

SunStar Laboratories, Inc.



Reported:

05/22/13 17:09

RPD

Limit

Notes

%REC

Limits

RPD

Partner Engineering & Science, Inc.--San Francisco

Project: 3037-3115 Adeline Street, Oakland

400 Second St., Suite 415 San Francisco CA, 94107

Analyte

Project Number: 13-99891.2 Project Manager: Terri Men

Spike

Level

Source

Result

%REC

## Volatile Organic Compounds by EPA Method 8260B - Quality Control SunStar Laboratories, Inc.

Units

Reporting

Limit

Result

LCS Dup (3051634-BSD1)				Prepared: 05/0	3/13 Analyze	d: 05/17/13		
Chlorobenzene	81.9	5.0	ug/kg	100	81.9	75-125	1.09	20
1,1-Dichloroethene	80.7	5.0	"	100	80.7	75-125	1.11	20
Trichloroethene	94.0	5.0	"	100	94.0	75-125	4.79	20
Benzene	87.2	5.0	"	100	87.2	75-125	0.628	20
Toluene	104	5.0	"	100	104	75-125	0.674	20
Surrogate: Toluene-d8	39.2		"	40.0	97.9	85.5-116		
Surrogate: 4-Bromofluorobenzene	42.4		"	40.0	106	81.2-123		
Surrogate: Dibromofluoromethane	47.0		"	40.0	117	95.7-135		

Blank (3051635-BLK1)				Prepared & Analyzed: 05/16/13
Bromobenzene	ND	1.0	ug/l	
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	"	
1,4-Dichlorobenzene	ND	1.0	"	
Dichlorodifluoromethane	ND	0.50	"	
1,1-Dichloroethane	ND	1.0	"	

SunStar Laboratories, Inc.



Partner Engineering & Science, Inc.--San Francisco

Project: 3037-3115 Adeline Street, Oakland

Spike

Level

Source

Result

%REC

400 Second St., Suite 415 San Francisco CA, 94107

Analyte

Project Number: 13-99891.2 Project Manager: Terri Men **Reported:** 05/22/13 17:09

RPD

Limit

Notes

%REC

Limits

RPD

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

## SunStar Laboratories, Inc.

Units

Reporting

Limit

Result

ND

0.50

Blank (3051635-BLK1)			
1,2-Dichloroethane	ND	0.50	ug/l
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	"
Vinyl chloride	ND	1.0	"
Benzene	ND	0.50	"
Toluene	ND	0.50	
Ethylbenzene	ND	0.50	"
m,p-Xylene	ND	1.0	
m,p rijiene	1112	1.0	

SunStar Laboratories, Inc.

o-Xylene



Partner Engineering & Science, Inc.--San Francisco

Project: 3037-3115 Adeline Street, Oakland

Spike

Source

400 Second St., Suite 415 San Francisco CA, 94107 Project Number: 13-99891.2 Project Manager: Terri Men

Reporting

**Reported:** 05/22/13 17:09

RPD

%REC

# Volatile Organic Compounds by EPA Method 8260B - Quality Control SunStar Laboratories, Inc.

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 3051635 - EPA 5030 GCMS										
Blank (3051635-BLK1)				Prepared	& Analyz	ed: 05/16/	13			
Surrogate: 4-Bromofluorobenzene	8.73		ug/l	8.00		109	83.5-119			
Surrogate: Dibromofluoromethane	7.57		"	8.00		94.6	81-136			
Surrogate: Toluene-d8	7.92		"	8.00		99.0	88.8-117			
LCS (3051635-BS1)				Prepared	& Analyze	ed: 05/16/	13			
Chlorobenzene	16.4	1.0	ug/l	20.0		82.2	75-125			
1,1-Dichloroethene	16.8	1.0	"	20.0		84.2	75-125			
Trichloroethene	17.6	1.0	"	20.0		88.1	75-125			
Benzene	17.2	0.50	"	20.0		86.2	75-125			
Toluene	18.7	0.50	"	20.0		93.6	75-125			
Surrogate: 4-Bromofluorobenzene	7.91		"	8.00		98.9	83.5-119			
Surrogate: Dibromofluoromethane	8.77		"	8.00		110	81-136			
Surrogate: Toluene-d8	8.01		"	8.00		100	88.8-117			
Matrix Spike (3051635-MS1)	So	urce: T13111	9-01	Prepared	& Analyze	ed: 05/16/	13			
Chlorobenzene	17.0	1.0	ug/l	20.0	ND	85.0	75-125			
1,1-Dichloroethene	26.0	1.0	"	20.0	7.96	90.0	75-125			
Γrichloroethene	30.6	1.0	"	20.0	11.8	94.2	75-125			
Benzene	18.3	0.50	"	20.0	ND	91.6	75-125			
Гoluene	20.1	0.50	"	20.0	0.820	96.4	75-125			
Surrogate: 4-Bromofluorobenzene	7.75		"	8.00		96.9	83.5-119			
Surrogate: Dibromofluoromethane	8.50		"	8.00		106	81-136			
Surrogate: Toluene-d8	7.68		"	8.00		96.0	88.8-117			
Matrix Spike Dup (3051635-MSD1)	So	urce: T13111	9-01	Prepared:	05/16/13	1: 05/17/13				
Chlorobenzene	16.9	1.0	ug/l	20.0	ND	84.4	75-125	0.708	20	
1,1-Dichloroethene	25.0	1.0	"	20.0	7.96	85.4	75-125	3.53	20	
Trichloroethene	30.3	1.0	"	20.0	11.8	92.5	75-125	1.12	20	
Benzene	18.1	0.50	"	20.0	ND	90.5	75-125	1.15	20	
Гoluene	20.2	0.50	"	20.0	0.820	97.0	75-125	0.645	20	
Surrogate: 4-Bromofluorobenzene	7.97		"	8.00		99.6	83.5-119			
Surrogate: Dibromofluoromethane	8.64		"	8.00		108	81-136			
Surrogate: Toluene-d8	8.16		"	8.00		102	88.8-117			

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.



Partner Engineering & Science, Inc.--San Francisco Project: 3037-3115 Adeline Street, Oakland

400 Second St., Suite 415Project Number: 13-99891.2Reported:San Francisco CA, 94107Project Manager: Terri Men05/22/13 17:09

### **Notes and Definitions**

S-GC Surrogate recovery outside of established control limits. The data was accepted based on valid recovery of the remaining surrogate(s).

O-05 This sample was extracted outside of the EPA recommended holding time.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

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.

## **Chain of Custody Record**

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

Client: Partner E Address: 400 2nd Phone: (410) 534-00 Project Manager: Ter	Street,	Fax: 415	4155	TECA-				Proj	ject ecto	Nan or:_ <b>_</b>	<u>3 ~</u>	ς, 1 ς, 1	3	1-: en			A		at Project #: 13-	4,00		
Sample ID	Date Sampled	Time	Sample Type	Container Type	8260	4260 + OXY	8260 BTEX, OXY only	8270	8021 BTEX	8015M (gasoline)	8015M (diesel)	ğ	6010/7000 Title 22 Metals					aboratory ID#	Comments/Pre	eservative		Total # of containers
Sample ID	5-1-13	0908		VOAS/JAK	8	8	-	- 0	-	<del>"</del>	8	<del>~</del>	-	$\dashv$	$\dashv$	+	-	0(	Commencer	<del>, , , , , , , , , , , , , , , , , , , </del>		4
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PES-B1-13		0953								$\neg$ †								03				4
PES-B1-19		1019	L	V				-										04				4
PES-BI-GW			WATER	VDAS											$\Box$			05				6
PES-B2-3				VOA-/JAR														06				4
PES- B2-7		1111																07				4
PES-82-12		1122									]_						-+	08				4
PES-B2-18		1150	V	V								_				1	_	09				4
PES-B2-6W		1435	WATER	VOAr							_	_	$\rightarrow$	_			_	10	CTN -			14
PEJ-83-3			SOIL	VOA-/JAR							_	_			_		$\dashv$	11		<b>AT</b>		7
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Sample disposal Instructions: Disposal @ \$2.00 each Return to client Pickup										_												

## **Chain of Custody Record**

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

Client: Partner I	Znaine	enua	+ Sc	ien ce									13					je: 2Ot		
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Phone: 45-534-0	2272	Fax.																nt Project #: 13-		
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Sample disposal Instructions:	Disposal @ \$2.00	each	Return	to client		Pi	ckup													



## SAMPLE RECEIVING REVIEW SHEET

BATCH # <u>7/3/024</u>		
Client Name: <u>PARTNER ENG - S.F.</u>	Project: 3037 - 3115 Ao.	ELINE STREET, DAKLA
Received by: Sunny	Date/Time Received: 5	3.13 / 10:00
Delivered by: Client SunStar Courier GSC	O FedEx Other	
Total number of coolers received Temp	criteria = 6°C > 0°C (no <u>fro</u>	<u>zen</u> containers)
Temperature: cooler #1 _2.0 °C +/- the CF (-0.2°C) =	/.8 °C corrected temperature	
cooler #2°C +/- the CF (- 0.2°C) =	oC corrected temperature	
cooler #3°C +/- the CF (-0.2°C) =	°C corrected temperature	
Samples outside temp. but received on ice, w/in 6 hours of	inal sampling. 🛮 Yes	□No* □N/A
Custody Seals Intact on Cooler/Sample	∑Yes [	□No* □N/A
Sample Containers Intact	∑Yes [	□No*
Sample labels match COC ID's	∑Yes [	□No*
Total number of containers received match COC	∑Yes [	□No*
Proper containers received for analyses requested on COC	∑Yes [	□No*
Proper preservative indicated on COC/containers for analys	es requested Yes	□No* □N/A
Complete shipment received in good condition with correct preservatives and within method specified holding times.		ls, volumes
* Complete Non-Conformance Receiving Sheet if checked	Cooler/Sample Review - Initials	and date <u>\$2 5.3.13</u>
Comments:		
	······································	



## Elizabeth French Staff Professional II



### Education

Bachelor of Science in Geology, California State University, Sacramento

### Summary of Professional Experience

Ms. French has over 4 years of experience in the environmental and engineering service industries. She has significant experience in due diligence assessments for a variety of property types and the needs and requirements of varied number of reporting standards, including ASTM standards, EPA's All Appropriate Inquiry (AAI), and customized client formats. Specifically, Ms. French has performed Phase I Environmental Site Assessments, Environmental Transaction Screens, Phase II and III Subsurface and Site Characterization Investigations, Air Monitoring, Storm Water Monitoring and Remediation, Regulatory Compliance Assessments, and Human Health Risk Analysis.

Ms. French is familiar with all aspects of due diligence property assessments. She has completed hundreds of Phase I Environmental Assessments, Environmental Transaction Screens, and other related environmental assessments for sites including multi-family residences, offices, retail shopping centers, gas stations, auto repair facilities, hotels, agricultural land, and industrial/manufacturing facilities.

Ms. French has also been involved with Brownfield initiatives for transfer, conversion and redevelopment of several open and closed industrial facilities in the state of California including the following:

- Ms. French completed air monitoring, soil and groundwater sampling, human health risk assessments, and geological modeling for the former 240-acre Sacramento Railyards which operated as an industrial workshop facility during the World War II era. Onsite operations consisted of a departure station, locomotive repairs and general maintenance. These operations lead to extensive soil and groundwater contamination and subsequent remediation which began in the 1980s and lasted until the early 2000s. The site was regulated by the Department of Toxic Substances Control (DTSC) and Regional Water Quality Control Board (RWQCB).
- Ms. French completed soil and groundwater investigations for the former 72-acre Curtis Park Railyard, regulated by the California Department of Toxic Substances Control (DTSC) in Sacramento, California. During the early 1900s, the Western Pacific Railroad established the railyard for steam locomotive and railcar maintenance. By the 1950s, diesel engine repair and maintenance was also conducted onsite. The railyard discontinued operations in the early 1980s with cleanup procedures beginning in 1986. Remediation included the excavation of over 358,000 yards of cubic soil. The clean-up projects enabled land use for the planned Curtis Park Village: an in-fill development project involving houses, apartments, shops and offices.

• Ms. French completed Job Safety Analysis (JSA) worksheets, material safety data sheet (MSDS) compilations, and regulatory compliance review and documentation for the McLaughlin Gold Mine located in Lower Lake, California. First discovered in 1978, the McLaughlin mine began production in 1983 from sulfide ore bodies. The McLaughlin deposit contains sulfides of iron, arsenic, silver, antimony and mercury. The mine has been acknowledged internationally including winning numerous awards for its innovative treatment of sulfide ores and sound environmental management practices.

Ms. French has technical experience working for a diverse group of clients including national and regional lenders, investors, equity stakeholders, and property owners, including:

- California Bank & Trust
- Wells Fargo Bank
- Bay Area Development Company
- United Commercial Bank
- East West Bank
- Citibank
- Mechanics Bank
- US Bank
- California Bank of Commerce
- Cathay Bank
- Bank of the West
- Fremont Bank

Finally, Ms. French's diversity across residential, industrial, regulatory, and commercial environments is a major contribution to Partner Engineering and Science's Associate team in the West region of the United States.



## Terri Men

### **Environmental Scientist**



#### Education

Bachelor of Science in Biology / Environmental Science Minor University of California – Riverside

### Registrations

EPA Accredited Asbestos Inspector OSHA 40-hour HAZWOPER

### Summary of Professional Experience

Ms. Men has over five years project experience in the environmental service industry conducting Phase I Environmental Site Assessments (ESAs), Environmental Transaction Screens, Phase II Subsurface Investigations, and Phase III Site Characterization Investigations, preparing Surface Water Quality Reports and assessing In-Situ Water Treatment Systems for Southern California lakes. Ms. Men is familiar with all aspects of Due Diligence Property Assessments and the needs and requirements of a varied number of reporting standards, including the new standard ASTM E1527-05, EPA's All Appropriate Inquiry (AAI), Fannie Mae DUS, Freddie Mac, and customized client formats and scopes.

Due Diligence Project experience for Ms. Men includes:

- Phase I Environmental Assessments, Environmental Transaction Screens and other related environmental assessments for sites including apartment buildings/complexes, commercial office buildings, shopping centers, multi-tenant commercial complexes, industrial warehouses and manufacturing facilities, gas stations, auto repair facilities
- Reviewed and evaluated hundreds of third-party Phase I, Phase II and Phase III reports
- Conducted several asbestos and lead-based paint inspections of commercial and residential properties
- Conducted radon testing at numerous residential properties throughout California

Ms. Men has designed, performed, and/or managed numerous subsurface investigations, including the following product types:

- Phase II Subsurface Investigations
- Phase III Site Characterizations
- Soil Gas Surveys
- Underground Storage Tank Removals
- Health-Based Risk Assessments
- Quarterly Groundwater Monitoring
- Geophysical Surveys
- Data Interpretation and Analysis for Third-Party Subsurface Investigations
- Peer Reviews

In addition, Ms. Men has technical experience in the following:

- Design of a radon study of uranium granite finishes installed in homes throughout the country
- Research and surface water quality monitoring for Southern California lakes
- Assessment of internal and external nutrient loading
- Assessment of in-situ mitigation techniques,
- Assessments of water quality on aquatic biota mortality, fecundity, and population dynamics

Ms. Men has technical experience working for the following financial institutions:

- United Commercial Bank
- Union Bank
- Citigroup
- California Bank & Trust
- East West Bank
- NorthMarq Capital

- JPMorgan Chase Bank
- Bank of the West
- Wells Fargo Bank
- Lehman Brothers Bank
- City National Bank
- US Bank

## Joseph Derhake, PE Principal



### Education

MBA, University of Southern California B.S. Civil Engineering, Michigan State University

### Registrations

Registered Professional Civil Engineer, California Registered Professional Civil Engineer, Arizona Registered Professional Civil Engineer, Tennessee EPA Accredited Asbestos Inspector, Management Planner, Designer (not current)

## **Affiliations**

Member, Environmental Banker's Association Member, Mortgage Banker's Association

## Summary of Professional Experience

Mr. Derhake serves as the President of Partner Engineering and Science, a national engineering and environmental consulting firm.

Mr. Derhake has over fifteen years of experience managing and performing environmental and engineering consulting. He began his career as a project engineer, then worked up to project manager, client relationship manager, executive manager, and eventually became a successful entrepreneur who has innovated and advanced the profession.

Mr. Derhake has served as a staff engineer, project manager, or executive senior author on over 10,000 real estate transactions throughout his career. His due diligence resume includes experience at all levels, including advising lenders and real estate investors through the following product types:

- Phase I Environmental Site Assessments
- Phase II Subsurface Investigations
- Phase III Site Characterizations
- Remedial Cost Estimates
- Environmental Transaction Screens

Remedial Cost Estimates allow real estate professionals to prudently complete transactions on contaminated property, and this consulting product has become one of Mr. Derhake's specialties. The prerequisite to a sound Remedial Cost Estimate is a sound Phase I, Phase II, and Phase III. With adequate assessment and characterization data in hand, Mr. Derhake can leverage his remedial design and implementation experience to produce a reliable estimate.

Understanding the extent and threat posed by a subsurface release is one of Mr. Derhake's most

valuable points of expertise. He has over fifteen years of experience in testing soil, soil gas, and groundwater in the context of real estate transactions, as well as under the supervision of state or federal regulators. Mr. Derhake has guided hundreds of landowners through the process of site characterization, gaining an approved remedial action plan, implementing the remedial technology, and ultimately gaining site closure.

Mr. Derhake has a significant portfolio of closed sites.

The following table includes some of the contaminants Mr. Derhake has removed and some of the technologies used:

#### **Contaminants**

Gasoline/Diesel
Free Product Floating on Groundwater
Metals: Lead, Arsenic, Chromium
Pesticides
PCBs
Chlorinated solvents

Other Solvents: Acetone, Toluene

### Remedial Technologies

Excavation Fixation

Soil Vapor Extraction
Air Sparging
Dual Phase Extraction
Pump and Treat
Ozone Sparging
In-situ Chemical Oxidation
Bioremediation (in-situ and ex-situ)
Bio-sparging

Mr. Derhake speaks regularly at industry events and conferences. Engagements within recent years include:

- Spoke at the Risk Managers Association (RMA) Credit Committee on the effects of the latest Federal All Appropriate Inquiries (AAI) standard for Phase I Environmental Site Assessments.
- Participated in the Real Estate Industry Roundtable on due diligence during a real estate transaction.
- Frequent speaker and/or panelist at the Environmental Bankers Association conferences.
- Spoke at the National Brownfields Association's Big Deal Conference in March of 2009 on the subject of LEED Development.

#### **Publications**

Managing Seismic Risk, RMA Journal, June 2010

<u>Understanding PMLs and Managing Engineering Providers, Commercial Mortgage Finance News, Summer 2009</u>

California Getting Real Energy, ENR, March 2009



Lender's Tolerance for Environmental Risk, RMA Journal, February 2009

The New Vapor-Intrusion Standard, Scotsman Guide, May 2008

Probable Maximum Loss Article, Scotsman Guide, June 2008

New Due Diligence Needs for SBA Loans, Scotsman Guide, October 2008

New Law Ranks Commercial Buildings by Efficiency, GlobeSt.com, December 2008

EBA Technical Committee Risk Tolerance Survey, June 2008

New Energy Disclosures Required by Assembly Bill 1103, California Mortgage Finance News, November 2008

