Brusca Associates, Inc.
Environmental Engineering Geology

May 7, 2018

Buzz Oates Development and Construction Services
Attention: Troy Estacio
555 Capitol Mall, Ninth Floor
Sacramento, CA 95814

DRAFT WASTE MATERIALS REUSE WORKPLAN
WASTE UNIT 1 MATERIALS
MURPHY PARKWAY PROPERTY
APN 198-012-009
17100 Murphy Parkway
Lathrop, California
Brusca Project No. 137-002

INTRODUCTION

In accordance with your request, we have prepared this *Draft Workplan* for the onsite reuse of solid waste materials and associated soils that were excavated, stockpiled, tested, and evaluated at the subject property as a part of clean closure activities. The property consists of an approximate 48-acre, vacant parcel identified as APN 198-012-009 in Lathrop, San Joaquin County, California. Recent waste management work at the site included excavation/removal, stockpiling, sampling, and testing of a layer of solid waste materials (primarily broken glass) and associated soils that existed beneath a clean soil "cap" on the far northwesterly portion of the subject parcel. These wastes on the property have been referred to as Waste Unit 1 (WU1). The removed/stockpiled waste materials were sampled and tested to evaluate whether the materials can be reused onsite in engineered fills during upcoming site development.

The waste management work recently performed at the site is a component of the clean closure activities for the subject parcel in general accord with CCR Title 27, Section 21810 and with the guidance outlined in the Local Enforcement Agency (LEA) Advisory #16 published by CalRecycle. Advanced GeoEnvironmental (AGE) prepared a *Clean Closure Plan* for the property dated March 5, 2018.[1] An element of the *Clean Closure Plan* is an *Excavation and Material Management Plan (EMMP)* that was prepared by our firm and presented measures and procedures for the removal, management, sampling, testing, and evaluation of residual solid waste materials within WU1.[2] Our firm prepared *Addendum* to the *EMMP* dated March 22,

[1] AGE; "Clean Closure Plan, 17100 Murphy Parkway, Lathrop, San Joaquin County, California, PNA Parcel B (Portion of Solid Waste Information System [SWIS] number 39-CR-0022), APN 198-120-09"; March 5, 2018.
[2] Brusca Associates, Inc.; "Excavation and Material Management Plan, Murphy Parkway Property, APN 198-012-009, 17100 Murphy Parkway, Lathrop, San Joaquin County, California"; March 9, 2018.

2018 to slightly revise the verification soil sampling program (testing of soils beneath the area of removed wastes) as suggested by the Central Valley Regional Water Quality Control Board (CVRWQCB).[3]

This *Draft Workplan* includes: a general description of the site; background information; a description of the planned site development; information, laboratory data and discussion pertaining to stockpiled materials generated during the recent removal of solid waste materials from WU1; justification for onsite reuse of materials excavated from WU1; procedures for the reuse of these materials in onsite engineered fills; and verification/reporting procedures to ensure that the materials are reused in the manner described herein.

A *Vicinity Map* showing the location of the subject parcel is presented as Plate 1. A *Site Map* is presented as Plate 2 showing the layout of the entire parcel, the former area of capped wastes (WU1) on the far northwesterly portion of the site, the locations of stockpiled materials that were recently excavated and removed from the capped waste area, and the general layout of the planned large commercial/light-industrial building on the property. A detail map showing WU1 area and the locations of verification soil samples collected beneath the area of removed wastes is presented as Plate 3. A civil engineering drawing depicting additional details pertaining to the planned construction is presented as Plate 4. Analytical laboratory data for samples of the stockpiled materials from WU1, as well as for the verification soil samples collected beneath WU1, are presented on Tables I through VII; the laboratory reports and chain-of-custody documentation are included in Appendix A. The *Foundation Investigation* (geotechnical engineering report) for the site development project is presented in Appendix B.

SITE DESCRIPTION AND BACKGROUND

Site Location and Description

The approximate 48-acre subject property is located about 500 feet easterly of Murphy Parkway and about 1,000 feet northerly of D'Arcy Parkway in a commercial and industrial area of Lathrop, San Joaquin County, California. The property consists of an approximate 48-acre parcel identified as APN 198-012-009. The subject parcel is currently vacant/undeveloped land. The site is generally flat; however, two depressed areas are situated on the northwesterly portion of the site (bordering the WU1 area). Until recently, portions of the site were used for livestock grazing; wire fencing is in place on portions of the site for livestock enclosure purposes. A *Vicinity Ma*p showing the location of the property is presented as Plate 1, and a *Site Map* is presented as Plate 2.

Historical Site Activities

The 48-acre subject parcel historically was vacant farmland. In the early 1960s, a large glass manufacturing facility (currently referred to as former Pilkington North America [PNA] facility) was constructed directly northerly of the subject property. The subject 48-acre parcel (identified by APN 198-012-009) was associated with the former PNA facility, and, along with other offsite areas, was used for solid waste handling and waste water disposal related to the PNA facility.

[3] Brusca Associates, Inc.; "Addendum, Excavation and Material Management Plan, Murphy Parkway Property, APN 198-012-009, 17100 Murphy Parkway, Lathrop, San Joaquin County, California"; March 22, 2018.

Solid wastes comprised largely of waste glass materials were handled within the northwesterly portion of the subject 48-acre site; the vast majority of waste glass materials historically handled and temporarily stored in this area were hauled from the property in the past to offsite disposal locations. Glass manufacturing activities at the former PNA facility were discontinued several years ago. In recent years, the subject 48-acre parcel generally has been unused, except for some livestock grazing.

Treated industrial and domestic waste water, as well as storm water, generated at the former PNA facility northerly of the subject property was disposed at that facility, and also on the subject 48-acre parcel via spray irrigation. The waste water discharge was performed under permit with the CVRWQCB. Because the subject 48-acre property is no longer intended for waste water discharge, the CVRWQCB is currently in the process of removing this area from the waste water discharge permit.

Past Onsite Waste Investigations and Remedial Work

It is indicated that the handling of glass wastes on the subject property ceased in the 1980s. Around 2012, the local oversight agency (the San Joaquin County Environmental Health Department [SJCEHD]) required the placement of a clean soil cap over the northwesterly portion of the property (WU1 area) where a thin layer of residual glass wastes was known to exist at the site surface. A *Soil Cover Workplan* was prepared in early 2013, and the capping work was implemented in late 2013.[4] The area of the cap (WU1 area) is shown on Plate 2.

Starting in 2014, a substantial amount of investigation, waste characterization, and waste removal work was implemented on the subject parcel by AGE with direction and oversight by the SJCEHD. This work included:

- a significant number of explorations (test pits and borings) within the capped area and other site areas, including areas to the south and east of the capped area.

- a geophysical survey (involving ground penetrating radar and a magnetometer survey) on the westerly portion of the property to identify any unknown areas of disturbed materials/buried wastes. The geophysical and trenching work reportedly identified two areas (approximate 2,000 square feet each in plan area) of deeper disturbed materials/wastes along the far westerly margin of the property and outside of the cap area. These areas were identified as the South Waste Cell (SWC) and the North Waste Cell (NWC). The SWC and NWC waste materials subsequently were completely excavated and removed from the parcel for offsite landfill disposal.

- collection of samples of soil and waste materials from WU1, SWC, and NWC areas, as well as from other site areas for analytical laboratory testing.

AGE's investigative, remedial, and characterization work associated with solid wastes on the subject parcel was summarized in a *Site Assessment Summary Report* dated December 21, 2017.[5]

[4] Antea Group; "Soil Cover Workplan, Former Cullet Staging Area, Pilkington North America, Inc., 500 East Louise Avenue, Lathrop, California"; May 22, 2013.

[5] AGE; "Revised Site Assessment Summary Report, 17100 Murphy Parkway, Lathrop, San Joaquin County, California, Solid Waste Information System (SWIS) Number 39-CR-022 (APN 198-120-09); January 10, 2018.

PLANNED SITE DEVELOPMENT/CONSTRUCTION

Redevelopment of the subject property is planned to be initiated in the very near future. The planned development includes construction of an approximate 870,000 square-foot commercial/light-industrial structure intended for use for warehouse/distribution purposes. The layout of the planned development is shown on Plates 2 and 3. The planned structure will be of tilt-up concrete construction with a concrete slab-on-grade floor. Onsite areas exterior to the building will support asphaltic-concrete and concrete pavements, storm water basins, and very limited landscaping.

WU1 WASTE EXCAVATION, STOCKPILING, SAMPLING/TESTING, AND EVALUATION

Excavation, removal, and stockpiling of waste materials and associated soil within WU1 (capped area within the northwesterly portion of the subject parcel) was performed in April 2018 by Ramcon Engineering and Environmental Contracting. The work was overseen by a Certified Engineering Geologist from our firm; additionally, representatives of SJCEHD, the CVRWQCB, and CalRecycle observed the work. The work was performed in accordance with the agency-approved *EMMP* and associated *Addendum* referenced earlier in this *Workplan*.

Prior to removal of the waste materials from WU1, the clean soil cap materials were removed from this area and stockpiled along the northerly margin of the site. Subsequently, the underlying waste materials and associated soils were excavated with earthmoving equipment, removed from the WU1 area, and stockpiled directly to the south of the WU1 area on the property (see Plate 2). Five stockpiles of WU1 materials were created (identified as SP1 through SP5). Stockpiles SP1, SP2, SP3, and SP5 range in volume from about 1,000 to about 5,000 cubic yards. Stockpile SP4 is comprised predominantly of sizable cemented masses (boulder-size and smaller) of glass fragments in a fine-grained matrix; the volume of SP4 is quite small (less than 10 cubic yards). The total volume of stockpiled materials removed from WU1 is on the order of 13,000 to 14,000 cubic yards. The stockpiles were covered with plastic sheeting, and the plastic sheeting was secured with sandbags to prevent wind disturbance.

Per the provisions of the *EMMP*, our firm collected verification soil samples below the removed wastes in the WU1 area, and we collected samples of the stockpiled materials removed from WU1 for analytical laboratory testing. The sampling was conducted by a Certified Engineering Geologist from our firm and was overseen by regulatory agency representatives. A total of 49 spatially distributed, random/representative samples of the WU1 materials was collected. The samples were placed in laboratory-provided glass jars, immediately placed on ice, and transported to State-certified analytical laboratories under chain-of-custody for analysis for the following:

- Total Petroleum Hydrocarbons as gasoline, diesel, and motor oil by EPA Method 8015B
- SVOCs by EPA Method 8270C
- Polychlorinated Biphenyls (PCBs) by EPA Method 8082
- Title 22 Metals Total Threshold Limit (TTLC) by EPA Method 6010/200.7
- Dioxins and Furans by EPA Method E1613

The results of the above-listed analyses performed on stockpiled materials from WU1 are presented on summary data tables attached to this *Workplan*; summary data tables from the verification soil sampling beneath the area of removed wastes also are included. For reference, hazardous waste criteria and screening levels are included on the summary data tables. The laboratory reports and chain-of-custody documentation are presented in Appendix A.

As outlined in the *EMMP*, samples stockpiled materials from WU1 containing the highest concentrations of total metals were analyzed for soluble Title 22 metals by the Waste Extraction Method (WET) by EPA Method 1311 using deionized water (DI) as the extractant; this element of the testing program was required by the CVRWQCB for the purpose of evaluating potential future leaching impact to groundwater posed by the waste materials. A total of 11 samples was selected for the DI WET metals testing, including samples from each of the five stockpiles.

WU1 MATERIALS REUSE EVALUATION

Per the provisions of the approved *EMMP*, the laboratory data from the samples of stockpiled materials removed from WU1 have been evaluated to determine whether these materials are acceptable for onsite reuse in engineered fills during upcoming site development. As shown on Tables IV, VI, and VII, none of the 49 samples of the stockpiled materials from WU1 contained total metals, petroleum hydrocarbons, PCBs, SVOCs or dioxins/furans at concentrations above the commercial/industrial screening levels established in the *EMMP* (or in the case of arsenic, above the site-specific background concentration). Additionally, none of the results exceed hazardous waste criteria established in the California Code of Regulations (CCR) Title 22, Division 4.5. As such, these results indicate that the stockpiled materials from WU1 are acceptable for onsite reuse.

Materials reuse evaluation has included consideration of the potential for future impact to groundwater as a result of possible leaching of metals from the materials. As shown on Table V, the DI WET concentrations from the tested samples for the majority of the Title 22 metals do not exceed California Maximum Contaminant Level (MCL) drinking water concentrations. However, the concentrations of DI WET arsenic, chromium and lead concentrations detected in most of the samples exceed the MCL values. We note that several groundwater samples have been collected and tested beneath the WU1 area as a part of past site assessment work, and none of the groundwater samples from this area have contained lead or chromium at concentrations above their respective MCL values, despite the fact that waste materials were handled and stored in this area for several decades starting in the 1960s (and during operation of the PNA facility, much greater volumes of wastes were stored in this area than were removed during the recent waste management work). As such, it does not appear likely that the chromium and lead in the removed/stockpiled waste materials represents a significant threat to groundwater quality. It is noted that elevated concentrations of arsenic (above the MCL value) have been detected in groundwater at various locations beneath the subject property, including beneath the WU1 area. However, in general, the distribution of elevated concentrations of arsenic in groundwater beneath the site is somewhat erratic, and some of the past groundwater samples collected beneath WU1 in the past have not contained elevated concentrations of arsenic. It is known that naturally-occurring elevated concentrations of arsenic exist in groundwater in other areas of San Joaquin County, and the arsenic detected in groundwater beneath the subject property may also be naturally occurring.

To further evaluate the leaching potential of arsenic in the stockpiled materials removed from WU1, we have compared the estimated mass of the DI soluble arsenic contained in the stockpiled materials to a potential volume of receptor groundwater beneath the site. Based on an average DI WET arsenic concentration of 0.02 milligrams per Liter (mg/L), and recognizing that the DI WET test utilizes 50 grams of materials and 500 milliliters of water as an extractant, we calculate the total mass of DI soluble arsenic in the stockpiled materials to be approximately 4,120 grams. Assuming, that the entirety of this mass is leached to groundwater, a saturated zone void ratio of 0.5, and a twenty-foot depth of dispersion and diffusion within the saturated zone, the soluble arsenic mass in the stockpiled materials would represent 0.007 mg/L beneath the 48-acre property; this value is below the drinking water standard for arsenic (0.01 mg/L). This mass calculation likely substantially overestimates potential arsenic impact to groundwater because the DI WET data utilized is from the samples with the highest total metals results (the actual average DI WET arsenic concentration in the stockpiled materials likely is less than 0.02 mg/L), and the mass calculation assumes that all soluble arsenic in the stockpiled materials leaches to groundwater.

Despite the foregoing that suggests that the soluble arsenic, chromium and lead detected in the stockpiled materials removed from WU1 is not likely to represent a significant leaching threat to shallow groundwater quality, as a highly protective and conservative measure we propose specific procedures to be implemented during the onsite reuse of these materials to mitigate leaching potential. Specifically, we propose that the stockpiled materials removed from WU1 be placed beneath the concrete floor slab of the planned building on the property (and to a lesser degree, beneath planned concrete pavements) so that these materials are not subject to rainwater infiltration and related leaching potential. Construction plans indicate that the concrete slab-on-grade floor for the planned building on the property will be seven inches thick and reinforced with #4 reinforcing bars at 24 inches on center, each way; floor slab concrete will be designed to achieve a minimum 28-day unconfined compressive strength of 3,000 pounds per square inch (psi). The building will be completely surrounded by concrete and asphaltic-concrete pavements. Site pavements will be sloped to drain and onsite storm water will be directed toward drain inlets that discharge to the storm water system. As such, rainwater infiltration and associated leaching potential to materials directly below the future building's floor slab is considered to be negligible.

Once the building pad is constructed utilizing the materials removed from WU1 within the pad subgrade, a comparatively minor amount of these materials will subsequently be excavated during foundation and underground utility trench excavation within the building pad. We suggest that these materials be placed below concrete pavements that will adjoin the building (i.e. the planned concrete-paved dock areas northerly and southerly of the planned building). The concrete pavements are designed to be six inches thick and reinforced with #4 reinforcing bars at 24 inches on center, each way; pavement concrete will be designed to achieve a minimum 28-day unconfined compressive strength of 4,000 psi. The concrete pavements will substantially prevent rainwater infiltration and associated leaching potential to underlying materials.

We propose that the materials removed from WU1 be placed within the upper one-foot of the subgrades beneath the floor slab and concrete pavement sections mentioned above since these subgrades will be cement treated as a part of construction activities to enhance the engineering/strength properties of the subgrades. The cement treatment of these materials would further reduce the leaching potential of metals in the materials. It is well recognized that cement treatment of soils can mitigate leaching potential of heavy metal ions by providing both physical

resistance to leaching and by creating an elevated pH environment. The cement treatment process results in an impermeable monolith that substantially reduces surface area available for leaching. Moreover, the increased pH of the treated material (caused by alkali nature of Portland cement) limits the solubility of metals. As such, incorporating the materials from WU1 into floor slab and pavement subgrades that will be treated with cement affords an even greater reduction of the potential for leaching of soluble metals in these materials. Following the placement of the WU1 materials beneath the building floor slab (and to a lesser degree beneath concrete pavements) and the treatment of these materials with cement, the potential for leaching of metals from these materials to groundwater is considered to be negligible.

Specific measures for the placement and cement treatment of the materials are presented below.

PROCEDURES OF REUSE OF WU1 MATERIALS

Notification

At least one week prior to the onset of construction activities at the site that involves the relocation of the stockpiled materials from WU1 and the placement of these materials within building pad and pavement subgrades, the SJCEHD, the CVRWQCB, and CalRecycle will be notified of the work schedule.

Placement and Cement Treatment of WU1 Materials

All of the materials contained in the stockpiles of material removed from WU1 will be placed within the upper one foot of the building pad subgrade for the proposed approximate 870,000 square-foot concrete tilt up building planned to be constructed on the site. Materials placement and compaction should conform to the requirements of project plans and specifications, including the project *Foundation Investigation* prepared by Raney Geotechnical, Inc.; a copy of the *Foundation Investigation* is included in Appendix B of this *Workplan*.[6]

As described in the appended *Foundation Investigation*, the upper one foot of the building pad subgrade will be treated with at least five percent Portland cement, as determined by dry unit weight. The treated mixture will be moisture conditioned and compacted to at least 92 percent of the maximum dry density as determined by the ASTM D1557-02 test procedure.

Any materials generated during trimming of the treated building pad to final grade, and all materials generated during foundation and utility trench excavation within the upper one foot of the building pad should be placed beneath areas adjoining the building that are designated to be concrete paved. These materials will be placed within the upper one foot of the concrete pavement subgrades and will subsequently be cement treated. The project *Foundation Investigation* indicates that the pavement subgrades will be cement treated in a similar manner as described above for the building pad subgrade.

[6] Raney Geotechnical, Inc.; "Foundation Investigation, Murphy Parkway Warehouse, Murphy Parkway near D'Arcy Parkway, Lathrop, California"; December 19, 2016.

This *Workplan* does not address physical hazards (such as those posed by the waste glass within the materials removed from WU1 on the property); protection against physical and construction hazards are the responsibility of future contractors/workers and other site personnel and are not included in the scope of this plan. It is recommended that all agencies, companies, and workers whose activities may result in exposure to the materials removed from WU1 (including waste glass materials and dust) develop health and safety plans specific to the site conditions and their activities, and that such measures consider/address potential inhalation hazards posed by glass dust, as well as cut/abrasion hazards posed by glass fragments.

Verification Observation and Reporting

A qualified environmental professional will make observations of site activities that involve the onsite transport, placement, and cement treatment of materials removed from WU1 to confirm that the procedures described herein are implemented. Additionally, earthwork quality control observations and testing will be performed by the project geotechnical engineering firm. The locations of placement of the materials removed from WU1 will be recorded on a scaled site plan. Upon completion, a report will be prepared summarizing the materials reuse activities

CLOSING

This *Draft Workplan* will be submitted to the SJCEHD, the CVRWQCB, and CalRecycle for review and approval prior to finalizing the *Workplan* and implementing the onsite reuse of the materials removed from WU1. If you have any questions or require additional information, please contact the undersigned at (916) 677-1470.

Sincerely,

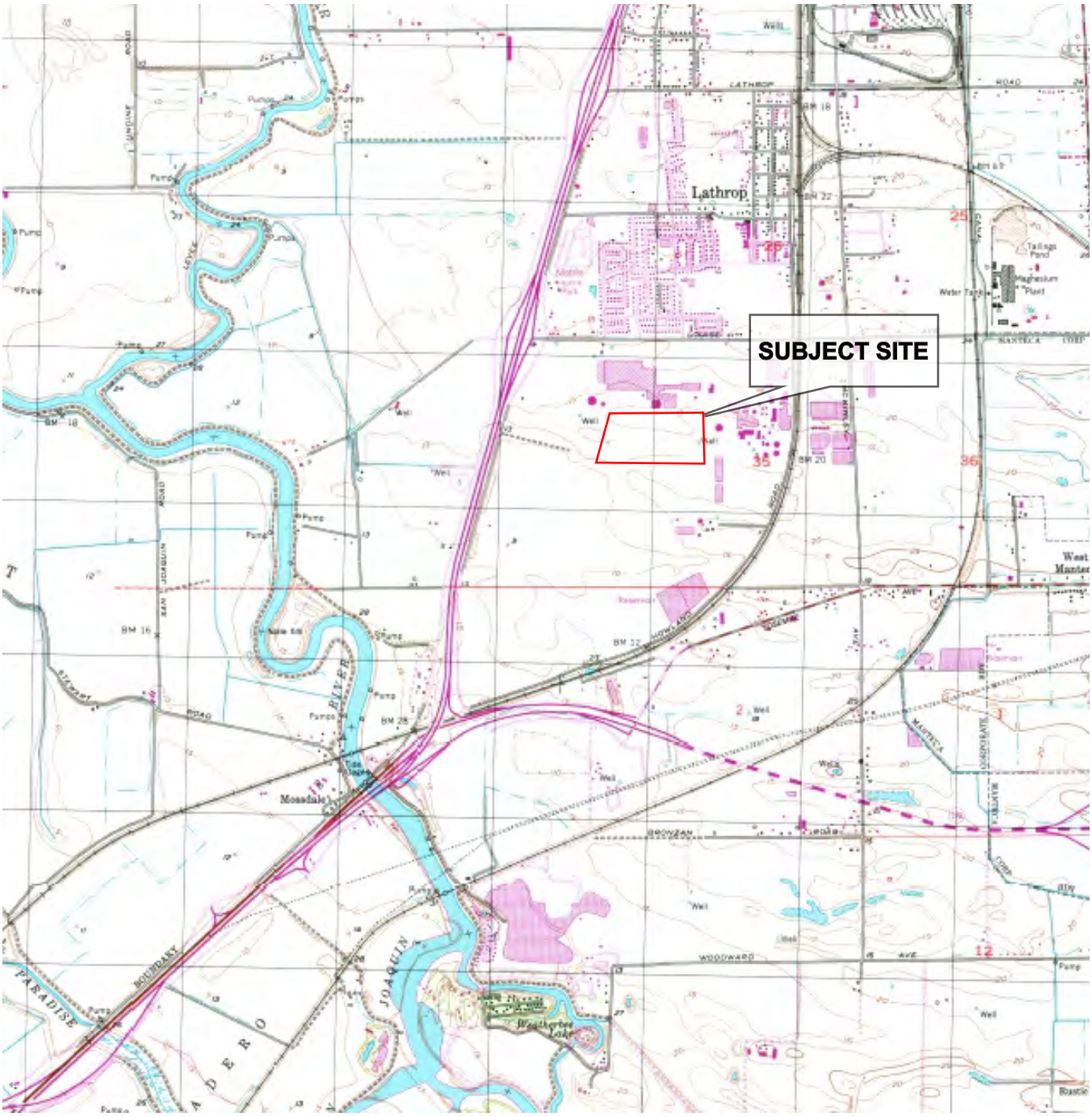
BRUSCA ASSOCIATES, INC.

Joe Brusca
Principal Engineering Geologist
Certified Engineering Geologist No. 1948

JB:jb

Attachments: Plate 1, *Vicinity Map*
Plate 2, *Site Map*
Plate 3, *Verification Soil Sample Detail Map*
Plate 4, *Planned Development Drawing*

Table I, Summary of Total Metals Data – Verification Soil Samples
Table II, Summary of Petroleum Hydrocarbons Data – Verification Soil Samples



SOURCE: U.S.G.S. 7.5-minute Lathrop Quadrangle, California, 1996
Scale 1:24,000

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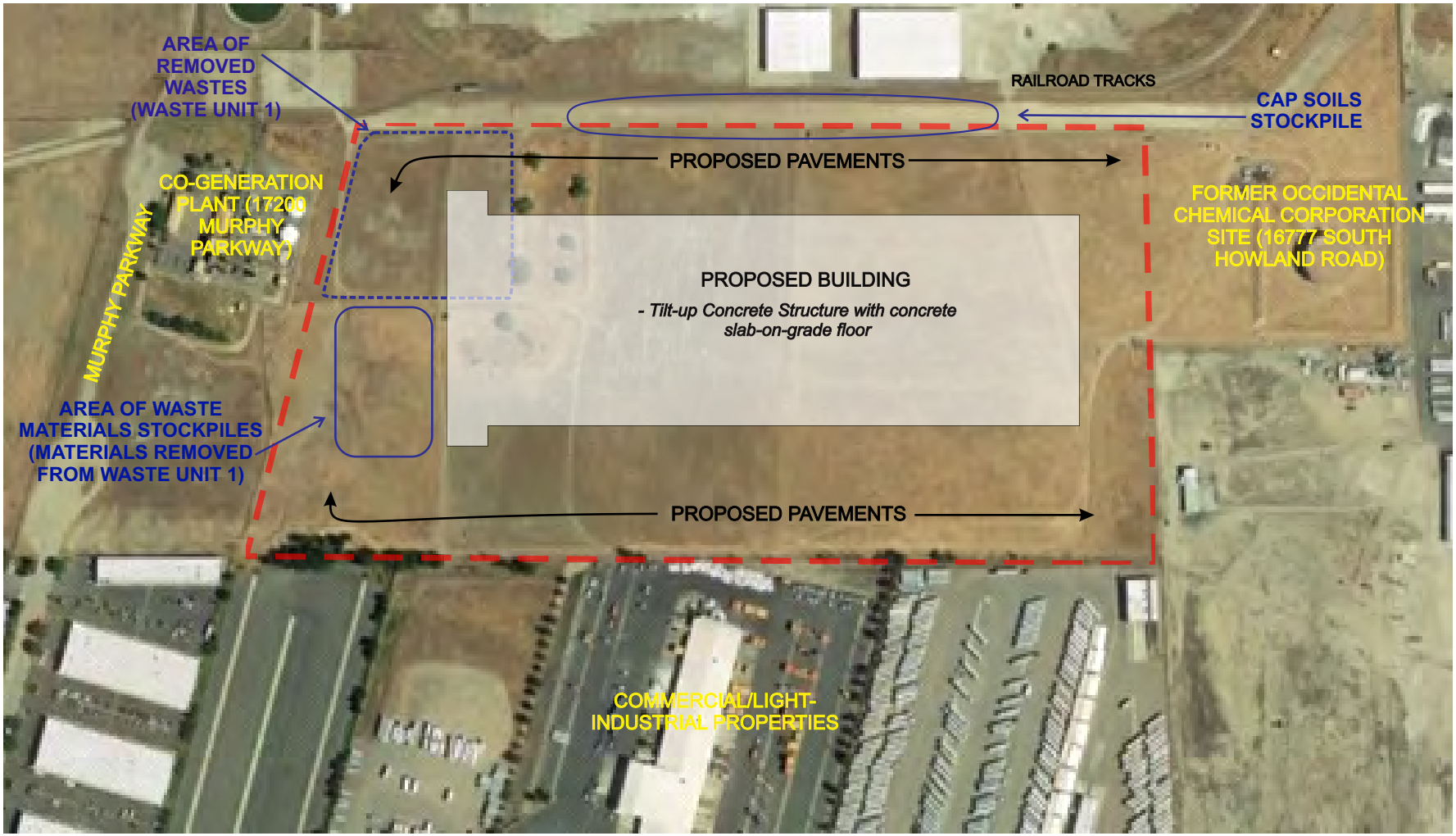
MURPHY PARKWAY PROPERTY
WASTE MATERIALS REUSE
WORKPLAN

APN 198-012-009
17100 Murphy Parkway
Lathrop, California

Brusca Project No. 137-002

VICINITY MAP

PLATE 1



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APPROXIMATE SCALE IN FEET

APPROXIMATE BOUNDARY OF SUBJECT 48-ACRE PARCEL

All features and locations are approximate only

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MURPHY PARKWAY PROPERTY
WASTE MATERIALS
REUSE WORK PLAN

APN 198-012-009
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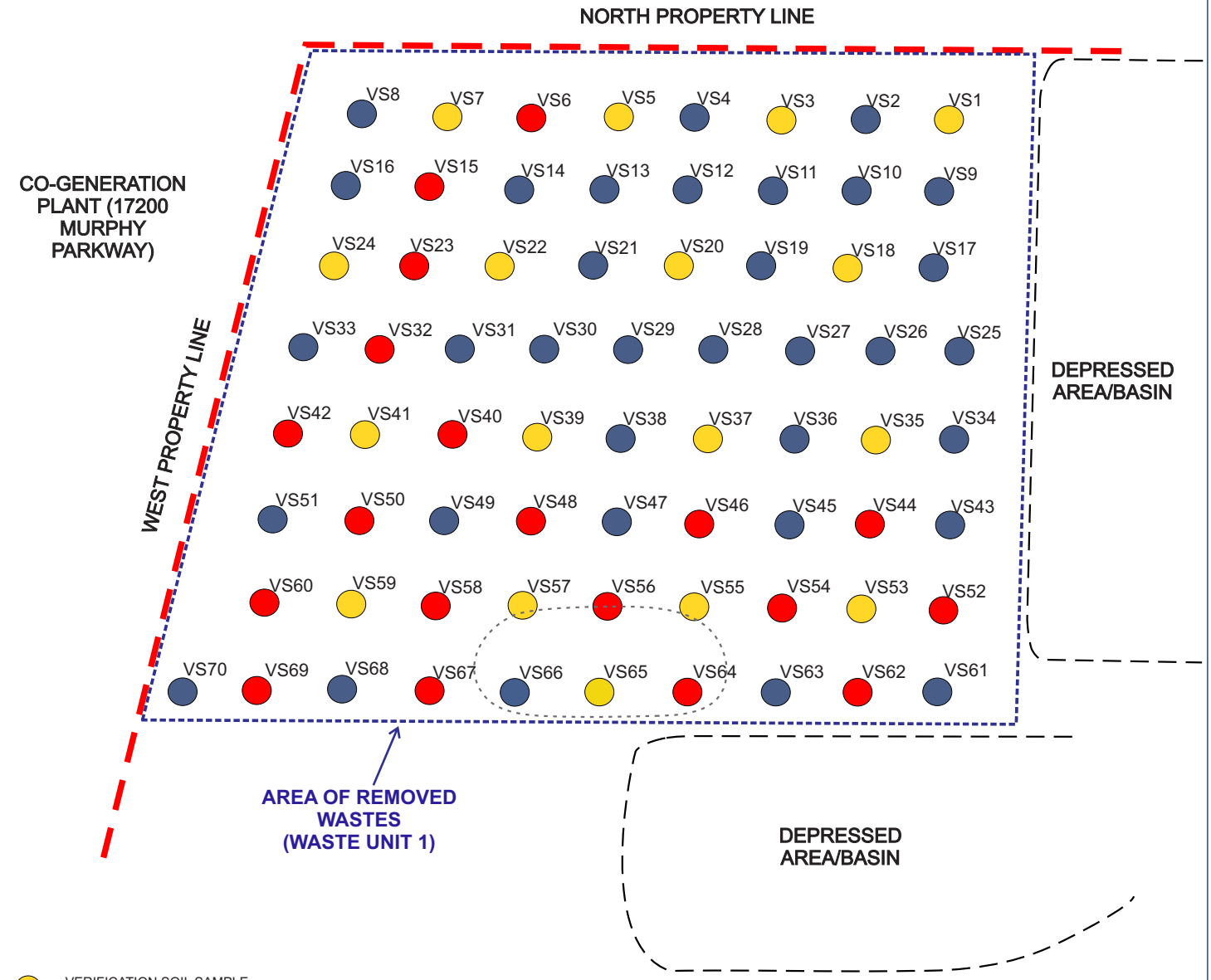
SITE MAP

PLATE 2



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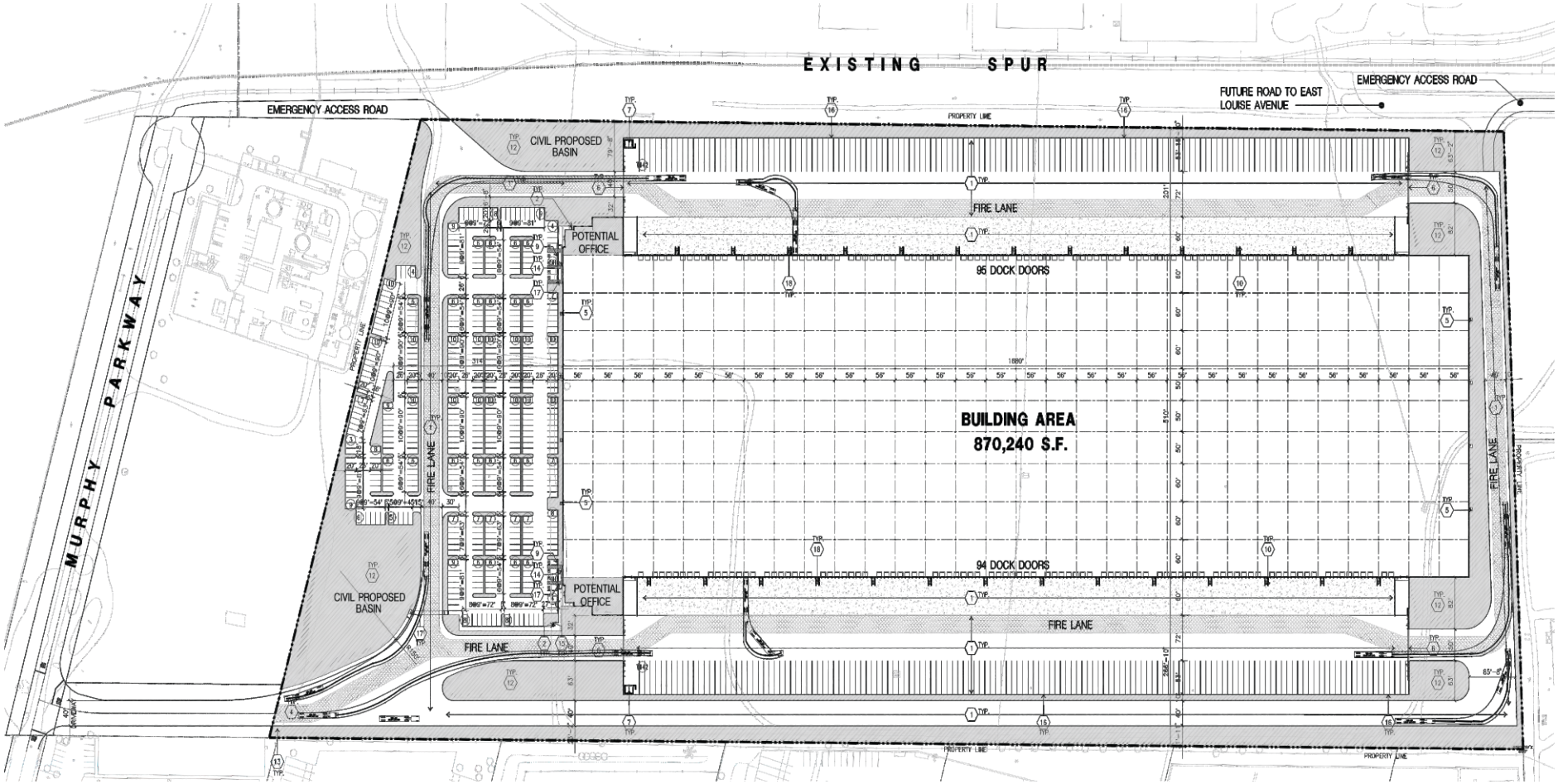
VERIFICATION SOIL SAMPLE DETAIL MAP

PLATE 3



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APPROXIMATE SCALE IN FEET

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PLANNED DEVELOPMENT DRAWING

PLATE 4

TABLE I
SUMMARY OF TOTAL METALS DATA
VERIFICATION SOIL SAMPLES
48-ACRE MURPHY PARKWAY PROPERTY
17100 Murphy Parkway, Lathrop, San Joaquin County, California

Brusca Reference No. 137-002

SAMPLE ID	DATE SAMPLED	TITLE 22 METALS *EPA Method 6010B/200.7*																
		Antimony	**Silver**	**Arsenic**	**Barium**	**Beryllium**	**Cadmium**	**Chromium**	**Cobalt**	**Copper**	**Lead**	**Molybdenum**	**Nickel**	**Selenium**	**Thallium**	**Vanadium**	**Zinc**	**Mercury**
VS1	4/2/18	ND	ND	ND	49	ND	ND	5.2	5.0	3.3	ND	ND	5.8	ND	ND	19	21	ND
VS2	4/2/18			ND							ND							
VS3	4/2/18	ND	ND	ND	55	ND	ND	4.2	4.2	1.4	ND	ND	6.2	ND	ND	16	17	ND
VS4	4/2/18			ND							ND							
VS5	4/2/18	ND	ND	ND	47	ND	ND	4.8	4.0	ND	ND	ND	3.9	ND	ND	18	18	ND
VS7	4/2/18	ND	ND	ND	45	ND	ND	5.2	3.7	ND	ND	ND	4.1	ND	ND	17	19	ND
VS8	4/2/18			ND							ND							
VS9	4/11/18			ND							ND							
VS10	4/11/18			ND							ND							
VS11	4/11/18			ND							ND							
VS12	4/11/18			ND							ND							
VS13	4/11/18			ND							ND							
VS14	4/11/18			ND							ND							
VS16	4/11/18			ND							ND							
VS17	4/11/18			ND							ND							
VS18	4/11/18	ND	ND	ND	44	ND	ND	3.8	3.4	ND	ND	ND	3.8	ND	ND	13	18	ND
VS19	4/11/18			ND							ND							
VS20	4/11/18	ND	ND	ND	55	ND	ND	4.7	3.6	1.4	ND	ND	4.5	ND	ND	15	22	ND
VS21	4/11/18			ND							ND							
VS22	4/11/18	ND	ND	ND	72	ND	ND	4.3	4.0	1.6	ND	ND	4.4	ND	ND	16	20	ND
VS24	4/11/18	ND	ND	ND	52	ND	ND	4.2	3.8	3.1	ND	ND	4.9	ND	ND	16	19	ND
VS25	4/11/18			ND							ND							
VS26	4/11/18			ND							ND							

TABLE I
SUMMARY OF TOTAL METALS DATA
VERIFICATION SOIL SAMPLES
48-ACRE MURPHY PARKWAY PROPERTY
17100 Murphy Parkway, Lathrop, San Joaquin County, California

Brusca Reference No. 137-002

SAMPLE ID	DATE SAMPLED	TITLE 22 METALS *EPA Method 6010B/200.7*																
		Antimony	**Silver**	**Arsenic**	**Barium**	**Beryllium**	**Cadmium**	**Chromium**	**Cobalt**	**Copper**	**Lead**	**Molybdenum**	**Nickel**	**Selenium**	**Thallium**	**Vanadium**	**Zinc**	**Mercury**
VS27	4/11/18			ND							ND							
VS28	4/11/18			ND							ND							
VS29	4/11/18			ND							ND							
VS30	4/11/18			ND							ND							
VS31	4/11/18			ND							ND							
VS33	4/11/18			ND							ND							
VS34	4/11/18			ND							ND							
VS35	4/11/18	ND	ND	ND	66	ND	ND	5.1	6.3	3.6	ND	ND	6.8	ND	ND	22	28	ND
VS36	4/11/18			ND							ND							
VS37	4/11/18	ND	ND	ND	77	ND	ND	5.9	6.4	4.1	ND	ND	7.5	ND	ND	18	26	ND
VS38	4/11/18			ND							ND							
VS39	4/11/18	ND	ND	ND	66	ND	ND	4.7	4.8	4.5	ND	ND	7.6	ND	ND	15	20	ND
VS41	4/11/18	ND	ND	ND	53	ND	ND	4.3	4.1	3.2	ND	ND	4.9	ND	ND	16	18	ND
VS43	4/11/18			ND							ND							
VS45	4/11/18			ND							ND							
VS47	4/11/18			ND							ND							
VS49	4/11/18			ND							ND							
VS51	4/11/18			ND							ND							
VS53	4/13/18	ND	ND	ND	80	ND	ND	7.1	6.6	6.8	ND	ND	8.8	ND	ND	23	28	ND
VS55	4/13/18	ND	ND	ND	65	ND	ND	7.7	5.8	4.1	ND	ND	8.2	ND	ND	24	27	ND
VS57	4/13/18	ND	ND	ND	49	ND	ND	6.6	4.7	3.0	ND	ND	5.8	ND	ND	21	32	ND
VS59	4/13/18	ND	ND	ND	62	ND	ND	6.0	5.0	3.5	ND	ND	7.2	ND	ND	20	22	ND
VS61	4/13/18			ND							ND							

TABLE I
SUMMARY OF TOTAL METALS DATA
VERIFICATION SOIL SAMPLES
48-ACRE MURPHY PARKWAY PROPERTY
17100 Murphy Parkway, Lathrop, San Joaquin County, California

Brusca Reference No. 137-002

SAMPLE ID	DATE SAMPLED	TITLE 22 METALS *EPA Method 6010B/200.7*																
		Antimony	**Silver**	**Arsenic**	**Barium**	**Beryllium**	**Cadmium**	**Chromium**	**Cobalt**	**Copper**	**Lead**	**Molybdenum**	**Nickel**	**Selenium**	**Thallium**	**Vanadium**	**Zinc**	**Mercury**
VS63	4/13/18			ND							ND							
VS65	4/13/18	ND	ND	ND	26	ND	ND	3.7	2.7	1.9	ND	ND	3.4	ND	ND	11	11	ND
VS66	4/13/18			ND							ND							
VS68	4/13/18			ND							12							
VS70	4/13/18			ND							ND							
SCREENING LEVELS																		
Hazardous Waste Criteria[2]		500	500	500	10,000	75	100	2,500	8,000	2,500	1,000	3,500	2,000	100	700	2,400	5,000	20
DTSC SLs - residential[3]		N/A	390	0.11[6]	N/A	15	5.2	36,000	N/A	N/A	80	N/A	490	N/A	N/A	390	N/A	1.0
DTSC SLs - commercial[3]		N/A	1,500	0.36[6]	N/A	210	7.3	170,000	N/A	N/A	320	N/A	3,100	N/A	N/A	1,000	N/A	4.5
USEPA RSLs - residential[4]		31	390	0.68[6]	15,000	160	71	120,000	23	3,100	400	390	1,500	390	0.78	390	23,000	11
USEPA RSLs - commercial[4]		470	5,800	3.0[6]	220,000	2,300	980	1,800,000	350	47,000	800	5,800	22,000	5,800	12	5,800	350,000	46

Notes: 1. All concentrations expressed in milligrams per kilogram (mg/kg)

2. California Code of Regulations Title 22, Division 4.5

3. DTSC-Modified Screening Levels (DTSC-SLs); January 2018

4. USEPA Regional Screening Levels, TR=1E-06, HQ=1"; November 2017

5. N/A = screening value not established

6. Arsenic data for the project are compared to background concentration of 8.6 mg/kg rather than cited screening levels.

TABLE II
SUMMARY OF PETROLEUM HYDROCARBONS DATA
VERIFICATION SOIL SAMPLES
48-ACRE MURPHY PARKWAY PROPERTY
17100 Murphy Parkway, Lathrop, San Joaquin County, California

Brusca Reference No. 137-002

SAMPLE ID	DATE SAMPLED	TOTAL PETROLEUM HYDROCARBONS *EPA Method 8015C*		
		C6-C12 (Gasoline Range)	C13-C28 (Diesel Range)	C29-C40 (Motor Oil Range)
VS1	4/2/18	ND	ND	ND
VS3	4/2/18	ND	ND	ND
VS5	4/2/18	ND	ND	ND
VS7	4/2/18	ND	950	2,100
VS18	4/11/18	ND	ND	ND
VS20	4/11/18	ND	ND	ND
VS22	4/11/18	ND	ND	ND
VS24	4/11/18	ND	220	310
VS35	4/11/18	ND	ND	ND
VS37	4/11/18	ND	ND	ND
VS39	4/11/18	ND	ND	ND
VS41	4/11/18	ND	ND	ND
VS53	4/13/18	ND	ND	ND
VS55	4/13/18	ND	21	26
VS57	4/13/18	ND	ND	ND
VS59	4/13/18	ND	ND	ND
VS65	4/13/18	ND	ND	ND
SCREENING LEVELS				
ESLs - residential[2]		740	230	11,000
ESLs - commercial[2]		3,900	1,100	140,000

Notes: 1. All concentrations expressed in milligrams per kilogram (mg/kg)

2. San Francisco Bay Regional Water Quality Control Board; "Environmental Screening Levels"; February 2016; Direct Exposure Human Health Levels; residential and commercial/industrial.

TABLE III
SUMMARY OF SVOCs, PCBs, AND DIOXINS/FURANS DATA VERIFICATION SOIL SAMPLES
48-ACRE MURPHY PARKWAY PROPERTY
17100 Murphy Parkway, Lathrop, San Joaquin County, California

Brusca Reference No. 137-002

SAMPLE ID	DATE SAMPLED	PCBs *EPA Method 8082*			SEMI-VOLATILE ORGANIC COMPOUNDS *EPA Method 8270C*	DIOXINS/FURANS *EPA Method 1613*	
		PCB-1254	PCB-1260	Other PCBs		2,3,7,8-TCDD[6]	TEQ[7]
VS1	4/2/18	ND	ND	ND	ND	ND	0.00672
VS3	4/2/18	ND	ND	ND	ND	ND	0.00529
VS5	4/2/18	ND	ND	ND	ND	ND	0.00850
VS7	4/2/18	0.10	ND	ND	ND	ND	0.665
VS18	4/11/18	ND	ND	ND	ND	ND	0.0453
VS20	4/11/18	ND	ND	ND	ND	ND	0.252
VS22	4/11/18	ND	ND	ND	ND	ND	0.0430
VS24	4/11/18	ND	0.021	ND	ND	ND	1.05
VS35	4/11/18	ND	0.057	ND	ND	ND	0.158
VS37	4/11/18	ND	ND	ND	ND	ND	0.0529
VS39	4/11/18	ND	ND	ND	ND	ND	0.117
VS41	4/11/18	ND	ND	ND	ND	ND	0.215
VS53	4/13/18	ND	ND	ND	ND	ND	0.0123
VS55	4/13/18	ND	ND	ND	ND	ND	0.0501
VS57	4/13/18	ND	ND	ND	ND	ND	0.0622
VS59	4/13/18	ND	ND	ND	ND	ND	0.332
VS65	4/13/18	ND	ND	ND	ND	ND	0.139
SCREENING LEVELS							
Hazardous Waste Criteria[2]		50	50			$1x10^7$	N/A
DTSC SLs - residential[3]		N/A	N/A			N/A	5
DTSC SLs - commercial[3]		N/A	N/A			N/A	22
USEPA RSLs - residential[4]		0.24	0.24			N/A	5
USEPA RSLs - commercial[4]		0.97	0.99			N/A	22

Notes:
1. All concentrations expressed in milligrams per kilogram (mg/kg) except for dioxin/furan results which are expressed in picograms per gram (pg/g) [parts per trillion]
2. California Code of Regulations Title 22, Division 4.5
3. DTSC-Modified Screening Levels (DTSC-SLs), January 2018, and DTSC HERO Note No. 2, April 2017 (preliminary remediation goals for dioxins/furans)
4. USEPA Regional Screening Levels, TR=1E-06, HQ=1"; November 2017
5. N/A = screening value not established
6. See laboratory report for other dioxin/furan compounds tested
7. TEQ = Toxic Equivalency calculated using the 2005 World Health Organization's (WHO's) toxic equivalency factors (TEFs)

TABLE IV
SUMMARY OF TOTAL METALS DATA
STOCKPILED WASTE MATERIAL SAMPLES

48-ACRE MURPHY PARKWAY PROPERTY

17100 Murphy Parkway, Lathrop, San Joaquin County, California

Brusca Reference No. 137-002

SAMPLE ID	DATE SAMPLED	TITLE 22 METALS *EPA Method 6010B/200.7*																
		Antimony	Silver	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Molybdenum	Nickel	Selenium	Thallium	Vanadium	Zinc	Mercury
SP1-1	4/4/18	ND	ND	ND	54	ND	ND	5.4	3.7	7.8	22	ND	5.1	ND	ND	12	36	ND
SP1-2	4/4/18	ND	ND	ND	65	ND	ND	5.4	4.0	3.7	ND	ND	5.4	ND	ND	16	29	ND
SP1-3	4/4/18	ND	ND	ND	61	ND	ND	5.3	3.9	4.0	ND	ND	5.1	ND	ND	16	28	ND
SP1-4	4/4/18	ND	ND	ND	69	ND	ND	5.3	4.6	4.2	8.4	ND	5.9	ND	ND	17	32	ND
SP1-5	4/4/18	ND	ND	ND	41	ND	ND	4.6	3.0	11	45	ND	3.9	ND	ND	8.0	30	ND
SP1-6	4/4/18	ND	ND	ND	44	ND	ND	4.2	3.0	5.1	24	ND	4.2	ND	ND	11	24	ND
SP1-7	4/4/18	ND	ND	ND	60	ND	ND	5.3	4.2	5.1	11	ND	5.5	ND	ND	14	29	ND
SP1-8	4/4/18	ND	ND	ND	66	ND	ND	6.1	3.6	7.2	13	ND	5.1	ND	ND	15	46	ND
SP1-9	4/4/18	ND	ND	ND	67	ND	ND	5.7	4.1	5.3	ND	ND	5.6	ND	ND	17	35	ND
SP1-10	4/4/18	ND	ND	ND	64	ND	ND	5.5	3.9	5.8	ND	ND	5.8	ND	ND	16	28	ND
SP1-11	4/4/18	ND	ND	ND	54	ND	ND	5.4	3.7	6.1	13	ND	4.9	ND	ND	13	28	ND
SP1-12	4/4/18	ND	ND	ND	55	ND	ND	4.5	3.7	4.6	12	ND	4.9	ND	ND	14	26	ND
SP1-13	4/4/18	ND	ND	ND	52	ND	ND	4.6	3.6	6.0	22	ND	4.5	ND	ND	13	29	ND
SP1-14	4/4/18	ND	ND	ND	52	ND	ND	4.2	3.6	3.2	21	ND	3.9	ND	ND	12	21	ND
SP1-15	4/4/18	ND	ND	ND	52	ND	ND	6.0	3.9	5.7	18	ND	5.0	ND	ND	14	27	ND
SP1-16	4/4/18	ND	ND	ND	64	ND	ND	5.6	5.1	5.2	ND	ND	6.5	ND	ND	17	31	ND
SP1-17	4/4/18	ND	ND	ND	49	ND	ND	5.0	3.6	3.9	9.4	ND	4.6	ND	ND	13	23	ND
SP1-18	4/4/18	ND	ND	ND	62	ND	ND	5.2	3.9	4.4	13	ND	5.7	ND	ND	15	27	ND
SP1-19	4/4/18	ND	ND	ND	58	ND	ND	5.4	3.8	4.6	ND	ND	5.3	ND	ND	14	28	ND
SP1-20	4/4/18	ND	ND	ND	57	ND	ND	5.9	3.9	4.6	10	ND	5.3	ND	ND	16	30	ND
SP2-1	4/5/18	ND	ND	ND	58	ND	ND	6.2	4.9	5.2	13	ND	5.9	ND	ND	20	33	0.52
SP2-2	4/5/18	ND	ND	ND	55	ND	ND	5.5	4.7	3.5	11	ND	5.3	ND	ND	20	29	ND
SP2-3	4/5/18	ND	ND	ND	63	ND	ND	6.7	4.2	5.5	ND	ND	6.2	ND	ND	22	33	ND
SP2-4	4/5/18	ND	ND	ND	62	ND	ND	6.5	4.9	5.5	9.8	ND	6.6	ND	ND	22	30	ND
SP2-5	4/5/18	ND	ND	ND	59	ND	ND	6.2	4.4	5.6	17	ND	5.9	ND	ND	18	31	ND
SP2-6	4/5/18	ND	ND	ND	68	ND	ND	7.1	5.0	5.7	13	ND	7.5	ND	ND	24	33	ND
SP2-7	4/5/18	ND	ND	ND	58	ND	ND	6.0	4.6	4.1	ND	ND	6.4	ND	ND	22	24	ND
SP2-8	4/5/18	ND	ND	ND	61	ND	ND	5.5	4.4	6.5	11	ND	5.1	ND	ND	16	27	ND
SP2-9	4/5/18	ND	ND	ND	52	ND	ND	5.5	5.6	8.5	32	ND	9.5	ND	ND	17	28	ND
SP2-10	4/5/18	ND	ND	ND	61	ND	ND	6.1	4.6	4.1	ND	ND	6.2	ND	ND	21	26	ND
SP2-11	4/5/18	ND	ND	ND	58	ND	ND	6.7	4.4	6.5	17	ND	6.4	ND	ND	20	31	ND
SP2-12	4/5/18	ND	ND	ND	58	ND	ND	5.8	4.5	5.8	11	ND	5.4	ND	ND	17	29	ND

TABLE IV
SUMMARY OF TOTAL METALS DATA
STOCKPILED WASTE MATERIAL SAMPLES

48-ACRE MURPHY PARKWAY PROPERTY

17100 Murphy Parkway, Lathrop, San Joaquin County, California

Brusca Reference No. 137-002

SAMPLE ID	DATE SAMPLED	TITLE 22 METALS *EPA Method 6010B/200.7*																
		Antimony	**Silver**	**Arsenic**	**Barium**	**Beryllium**	**Cadmium**	**Chromium**	**Cobalt**	**Copper**	**Lead**	**Molybdenum**	**Nickel**	**Selenium**	**Thallium**	**Vanadium**	**Zinc**	**Mercury**
SP3-1	4/12/18	ND	ND	ND	61	ND	ND	5.8	4.5	4.5	ND	ND	6.0	ND	ND	17	30	ND
SP3-2	4/12/18	ND	ND	ND	72	ND	ND	5.6	4.7	8.0	ND	ND	6.6	ND	ND	17	33	ND
SP3-3	4/12/18	ND	ND	ND	41	ND	ND	4.4	3.5	5.0	20	ND	4.1	ND	ND	10	24	ND
SP3-4	4/12/18	ND	ND	ND	53	ND	ND	5.1	4.4	4.3	ND	ND	5.7	ND	ND	15	26	ND
SP3-5	4/12/18	ND	ND	ND	64	ND	ND	4.9	4.2	5.2	ND	ND	5.1	ND	ND	15	29	ND
SP3-6	4/12/18	ND	ND	ND	43	ND	ND	5.1	3.8	4.4	14	ND	4.5	ND	ND	11	23	ND
SP3-7	4/12/18	ND	ND	ND	43	ND	ND	4.6	3.8	3.3	10	ND	4.1	ND	ND	11	25	ND
SP3-8	4/12/18	ND	ND	ND	67	ND	ND	5.7	4.9	4.6	17	ND	6.6	ND	ND	17	26	ND
SP3-9	4/12/18	ND	ND	ND	59	ND	ND	5.9	5.6	4.8	ND	ND	6.6	ND	ND	18	29	ND
SP3-10	4/12/18	ND	ND	ND	57	ND	ND	5.7	4.9	4.6	ND	ND	5.7	ND	ND	14	28	ND
SP3-11	4/12/18	ND	ND	ND	56	ND	ND	5.0	4.4	4.0	ND	ND	5.7	ND	ND	15	28	ND
SP3-12	4/12/18	ND	ND	ND	38	ND	ND	3.8	3.9	7.6	38	ND	3.6	ND	ND	8.3	22	ND
SP4-1	4/12/18	ND	ND	ND	31	ND	ND	3.5	3.2	7.0	25	ND	2.9	ND	ND	7.8	21	ND
SP5-1	4/13/18	ND	ND	ND	59	ND	ND	8.6	4.3	4.4	ND	ND	6.2	ND	ND	20	33	ND
SP5-2	4/13/18	ND	ND	ND	63	ND	ND	6.4	5.3	4.9	ND	ND	7.2	ND	ND	20	30	ND
SP5-3	4/13/18	ND	ND	ND	61	ND	ND	7.0	4.5	8.6	ND	ND	6.4	ND	ND	18	30	ND
SP5-4	4/13/18	ND	ND	ND	64	ND	ND	6.7	4.9	5.2	ND	ND	7.2	ND	ND	20	31	ND
SCREENING LEVELS																		
Hazardous Waste Criteria[2]		500	500	500	10,000	75	100	2,500	8,000	2,500	1,000	3,500	2,000	100	700	2,400	5,000	20
DTSC SLs - residential[3]		N/A	390	0.11[6]	N/A	15	5.2	36,000	N/A	N/A	80	N/A	490	N/A	N/A	390	N/A	1.0
DTSC SLs - commercial[3]		N/A	1,500	0.36[6]	N/A	210	7.3	170,000	N/A	N/A	320	N/A	3,100	N/A	N/A	1,000	N/A	4.5
USEPA RSLs - residential[4]		31	390	0.68[6]	15,000	160	71	120,000	23	3,100	400	390	1,500	390	0.78	390	23,000	11
USEPA RSLs - commercial[4]		470	5,800	3.0[6]	220,000	2,300	980	1,800,000	350	47,000	800	5,800	22,000	5,800	12	5,800	350,000	46

Notes: 1. All concentrations expressed in milligrams per kilogram (mg/kg)

2. California Code of Regulations Title 22, Division 4.5

3. DTSC-Modified Screening Levels (DTSC-SLs); January 2018

4. USEPA Regional Screening Levels, TR=1E-06, HQ=1"; November 2017

5. N/A = screening value not established

6. Arsenic data for the project are compared to background concentraiton of 8.6 mg/kg rather than cited screening levels.

TABLE V
SUMMARY OF DI WET METALS DATA
STOCKPILED WASTE MATERIAL SAMPLES
48-ACRE MURPHY PARKWAY PROPERTY
17100 Murphy Parkway, Lathrop, San Joaquin County, California

Brusca Reference No. 137-002

SAMPLE ID	DATE SAMPLED	TITLE 22 METALS *EPA Method 6020*																
		Antimony	**Silver**	**Arsenic**	**Barium**	**Beryllium**	**Cadmium**	**Chromium**	**Cobalt**	**Copper**	**Lead**	**Molybdenum**	**Nickel**	**Selenium**	**Thallium**	**Vanadium**	**Zinc**	**Mercury**
SP1-1	4/4/18	0.002	0.005	0.030	0.48	0.001	0.002	0.069	0.045	0.12	0.30	0.021	0.06	ND	ND	0.26	0.44	0.0002
SP1-5	4/4/18	0.002	0.009	0.020	0.34	ND	0.002	0.060	0.039	0.20	0.36	0.016	0.045	ND	ND	0.16	0.35	0.0003
SP1-6	4/4/18	0.002	0.005	0.024	0.51	0.001	0.002	0.056	0.039	0.11	0.39	0.016	0.054	ND	ND	0.19	0.38	0.0002
SP1-8	4/4/18	0.001	0.004	0.027	0.52	0.001	0.001	0.057	0.037	0.085	0.14	0.024	0.053	ND	ND	0.24	0.37	0.0001
SP2-1	4/5/18	ND	0.005	0.017	0.45	0.001	ND	0.065	0.049	0.096	0.17	0.009	0.061	ND	ND	0.22	0.34	0.0003
SP2-6	4/5/18	ND	0.003	0.028	0.52	0.002	ND	0.054	0.044	0.099	0.11	0.007	0.073	ND	ND	0.25	0.32	0.0002
SP2-9	4/5/18	0.001	0.001	0.009	0.12	0.0004	0.0003	0.016	0.013	0.034	0.051	0.006	0.015	0.002	ND	0.080	0.068	0.0001
SP3-3	4/12/18	ND	0.003	0.013	0.34	ND	0.002	0.040	0.033	0.12	0.17	0.007	0.041	ND	ND	0.099	0.21	0.0003
SP3-12	4/12/18	ND	0.007	0.009	0.360	0.001	0.002	0.040	0.049	0.11	0.20	0.005	0.054	ND	ND	0.11	0.23	0.0001
SP4-1	4/12/18	ND	0.003	0.011	0.23	ND	0.002	0.033	0.031	0.11	0.17	0.007	0.028	ND	ND	0.075	0.25	0.00003
SP5-1	4/14/18	ND	ND	0.031	0.40	0.001	ND	0.047	0.032	0.055	0.046	0.007	0.047	ND	ND	0.20	0.20	ND
SCREENING LEVELS																		
MCLs[2]		0.006	N/A	0.01	1.0	0.004	0.005	0.05	N/A	1.3	0.015	N/A	0.1	0.05	0.002	N/A	N/A	0.002

Notes: 1. All concentrations expressed in milligrams per liter (mg/L)

2. Maximum Contaminant Levels (MCLs) for drinking water; California; July 2014

3. N/A = MCL not established

TABLE VI
SUMMARY OF PETROLEUM HYDROCARBONS DATA
STOCKPILED WASTE MATERIAL SAMPLES
48-ACRE MURPHY PARKWAY PROPERTY
17100 Murphy Parkway, Lathrop, San Joaquin County, California

Brusca Reference No. 137-002

SAMPLE ID	DATE SAMPLED	TOTAL PETROLEUM HYDROCARBONS *EPA Method 8015C*		
		C6-C12 (Gasoline Range)	C13-C28 (Diesel Range)	C29-C40 (Motor Oil Range)
SP1-1	4/4/18	ND	47	100
SP1-2	4/4/18	ND	13	86
SP1-3	4/4/18	ND	47	68
SP1-4	4/4/18	ND	24	75
SP1-5	4/4/18	ND	96	52
SP1-6	4/4/18	ND	44	78
SP1-7	4/4/18	ND	88	92
SP1-8	4/4/18	ND	28	64
SP1-9	4/4/18	ND	44	28
SP1-10	4/4/18	ND	18	58
SP1-11	4/4/18	ND	75	87
SP1-12	4/4/18	ND	97	55
SP1-13	4/4/18	ND	71	74
SP1-14	4/4/18	ND	16	35
SP1-15	4/4/18	ND	170	240
SP1-16	4/4/18	ND	85	55
SP1-17	4/4/18	ND	81	40
SP1-18	4/4/18	ND	26	82
SP1-19	4/4/18	ND	39	51
SP1-20	4/4/18	ND	76	150
SP2-1	4/5/18	ND	62	59
SP2-2	4/5/18	ND	24	42
SP2-3	4/5/18	ND	18	55
SP2-4	4/5/18	ND	94	69
SP2-5	4/5/18	ND	51	46
SP2-6	4/5/18	ND	90	49
SP2-7	4/5/18	ND	60	57
SP2-8	4/5/18	ND	170	120
SP2-9	4/5/18	ND	370	380
SP2-10	4/5/18	ND	150	76
SP2-11	4/5/18	ND	110	68
SP2-12	4/5/18	ND	140	150
SP3-1	4/12/18	ND	29	29
SP3-2	4/12/18	ND	150	160
SP3-3	4/12/18	ND	51	37
SP3-4	4/12/18	ND	100	96
SP3-5	4/12/18	ND	32	15
SP3-6	4/12/18	ND	56	32

TABLE VI
SUMMARY OF PETROLEUM HYDROCARBONS DATA
STOCKPILED WASTE MATERIAL SAMPLES
48-ACRE MURPHY PARKWAY PROPERTY
17100 Murphy Parkway, Lathrop, San Joaquin County, California

Brusca Reference No. 137-002

SAMPLE ID	DATE SAMPLED	TOTAL PETROLEUM HYDROCARBONS *EPA Method 8015C*		
		C6-C12 (Gasoline Range)	C13-C28 (Diesel Range)	C29-C40 (Motor Oil Range)
SP3-7	4/12/18	ND	39	19
SP3-8	4/12/18	ND	29	17
SP3-9	4/12/18	ND	85	82
SP3-10	4/12/18	ND	360	380
SP3-11	4/12/18	ND	26	33
SP3-12	4/12/18	ND	140	130
SP4-1	4/12/18	ND	170	220
SP5-1	4/13/18	ND	53	61
SP5-2	4/13/18	ND	70	58
SP5-3	4/13/18	ND	35	50
SP5-4	4/13/18	ND	17	56
SCREENING LEVELS				
ESLs - residential[2]		740	230	11,000
ESLs - commercial[2]		3,900	1,100	140,000

Notes: 1. All concentrations expressed in milligrams per kilogram (mg/kg)
2. San Francisco Bay Regional Water Quality Control Board; "Environmental Screening Levels"; February 2016; Direct Exposure Human Health Levels; residential and commercial/industrial.

TABLE VII
SUMMARY OF SVOCs, PCBs, AND DIOXINS/FURANS DATA
STOCKPILED WASTE MATERIAL SAMPLES

48-ACRE MURPHY PARKWAY PROPERTY

17100 Murphy Parkway, Lathrop, San Joaquin County, California

Brusca Reference No. 137-002

		PCBs *EPA Method 8020*				**SEMI-VOLATILE ORGANIC COMPOUNDS** *EPA Method 8270C*										**DIOXINS/FURANS** *EPA Method 1613*	
SAMPLE ID	**DATE SAMPLED**	**PCB -1016**	**PCB-1254**	**PCB-1260**	**Other PCBs**	**Pyrene**	**Benzo (a) anthracene**	**Benzo (b) fluoranthene**	**Benzo (k) fluoranthene**	**Benzo (a) pyrene**	**Chrysene**	**Fluoranthene**	**Indeno (1,2,3-cd) pyrene**	**Phenanthrene**	**Other SVOCs**	**2,3,7,8-TCDD[6]**	**TEQ[7]**
SP1-1	4/4/18	ND	0.035	ND	ND	2.4	0.90	0.73	0.41	0.36	1.1	2.1	0.34	1.3	ND	0.375	6.49
SP1-2	4/4/18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.668
SP1-3	4/4/18	ND	0.025	ND	ND	0.30	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.10
SP1-4	4/4/18	ND	0.013	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.510
SP1-5	4/4/18	ND	0.047	ND	ND	0.42	ND	ND	ND	ND	ND	0.36	ND	ND	ND	ND	4.88
SP1-6	4/4/18	ND	0.052	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.00
SP1-7	4/4/18	ND	0.043	ND	ND	0.49	ND	ND	ND	ND	ND	0.42	ND	ND	ND	ND	1.65
SP1-8	4/4/18	ND	0.032	ND	ND	0.36	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.93
SP1-9	4/4/18	ND	0.011	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.139
SP1-10	4/4/18	ND	0.013	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.23
SP1-11	4/4/18	ND	0.061	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.94
SP1-12	4/4/18	ND	0.024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.08
SP1-13	4/4/18	ND	0.043	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.89
SP1-14	4/4/18	ND	0.019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.316
SP1-15	4/4/18	ND	0.110	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.20
SP1-16	4/4/18	ND	0.025	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.97
SP1-17	4/4/18	ND	0.018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.429
SP1-18	4/4/18	ND	0.042	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.891
SP1-19	4/4/18	ND	0.021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.84
SP1-20	4/4/18	ND	0.050	ND	ND	0.42	ND	ND	ND	ND	ND	0.34	ND	ND	ND	ND	3.62
SP2-1	4/5/18	ND	ND	0.029	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.77

TABLE VII
SUMMARY OF SVOCs, PCBs, AND DIOXINS/FURANS DATA
STOCKPILED WASTE MATERIAL SAMPLES

48-ACRE MURPHY PARKWAY PROPERTY

17100 Murphy Parkway, Lathrop, San Joaquin County, California

Brusca Reference No. 137-002

		PCBs *EPA Method 8020*				**SEMI-VOLATILE ORGANIC COMPOUNDS** *EPA Method 8270C*										**DIOXINS/FURANS** *EPA Method 1613*	
SAMPLE ID	**DATE SAMPLED**	**PCB -1016**	**PCB-1254**	**PCB-1260**	**Other PCBs**	**Pyrene**	**Benzo (a) anthracene**	**Benzo (b) fluoranthene**	**Benzo (k) fluoranthene**	**Benzo (a) pyrene**	**Chrysene**	**Fluoranthene**	**Indeno (1,2,3-cd) pyrene**	**Phenanthrene**	**Other SVOCs**	**2,3,7,8-TCDD[6]**	**TEQ[7]**
SP2-2	4/5/18	0.066	ND	0.072	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.65
SP2-3	4/5/18	ND	0.036	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.73
SP2-4	4/5/18	ND	ND	0.077	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.96
SP2-5	4/5/18	ND	ND	0.032	ND	0.95	0.34	ND	ND	ND	0.44	0.88	ND	0.53	ND	ND	1.64
SP2-6	4/5/18	ND	ND	0.058	ND	1.2	0.49	0.41	ND	ND	0.57	1.1	ND	0.75	ND	ND	2.71
SP2-7	4/5/18	ND	ND	0.086	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.45
SP2-8	4/5/18	ND	ND	0.058	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.57
SP2-9	4/5/18	ND	ND	0.058	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.43
SP2-10	4/5/18	0.072	ND	0.045	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.08
SP2-11	4/5/18	ND	ND	0.026	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.75
SP2-12	4/5/18	ND	ND	0.061	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.21
SP3-1	4/12/18	ND	ND	ND	ND	0.65	0.30	0.30	ND	ND	0.34	0.73	ND	0.46	ND	ND	1.79
SP3-2	4/12/18	ND	0.020	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.62
SP3-3	4/12/18	ND	0.017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.933
SP3-4	4/12/18	ND	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.522
SP3-5	4/12/18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.76
SP3-6	4/12/18	ND	0.012	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.995
SP3-7	4/12/18	ND	0.012	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.823
SP3-8	4/12/18	ND	0.019	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.34
SP3-9	4/12/18	ND	0.016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.47	0.731
SP3-10	4/12/18	ND	0.018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.492

TABLE VII
SUMMARY OF SVOCs, PCBs, AND DIOXINS/FURANS DATA
STOCKPILED WASTE MATERIAL SAMPLES
48-ACRE MURPHY PARKWAY PROPERTY
17100 Murphy Parkway, Lathrop, San Joaquin County, California

Brusca Reference No. 137-002

SAMPLE ID	DATE SAMPLED	PCBs *EPA Method 8020*				SEMI-VOLATILE ORGANIC COMPOUNDS *EPA Method 8270C*										DIOXINS/FURANS *EPA Method 1613*	
		PCB -1016	PCB-1254	PCB-1260	Other PCBs	Pyrene	Benzo (a) anthracene	Benzo (b) fluoranthene	Benzo (k) fluoranthene	Benzo (a) pyrene	Chrysene	Fluoranthene	Indeno (1,2,3-cd) pyrene	Phenanthrene	Other SVOCs	2,3,7,8-TCDD[6]	TEQ[7]
SP3-11	4/12/18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.616
SP3-12	4/12/18	ND	0.034	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.79
SP4-1	4/12/18	0.17	0.11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.91
SP5-1	4/13/18	ND	0.017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.759
SP5-2	4/13/18	ND	0.014	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.670
SP5-3	4/13/18	ND	0.035	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.24
SP5-4	4/13/18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.539
SCREENING LEVELS																	
Hazardous Waste Criteria[2]		50	50	50	50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		$1x10^7$	N/A
DTSC SLs - residential[3]		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A	5
DTSC SLs - commercial[3]		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A	22
USEPA RSLs - residential[4]		4.1	0.24	0.24		1,800	1.1	1.1	11	0.11	110	2,400	1.1	N/A		N/A	5
USEPA RSLs - commercial[4]		27	0.97	0.99		23,000	21	21	210	2.1	2,100	30,000	21	N/A		N/A	22

Notes:
1. All concentrations expressed in milligrams per kilogram (mg/kg) except for dioxin/furan results which are expressed in picograms per gram (pg/g) [parts per trillion]
2. California Code of Regulations Title 22, Division 4.5
3. DTSC-Modified Screening Levels (DTSC-SLs), January 2018, and DTSC HERO Note No. 2, April 2017 (preliminary remediation goals for dioxins/furans)
4. USEPA Regional Screening Levels, TR=1E-06, HQ=1"; November 2017
5. N/A = screening value not established
6. See laboratory report for other dioxin/furan compounds tested
7. TEQ = Toxic Equivalency calculated using the 2005 World Health Organization's (WHO's) toxic equivalency factors (TEFs)

APPENDIX A – Laboratory Reports

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

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

10 April 2018

Joe Brusca
Brusca Associates Inc.
PO Box 332
Roseville, CA 95661

RE: Lathrop 48-Ac Property

Enclosed are the results of analyses for samples received by the laboratory on 04/03/18 10:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Mike Jaroudi
Project Manager

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

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Lake Forest, California 92630
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949.297.5027 Fax

Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/10/18 16:14

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
VS1	T181118-01	Soil	04/02/18 11:45	04/03/18 10:00
VS2	T181118-02	Soil	04/02/18 11:49	04/03/18 10:00
VS3	T181118-03	Soil	04/02/18 11:52	04/03/18 10:00
VS4	T181118-04	Soil	04/02/18 11:55	04/03/18 10:00
VS5	T181118-05	Soil	04/02/18 11:57	04/03/18 10:00
VS7	T181118-07	Soil	04/02/18 12:03	04/03/18 10:00
VS8	T181118-08	Soil	04/02/18 12:05	04/03/18 10:00

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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.

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/10/18 16:14

DETECTIONS SUMMARY

Sample ID: VS1 **Laboratory ID:** T181118-01

Analyte	Result	Reporting Limit	Units	Method	Notes
Barium	**49**	1.0	mg/kg	EPA 6010B	
Chromium	**5.2**	2.0	mg/kg	EPA 6010B	
Cobalt	**5.0**	2.0	mg/kg	EPA 6010B	
Copper	**3.3**	1.0	mg/kg	EPA 6010B	
Nickel	**5.8**	2.0	mg/kg	EPA 6010B	
Vanadium	**19**	5.0	mg/kg	EPA 6010B	
Zinc	**21**	1.0	mg/kg	EPA 6010B	

Sample ID: VS2 **Laboratory ID:** T181118-02

No Results Detected

Sample ID: VS3 **Laboratory ID:** T181118-03

Analyte	Result	Reporting Limit	Units	Method	Notes
Barium	**55**	1.0	mg/kg	EPA 6010B	
Chromium	**4.2**	2.0	mg/kg	EPA 6010B	
Cobalt	**4.2**	2.0	mg/kg	EPA 6010B	
Copper	**1.4**	1.0	mg/kg	EPA 6010B	
Nickel	**6.2**	2.0	mg/kg	EPA 6010B	
Vanadium	**16**	5.0	mg/kg	EPA 6010B	
Zinc	**17**	1.0	mg/kg	EPA 6010B	

Sample ID: VS4 **Laboratory ID:** T181118-04

No Results Detected

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/10/18 16:14

Sample ID: VS5 **Laboratory ID:** T181118-05

Analyte	Result	Reporting Limit	Units	Method	Notes
Barium	**47**	1.0	mg/kg	EPA 6010B	
Chromium	**4.8**	2.0	mg/kg	EPA 6010B	
Cobalt	**4.0**	2.0	mg/kg	EPA 6010B	
Nickel	**3.9**	2.0	mg/kg	EPA 6010B	
Vanadium	**18**	5.0	mg/kg	EPA 6010B	
Zinc	**18**	1.0	mg/kg	EPA 6010B	

Sample ID: VS7 **Laboratory ID:** T181118-07

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**950**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**2100**	10	mg/kg	EPA 8015B	
Barium	**45**	1.0	mg/kg	EPA 6010B	
Chromium	**5.2**	2.0	mg/kg	EPA 6010B	
Cobalt	**3.7**	2.0	mg/kg	EPA 6010B	
Nickel	**4.1**	2.0	mg/kg	EPA 6010B	
Vanadium	**17**	5.0	mg/kg	EPA 6010B	
Zinc	**19**	1.0	mg/kg	EPA 6010B	
PCB-1254	**100**	10	ug/kg	EPA 8082	

Sample ID: VS8 **Laboratory ID:** T181118-08

No Results Detected

SunStar Laboratories, Inc.

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Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/10/18 16:14

VS1

T181118-01 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8040323	04/03/18	04/04/18	EPA 8015B	
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*81.4 %*	*65-135*		"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8040313	04/03/18	04/03/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**49**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**5.2**	2.0	"	"	"	"	"	"	
Cobalt	**5.0**	2.0	"	"	"	"	"	"	
Copper	**3.3**	1.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**5.8**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**19**	5.0	"	"	"	"	"	"	
Zinc	**21**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8040314	04/03/18	04/03/18	EPA 7471A Soil	

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/10/18 16:14

VS1

T181118-01 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8040318	04/03/18	04/06/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*119 %*	*35-140*		"	"	"	"	
Surrogate: Decachlorobiphenyl		*139 %*	*35-140*		"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8040221	04/04/18	04/05/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/10/18 16:14

VS1

T181118-01 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8040221	04/04/18	04/05/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

SunStar Laboratories, Inc.

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Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/10/18 16:14

VS1

T181118-01 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8040221	04/04/18	04/05/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*58.5 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*61.7 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*82.7 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*79.5 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*73.3 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*132 %*	*29.1-130*		"	"	"	"	*S-GC*

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Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/10/18 16:14

VS2

T181118-02 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Metals by EPA 6010B									
Arsenic	ND	5.0	mg/kg	1	8040313	04/03/18	04/03/18	EPA 6010b	
Lead	ND	3.0	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/10/18 16:14

VS3

T181118-03 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8040323	04/03/18	04/04/18	EPA 8015B	
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*72.8 %*		*65-135*	"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8040313	04/03/18	04/03/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**55**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**4.2**	2.0	"	"	"	"	"	"	
Cobalt	**4.2**	2.0	"	"	"	"	"	"	
Copper	**1.4**	1.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**6.2**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**16**	5.0	"	"	"	"	"	"	
Zinc	**17**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8040314	04/03/18	04/03/18	EPA 7471A Soil	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/10/18 16:14

VS3

T181118-03 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8040318	04/03/18	04/06/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*106 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*146 %*		*35-140*	"	"	"	"	*S-GC*
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8040221	04/04/18	04/05/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/10/18 16:14

VS3

T181118-03 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8040221	04/04/18	04/05/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/10/18 16:14

VS3

T181118-03 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8040221	04/04/18	04/05/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*66.0 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*69.0 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*90.2 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*84.5 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*77.8 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*133 %*	*29.1-130*		"	"	"	"	*S-GC*

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/10/18 16:14

VS4

T181118-04 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Metals by EPA 6010B									
Arsenic	ND	5.0	mg/kg	1	8040313	04/03/18	04/03/18	EPA 6010b	
Lead	ND	3.0	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/10/18 16:14

VS5

T181118-05 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8040323	04/03/18	04/04/18	EPA 8015B	
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*71.9 %*	*65-135*		*"*	*"*	*"*	*"*	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8040313	04/03/18	04/03/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**47**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**4.8**	2.0	"	"	"	"	"	"	
Cobalt	**4.0**	2.0	"	"	"	"	"	"	
Copper	ND	1.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**3.9**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**18**	5.0	"	"	"	"	"	"	
Zinc	**18**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8040314	04/03/18	04/03/18	EPA 7471A Soil	

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/10/18 16:14

VS5

T181118-05 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8040318	04/03/18	04/06/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*124 %*	*35-140*		"	"	"	"	
Surrogate: Decachlorobiphenyl		*137 %*	*35-140*		"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8040221	04/04/18	04/05/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/10/18 16:14

VS5

T181118-05 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8040221	04/04/18	04/05/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/10/18 16:14

VS5

T181118-05 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8040221	04/04/18	04/05/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*66.2 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*67.8 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*91.4 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*83.8 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*76.0 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*126 %*	*29.1-130*		"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/10/18 16:14

VS7

T181118-07 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8040323	04/03/18	04/04/18	EPA 8015B	
C13-C28 (DRO)	**950**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**2100**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*87.6 %*		*65-135*	"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8040313	04/03/18	04/03/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**45**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**5.2**	2.0	"	"	"	"	"	"	
Cobalt	**3.7**	2.0	"	"	"	"	"	"	
Copper	ND	1.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**4.1**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**17**	5.0	"	"	"	"	"	"	
Zinc	**19**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8040314	04/03/18	04/03/18	EPA 7471A Soil	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/10/18 16:14

VS7

T181118-07 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8040318	04/03/18	04/06/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	**100**	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*107 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*106 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8040221	04/04/18	04/05/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/10/18 16:14

VS7

T181118-07 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8040221	04/04/18	04/05/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Roseville CA, 95661	Project Manager: Joe Brusca	04/10/18 16:14

VS7

T181118-07 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8040221	04/04/18	04/05/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*55.5 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*59.7 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*81.5 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*78.4 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*62.0 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*92.8 %*	*29.1-130*		"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/10/18 16:14

VS8

T181118-08 (Soil)

SunStar Laboratories, Inc.

Metals by EPA 6010B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	ND	5.0	mg/kg	1	8040313	04/03/18	04/03/18	EPA 6010b	
Lead	ND	3.0	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/10/18 16:14

Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8040323 - EPA 3550B GC										
Blank (8040323-BLK1)				Prepared: 04/03/18 Analyzed: 04/04/18						
C6-C12 (GRO)	ND	10	mg/kg							
C13-C28 (DRO)	ND	10	"							
C29-C40 (MORO)	ND	10	"							
Surrogate: p-Terphenyl	*71.0*		*"*	*100*		*71.0*	*65-135*			
LCS (8040323-BS1)				Prepared & Analyzed: 04/03/18						
C13-C28 (DRO)	500	10	mg/kg	495		100	75-125			
Surrogate: p-Terphenyl	*79.8*		*"*	*99.0*		*80.6*	*65-135*			
LCS Dup (8040323-BSD1)				Prepared & Analyzed: 04/03/18						
C13-C28 (DRO)	540	10	mg/kg	505		106	75-125	7.88	20	
Surrogate: p-Terphenyl	*82.4*		*"*	*101*		*81.6*	*65-135*			

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/10/18 16:14

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 8040313 - EPA 3050B										
Blank (8040313-BLK1)				Prepared & Analyzed: 04/03/18						
Antimony	ND	3.0	mg/kg							
Silver	ND	2.0	"							
Arsenic	ND	5.0	"							
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	"							
Lead	ND	3.0	"							
Selenium	ND	5.0	"							
Thallium	ND	2.0	"							
Vanadium	ND	5.0	"							
Zinc	ND	1.0	"							
LCS (8040313-BS1)				Prepared & Analyzed: 04/03/18						
Arsenic	103	5.0	mg/kg	100		103	75-125			
Arsenic	103	5.0	"	100		103	75-125			
Barium	104	1.0	"	100		104	75-125			
Cadmium	103	2.0	"	100		103	75-125			
Chromium	104	2.0	"	100		104	75-125			
Lead	109	3.0	"	100		109	75-125			
Lead	109	3.0	"	100		109	75-125			

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/10/18 16:14

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 8040313 - EPA 3050B										
Matrix Spike (8040313-MS1)	**Source: T181119-01**			Prepared & Analyzed: 04/03/18						
Arsenic	90.6	5.0	mg/kg	100	1.36	89.3	75-125			
Arsenic	90.6	5.0	"	100	1.36	89.3	75-125			
Barium	161	1.0	"	100	66.0	95.4	75-125			
Cadmium	90.0	2.0	"	100	0.633	89.3	75-125			
Chromium	99.2	2.0	"	100	8.01	91.2	75-125			
Lead	95.6	3.0	"	100	ND	95.6	75-125			
Lead	95.6	3.0	"	100	2.80	92.8	75-125			
Matrix Spike Dup (8040313-MSD1)	**Source: T181119-01**			Prepared & Analyzed: 04/03/18						
Arsenic	88.3	5.0	mg/kg	97.1	1.36	89.5	75-125	2.59	20	
Arsenic	88.3	5.0	"	97.1	1.36	89.5	75-125	2.59	20	
Barium	156	1.0	"	97.1	66.0	92.8	75-125	3.29	20	
Cadmium	87.9	2.0	"	97.1	0.633	89.9	75-125	2.30	20	
Chromium	96.9	2.0	"	97.1	8.01	91.6	75-125	2.36	20	
Lead	94.6	3.0	"	97.1	ND	97.5	75-125	1.04	20	
Lead	94.6	3.0	"	97.1	2.80	94.6	75-125	1.04	20	

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Mike Jaroudi, Project Manager

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PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

25712 Commercentre Drive
Lake Forest, California 92630
949.297.5020 Phone
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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/10/18 16:14

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 8040314 - EPA 7471A Soil										
Blank (8040314-BLK1)				Prepared & Analyzed: 04/03/18						
Mercury	ND	0.10	mg/kg							
LCS (8040314-BS1)				Prepared & Analyzed: 04/03/18						
Mercury	0.431	0.10	mg/kg	0.417		104	80-120			
Matrix Spike (8040314-MS1)	**Source: T181119-01**			Prepared & Analyzed: 04/03/18						
Mercury	0.395	0.10	mg/kg	0.391	ND	101	75-125			
Matrix Spike Dup (8040314-MSD1)	**Source: T181119-01**			Prepared & Analyzed: 04/03/18						
Mercury	0.426	0.10	mg/kg	0.417	ND	102	75-125	7.63	20	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/10/18 16:14

Polychlorinated Biphenyls by EPA Method 8082 - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8040318 - EPA 3550 ECD/GCMS										
Blank (8040318-BLK1)				Prepared: 04/03/18 Analyzed: 04/06/18						
PCB-1016	ND	10	ug/kg							
PCB-1221	ND	10	"							
PCB-1232	ND	10	"							
PCB-1242	ND	10	"							
PCB-1248	ND	10	"							
PCB-1254	ND	10	"							
PCB-1260	ND	10	"							
Surrogate: Tetrachloro-meta-xylene	*11.0*		"	*9.80*		*112*	*35-140*			
Surrogate: Decachlorobiphenyl	*12.7*		"	*9.80*		*130*	*35-140*			
LCS (8040318-BS1)				Prepared: 04/03/18 Analyzed: 04/06/18						
PCB-1016	72.2	10	ug/kg	98.0		73.6	40-130			
PCB-1260	66.4	10	"	98.0		67.7	40-130			
Surrogate: Tetrachloro-meta-xylene	*11.7*		"	*9.80*		*119*	*35-140*			
Surrogate: Decachlorobiphenyl	*14.0*		"	*9.80*		*142*	*35-140*			*S-GC*
Matrix Spike (8040318-MS1)		**Source: T181118-01**		Prepared: 04/03/18 Analyzed: 04/06/18						
PCB-1016	53.3	10	ug/kg	99.0	ND	53.8	40-130			
PCB-1260	58.4	10	"	99.0	ND	59.0	40-130			
Surrogate: Tetrachloro-meta-xylene	*12.2*		"	*9.90*		*123*	*35-140*			
Surrogate: Decachlorobiphenyl	*16.5*		"	*9.90*		*166*	*35-140*			*S-GC*
Matrix Spike Dup (8040318-MSD1)		**Source: T181118-01**		Prepared: 04/03/18 Analyzed: 04/06/18						
PCB-1016	50.4	10	ug/kg	99.0	ND	50.9	40-130	5.54	30	
PCB-1260	50.6	10	"	99.0	ND	51.1	40-130	14.4	30	
Surrogate: Tetrachloro-meta-xylene	*11.2*		"	*9.90*		*113*	*35-140*			
Surrogate: Decachlorobiphenyl	*12.4*		"	*9.90*		*125*	*35-140*			

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Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/10/18 16:14

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8040221 - EPA 3550 ECD/GCMS										
Blank (8040221-BLK1)				Prepared: 04/04/18 Analyzed: 04/05/18						
Carbazole	ND	300	ug/kg							
Aniline	ND	300	"							
Phenol	ND	1000	"							
2-Chlorophenol	ND	1000	"							
1,4-Dichlorobenzene	ND	300	"							
N-Nitrosodi-n-propylamine	ND	300	"							
1,2,4-Trichlorobenzene	ND	300	"							
4-Chloro-3-methylphenol	ND	1000	"							
2-Methylnaphthalene	ND	300	"							
1-Methylnaphthalene	ND	300	"							
Acenaphthene	ND	300	"							
4-Nitrophenol	ND	1000	"							
2,4-Dinitrotoluene	ND	300	"							
Pentachlorophenol	ND	1000	"							
Pyrene	ND	300	"							
Acenaphthylene	ND	300	"							
Anthracene	ND	300	"							
Benzo (a) anthracene	ND	300	"							
Benzo (b) fluoranthene	ND	300	"							
Benzo (k) fluoranthene	ND	300	"							
Benzo (g,h,i) perylene	ND	1000	"							
Benzo (a) pyrene	ND	300	"							
Benzyl alcohol	ND	300	"							
Bis(2-chloroethoxy)methane	ND	300	"							
Bis(2-chloroethyl)ether	ND	300	"							
Bis(2-chloroisopropyl)ether	ND	300	"							
Bis(2-ethylhexyl)phthalate	ND	300	"							
4-Bromophenyl phenyl ether	ND	300	"							
Butyl benzyl phthalate	ND	300	"							
4-Chloroaniline	ND	300	"							
2-Chloronaphthalene	ND	300	"							
4-Chlorophenyl phenyl ether	ND	300	"							
Chrysene	ND	300	"							
Dibenz (a,h) anthracene	ND	300	"							
Dibenzofuran	ND	300	"							
Di-n-butyl phthalate	ND	300	"							

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/10/18 16:14

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8040221 - EPA 3550 ECD/GCMS										
Blank (8040221-BLK1)				Prepared: 04/04/18 Analyzed: 04/05/18						
1,2-Dichlorobenzene	ND	300	ug/kg							
1,3-Dichlorobenzene	ND	300	"							
2,4-Dichlorophenol	ND	1000	"							
Diethyl phthalate	ND	300	"							
2,4-Dimethylphenol	ND	1000	"							
Dimethyl phthalate	ND	300	"							
4,6-Dinitro-2-methylphenol	ND	1000	"							
2,4-Dinitrophenol	ND	1000	"							
2,6-Dinitrotoluene	ND	1000	"							
Di-n-octyl phthalate	ND	300	"							
Fluoranthene	ND	300	"							
Fluorene	ND	300	"							
Hexachlorobenzene	ND	1500	"							
Hexachlorobutadiene	ND	300	"							
Hexachlorocyclopentadiene	ND	1000	"							
Hexachloroethane	ND	300	"							
Indeno (1,2,3-cd) pyrene	ND	300	"							
Isophorone	ND	300	"							
2-Methylphenol	ND	1000	"							
4-Methylphenol	ND	1000	"							
Naphthalene	ND	300	"							
2-Nitroaniline	ND	300	"							
3-Nitroaniline	ND	300	"							
4-Nitroaniline	ND	300	"							
Nitrobenzene	ND	1000	"							
2-Nitrophenol	ND	1000	"							
N-Nitrosodimethylamine	ND	300	"							
N-Nitrosodiphenylamine	ND	300	"							
2,3,5,6-Tetrachlorophenol	ND	300	"							
2,3,4,6-Tetrachlorophenol	ND	300	"							
Phenanthrene	ND	300	"							
Azobenzene	ND	300	"							
Pyridine	ND	300	"							
2,4,5-Trichlorophenol	ND	1000	"							
2,4,6-Trichlorophenol	ND	1000	"							

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Providing Quality Analytical Services Nationwide

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/10/18 16:14

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8040221 - EPA 3550 ECD/GCMS										
Blank (8040221-BLK1)				Prepared: 04/04/18 Analyzed: 04/05/18						
Surrogate: 2-Fluorophenol	*1990*		*ug/kg*	*3440*		*58.0*	*15-121*			
Surrogate: Phenol-d6	*2040*		*"*	*3440*		*59.4*	*24-113*			
Surrogate: Nitrobenzene-d5	*2900*		*"*	*3440*		*84.3*	*21.3-119*			
Surrogate: 2-Fluorobiphenyl	*2670*		*"*	*3440*		*77.7*	*32.4-102*			
Surrogate: 2,4,6-Tribromophenol	*2500*		*"*	*3440*		*72.7*	*18.1-105*			
Surrogate: Terphenyl-dl4	*4460*		*"*	*3440*		*130*	*29.1-130*			
LCS (8040221-BS1)				Prepared: 04/02/18 Analyzed: 04/05/18						
Phenol	1840	1000	ug/kg	3230		56.9	34-114			
2-Chlorophenol	1850	1000	"	3230		57.2	34-114			
1,4-Dichlorobenzene	1970	300	"	3230		61.0	34-114			
N-Nitrosodi-n-propylamine	2490	300	"	3230		77.3	30-110			
1,2,4-Trichlorobenzene	2180	300	"	3230		67.5	39-119			
4-Chloro-3-methylphenol	2620	1000	"	3230		81.1	50-130			
Acenaphthene	2460	300	"	3230		76.3	34-114			
Pentachlorophenol	1700	1000	"	3230		52.8	50-130			
Pyrene	2400	300	"	3230		74.4	30-110			
Surrogate: 2-Fluorophenol	*1780*		*"*	*3230*		*55.0*	*15-121*			
Surrogate: Phenol-d6	*1870*		*"*	*3230*		*57.9*	*24-113*			
Surrogate: Nitrobenzene-d5	*2640*		*"*	*3230*		*81.9*	*21.3-119*			
Surrogate: 2-Fluorobiphenyl	*2480*		*"*	*3230*		*76.8*	*32.4-102*			
Surrogate: 2,4,6-Tribromophenol	*2530*		*"*	*3230*		*78.6*	*18.1-105*			
Surrogate: Terphenyl-dl4	*4310*		*"*	*3230*		*133*	*29.1-130*			*S-GC*
Matrix Spike (8040221-MS1)	**Source: T181108-01**			Prepared: 04/02/18 Analyzed: 04/05/18						
Phenol	2260	1000	ug/kg	3240	ND	70.0	34-114			
2-Chlorophenol	2240	1000	"	3240	ND	69.1	34-114			
1,4-Dichlorobenzene	2240	300	"	3240	ND	69.2	34-114			
N-Nitrosodi-n-propylamine	2660	300	"	3240	ND	82.3	30-110			
1,2,4-Trichlorobenzene	2510	300	"	3240	ND	77.4	39-119			
4-Chloro-3-methylphenol	2680	1000	"	3240	ND	82.9	50-130			
Acenaphthene	2680	300	"	3240	ND	82.8	34-114			
Pentachlorophenol	1660	1000	"	3240	ND	51.4	50-130			
Pyrene	2370	300	"	3240	37.5	72.0	30-110			
Surrogate: 2-Fluorophenol	*2140*		*"*	*3240*		*66.2*	*15-121*			
Surrogate: Phenol-d6	*2270*		*"*	*3240*		*70.2*	*24-113*			

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Mike Jaroudi, Project Manager

SunStar Laboratories, Inc.
Providing Quality Analytical Services Nationwide

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/10/18 16:14

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8040221 - EPA 3550 ECD/GCMS										
Matrix Spike (8040221-MS1)	**Source: T181108-01**			Prepared: 04/02/18 Analyzed: 04/05/18						
Surrogate: Nitrobenzene-d5	*3040*		*ug/kg*	*3240*		*93.8*	*21.3-119*			
Surrogate: 2-Fluorobiphenyl	*2560*		*"*	*3240*		*79.1*	*32.4-102*			
Surrogate: 2,4,6-Tribromophenol	*2670*		*"*	*3240*		*82.4*	*18.1-105*			
Surrogate: Terphenyl-dl4	*4020*		*"*	*3240*		*124*	*29.1-130*			
Matrix Spike Dup (8040221-MSD1)	**Source: T181108-01**			Prepared: 04/02/18 Analyzed: 04/05/18						
Phenol	2090	1000	ug/kg	3360	ND	62.2	34-114	8.06	42	
2-Chlorophenol	2260	1000	"	3360	ND	67.2	34-114	0.852	40	
1,4-Dichlorobenzene	2240	300	"	3360	ND	66.8	34-114	0.00715	28	
N-Nitrosodi-n-propylamine	2770	300	"	3360	ND	82.7	30-110	4.11	38	
1,2,4-Trichlorobenzene	2460	300	"	3360	ND	73.4	39-119	1.65	28	
4-Chloro-3-methylphenol	2710	1000	"	3360	ND	80.8	50-130	1.07	42	
Acenaphthene	2660	300	"	3360	ND	79.3	34-114	0.696	31	
Pentachlorophenol	1780	1000	"	3360	ND	52.9	50-130	6.52	50	
Pyrene	2310	300	"	3360	37.5	67.7	30-110	2.57	31	
Surrogate: 2-Fluorophenol	*2160*		*"*	*3360*		*64.3*	*15-121*			
Surrogate: Phenol-d6	*2290*		*"*	*3360*		*68.1*	*24-113*			
Surrogate: Nitrobenzene-d5	*3090*		*"*	*3360*		*92.2*	*21.3-119*			
Surrogate: 2-Fluorobiphenyl	*2620*		*"*	*3360*		*78.0*	*32.4-102*			
Surrogate: 2,4,6-Tribromophenol	*2730*		*"*	*3360*		*81.3*	*18.1-105*			
Surrogate: Terphenyl-dl4	*4160*		*"*	*3360*		*124*	*29.1-130*			

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Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/10/18 16:14

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).
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.

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Mike Jaroudi, Project Manager

SunStar Laboratories, Inc.

PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

25712 Commercentre Drive, Lake Forest, CA 92630
949-297-5020

Chain of Custody Record

Client: BRUSCA ASSOCIATES INC.
Address: PO BOX 332, ROSEVILLE, CA 95661
Phone: (916) 677-1470 Fax: (916) 677-1471
Project Manager: JOE BRUSCA

Date: 4/2/18 Page: 1 Of 1
Project Name: LATHROP 48-AC PROPERTY
Collector: BRUSCA Client Project #: 137-002
Batch #: T181118 EDF #:

Sample ID	Date Sampled	Time	Sample Type	Container Type	~~8260~~ SVOCs 8270	8260 + OXY	8260 BTEX, OXY only	~~8270~~ PCBs 8082	8021 BTEX	8015M (gasoline)	8015M (diesel)	8015M Ext./Carbon Chain STACK GEL CLEANUP	6010/7000 Title 22 Metals	6020 ICP-MS Metals	LEAD AND ARSENIC			Laboratory ID #	Comments/Preservative	Total # of containers
VS1	4/2/18	11:45	SOIL	JAR	X			X				X	X					01		1
VS2		11:49													X			02		1
VS3		11:52			X			X				X	X		X			03		1
VS4		11:55													X			04		1
VS5		11:57			X			X				X	X					05		1
VS6		12:00																06	HOLD	1
VS7		12:03			X			X				X	X					07		1
VS8		12:05													X			08		1

Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
	4/2/18 2:37 PM		4/2/18 2:37PM
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
650	4.3.18 10:00		4.3.18 10:00
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time

Total # of containers
Chain of Custody seals Y/N/NA
Seals intact? Y/N/NA
Received good condition/cold 4.9

Turn around time: NORMAL

Notes

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

COC 160903

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

25712 Commercentre Drive
Lake Forest, California 92630
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19 April 2018

Joe Brusca
Brusca Associates Inc.
PO Box 332
Roseville, CA 95661

RE: Lathrop 48-Ac Property

Enclosed are the results of analyses for samples received by the laboratory on 04/12/18 10:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Mike Jaroudi
Project Manager

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

25712 Commercentre Drive
Lake Forest, California 92630
949.297.5020 Phone
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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
VS9	T181234-01	Soil	04/11/18 11:00	04/12/18 10:00
VS10	T181234-02	Soil	04/11/18 11:02	04/12/18 10:00
VS11	T181234-03	Soil	04/11/18 11:03	04/12/18 10:00
VS12	T181234-04	Soil	04/11/18 11:05	04/12/18 10:00
VS13	T181234-05	Soil	04/11/18 11:07	04/12/18 10:00
VS14	T181234-06	Soil	04/11/18 11:09	04/12/18 10:00
VS16	T181234-08	Soil	04/11/18 11:14	04/12/18 10:00
VS17	T181234-09	Soil	04/11/18 11:20	04/12/18 10:00
VS18	T181234-10	Soil	04/11/18 11:22	04/12/18 10:00
VS19	T181234-11	Soil	04/11/18 11:26	04/12/18 10:00
VS20	T181234-12	Soil	04/11/18 11:29	04/12/18 10:00
VS21	T181234-13	Soil	04/11/18 11:31	04/12/18 10:00
VS22	T181234-14	Soil	04/11/18 11:34	04/12/18 10:00
VS24	T181234-16	Soil	04/11/18 11:37	04/12/18 10:00
VS25	T181234-17	Soil	04/11/18 11:55	04/12/18 10:00
VS26	T181234-18	Soil	04/11/18 11:57	04/12/18 10:00
VS27	T181234-19	Soil	04/11/18 11:58	04/12/18 10:00
VS28	T181234-20	Soil	04/11/18 12:00	04/12/18 10:00
VS29	T181234-21	Soil	04/11/18 12:03	04/12/18 10:00
VS30	T181234-22	Soil	04/11/18 12:04	04/12/18 10:00
VS31	T181234-23	Soil	04/11/18 12:06	04/12/18 10:00
VS33	T181234-25	Soil	04/11/18 12:10	04/12/18 10:00
VS34	T181234-26	Soil	04/11/18 12:41	04/12/18 10:00
VS35	T181234-27	Soil	04/11/18 12:43	04/12/18 10:00
VS36	T181234-28	Soil	04/11/18 12:45	04/12/18 10:00
VS37	T181234-29	Soil	04/11/18 12:48	04/12/18 10:00

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
VS38	T181234-30	Soil	04/11/18 12:50	04/12/18 10:00
VS39	T181234-31	Soil	04/11/18 12:52	04/12/18 10:00
VS41	T181234-33	Soil	04/11/18 12:57	04/12/18 10:00
VS43	T181234-35	Soil	04/11/18 13:14	04/12/18 10:00
VS45	T181234-37	Soil	04/11/18 13:17	04/12/18 10:00
VS47	T181234-39	Soil	04/11/18 13:21	04/12/18 10:00
VS49	T181234-41	Soil	04/11/18 13:26	04/12/18 10:00
VS51	T181234-43	Soil	04/11/18 13:30	04/12/18 10:00

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

DETECTIONS SUMMARY

Sample ID: VS9 **Laboratory ID:** T181234-01

No Results Detected

Sample ID: VS10 **Laboratory ID:** T181234-02

No Results Detected

Sample ID: VS11 **Laboratory ID:** T181234-03

No Results Detected

Sample ID: VS12 **Laboratory ID:** T181234-04

No Results Detected

Sample ID: VS13 **Laboratory ID:** T181234-05

No Results Detected

Sample ID: VS14 **Laboratory ID:** T181234-06

No Results Detected

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

Sample ID: VS16 **Laboratory ID:** T181234-08

No Results Detected

Sample ID: VS17 **Laboratory ID:** T181234-09

No Results Detected

Sample ID: VS18 **Laboratory ID:** T181234-10

Analyte	Result	Reporting Limit	Units	Method	Notes
Barium	**44**	1.0	mg/kg	EPA 6010B	
Chromium	**3.8**	2.0	mg/kg	EPA 6010B	
Cobalt	**3.4**	2.0	mg/kg	EPA 6010B	
Nickel	**3.8**	2.0	mg/kg	EPA 6010B	
Vanadium	**13**	5.0	mg/kg	EPA 6010B	
Zinc	**18**	1.0	mg/kg	EPA 6010B	

Sample ID: VS19 **Laboratory ID:** T181234-11

No Results Detected

Sample ID: VS20 **Laboratory ID:** T181234-12

Analyte	Result	Reporting Limit	Units	Method	Notes
Barium	**55**	1.0	mg/kg	EPA 6010B	
Chromium	**4.7**	2.0	mg/kg	EPA 6010B	
Cobalt	**3.6**	2.0	mg/kg	EPA 6010B	
Copper	**1.4**	1.0	mg/kg	EPA 6010B	
Nickel	**4.5**	2.0	mg/kg	EPA 6010B	
Vanadium	**15**	5.0	mg/kg	EPA 6010B	
Zinc	**22**	1.0	mg/kg	EPA 6010B	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

Sample ID: VS21 **Laboratory ID:** T181234-13

No Results Detected

Sample ID: VS22 **Laboratory ID:** T181234-14

Analyte	Result	Reporting Limit	Units	Method	Notes
Barium	**72**	1.0	mg/kg	EPA 6010B	
Chromium	**4.3**	2.0	mg/kg	EPA 6010B	
Cobalt	**4.0**	2.0	mg/kg	EPA 6010B	
Copper	**1.6**	1.0	mg/kg	EPA 6010B	
Nickel	**4.4**	2.0	mg/kg	EPA 6010B	
Vanadium	**16**	5.0	mg/kg	EPA 6010B	
Zinc	**20**	1.0	mg/kg	EPA 6010B	

Sample ID: VS24 **Laboratory ID:** T181234-16

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**220**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**310**	10	mg/kg	EPA 8015B	
Barium	**52**	1.0	mg/kg	EPA 6010B	
Chromium	**4.2**	2.0	mg/kg	EPA 6010B	
Cobalt	**3.8**	2.0	mg/kg	EPA 6010B	
Copper	**3.1**	1.0	mg/kg	EPA 6010B	
Nickel	**4.9**	2.0	mg/kg	EPA 6010B	
Vanadium	**16**	5.0	mg/kg	EPA 6010B	
Zinc	**19**	1.0	mg/kg	EPA 6010B	
PCB-1260	**21**	10	ug/kg	EPA 8082	

Sample ID: VS25 **Laboratory ID:** T181234-17

No Results Detected

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

Sample ID: VS26 **Laboratory ID:** T181234-18

No Results Detected

Sample ID: VS27 **Laboratory ID:** T181234-19

No Results Detected

Sample ID: VS28 **Laboratory ID:** T181234-20

No Results Detected

Sample ID: VS29 **Laboratory ID:** T181234-21

No Results Detected

Sample ID: VS30 **Laboratory ID:** T181234-22

No Results Detected

Sample ID: VS31 **Laboratory ID:** T181234-23

No Results Detected

Sample ID: VS33 **Laboratory ID:** T181234-25

No Results Detected

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Sample ID: VS34 **Laboratory ID:** T181234-26

No Results Detected

Sample ID: VS35 **Laboratory ID:** T181234-27

Analyte	Result	Reporting Limit	Units	Method	Notes
Barium	**66**	1.0	mg/kg	EPA 6010B	
Chromium	**5.1**	2.0	mg/kg	EPA 6010B	
Cobalt	**6.3**	2.0	mg/kg	EPA 6010B	
Copper	**3.6**	1.0	mg/kg	EPA 6010B	
Nickel	**6.8**	2.0	mg/kg	EPA 6010B	
Vanadium	**22**	5.0	mg/kg	EPA 6010B	
Zinc	**28**	1.0	mg/kg	EPA 6010B	
PCB-1260	**57**	10	ug/kg	EPA 8082	

Sample ID: VS36 **Laboratory ID:** T181234-28

No Results Detected

Sample ID: VS37 **Laboratory ID:** T181234-29

Analyte	Result	Reporting Limit	Units	Method	Notes
Barium	**77**	1.0	mg/kg	EPA 6010B	
Chromium	**5.9**	2.0	mg/kg	EPA 6010B	
Cobalt	**6.4**	2.0	mg/kg	EPA 6010B	
Copper	**4.1**	1.0	mg/kg	EPA 6010B	
Nickel	**7.5**	2.0	mg/kg	EPA 6010B	
Vanadium	**18**	5.0	mg/kg	EPA 6010B	
Zinc	**26**	1.0	mg/kg	EPA 6010B	

Sample ID: VS38 **Laboratory ID:** T181234-30

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Sample ID: VS38 **Laboratory ID:** T181234-30

No Results Detected

Sample ID: VS39 **Laboratory ID:** T181234-31

Analyte	Result	Reporting Limit	Units	Method	Notes
Barium	**66**	1.0	mg/kg	EPA 6010B	
Chromium	**4.7**	2.0	mg/kg	EPA 6010B	
Cobalt	**4.8**	2.0	mg/kg	EPA 6010B	
Copper	**4.5**	1.0	mg/kg	EPA 6010B	
Nickel	**7.6**	2.0	mg/kg	EPA 6010B	
Vanadium	**15**	5.0	mg/kg	EPA 6010B	
Zinc	**20**	1.0	mg/kg	EPA 6010B	

Sample ID: VS41 **Laboratory ID:** T181234-33

Analyte	Result	Reporting Limit	Units	Method	Notes
Barium	**53**	1.0	mg/kg	EPA 6010B	
Chromium	**4.3**	2.0	mg/kg	EPA 6010B	
Cobalt	**4.1**	2.0	mg/kg	EPA 6010B	
Copper	**3.2**	1.0	mg/kg	EPA 6010B	
Nickel	**4.9**	2.0	mg/kg	EPA 6010B	
Vanadium	**16**	5.0	mg/kg	EPA 6010B	
Zinc	**18**	1.0	mg/kg	EPA 6010B	

Sample ID: VS43 **Laboratory ID:** T181234-35

No Results Detected

Sample ID: VS45 **Laboratory ID:** T181234-37

No Results Detected

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Sample ID: VS47 **Laboratory ID:** T181234-39

No Results Detected

Sample ID: VS49 **Laboratory ID:** T181234-41

No Results Detected

Sample ID: VS51 **Laboratory ID:** T181234-43

No Results Detected

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Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS9

T181234-01 (Soil)

SunStar Laboratories, Inc.

Metals by EPA 6010B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	ND	5.0	mg/kg	1	8041304	04/13/18	04/16/18	EPA 6010b	
Lead	ND	3.0	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
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Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS10

T181234-02 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Metals by EPA 6010B									
Arsenic	ND	5.0	mg/kg	1	8041304	04/13/18	04/16/18	EPA 6010b	
Lead	ND	3.0	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS11

T181234-03 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Metals by EPA 6010B									
Arsenic	ND	5.0	mg/kg	1	8041304	04/13/18	04/16/18	EPA 6010b	
Lead	ND	3.0	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS12

T181234-04 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Metals by EPA 6010B									
Arsenic	ND	5.0	mg/kg	1	8041304	04/13/18	04/16/18	EPA 6010b	
Lead	ND	3.0	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
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Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS13

T181234-05 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Metals by EPA 6010B									
Arsenic	ND	5.0	mg/kg	1	8041304	04/13/18	04/16/18	EPA 6010b	
Lead	ND	3.0	"	"	"	"	"	"	

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VS14

T181234-06 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Metals by EPA 6010B									
Arsenic	ND	5.0	mg/kg	1	8041304	04/13/18	04/16/18	EPA 6010b	
Lead	ND	3.0	"	"	"	"	"	"	

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Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS16

T181234-08 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Metals by EPA 6010B									
Arsenic	ND	5.0	mg/kg	1	8041304	04/13/18	04/16/18	EPA 6010b	
Lead	ND	3.0	"	"	"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS17

T181234-09 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Metals by EPA 6010B									
Arsenic	ND	5.0	mg/kg	1	8041304	04/13/18	04/16/18	EPA 6010b	
Lead	ND	3.0	"	"	"	"	"	"	

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Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS18

T181234-10 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8041214	04/12/18	04/18/18	EPA 8015B	
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*109 %*	*65-135*		*"*	*"*	*"*	*"*	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8041307	04/13/18	04/13/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**44**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**3.8**	2.0	"	"	"	"	"	"	
Cobalt	**3.4**	2.0	"	"	"	"	"	"	
Copper	ND	1.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**3.8**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**13**	5.0	"	"	"	"	"	"	
Zinc	**18**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8041308	04/13/18	04/13/18	EPA 7471A Soil	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS18

T181234-10 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8041144	04/11/18	04/14/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*97.4 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*78.2 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8041145	04/11/18	04/13/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS18

T181234-10 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8041145	04/11/18	04/13/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS18

T181234-10 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8041145	04/11/18	04/13/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*43.0 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*47.8 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*50.7 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*63.6 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*74.4 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*67.4 %*	*29.1-130*		"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS19

T181234-11 (Soil)

SunStar Laboratories, Inc.

Metals by EPA 6010B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	ND	5.0	mg/kg	1	8041304	04/13/18	04/16/18	EPA 6010b	
Lead	ND	3.0	"	"	"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS20

T181234-12 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8041214	04/12/18	04/18/18	EPA 8015B	
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*102 %*	*65-135*		*"*	*"*	*"*	*"*	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8041307	04/13/18	04/13/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**55**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**4.7**	2.0	"	"	"	"	"	"	
Cobalt	**3.6**	2.0	"	"	"	"	"	"	
Copper	**1.4**	1.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**4.5**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**15**	5.0	"	"	"	"	"	"	
Zinc	**22**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8041308	04/13/18	04/13/18	EPA 7471A Soil	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS20

T181234-12 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8041144	04/11/18	04/14/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*105 %*	*35-140*		"	"	"	"	
Surrogate: Decachlorobiphenyl		*98.8 %*	*35-140*		"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8041145	04/11/18	04/13/18	EPA 8270C	
Aniline	ND	300	"	"	"	"	"	"	
Phenol	ND	1000	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS20

T181234-12 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8041145	04/11/18	04/13/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS20

T181234-12 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8041145	04/11/18	04/13/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*46.1 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*49.8 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*50.7 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*63.6 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*75.0 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*69.3 %*	*29.1-130*		"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS21

T181234-13 (Soil)

SunStar Laboratories, Inc.

Metals by EPA 6010B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	ND	5.0	mg/kg	1	8041304	04/13/18	04/16/18	EPA 6010b	
Lead	ND	3.0	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS22

T181234-14 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8041214	04/12/18	04/18/18	EPA 8015B	
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*106 %*	*65-135*		*"*	*"*	*"*	*"*	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8041307	04/13/18	04/13/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**72**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**4.3**	2.0	"	"	"	"	"	"	
Cobalt	**4.0**	2.0	"	"	"	"	"	"	
Copper	**1.6**	1.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**4.4**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**16**	5.0	"	"	"	"	"	"	
Zinc	**20**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8041308	04/13/18	04/13/18	EPA 7471A Soil	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS22

T181234-14 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8041144	04/11/18	04/14/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*94.7 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*93.0 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8041145	04/11/18	04/13/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS22

T181234-14 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8041145	04/11/18	04/13/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

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T181234-14 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8041145	04/11/18	04/13/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*49.4 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*52.9 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*54.8 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*67.4 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*76.9 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*67.4 %*	*29.1-130*		"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

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T181234-16 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8041214	04/12/18	04/18/18	EPA 8015B	
C13-C28 (DRO)	**220**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**310**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*109 %*		*65-135*	"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8041307	04/13/18	04/13/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**52**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**4.2**	2.0	"	"	"	"	"	"	
Cobalt	**3.8**	2.0	"	"	"	"	"	"	
Copper	**3.1**	1.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**4.9**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**16**	5.0	"	"	"	"	"	"	
Zinc	**19**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8041308	04/13/18	04/13/18	EPA 7471A Soil	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

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T181234-16 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8041144	04/11/18	04/14/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	**21**	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*80.2 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*81.8 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8041145	04/11/18	04/13/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS24

T181234-16 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8041145	04/11/18	04/13/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS24

T181234-16 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8041145	04/11/18	04/13/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*47.3 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*55.4 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*54.9 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*72.9 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*84.6 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*71.4 %*	*29.1-130*		"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS25

T181234-17 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Metals by EPA 6010B									
Arsenic	ND	5.0	mg/kg	1	8041304	04/13/18	04/16/18	EPA 6010b	
Lead	ND	3.0	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS26

T181234-18 (Soil)

SunStar Laboratories, Inc.

Metals by EPA 6010B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	ND	5.0	mg/kg	1	8041304	04/13/18	04/16/18	EPA 6010b	
Lead	ND	3.0	"	"	"	"	"	"	

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Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS27

T181234-19 (Soil)

SunStar Laboratories, Inc.

Metals by EPA 6010B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	ND	5.0	mg/kg	1	8041304	04/13/18	04/16/18	EPA 6010b	
Lead	ND	3.0	"	"	"	"	"	"	

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VS28

T181234-20 (Soil)

SunStar Laboratories, Inc.

Metals by EPA 6010B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	ND	5.0	mg/kg	1	8041304	04/13/18	04/16/18	EPA 6010b	
Lead	ND	3.0	"	"	"	"	"	"	

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Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS29

T181234-21 (Soil)

SunStar Laboratories, Inc.

Metals by EPA 6010B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	ND	5.0	mg/kg	1	8041304	04/13/18	04/16/18	EPA 6010b	
Lead	ND	3.0	"	"	"	"	"	"	

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Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS30

T181234-22 (Soil)

SunStar Laboratories, Inc.

Metals by EPA 6010B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	ND	5.0	mg/kg	1	8041304	04/13/18	04/16/18	EPA 6010b	
Lead	ND	3.0	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS31

T181234-23 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Metals by EPA 6010B									
Arsenic	ND	5.0	mg/kg	1	8041304	04/13/18	04/16/18	EPA 6010b	
Lead	ND	3.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS33

T181234-25 (Soil)

SunStar Laboratories, Inc.

Metals by EPA 6010B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	ND	5.0	mg/kg	1	8041304	04/13/18	04/16/18	EPA 6010b	
Lead	ND	3.0	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS34

T181234-26 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Metals by EPA 6010B									
Arsenic	ND	5.0	mg/kg	1	8041304	04/13/18	04/16/18	EPA 6010b	
Lead	ND	3.0	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS35

T181234-27 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8041214	04/12/18	04/18/18	EPA 8015B	
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*94.4 %*		*65-135*	"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8041307	04/13/18	04/13/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**66**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**5.1**	2.0	"	"	"	"	"	"	
Cobalt	**6.3**	2.0	"	"	"	"	"	"	
Copper	**3.6**	1.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**6.8**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**22**	5.0	"	"	"	"	"	"	
Zinc	**28**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8041308	04/13/18	04/13/18	EPA 7471A Soil	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS35

T181234-27 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8041144	04/11/18	04/14/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	**57**	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*108 %*	*35-140*		"	"	"	"	
Surrogate: Decachlorobiphenyl		*101 %*	*35-140*		"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8041145	04/11/18	04/13/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
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VS35

T181234-27 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8041145	04/11/18	04/13/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS35

T181234-27 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8041145	04/11/18	04/13/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*51.1 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*55.2 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*56.5 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*68.9 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*78.7 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*73.4 %*	*29.1-130*		"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS36

T181234-28 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Metals by EPA 6010B									
Arsenic	ND	5.0	mg/kg	1	8041304	04/13/18	04/16/18	EPA 6010b	
Lead	ND	3.0	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS37

T181234-29 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8041214	04/12/18	04/18/18	EPA 8015B	
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*105 %*	*65-135*		*"*	*"*	*"*	*"*	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8041307	04/13/18	04/13/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**77**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**5.9**	2.0	"	"	"	"	"	"	
Cobalt	**6.4**	2.0	"	"	"	"	"	"	
Copper	**4.1**	1.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**7.5**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**18**	5.0	"	"	"	"	"	"	
Zinc	**26**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8041308	04/13/18	04/13/18	EPA 7471A Soil	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS37

T181234-29 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8041144	04/11/18	04/14/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*93.7 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*97.2 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8041145	04/11/18	04/13/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS37

T181234-29 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8041145	04/11/18	04/13/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Mike Jaroudi, Project Manager

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PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

25712 Commercentre Drive
Lake Forest, California 92630
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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS37

T181234-29 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8041145	04/11/18	04/13/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*52.8 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*57.0 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*62.0 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*75.8 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*84.8 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*77.9 %*	*29.1-130*		"	"	"	"	

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS38

T181234-30 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Metals by EPA 6010B									
Arsenic	ND	5.0	mg/kg	1	8041305	04/13/18	04/17/18	EPA 6010b	
Lead	ND	3.0	"	"	"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS39

T181234-31 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8041214	04/12/18	04/18/18	EPA 8015B	
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*106 %*	*65-135*		*"*	*"*	*"*	*"*	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8041307	04/13/18	04/13/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**66**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**4.7**	2.0	"	"	"	"	"	"	
Cobalt	**4.8**	2.0	"	"	"	"	"	"	
Copper	**4.5**	1.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**7.6**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**15**	5.0	"	"	"	"	"	"	
Zinc	**20**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8041308	04/13/18	04/13/18	EPA 7471A Soil	

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS39

T181234-31 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8041144	04/11/18	04/14/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*89.1 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*100 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8041145	04/11/18	04/13/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS39

T181234-31 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8041145	04/11/18	04/13/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS39

T181234-31 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8041145	04/11/18	04/13/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*60.7 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*66.0 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*69.4 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*81.2 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*96.1 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*74.8 %*	*29.1-130*		"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS41

T181234-33 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8041214	04/12/18	04/18/18	EPA 8015B	
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	8041307	04/13/18	04/13/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**53**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**4.3**	2.0	"	"	"	"	"	"	
Cobalt	**4.1**	2.0	"	"	"	"	"	"	
Copper	**3.2**	1.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**4.9**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**16**	5.0	"	"	"	"	"	"	
Zinc	**18**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8041308	04/13/18	04/13/18	EPA 7471A Soil	

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Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS41

T181234-33 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8041144	04/11/18	04/14/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*88.2 %*	*35-140*		"	"	"	"	
Surrogate: Decachlorobiphenyl		*89.5 %*	*35-140*		"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8041145	04/11/18	04/13/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS41

T181234-33 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8041145	04/11/18	04/13/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS41

T181234-33 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8041145	04/11/18	04/13/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*53.8 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*58.1 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*58.6 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*72.4 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*80.4 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*73.5 %*	*29.1-130*		"	"	"	"	

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Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS43

T181234-35 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Metals by EPA 6010B									
Arsenic	ND	5.0	mg/kg	1	8041305	04/13/18	04/17/18	EPA 6010b	
Lead	ND	3.0	"	"	"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS45

T181234-37 (Soil)

SunStar Laboratories, Inc.

Metals by EPA 6010B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	ND	5.0	mg/kg	1	8041305	04/13/18	04/17/18	EPA 6010b	
Lead	ND	3.0	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS47

T181234-39 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Metals by EPA 6010B									
Arsenic	ND	5.0	mg/kg	1	8041305	04/13/18	04/17/18	EPA 6010b	
Lead	ND	3.0	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS49

T181234-41 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Metals by EPA 6010B									
Arsenic	ND	5.0	mg/kg	1	8041305	04/13/18	04/17/18	EPA 6010b	
Lead	ND	3.0	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

VS51

T181234-43 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Metals by EPA 6010B									
Arsenic	ND	4.5	mg/kg	1	8041305	04/13/18	04/17/18	EPA 6010b	
Lead	ND	2.7	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8041214 - EPA 3550B GC										
Blank (8041214-BLK1)				Prepared: 04/12/18 Analyzed: 04/18/18						
C6-C12 (GRO)	ND	10	mg/kg							
C13-C28 (DRO)	ND	10	"							
C29-C40 (MORO)	ND	10	"							
Surrogate: p-Terphenyl	*97.8*		*"*	*99.0*		*98.8*	*65-135*			
LCS (8041214-BS1)				Prepared: 04/12/18 Analyzed: 04/18/18						
C13-C28 (DRO)	500	10	mg/kg	495		101	75-125			
Surrogate: p-Terphenyl	*101*		*"*	*99.0*		*102*	*65-135*			
Matrix Spike (8041214-MS1)	**Source: T181265-01**			Prepared: 04/12/18 Analyzed: 04/18/18						
C13-C28 (DRO)	560	10	mg/kg	505	53	100	75-125			
Surrogate: p-Terphenyl	*106*		*"*	*101*		*105*	*65-135*			
Matrix Spike Dup (8041214-MSD1)	**Source: T181265-01**			Prepared: 04/12/18 Analyzed: 04/18/18						
C13-C28 (DRO)	590	10	mg/kg	500	53	108	75-125	5.92	20	
Surrogate: p-Terphenyl	*104*		*"*	*100*		*104*	*65-135*			

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

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 8041304 - EPA 3050B										
Blank (8041304-BLK1)				Prepared: 04/13/18 Analyzed: 04/16/18						
Arsenic	ND	5.0	mg/kg							
Lead	ND	3.0	"							
LCS (8041304-BS1)				Prepared: 04/13/18 Analyzed: 04/16/18						
Arsenic	103	5.0	mg/kg	100		103	75-125			
Lead	108	3.0	"	100		108	75-125			
Matrix Spike (8041304-MS1)	**Source: T181234-01**			Prepared: 04/13/18 Analyzed: 04/16/18						
Arsenic	94.4	5.0	mg/kg	94.3	ND	100	75-125			
Lead	94.7	3.0	"	94.3	0.0883	100	75-125			
Matrix Spike Dup (8041304-MSD1)	**Source: T181234-01**			Prepared: 04/13/18 Analyzed: 04/16/18						
Arsenic	96.3	5.0	mg/kg	94.3	ND	102	75-125	1.96	20	
Lead	101	3.0	"	94.3	0.0883	107	75-125	6.06	20	
Batch 8041305 - EPA 3050B										
Blank (8041305-BLK1)				Prepared: 04/13/18 Analyzed: 04/17/18						
Arsenic	ND	5.0	mg/kg							
Lead	ND	3.0	"							
LCS (8041305-BS1)				Prepared: 04/13/18 Analyzed: 04/17/18						
Arsenic	106	5.0	mg/kg	100		106	75-125			
Lead	112	3.0	"	100		112	75-125			
Matrix Spike (8041305-MS1)	**Source: T181234-30**			Prepared: 04/13/18 Analyzed: 04/17/18						
Arsenic	100	5.0	mg/kg	95.2	ND	105	75-125			
Lead	105	3.0	"	95.2	ND	110	75-125			

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Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

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 8041305 - EPA 3050B										
Matrix Spike Dup (8041305-MSD1)	**Source: T181234-30**			Prepared: 04/13/18 Analyzed: 04/17/18						
Arsenic	100	5.0	mg/kg	91.7	ND	109	75-125	0.0163	20	
Lead	107	3.0	"	91.7	ND	116	75-125	1.55	20	
Batch 8041307 - EPA 3050B										
Blank (8041307-BLK1)				Prepared & Analyzed: 04/13/18						
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 (8041307-BS1)				Prepared & Analyzed: 04/13/18						
Arsenic	94.3	5.0	mg/kg	100		94.3	75-125			
Barium	101	1.0	"	100		101	75-125			
Cadmium	99.6	2.0	"	100		99.6	75-125			
Chromium	101	2.0	"	100		101	75-125			
Lead	98.8	3.0	"	100		98.8	75-125			

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

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 8041307 - EPA 3050B										
Matrix Spike (8041307-MS1)	**Source: T181234-10**			Prepared & Analyzed: 04/13/18						
Arsenic	95.1	5.0	mg/kg	100	1.26	93.9	75-125			
Barium	137	1.0	"	100	44.3	92.6	75-125			
Cadmium	93.6	2.0	"	100	ND	93.6	75-125			
Chromium	98.9	2.0	"	100	3.82	95.0	75-125			
Lead	95.6	3.0	"	100	1.54	94.1	75-125			
Matrix Spike Dup (8041307-MSD1)	**Source: T181234-10**			Prepared & Analyzed: 04/13/18						
Arsenic	83.2	5.0	mg/kg	100	1.26	81.9	75-125	13.4	20	
Barium	125	1.0	"	100	44.3	80.8	75-125	9.07	20	
Cadmium	84.9	2.0	"	100	ND	84.9	75-125	9.84	20	
Chromium	89.0	2.0	"	100	3.82	85.2	75-125	10.5	20	
Lead	83.0	3.0	"	100	1.54	81.5	75-125	14.1	20	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

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 8041308 - EPA 7471A Soil										
Blank (8041308-BLK1)				Prepared & Analyzed: 04/13/18						
Mercury	ND	0.10	mg/kg							
LCS (8041308-BS1)				Prepared & Analyzed: 04/13/18						
Mercury	0.427	0.10	mg/kg	0.417		103	80-120			
Matrix Spike (8041308-MS1)	**Source: T181234-10**			Prepared & Analyzed: 04/13/18						
Mercury	0.399	0.10	mg/kg	0.417	ND	95.7	75-125			
Matrix Spike Dup (8041308-MSD1)	**Source: T181234-10**			Prepared & Analyzed: 04/13/18						
Mercury	0.399	0.10	mg/kg	0.417	ND	95.9	75-125	0.195	20	

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Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

Polychlorinated Biphenyls by EPA Method 8082 - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8041144 - EPA 3550 ECD/GCMS										
Blank (8041144-BLK1)				Prepared: 04/11/18 Analyzed: 04/13/18						
PCB-1016	ND	10	ug/kg							
PCB-1221	ND	10	"							
PCB-1232	ND	10	"							
PCB-1242	ND	10	"							
PCB-1248	ND	10	"							
PCB-1254	ND	10	"							
PCB-1260	ND	10	"							
Surrogate: Tetrachloro-meta-xylene	*9.99*		*"*	*10.0*		*99.9*	*35-140*			
Surrogate: Decachlorobiphenyl	*10.9*		*"*	*10.0*		*109*	*35-140*			
LCS (8041144-BS1)				Prepared: 04/11/18 Analyzed: 04/13/18						
PCB-1016	85.4	10	ug/kg	100		85.4	40-130			
PCB-1260	66.4	10	"	100		66.4	40-130			
Surrogate: Tetrachloro-meta-xylene	*8.79*		*"*	*10.0*		*87.9*	*35-140*			
Surrogate: Decachlorobiphenyl	*10.4*		*"*	*10.0*		*104*	*35-140*			
LCS Dup (8041144-BSD1)				Prepared: 04/11/18 Analyzed: 04/13/18						
PCB-1016	87.6	10	ug/kg	100		87.6	40-130	2.54	30	
PCB-1260	73.8	10	"	100		73.8	40-130	10.6	30	
Surrogate: Tetrachloro-meta-xylene	*8.32*		*"*	*10.0*		*83.2*	*35-140*			
Surrogate: Decachlorobiphenyl	*10.5*		*"*	*10.0*		*105*	*35-140*			

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8041145 - EPA 3550 ECD/GCMS										
Blank (8041145-BLK1)				Prepared: 04/11/18 Analyzed: 04/13/18						
Carbazole	ND	300	ug/kg							
Aniline	ND	300	"							
Phenol	ND	1000	"							
2-Chlorophenol	ND	1000	"							
1,4-Dichlorobenzene	ND	300	"							
N-Nitrosodi-n-propylamine	ND	300	"							
1,2,4-Trichlorobenzene	ND	300	"							
4-Chloro-3-methylphenol	ND	1000	"							
1-Methylnaphthalene	ND	300	"							
2-Methylnaphthalene	ND	300	"							
Acenaphthene	ND	300	"							
4-Nitrophenol	ND	1000	"							
2,4-Dinitrotoluene	ND	300	"							
Pentachlorophenol	ND	1000	"							
Pyrene	ND	300	"							
Acenaphthylene	ND	300	"							
Anthracene	ND	300	"							
Benzo (a) anthracene	ND	300	"							
Benzo (b) fluoranthene	ND	300	"							
Benzo (k) fluoranthene	ND	300	"							
Benzo (g,h,i) perylene	ND	1000	"							
Benzo (a) pyrene	ND	300	"							
Benzyl alcohol	ND	300	"							
Bis(2-chloroethoxy)methane	ND	300	"							
Bis(2-chloroethyl)ether	ND	300	"							
Bis(2-chloroisopropyl)ether	ND	300	"							
Bis(2-ethylhexyl)phthalate	ND	300	"							
4-Bromophenyl phenyl ether	ND	300	"							
Butyl benzyl phthalate	ND	300	"							
4-Chloroaniline	ND	300	"							
2-Chloronaphthalene	ND	300	"							
4-Chlorophenyl phenyl ether	ND	300	"							
Chrysene	ND	300	"							
Dibenz (a,h) anthracene	ND	300	"							
Dibenzofuran	ND	300	"							
Di-n-butyl phthalate	ND	300	"							

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8041145 - EPA 3550 ECD/GCMS										
Blank (8041145-BLK1)				Prepared: 04/11/18 Analyzed: 04/13/18						
1,2-Dichlorobenzene	ND	300	ug/kg							
1,3-Dichlorobenzene	ND	300	"							
2,4-Dichlorophenol	ND	1000	"							
Diethyl phthalate	ND	300	"							
2,4-Dimethylphenol	ND	1000	"							
Dimethyl phthalate	ND	300	"							
4,6-Dinitro-2-methylphenol	ND	1000	"							
2,4-Dinitrophenol	ND	1000	"							
2,6-Dinitrotoluene	ND	1000	"							
Di-n-octyl phthalate	ND	300	"							
Fluoranthene	ND	300	"							
Fluorene	ND	300	"							
Hexachlorobenzene	ND	1500	"							
Hexachlorobutadiene	ND	300	"							
Hexachlorocyclopentadiene	ND	1000	"							
Hexachloroethane	ND	300	"							
Indeno (1,2,3-cd) pyrene	ND	300	"							
Isophorone	ND	300	"							
2-Methylphenol	ND	1000	"							
4-Methylphenol	ND	1000	"							
Naphthalene	ND	300	"							
2-Nitroaniline	ND	300	"							
3-Nitroaniline	ND	300	"							
4-Nitroaniline	ND	300	"							
Nitrobenzene	ND	1000	"							
2-Nitrophenol	ND	1000	"							
N-Nitrosodimethylamine	ND	300	"							
N-Nitrosodiphenylamine	ND	300	"							
2,3,5,6-Tetrachlorophenol	ND	300	"							
2,3,4,6-Tetrachlorophenol	ND	300	"							
Phenanthrene	ND	300	"							
Azobenzene	ND	300	"							
Pyridine	ND	300	"							
2,4,5-Trichlorophenol	ND	1000	"							
2,4,6-Trichlorophenol	ND	1000	"							

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Mike Jaroudi, Project Manager

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Providing Quality Analytical Services Nationwide

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Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8041145 - EPA 3550 ECD/GCMS										
Blank (8041145-BLK1)				Prepared: 04/11/18 Analyzed: 04/13/18						
Surrogate: 2-Fluorophenol	*1400*		*ug/kg*	*3240*		*43.4*	*15-121*			
Surrogate: Phenol-d6	*1560*		*"*	*3240*		*48.1*	*24-113*			
Surrogate: Nitrobenzene-d5	*1750*		*"*	*3240*		*53.9*	*21.3-119*			
Surrogate: 2-Fluorobiphenyl	*2060*		*"*	*3240*		*63.8*	*32.4-102*			
Surrogate: 2,4,6-Tribromophenol	*2450*		*"*	*3240*		*75.8*	*18.1-105*			
Surrogate: Terphenyl-dl4	*2410*		*"*	*3240*		*74.5*	*29.1-130*			
LCS (8041145-BS1)				Prepared: 04/11/18 Analyzed: 04/13/18						
Phenol	1600	1000	ug/kg	3390		47.1	34-114			
2-Chlorophenol	1750	1000	"	3390		51.8	34-114			
1,4-Dichlorobenzene	1860	300	"	3390		55.0	34-114			
N-Nitrosodi-n-propylamine	2140	300	"	3390		63.3	30-110			
1,2,4-Trichlorobenzene	2100	300	"	3390		62.0	39-119			
4-Chloro-3-methylphenol	2340	1000	"	3390		69.1	50-130			
Acenaphthene	1860	300	"	3390		55.0	34-114			
Pentachlorophenol	2320	1000	"	3390		68.4	50-130			
Pyrene	1570	300	"	3390		46.2	30-110			
Surrogate: 2-Fluorophenol	*1340*		*"*	*3390*		*39.6*	*15-121*			
Surrogate: Phenol-d6	*1550*		*"*	*3390*		*45.6*	*24-113*			
Surrogate: Nitrobenzene-d5	*1770*		*"*	*3390*		*52.4*	*21.3-119*			
Surrogate: 2-Fluorobiphenyl	*2070*		*"*	*3390*		*61.0*	*32.4-102*			
Surrogate: 2,4,6-Tribromophenol	*2440*		*"*	*3390*		*72.0*	*18.1-105*			
Surrogate: Terphenyl-dl4	*2350*		*"*	*3390*		*69.2*	*29.1-130*			
LCS Dup (8041145-BSD1)				Prepared: 04/11/18 Analyzed: 04/13/18						
Phenol	1670	1000	ug/kg	3400		49.1	34-114	4.50	42	
2-Chlorophenol	1830	1000	"	3400		53.8	34-114	4.28	40	
1,4-Dichlorobenzene	1910	300	"	3400		56.3	34-114	2.69	28	
N-Nitrosodi-n-propylamine	2220	300	"	3400		65.2	30-110	3.36	38	
1,2,4-Trichlorobenzene	2220	300	"	3400		65.4	39-119	5.60	28	
4-Chloro-3-methylphenol	2500	1000	"	3400		73.4	50-130	6.42	42	
Acenaphthene	2010	300	"	3400		59.1	34-114	7.55	31	
Pentachlorophenol	2530	1000	"	3400		74.3	50-130	8.67	50	
Pyrene	1780	300	"	3400		52.4	30-110	12.9	31	
Surrogate: 2-Fluorophenol	*1410*		*"*	*3400*		*41.4*	*15-121*			
Surrogate: Phenol-d6	*1600*		*"*	*3400*		*47.1*	*24-113*			

SunStar Laboratories, Inc.

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Mike Jaroudi, Project Manager

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PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

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

Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8041145 - EPA 3550 ECD/GCMS										
LCS Dup (8041145-BSD1)				Prepared: 04/11/18 Analyzed: 04/13/18						
Surrogate: Nitrobenzene-d5	*1800*		*ug/kg*	*3400*		*52.9*	*21.3-119*			
Surrogate: 2-Fluorobiphenyl	*2170*		*"*	*3400*		*63.7*	*32.4-102*			
Surrogate: 2,4,6-Tribromophenol	*2630*		*"*	*3400*		*77.2*	*18.1-105*			
Surrogate: Terphenyl-dl4	*2580*		*"*	*3400*		*76.0*	*29.1-130*			

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Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/19/18 13:50

Notes and Definitions

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

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Mike Jaroudi, Project Manager

SunStar Laboratories

25712 Commercentre Drive, Lake Forest, CA 92630
949-297-5020

Chain of Custody Record

Client: BRUSCA ASSOCIATES, INC.
Address: PO Box 332, ROSEVILLE, CA 95661
Phone: (916) 677-1470 Fax: (916) 677-1471
Project Manager: JOE BRUSCA

Date: 4/11/18 Page: 1 Of 3
Project Name: LATHROP 48-AC PROPERTY
Collector: BRUSCA Client Project #: 137-002
Batch #: T181234 EDF #:

Sample ID	Date Sampled	Time	Sample Type	Container Type	~~8260~~ SVOCs 8270	8260 + OXY	8260 BTEX, OXY only	~~8270~~ PCBs 8082	8021 BTEX	8015M (gasoline)	8015M (diesel) silica gel cleanup	8015M Ext./Carbon Chain	6010/7000 Title 22 Metals	6020 ICP-MS Metals	LEAD AND ARSENIC			Laboratory ID #	Comments/Preservative	Total # of containers
VS9	4/11/18	11:00	SOIL	JAR											X			01		1
VS10		11:02													X			02		1
VS11		11:03													X			03		1
VS12		11:05													X			04		1
VS13		11:07													X			05		1
VS14		11:09													X			06		1
VS15		11:17																07	HOLD	1
VS16		11:14													X			08		1
VS17		11:20													X			09		1
VS18		11:22			X			X				X	X					10		1
VS19		11:26													X			11		1
VS20		11:29			X			X				X	X					12		1
VS21		11:31													X			13		1
VS22		11:34			X			X				X	X					14		1
VS23		11:35																15	HOLD	1

Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
	4/11/18 2:58pm		4/11/18 2:58
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
GSO	4.12.18 10:00		4.12.18 10:00
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time

Total # of containers
Chain of Custody seals Y/N/NA
Seals intact? Y/N/NA
Received good condition/cold 3.4

Turn around time: NORMAL

Notes

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

COC 170171

SunStar Laboratories

25712 Commercentre Drive, Lake Forest, CA 92630
949-297-5020

Chain of Custody Record

Client: BRUSCA ASSOCIATES, INC.
Address: PO BOX 332, ROSEVILLE, CA 95661
Phone: (916) 677-1470 Fax: (916) 677-1471
Project Manager: JOE BRUSCA

Date: 4/11/18 Page: 2 Of 3
Project Name: LATHROP 48-AC PROPERTY
Collector: BRUSCA Client Project #: 137-002
Batch #: T181234 EDF #:

Sample ID	Date Sampled	Time	Sample Type	Container Type	~~8260~~ SVOCs 8270	8260 + OXY	8260 BTEX, OXY only	~~8270~~ PCBs 8082	8021 BTEX	8015M (gasoline)	8015M (diesel)	8015M Ext./Carbon Chain silica gel cleanup	6010/7000 Title 22 Metals	6020 ICP-MS Metals	LEAD AND ARSENIC ONLY		Laboratory ID #	Comments/Preservative	Total # of containers
VS24	4/11/18	11:37	SOIL	JAR	X			X				X	X		X		16		1
VS25		11:55													X		17		1
VS26		11:57													X		18		1
VS27		11:55													X		19		1
VS28		12:00													X		20		1
VS29		12:03													X		21		1
VS30		12:04													X		22		1
VS31		12:06													X		23		1
VS32		12:08															24	HOLD	1
VS33		12:10													X		25		1
VS34		12:41													X		26		1
VS35		12:43			X			X				X	X				27		1
VS36		12:45													X		28		1
VS37		12:45			X			X				X	X				29		1
VS38		12:50													X		30		1

Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
	4/11/18 2:54PM		4/11/18 2:58
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
GSO 4-12-18 10:00		4-12-18 10:00	
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time

Total # of containers
Chain of Custody seals Y/N/NA
Seals Intact? Y/N/NA
Received good condition/cold 3.4

Turn around time: NORMAL

Notes

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

COC 170170

REVISED

SunStar Laboratories

Chain of Custody Record

25712 Commercentre Drive, Lake Forest, CA 92630
949-297-5020

Client: BRUSCA ASSOCIATES, INC.
Address: PO Box 332, Rosemille CA 95661
Phone: (916) 677-1470 Fax: (916) 677-1471
Project Manager: JOE BRUSCA

Date: 4/11/18 Page: 3 Of 3
Project Name: LATHROP 42-AC PROPERTY
Collector: BRUSCA Client Project #: 137-002
Batch #: T181234 EDF #:

Sample ID	Date Sampled	Time	Sample Type	Container Type	~~8260~~ SVOCs 8270	8260 + OXY	8260 BTEX, OXY only	~~8270~~ PCBs 8082	8021 BTEX	8015M (gasoline)	8015M (diesel)	8015M Ext./Carbon Chain Silica Gel Cleanup	6010/7000 Title 22 Metals	6020 ICP-MS Metals LUFT AND ARSENIC				Laboratory ID #	Comments/Preservative	Total # of containers
VS39	4/11/18	12:52	SOIL	JAR	X			X				X	X					31		1
VS40		12:55										[redacted]						32	HOLD	1
VS 41		12:57			X			X				X	X					33		1
VS 42		12:59																34	HOLD	1
VS 43		1:14 pm												X				35		1
VS 44		1:16 pm																36	HOLD	1
VS 45		1:17 pm												X				37		1
VS 46		1:19 pm																38	HOLD	1
VS 47		1:21 pm												X				39		1
VS 48		1:25 pm																40	HOLD	1
VS 49		1:26 pm												X				41		1
VS 50		1:28 pm																42	HOLD	1
VS51		1:30 pm												X				43		1

Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
[signature]	4/11/18 2:58 pm	[signature]	4/11/18 2:58
[signature] GSO 4-12-18	10:00	[signature]	4-12-18 10:00
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time

Total # of containers
Chain of Custody seals Y/N/NA
Seals intact? Y/N/NA
Received good condition/cold 3.4

Turn around time: NORMAL

Notes

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

COC 17116

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

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23 April 2018

Joe Brusca
Brusca Associates Inc.
PO Box 332
Roseville, CA 95661

RE: Lathrop 48-Ac Property

Enclosed are the results of analyses for samples received by the laboratory on 04/14/18 08:10. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Mike Jaroudi
Project Manager

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

25712 Commercentre Drive
Lake Forest, California 92630
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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:43

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
VS53	T181266-02	Soil	04/13/18 10:44	04/14/18 08:10
VS55	T181266-04	Soil	04/13/18 10:49	04/14/18 08:10
VS57	T181266-06	Soil	04/13/18 10:54	04/14/18 08:10
VS59	T181266-08	Soil	04/13/18 10:57	04/14/18 08:10
VS61	T181266-10	Soil	04/13/18 11:14	04/14/18 08:10
VS63	T181266-12	Soil	04/13/18 11:19	04/14/18 08:10
VS65	T181266-14	Soil	04/13/18 11:23	04/14/18 08:10
VS66	T181266-15	Soil	04/13/18 11:27	04/14/18 08:10
VS68	T181266-17	Soil	04/13/18 11:32	04/14/18 08:10
VS70	T181266-19	Soil	04/13/18 11:35	04/14/18 08:10

SunStar Laboratories, Inc.

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Mike Jaroudi, Project Manager

SunStar Laboratories, Inc.
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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:43

DETECTIONS SUMMARY

Sample ID: VS53 **Laboratory ID:** T181266-02

Analyte	Result	Reporting Limit	Units	Method	Notes
Barium	**80**	1.0	mg/kg	EPA 6010B	
Chromium	**7.1**	2.0	mg/kg	EPA 6010B	
Cobalt	**6.6**	2.0	mg/kg	EPA 6010B	
Copper	**6.8**	1.0	mg/kg	EPA 6010B	
Nickel	**8.8**	2.0	mg/kg	EPA 6010B	
Vanadium	**23**	5.0	mg/kg	EPA 6010B	
Zinc	**28**	1.0	mg/kg	EPA 6010B	

Sample ID: VS55 **Laboratory ID:** T181266-04

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**21**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**26**	10	mg/kg	EPA 8015B	
Barium	**65**	1.0	mg/kg	EPA 6010B	
Chromium	**7.7**	2.0	mg/kg	EPA 6010B	
Cobalt	**5.8**	2.0	mg/kg	EPA 6010B	
Copper	**4.1**	1.0	mg/kg	EPA 6010B	
Nickel	**8.2**	2.0	mg/kg	EPA 6010B	
Vanadium	**24**	5.0	mg/kg	EPA 6010B	
Zinc	**27**	1.0	mg/kg	EPA 6010B	

Sample ID: VS57 **Laboratory ID:** T181266-06

Analyte	Result	Reporting Limit	Units	Method	Notes
Barium	**49**	1.0	mg/kg	EPA 6010B	
Chromium	**6.6**	2.0	mg/kg	EPA 6010B	
Cobalt	**4.7**	2.0	mg/kg	EPA 6010B	
Copper	**3.0**	1.0	mg/kg	EPA 6010B	
Nickel	**5.8**	2.0	mg/kg	EPA 6010B	
Vanadium	**21**	5.0	mg/kg	EPA 6010B	
Zinc	**32**	1.0	mg/kg	EPA 6010B	

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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Lake Forest, California 92630
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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:43

Sample ID: VS59 **Laboratory ID:** T181266-08

Analyte	Result	Reporting Limit	Units	Method	Notes
Barium	**62**	1.0	mg/kg	EPA 6010B	
Chromium	**6.0**	2.0	mg/kg	EPA 6010B	
Cobalt	**5.0**	2.0	mg/kg	EPA 6010B	
Copper	**3.5**	1.0	mg/kg	EPA 6010B	
Nickel	**7.2**	2.0	mg/kg	EPA 6010B	
Vanadium	**20**	5.0	mg/kg	EPA 6010B	
Zinc	**22**	1.0	mg/kg	EPA 6010B	

Sample ID: VS61 **Laboratory ID:** T181266-10

No Results Detected

Sample ID: VS63 **Laboratory ID:** T181266-12

No Results Detected

Sample ID: VS65 **Laboratory ID:** T181266-14

Analyte	Result	Reporting Limit	Units	Method	Notes
Barium	**26**	1.0	mg/kg	EPA 6010B	
Chromium	**3.7**	2.0	mg/kg	EPA 6010B	
Cobalt	**2.7**	2.0	mg/kg	EPA 6010B	
Copper	**1.9**	1.0	mg/kg	EPA 6010B	
Nickel	**3.4**	2.0	mg/kg	EPA 6010B	
Vanadium	**11**	5.0	mg/kg	EPA 6010B	
Zinc	**11**	1.0	mg/kg	EPA 6010B	

Sample ID: VS66 **Laboratory ID:** T181266-15

No Results Detected

SunStar Laboratories, Inc.

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Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:43

Sample ID: VS68 **Laboratory ID:** T181266-17

Analyte	Result	Reporting Limit	Units	Method	Notes
Lead	**12**	3.0	mg/kg	EPA 6010b	

Sample ID: VS70 **Laboratory ID:** T181266-19

No Results Detected

SunStar Laboratories, Inc.
Providing Quality Analytical Services Nationwide

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:43

VS53

T181266-02 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8041214	04/18/18	04/18/18	EPA 8015B	
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*106 %*	*65-135*		"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8041623	04/16/18	04/16/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**80**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**7.1**	2.0	"	"	"	"	"	"	
Cobalt	**6.6**	2.0	"	"	"	"	"	"	
Copper	**6.8**	1.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**8.8**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**23**	5.0	"	"	"	"	"	"	
Zinc	**28**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8041624	04/16/18	04/16/18	EPA 7471A Soil	

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:43

VS53

T181266-02 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8041633	04/16/18	04/18/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*91.3 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*93.8 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8041634	04/16/18	04/17/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:43

VS53

T181266-02 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8041634	04/16/18	04/17/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Mike Jaroudi, Project Manager

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:43

VS53

T181266-02 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8041634	04/16/18	04/17/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*62.3 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*71.0 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*72.1 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*82.5 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*99.9 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*84.7 %*	*29.1-130*		"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:43

VS55

T181266-04 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8041214	04/18/18	04/18/18	EPA 8015B	
C13-C28 (DRO)	**21**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**26**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*104 %*	*65-135*		"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8041623	04/16/18	04/16/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**65**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**7.7**	2.0	"	"	"	"	"	"	
Cobalt	**5.8**	2.0	"	"	"	"	"	"	
Copper	**4.1**	1.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**8.2**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**24**	5.0	"	"	"	"	"	"	
Zinc	**27**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8041624	04/16/18	04/16/18	EPA 7471A Soil	

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VS55

T181266-04 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8041633	04/16/18	04/18/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*89.9 %*	*35-140*		"	"	"	"	
Surrogate: Decachlorobiphenyl		*93.0 %*	*35-140*		"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8041634	04/16/18	04/17/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:43

VS55

T181266-04 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8041634	04/16/18	04/17/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:43

VS55

T181266-04 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8041634	04/16/18	04/17/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*51.4 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*62.4 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*64.5 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*76.7 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*91.4 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*85.7 %*	*29.1-130*		"	"	"	"	

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:43

VS57

T181266-06 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8041214	04/18/18	04/18/18	EPA 8015B	
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*106 %*	*65-135*		*"*	*"*	*"*	*"*	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8041623	04/16/18	04/16/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**49**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**6.6**	2.0	"	"	"	"	"	"	
Cobalt	**4.7**	2.0	"	"	"	"	"	"	
Copper	**3.0**	1.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**5.8**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**21**	5.0	"	"	"	"	"	"	
Zinc	**32**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8041624	04/16/18	04/16/18	EPA 7471A Soil	

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:43

VS57

T181266-06 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8041633	04/16/18	04/18/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*96.3 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*101 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8041634	04/16/18	04/17/18	EPA 8270C	
Aniline	ND	300	"	"	"	"	"	"	
Phenol	ND	1000	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:43

VS57

T181266-06 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8041634	04/16/18	04/17/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:43

VS57

T181266-06 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8041634	04/16/18	04/17/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*52.0 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*62.5 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*62.2 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*72.2 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*86.9 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*83.8 %*	*29.1-130*		"	"	"	"	

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Mike Jaroudi, Project Manager

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PO Box 332	Project Number: 137-002	**Reported:**
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VS59

T181266-08 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8041214	04/18/18	04/18/18	EPA 8015B	
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*99.9 %*		*65-135*	"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8041623	04/16/18	04/16/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**62**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**6.0**	2.0	"	"	"	"	"	"	
Cobalt	**5.0**	2.0	"	"	"	"	"	"	
Copper	**3.5**	1.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**7.2**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**20**	5.0	"	"	"	"	"	"	
Zinc	**22**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8041624	04/16/18	04/16/18	EPA 7471A Soil	

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Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:43

VS59

T181266-08 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8041633	04/16/18	04/18/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*92.7 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*109 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8041634	04/16/18	04/17/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:43

VS59

T181266-08 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8041634	04/16/18	04/17/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:43

VS59

T181266-08 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8041634	04/16/18	04/17/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*61.1 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*70.9 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*69.8 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*79.6 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*93.8 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*90.0 %*	*29.1-130*		"	"	"	"	

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
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Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:43

VS61

T181266-10 (Soil)

SunStar Laboratories, Inc.

Metals by EPA 6010B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	ND	5.0	mg/kg	1	8041623	04/16/18	04/16/18	EPA 6010b	
Lead	ND	3.0	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:43

VS63

T181266-12 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Metals by EPA 6010B									
Arsenic	ND	5.0	mg/kg	1	8041623	04/16/18	04/16/18	EPA 6010b	
Lead	ND	3.0	"	"	"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:43

VS65

T181266-14 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8041214	04/18/18	04/18/18	EPA 8015B	
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*100 %*	*65-135*		*"*	*"*	*"*	*"*	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8041623	04/16/18	04/16/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**26**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**3.7**	2.0	"	"	"	"	"	"	
Cobalt	**2.7**	2.0	"	"	"	"	"	"	
Copper	**1.9**	1.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**3.4**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**11**	5.0	"	"	"	"	"	"	
Zinc	**11**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8041624	04/16/18	04/16/18	EPA 7471A Soil	

SunStar Laboratories, Inc.

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:43

VS65

T181266-14 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8041633	04/16/18	04/18/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*98.5 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*113 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8041634	04/16/18	04/17/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:43

VS65

T181266-14 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8041634	04/16/18	04/17/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:43

VS65

T181266-14 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8041634	04/16/18	04/17/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*56.7 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*68.1 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*67.2 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*81.1 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*97.1 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*92.1 %*	*29.1-130*		"	"	"	"	

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VS66

T181266-15 (Soil)

SunStar Laboratories, Inc.

Metals by EPA 6010B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	ND	5.0	mg/kg	1	8041623	04/16/18	04/16/18	EPA 6010b	
Lead	ND	3.0	"	"	"	"	"	"	

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VS68

T181266-17 (Soil)

SunStar Laboratories, Inc.

Metals by EPA 6010B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	ND	5.0	mg/kg	1	8041623	04/16/18	04/16/18	EPA 6010b	
Lead	**12**	3.0	"	"	"	"	"	"	

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VS70

T181266-19 (Soil)

SunStar Laboratories, Inc.

Metals by EPA 6010B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	ND	5.0	mg/kg	1	8041623	04/16/18	04/16/18	EPA 6010b	
Lead	ND	3.0	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:43

Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8041214 - EPA 3550B GC										
Blank (8041214-BLK1)				Prepared: 04/12/18 Analyzed: 04/18/18						
C6-C12 (GRO)	ND	10	mg/kg							
C13-C28 (DRO)	ND	10	"							
C29-C40 (MORO)	ND	10	"							
Surrogate: p-Terphenyl	*97.8*		*"*	*99.0*		*98.8*	*65-135*			
LCS (8041214-BS1)				Prepared: 04/12/18 Analyzed: 04/18/18						
C13-C28 (DRO)	500	10	mg/kg	495		101	75-125			
Surrogate: p-Terphenyl	*101*		*"*	*99.0*		*102*	*65-135*			
Matrix Spike (8041214-MS1)	**Source: T181265-01**			Prepared: 04/12/18 Analyzed: 04/18/18						
C13-C28 (DRO)	560	10	mg/kg	505	53	100	75-125			
Surrogate: p-Terphenyl	*106*		*"*	*101*		*105*	*65-135*			
Matrix Spike Dup (8041214-MSD1)	**Source: T181265-01**			Prepared: 04/12/18 Analyzed: 04/18/18						
C13-C28 (DRO)	590	10	mg/kg	500	53	108	75-125	5.92	20	
Surrogate: p-Terphenyl	*104*		*"*	*100*		*104*	*65-135*			

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:43

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 8041623 - EPA 3050B										
Blank (8041623-BLK1)				Prepared & Analyzed: 04/16/18						
Antimony	ND	3.0	mg/kg							
Antimony	ND	3.0	"							
Silver	ND	2.0	"							
Arsenic	ND	5.0	"							
Arsenic	ND	5.0	"							
Barium	ND	1.0	"							
Barium	ND	1.0	"							
Beryllium	ND	1.0	"							
Beryllium	ND	1.0	"							
Cadmium	ND	2.0	"							
Cadmium	ND	2.0	"							
Chromium	ND	2.0	"							
Cobalt	ND	2.0	"							
Chromium	ND	2.0	"							
Copper	ND	1.0	"							
Cobalt	ND	2.0	"							
Lead	ND	3.0	"							
Copper	ND	1.0	"							
Molybdenum	ND	5.0	"							
Nickel	ND	2.0	"							
Lead	ND	3.0	"							
Selenium	ND	5.0	"							
Thallium	ND	2.0	"							
Vanadium	ND	5.0	"							
Zinc	ND	1.0	"							
Molybdenum	ND	5.0	"							
Nickel	ND	2.0	"							
Selenium	ND	5.0	"							
Silver	ND	2.0	"							
Thallium	ND	2.0	"							
Vanadium	ND	5.0	"							
Zinc	ND	1.0	"							

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Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:43

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 8041623 - EPA 3050B										
LCS (8041623-BS1)				Prepared & Analyzed: 04/16/18						
Arsenic	92.9	5.0	mg/kg	100		92.9	75-125			
Arsenic	92.9	5.0	"	100		92.9	75-125			
Barium	91.6	1.0	"	100		91.6	75-125			
Barium	91.6	1.0	"	100		91.6	75-125			
Cadmium	88.7	2.0	"	100		88.7	75-125			
Cadmium	88.7	2.0	"	100		88.7	75-125			
Chromium	90.3	2.0	"	100		90.3	75-125			
Chromium	90.3	2.0	"	100		90.3	75-125			
Lead	96.9	3.0	"	100		96.9	75-125			
Lead	96.9	3.0	"	100		96.9	75-125			
Matrix Spike (8041623-MS1)	**Source: T181256-01**			Prepared & Analyzed: 04/16/18						
Arsenic	88.5	5.0	mg/kg	100	1.81	86.7	75-125			
Arsenic	88.5	5.0	"	100	1.81	86.7	75-125			
Barium	119	1.0	"	100	37.7	81.1	75-125			
Barium	119	1.0	"	100	37.7	81.1	75-125			
Cadmium	83.2	2.0	"	100	0.425	82.8	75-125			
Cadmium	83.2	2.0	"	100	0.425	82.8	75-125			
Chromium	89.3	2.0	"	100	5.37	84.0	75-125			
Chromium	89.3	2.0	"	100	5.37	84.0	75-125			
Lead	93.3	3.0	"	100	ND	93.3	75-125			
Lead	93.3	3.0	"	100	6.15	87.1	75-125			
Matrix Spike Dup (8041623-MSD1)	**Source: T181256-01**			Prepared & Analyzed: 04/16/18						
Arsenic	95.2	5.0	mg/kg	100	1.81	93.4	75-125	7.37	20	
Arsenic	95.2	5.0	"	100	1.81	93.4	75-125	7.37	20	
Barium	123	1.0	"	100	37.7	85.1	75-125	3.25	20	
Barium	123	1.0	"	100	37.7	85.1	75-125	3.25	20	
Cadmium	85.4	2.0	"	100	0.425	85.0	75-125	2.67	20	
Cadmium	85.4	2.0	"	100	0.425	85.0	75-125	2.67	20	
Chromium	91.3	2.0	"	100	5.37	86.0	75-125	2.21	20	
Chromium	91.3	2.0	"	100	5.37	86.0	75-125	2.21	20	
Lead	99.2	3.0	"	100	ND	99.2	75-125	6.14	20	
Lead	99.2	3.0	"	100	6.15	93.0	75-125	6.14	20	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:43

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 8041624 - EPA 7471A Soil										
Blank (8041624-BLK1)				Prepared & Analyzed: 04/16/18						
Mercury	ND	0.10	mg/kg							
LCS (8041624-BS1)				Prepared & Analyzed: 04/16/18						
Mercury	0.405	0.10	mg/kg	0.417		97.2	80-120			
Matrix Spike (8041624-MS1)	**Source: T181256-01**			Prepared & Analyzed: 04/16/18						
Mercury	0.408	0.10	mg/kg	0.417	ND	98.0	75-125			
Matrix Spike Dup (8041624-MSD1)	**Source: T181256-01**			Prepared & Analyzed: 04/16/18						
Mercury	0.428	0.10	mg/kg	0.417	ND	103	75-125	4.64	20	

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Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:43

Polychlorinated Biphenyls by EPA Method 8082 - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8041633 - EPA 3550 ECD/GCMS										
Blank (8041633-BLK1)				Prepared: 04/16/18 Analyzed: 04/18/18						
PCB-1016	ND	10	ug/kg							
PCB-1221	ND	10	"							
PCB-1232	ND	10	"							
PCB-1242	ND	10	"							
PCB-1248	ND	10	"							
PCB-1254	ND	10	"							
PCB-1260	ND	10	"							
Surrogate: Tetrachloro-meta-xylene	*8.65*		"	*9.90*		*87.3*	*35-140*			
Surrogate: Decachlorobiphenyl	*10.1*		"	*9.90*		*102*	*35-140*			
LCS (8041633-BS1)				Prepared: 04/16/18 Analyzed: 04/18/18						
PCB-1016	70.1	10	ug/kg	99.0		70.8	40-130			
PCB-1260	66.8	10	"	99.0		67.5	40-130			
Surrogate: Tetrachloro-meta-xylene	*9.51*		"	*9.90*		*96.0*	*35-140*			
Surrogate: Decachlorobiphenyl	*11.0*		"	*9.90*		*112*	*35-140*			
Matrix Spike (8041633-MS1)	**Source: T181265-01**			Prepared: 04/16/18 Analyzed: 04/18/18						
PCB-1016	60.2	10	ug/kg	101	ND	59.6	40-130			
PCB-1260	60.1	10	"	101	ND	59.5	40-130			
Surrogate: Tetrachloro-meta-xylene	*8.99*		"	*10.1*		*89.0*	*35-140*			
Surrogate: Decachlorobiphenyl	*9.25*		"	*10.1*		*91.5*	*35-140*			
Matrix Spike Dup (8041633-MSD1)	**Source: T181265-01**			Prepared: 04/16/18 Analyzed: 04/18/18						
PCB-1016	64.2	10	ug/kg	101	ND	63.6	40-130	6.49	30	
PCB-1260	62.7	10	"	101	ND	62.1	40-130	4.28	30	
Surrogate: Tetrachloro-meta-xylene	*9.14*		"	*10.1*		*90.5*	*35-140*			
Surrogate: Decachlorobiphenyl	*9.02*		"	*10.1*		*89.3*	*35-140*			

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Mike Jaroudi, Project Manager

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

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

Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:43

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8041634 - EPA 3550 ECD/GCMS										
Blank (8041634-BLK1)				Prepared: 04/16/18 Analyzed: 04/17/18						
Carbazole	ND	300	ug/kg							
Aniline	ND	300	"							
Phenol	ND	1000	"							
2-Chlorophenol	ND	1000	"							
1,4-Dichlorobenzene	ND	300	"							
N-Nitrosodi-n-propylamine	ND	300	"							
1,2,4-Trichlorobenzene	ND	300	"							
4-Chloro-3-methylphenol	ND	1000	"							
2-Methylnaphthalene	ND	300	"							
1-Methylnaphthalene	ND	300	"							
Acenaphthene	ND	300	"							
4-Nitrophenol	ND	1000	"							
2,4-Dinitrotoluene	ND	300	"							
Pentachlorophenol	ND	1000	"							
Pyrene	ND	300	"							
Acenaphthylene	ND	300	"							
Anthracene	ND	300	"							
Benzo (a) anthracene	ND	300	"							
Benzo (b) fluoranthene	ND	300	"							
Benzo (k) fluoranthene	ND	300	"							
Benzo (g,h,i) perylene	ND	1000	"							
Benzo (a) pyrene	ND	300	"							
Benzyl alcohol	ND	300	"							
Bis(2-chloroethoxy)methane	ND	300	"							
Bis(2-chloroethyl)ether	ND	300	"							
Bis(2-chloroisopropyl)ether	ND	300	"							
Bis(2-ethylhexyl)phthalate	ND	300	"							
4-Bromophenyl phenyl ether	ND	300	"							
Butyl benzyl phthalate	ND	300	"							
4-Chloroaniline	ND	300	"							
2-Chloronaphthalene	ND	300	"							
4-Chlorophenyl phenyl ether	ND	300	"							
Chrysene	ND	300	"							
Dibenz (a,h) anthracene	ND	300	"							
Dibenzofuran	ND	300	"							
Di-n-butyl phthalate	ND	300	"							

SunStar Laboratories, Inc.

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:43

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8041634 - EPA 3550 ECD/GCMS										
Blank (8041634-BLK1)				Prepared: 04/16/18 Analyzed: 04/17/18						
1,2-Dichlorobenzene	ND	300	ug/kg							
1,3-Dichlorobenzene	ND	300	"							
2,4-Dichlorophenol	ND	1000	"							
Diethyl phthalate	ND	300	"							
2,4-Dimethylphenol	ND	1000	"							
Dimethyl phthalate	ND	300	"							
4,6-Dinitro-2-methylphenol	ND	1000	"							
2,4-Dinitrophenol	ND	1000	"							
2,6-Dinitrotoluene	ND	1000	"							
Di-n-octyl phthalate	ND	300	"							
Fluoranthene	ND	300	"							
Fluorene	ND	300	"							
Hexachlorobenzene	ND	1500	"							
Hexachlorobutadiene	ND	300	"							
Hexachlorocyclopentadiene	ND	1000	"							
Hexachloroethane	ND	300	"							
Indeno (1,2,3-cd) pyrene	ND	300	"							
Isophorone	ND	300	"							
2-Methylphenol	ND	1000	"							
4-Methylphenol	ND	1000	"							
Naphthalene	ND	300	"							
2-Nitroaniline	ND	300	"							
3-Nitroaniline	ND	300	"							
4-Nitroaniline	ND	300	"							
Nitrobenzene	ND	1000	"							
2-Nitrophenol	ND	1000	"							
N-Nitrosodimethylamine	ND	300	"							
N-Nitrosodiphenylamine	ND	300	"							
2,3,5,6-Tetrachlorophenol	ND	300	"							
2,3,4,6-Tetrachlorophenol	ND	300	"							
Phenanthrene	ND	300	"							
Azobenzene	ND	300	"							
2,4,5-Trichlorophenol	ND	1000	"							
Pyridine	ND	300	"							
2,4,6-Trichlorophenol	ND	1000	"							

SunStar Laboratories, Inc.

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Providing Quality Analytical Services Nationwide

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:43

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8041634 - EPA 3550 ECD/GCMS										
Blank (8041634-BLK1)				Prepared: 04/16/18 Analyzed: 04/17/18						
Surrogate: 2-Fluorophenol	*1790*		*ug/kg*	*3380*		*53.0*	*15-121*			
Surrogate: Phenol-d6	*1920*		*"*	*3380*		*56.9*	*24-113*			
Surrogate: Nitrobenzene-d5	*2150*		*"*	*3380*		*63.5*	*21.3-119*			
Surrogate: 2-Fluorobiphenyl	*2510*		*"*	*3380*		*74.3*	*32.4-102*			
Surrogate: 2,4,6-Tribromophenol	*3160*		*"*	*3380*		*93.4*	*18.1-105*			
Surrogate: Terphenyl-dl4	*2960*		*"*	*3380*		*87.6*	*29.1-130*			
LCS (8041634-BS1)				Prepared: 04/16/18 Analyzed: 04/17/18						
Phenol	1490	1000	ug/kg	3280		45.6	34-114			
2-Chlorophenol	1620	1000	"	3280		49.4	34-114			
1,4-Dichlorobenzene	1680	300	"	3280		51.4	34-114			
N-Nitrosodi-n-propylamine	1700	300	"	3280		51.9	30-110			
1,2,4-Trichlorobenzene	1900	300	"	3280		58.0	39-119			
4-Chloro-3-methylphenol	2150	1000	"	3280		65.6	50-130			
Acenaphthene	1720	300	"	3280		52.6	34-114			
Pentachlorophenol	2280	1000	"	3280		69.7	50-130			
Pyrene	1530	300	"	3280		46.8	30-110			
Surrogate: 2-Fluorophenol	*1450*		*"*	*3280*		*44.3*	*15-121*			
Surrogate: Phenol-d6	*1650*		*"*	*3280*		*50.4*	*24-113*			
Surrogate: Nitrobenzene-d5	*1790*		*"*	*3280*		*54.7*	*21.3-119*			
Surrogate: 2-Fluorobiphenyl	*2130*		*"*	*3280*		*65.1*	*32.4-102*			
Surrogate: 2,4,6-Tribromophenol	*2810*		*"*	*3280*		*85.6*	*18.1-105*			
Surrogate: Terphenyl-dl4	*2600*		*"*	*3280*		*79.4*	*29.1-130*			
Matrix Spike (8041634-MS1)	**Source: T181265-01**			Prepared: 04/16/18 Analyzed: 04/17/18						
Phenol	1750	1000	ug/kg	3390	ND	51.7	34-114			
2-Chlorophenol	1860	1000	"	3390	ND	54.9	34-114			
1,4-Dichlorobenzene	1830	300	"	3390	ND	54.0	34-114			
N-Nitrosodi-n-propylamine	1880	300	"	3390	ND	55.4	30-110			
1,2,4-Trichlorobenzene	2190	300	"	3390	ND	64.5	39-119			
4-Chloro-3-methylphenol	2550	1000	"	3390	ND	75.3	50-130			
Acenaphthene	1960	300	"	3390	ND	57.8	34-114			
Pentachlorophenol	2620	1000	"	3390	ND	77.3	50-130			
Pyrene	1980	300	"	3390	160	53.7	30-110			
Surrogate: 2-Fluorophenol	*1600*		*"*	*3390*		*47.3*	*15-121*			
Surrogate: Phenol-d6	*1890*		*"*	*3390*		*55.8*	*24-113*			

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Mike Jaroudi, Project Manager

SunStar Laboratories, Inc.
Providing Quality Analytical Services Nationwide

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

Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:43

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8041634 - EPA 3550 ECD/GCMS										
Matrix Spike (8041634-MS1)	**Source: T181265-01**			Prepared: 04/16/18 Analyzed: 04/17/18						
Surrogate: Nitrobenzene-d5	*2040*		*ug/kg*	*3390*		*60.1*	*21.3-119*			
Surrogate: 2-Fluorobiphenyl	*2310*		*"*	*3390*		*68.1*	*32.4-102*			
Surrogate: 2,4,6-Tribromophenol	*3090*		*"*	*3390*		*91.2*	*18.1-105*			
Surrogate: Terphenyl-dl4	*2670*		*"*	*3390*		*78.7*	*29.1-130*			
Matrix Spike Dup (8041634-MSD1)	**Source: T181265-01**			Prepared: 04/16/18 Analyzed: 04/17/18						
Phenol	1720	1000	ug/kg	3410	ND	50.4	34-114	2.00	42	
2-Chlorophenol	1840	1000	"	3410	ND	53.9	34-114	1.32	40	
1,4-Dichlorobenzene	1760	300	"	3410	ND	51.7	34-114	3.82	28	
N-Nitrosodi-n-propylamine	1840	300	"	3410	ND	54.0	30-110	1.82	38	
1,2,4-Trichlorobenzene	2090	300	"	3410	ND	61.4	39-119	4.29	28	
4-Chloro-3-methylphenol	2560	1000	"	3410	ND	74.9	50-130	0.108	42	
Acenaphthene	1960	300	"	3410	ND	57.3	34-114	0.119	31	
Pentachlorophenol	2860	1000	"	3410	ND	83.9	50-130	8.97	50	
Pyrene	1940	300	"	3410	160	52.1	30-110	2.05	31	
Surrogate: 2-Fluorophenol	*1630*		*"*	*3410*		*47.8*	*15-121*			
Surrogate: Phenol-d6	*1870*		*"*	*3410*		*54.8*	*24-113*			
Surrogate: Nitrobenzene-d5	*1870*		*"*	*3410*		*54.9*	*21.3-119*			
Surrogate: 2-Fluorobiphenyl	*2210*		*"*	*3410*		*64.7*	*32.4-102*			
Surrogate: 2,4,6-Tribromophenol	*3080*		*"*	*3410*		*90.1*	*18.1-105*			
Surrogate: Terphenyl-dl4	*2940*		*"*	*3410*		*86.0*	*29.1-130*			

SunStar Laboratories, Inc.

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Mike Jaroudi, Project Manager

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

25712 Commercentre Drive
Lake Forest, California 92630
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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:43

Notes and Definitions

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

SunStar Laboratories, Inc.

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Mike Jaroudi, Project Manager

SunStar Laboratories

Chain of Custody Record

25712 Commercentre Drive, Lake Forest, CA 92630
949-297-5020

Client: BRUSCA ASSOCIATES, INC.
Address: PO BOX 332, ROSEVILLE, CA 95661
Phone: (916) 677-1470 Fax: (916) 677-1471
Project Manager: JOE BRUSCA

Date: 4/13/18 Page: 1 Of 2
Project Name: LATHROP 49-AC PROPERTY
Collector: BRUSCA Client Project #: 137-002
Batch #: T181266 EDF #:

Sample ID	Date Sampled	Time	Sample Type	Container Type	8260 ~~SVOCs~~ 8270	8260 + OXY	8260 BTEX, OXY only	8270 ~~PCBs~~ 8082	8021 BTEX	8015M (gasoline)	8015M (diesel) Silica Gel Cleanup	8015M Ext./Carbon Chain	6010/7000 Title 22 Metals	6020 ICP-MS Metals	LEAD + ARSENIC			Laboratory ID #	Comments/Preservative	Total # of containers
VS52	4/13/18	10:43	SOIL	JAR														01	HOLD	1
VS53		10:44			X			X				X	X					02		1
VS54		10:47																03	HOLD	1
VS55		10:49			X			X				X	X					04		1
VS56		10:51																05	HOLD	1
VS57		10:54			X			X				X	X					06		1
VS58		10:55																07	HOLD	1
VS59		10:57			X			X				X	X					08		1
VS60		10:59																09	HOLD	1
VS61		11:14													X			10		1
VS62		11:16																11	HOLD	1
VS63		11:19													X			12	~~HOLD~~	1
VS64		11:21																13	HOLD	1
VS65		11:23			X			X				X	X					14		1
VS66		11:27													X			15		1

Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
	4/13/18 1:30pm		4/13/18 1330
GSO 4-14-18 8:10			4-14-18 8:10

Total # of containers
Chain of Custody seals Y/N/NA
Seals intact? Y/N/NA
Received good condition/cold 5.5

Turn around time: NORMAL

Notes

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

COC 170174

SunStar Laboratories

Chain of Custody Record

25712 Commercentre Drive, Lake Forest, CA 92630
949-297-5020

Client: BRUSCA ASSOCIATES, INC.
Address: PO BOX 332, ROSEVILLE, CA 95661
Phone: (916) 677-1470 Fax: (916) 677-1471
Project Manager: JOE BRUSCA

Date: 4/13/18 Page: 2 Of 2
Project Name: LATHROP 4E-AC PROPERTY
Collector: BRUSCA Client Project #: 137-002
Batch #: T181266 EDF #:

Sample ID	Date Sampled	Time	Sample Type	Container Type	8260 SVOCs 8270	8260 + OXY	8260 BTEX, OXY only	8270 PCBs 8082	8021 BTEX	8015M (gasoline)	8015M (diesel)	8015M Ext./Carbon Chain Silica Gel Cleanup	6010/7000 Title 22 Metals	6020 ICP-MS Metals	LEAD AND ARSENIC			Laboratory ID #	Comments/Preservative	Total # of containers
VS 67	4/13/18	11:29	SOIL	JAR														16	HOLD	1
VS 68		11:32													X			17		1
VS 69		11:33																18	HOLD	1
VS 70		11:35													X			19		1

Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
	4/13/18; 1:30PM	Ed Stevens	4/13/18 1530
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
GSO 4-14-18	8:10		4-14-18 8:10
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time

Total # of containers
Chain of Custody seals Y/N/NA
Seals intact? Y/N/NA
Received good condition/cold 55

Turn around time: NORMAL

Notes

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

COC 170163

April 17, 2018

FAL Project ID: 11414

Mr. Joe Brusca
Brusca Associates
7633 Stonewood Court
Granite Bay, CA 95746

Dear Mr. Brusca,

The following results are associated with Frontier Analytical Laboratory project **11414**. This corresponds to your **Lathrop 48-Ac Property** project under project number **137-002**. Four solid samples were received on 4/2/2018 in good condition. These samples were extracted and analyzed by EPA Method 1613 for tetra through octa chlorinated dibenzo dioxins and furans. The Toxic Equivalency (TEQ) for your samples has been calculated using the 2005 World Health Organization's (WHO's) toxic equivalency factors (TEFs).The total TEQ is reported on the upper right hand corner of each sample data sheet. Brusca Associates requested a turnaround time of ten business days for project **11414**.

The following report consists of an Analytical Data section and a Sample Receipt section. The Analytical Data section contains our sample tracking log and the analytical results. The Sample Receipt section contains your chain of custody, our sample login form and a sample photo. The attached results are specifically for the samples referenced in this report only. These results meet all NELAC requirements and shall not be reproduced except in full. Frontier Analytical Laboratory's State of Oregon NELAP certificate number is **4041**. Our State of California ELAP certificate number is **2934**. This report has been emailed to you as a portable document format (PDF) file. A hardcopy will not be sent to you unless specifically requested.

If you have any questions regarding project **11414**, please contact me at (916) 934-0900. Thank you for choosing Frontier Analytical Laboratory for your analytical testing needs.

Sincerely,

Thomas C. Crabtree
Director

Frontier Analytical Laboratory

Sample Tracking Log

FAL Project ID: **11414**

Received on: **04/02/2018** Project Due: **04/17/2018** Storage: **R-4**

FAL Sample ID	Dup	Client Project ID	Client Sample ID	Requested Method	Matrix	Sampling Date	Sampling Time	Hold Time Due Date
11414-001-SA	0	137-002	VS1	EPA 1613 D/F	Soil	04/02/2018	11:45 am	04/02/2019
11414-002-SA	0	137-002	VS3	EPA 1613 D/F	Soil	04/02/2018	11:52 am	04/02/2019
11414-003-SA	0	137-002	VS5	EPA 1613 D/F	Soil	04/02/2018	11:57 am	04/02/2019
11414-004-SA	0	137-002	VS7	EPA 1613 D/F	Soil	04/02/2018	12:03 pm	04/02/2019

5172 Hillsdale Circle * El Dorado Hills, CA 95762 * Tel (916) 934-0900 * Fax (916) 934-0999 * www.frontieranalytical.com

EPA Method 1613
PCDD/F

FAL ID: 11414-001-MB
Client ID: Method Blank
Matrix: Soil
Batch No: X4472

Date Extracted: 04-13-2018
Date Received: NA
Amount: 5.00 g

ICal: PCDDFAL3-12-22-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-16-2018
2005 WHO TEQ: 0.0
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.111		-	0.0315				
1,2,3,7,8-PeCDD	ND	0.210		-	0.0468				
1,2,3,4,7,8-HxCDD	ND	0.390		-	0.0503				
1,2,3,6,7,8-HxCDD	ND	0.391		-	0.0490	Total TCDD	ND	0.111	
1,2,3,7,8,9-HxCDD	ND	0.378		-	0.0488	Total PeCDD	ND	0.210	
1,2,3,4,6,7,8-HpCDD	ND	0.379		-	0.0541	Total HxCDD	ND	0.391	
OCDD	ND	0.662		-	0.0888	Total HpCDD	ND	0.379	
2,3,7,8-TCDF	ND	0.0839		-	0.0243				
1,2,3,7,8-PeCDF	ND	0.107		-	0.0285				
2,3,4,7,8-PeCDF	ND	0.105		-	0.0298				
1,2,3,4,7,8-HxCDF	ND	0.172		-	0.0255				
1,2,3,6,7,8-HxCDF	ND	0.176		-	0.0253				
2,3,4,6,7,8-HxCDF	ND	0.194		-	0.0279				
1,2,3,7,8,9-HxCDF	ND	0.231		-	0.0367	Total TCDF	ND	0.0839	
1,2,3,4,6,7,8-HpCDF	ND	0.178		-	0.0321	Total PeCDF	ND	0.107	
1,2,3,4,7,8,9-HpCDF	ND	0.248		-	0.0396	Total HxCDF	ND	0.231	
OCDF	ND	0.277		-	0.0843	Total HpCDF	ND	0.248	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	96.3	25.0 - 164	
13C-1,2,3,7,8-PeCDD	90.2	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	89.5	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	94.1	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	97.8	23.0 - 140	
13C-OCDD	81.9	17.0 - 157	
13C-2,3,7,8-TCDF	100	24.0 - 169	
13C-1,2,3,7,8-PeCDF	79.8	24.0 - 185	
13C-2,3,4,7,8-PeCDF	82.5	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	106	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	109	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	106	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	108	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	92.4	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	98.1	26.0 - 138	
13C-OCDF	86.3	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	92.7	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/17/2018

Reviewed By: _____
Date: 4/17/2018

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EPA Method 1613
PCDD/F

FAL ID: 11414-001-OPR
Client ID: OPR
Matrix: Soil
Batch No: X4472

Date Extracted: 04-13-2018
Date Received: NA
Amount: 5.00 g

ICal: PCDDFAL3-12-22-17
GC Column: DB5MS
Units: ng/ml

Acquired: 04-16-2018
2005 WHO TEQ: NA

Compound	Conc	QC Limits	Qual
2,3,7,8-TCDD	11.2	6.70 - 15.8	
1,2,3,7,8-PeCDD	51.1	35.0 - 71.0	
1,2,3,4,7,8-HxCDD	57.6	35.0 - 82.0	
1,2,3,6,7,8-HxCDD	57.9	38.0 - 67.0	
1,2,3,7,8,9-HxCDD	57.8	32.0 - 81.0	
1,2,3,4,6,7,8-HpCDD	55.3	35.0 - 70.0	
OCDD	111	78.0 - 144	
2,3,7,8-TCDF	10.1	7.50 - 15.8	
1,2,3,7,8-PeCDF	47.1	40.0 - 67.0	
2,3,4,7,8-PeCDF	47.5	34.0 - 80.0	
1,2,3,4,7,8-HxCDF	48.6	36.0 - 67.0	
1,2,3,6,7,8-HxCDF	49.1	42.0 - 65.0	
2,3,4,6,7,8-HxCDF	49.9	35.0 - 78.0	
1,2,3,7,8,9-HxCDF	50.8	39.0 - 65.0	
1,2,3,4,6,7,8-HpCDF	51.0	41.0 - 61.0	
1,2,3,4,7,8,9-HpCDF	51.1	39.0 - 69.0	
OCDF	102	63.0 - 170	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	99.5	20.0 - 175	
13C-1,2,3,7,8-PeCDD	87.1	21.0 - 227	
13C-1,2,3,4,7,8-HxCDD	95.5	21.0 - 193	
13C-1,2,3,6,7,8-HxCDD	103	25.0 - 163	
13C-1,2,3,4,6,7,8-HpCDD	101	26.0 - 166	
13C-OCDD	87.7	13.0 - 198	
13C-2,3,7,8-TCDF	103	22.0 - 152	
13C-1,2,3,7,8-PeCDF	78.2	21.0 - 192	
13C-2,3,4,7,8-PeCDF	81.0	13.0 - 328	
13C-1,2,3,4,7,8-HxCDF	110	19.0 - 202	
13C-1,2,3,6,7,8-HxCDF	112	21.0 - 159	
13C-2,3,4,6,7,8-HxCDF	107	22.0 - 176	
13C-1,2,3,7,8,9-HxCDF	106	17.0 - 205	
13C-1,2,3,4,6,7,8-HpCDF	92.3	21.0 - 158	
13C-1,2,3,4,7,8,9-HpCDF	104	20.0 - 186	
13C-OCDF	87.3	13.0 - 198	

Cleanup Surrogate		
37Cl-2,3,7,8-TCDD	96.0	31.0 - 191

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____

Date: 4/17/2018

Reviewed By: _____

Date: 4/17/2018

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EPA Method 1613
PCDD/F

FAL ID: 11414-001-SA
Client ID: VS1
Matrix: Soil
Batch No: X4472

Date Extracted: 04-13-2018
Date Received: 04-02-2018
Amount: 5.03 g
% Solids: 96.30

ICal: PCDDFAL3-12-22-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-17-2018
2005 WHO TEQ: 0.00672
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.149		-	0.0315				
1,2,3,7,8-PeCDD	ND	0.322		-	0.0468				
1,2,3,4,7,8-HxCDD	ND	0.388		-	0.0503				
1,2,3,6,7,8-HxCDD	ND	0.389		-	0.0490	Total TCDD	ND	0.149	
1,2,3,7,8,9-HxCDD	ND	0.376		-	0.0488	Total PeCDD	ND	0.322	
1,2,3,4,6,7,8-HpCDD	0.603	-	J	0.00603	0.0541	Total HxCDD	ND	0.389	
OCDD	2.29	-	J	0.000687	0.0888	Total HpCDD	1.16	-	J
2,3,7,8-TCDF	ND	0.112		-	0.0243				
1,2,3,7,8-PeCDF	ND	0.192		-	0.0285				
2,3,4,7,8-PeCDF	ND	0.184		-	0.0298				
1,2,3,4,7,8-HxCDF	ND	0.183		-	0.0255				
1,2,3,6,7,8-HxCDF	ND	0.183		-	0.0253				
2,3,4,6,7,8-HxCDF	ND	0.202		-	0.0279				
1,2,3,7,8,9-HxCDF	ND	0.258		-	0.0367	Total TCDF	ND	0.112	
1,2,3,4,6,7,8-HpCDF	ND	0.251		-	0.0321	Total PeCDF	ND	0.192	
1,2,3,4,7,8,9-HpCDF	ND	0.325		-	0.0396	Total HxCDF	ND	0.258	
OCDF	ND	0.368		-	0.0843	Total HpCDF	ND	0.325	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	101	25.0 - 164	
13C-1,2,3,7,8-PeCDD	87.7	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	87.7	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	92.8	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	96.3	23.0 - 140	
13C-OCDD	79.9	17.0 - 157	
13C-2,3,7,8-TCDF	107	24.0 - 169	
13C-1,2,3,7,8-PeCDF	79.4	24.0 - 185	
13C-2,3,4,7,8-PeCDF	82.9	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	101	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	107	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	103	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	101	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	87.6	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	92.4	26.0 - 138	
13C-OCDF	81.2	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	98.9	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/17/2018

Reviewed By: _____
Date: 4/17/2018

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EPA Method 1613
PCDD/F

FAL ID: 11414-002-SA
Client ID: VS3
Matrix: Soil
Batch No: X4472

Date Extracted: 04-13-2018
Date Received: 04-02-2018
Amount: 5.07 g
% Solids: 96.41

ICal: PCDDFAL3-12-22-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-17-2018
2005 WHO TEQ: 0.00529
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.0914		-	0.0315				
1,2,3,7,8-PeCDD	ND	0.201		-	0.0468				
1,2,3,4,7,8-HxCDD	ND	0.343		-	0.0503				
1,2,3,6,7,8-HxCDD	ND	0.371		-	0.0490	Total TCDD	ND	0.0914	
1,2,3,7,8,9-HxCDD	ND	0.347		-	0.0488	Total PeCDD	ND	0.201	
1,2,3,4,6,7,8-HpCDD	0.460	-	J	0.00460	0.0541	Total HxCDD	ND	0.371	
OCDD	2.30	-	J	0.000690	0.0888	Total HpCDD	1.12	-	J
2,3,7,8-TCDF	ND	0.104		-	0.0243				
1,2,3,7,8-PeCDF	ND	0.150		-	0.0285				
2,3,4,7,8-PeCDF	ND	0.144		-	0.0298				
1,2,3,4,7,8-HxCDF	ND	0.103		-	0.0255				
1,2,3,6,7,8-HxCDF	ND	0.101		-	0.0253				
2,3,4,6,7,8-HxCDF	ND	0.115		-	0.0279				
1,2,3,7,8,9-HxCDF	ND	0.142		-	0.0367	Total TCDF	ND	0.104	
1,2,3,4,6,7,8-HpCDF	ND	0.159		-	0.0321	Total PeCDF	ND	0.150	
1,2,3,4,7,8,9-HpCDF	ND	0.201		-	0.0396	Total HxCDF	ND	0.142	
OCDF	ND	0.355		-	0.0843	Total HpCDF	ND	0.201	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	95.7	25.0 - 164	
13C-1,2,3,7,8-PeCDD	83.1	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	84.4	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	89.6	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	86.9	23.0 - 140	
13C-OCDD	64.6	17.0 - 157	
13C-2,3,7,8-TCDF	102	24.0 - 169	
13C-1,2,3,7,8-PeCDF	74.9	24.0 - 185	
13C-2,3,4,7,8-PeCDF	78.4	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	99.7	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	103	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	95.4	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	94.4	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	78.3	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	83.0	26.0 - 138	
13C-OCDF	68.2	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	97.1	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/17/2018

Reviewed By: _____
Date: 4/17/2018

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EPA Method 1613
PCDD/F

FAL ID: 11414-003-SA
Client ID: VS5
Matrix: Soil
Batch No: X4472

Date Extracted: 04-13-2018
Date Received: 04-02-2018
Amount: 5.00 g
% Solids: 95.28

ICal: PCDDFAL3-12-22-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-17-2018
2005 WHO TEQ: 0.00850
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.0985		-	0.0315				
1,2,3,7,8-PeCDD	ND	0.236		-	0.0468				
1,2,3,4,7,8-HxCDD	ND	0.372		-	0.0503				
1,2,3,6,7,8-HxCDD	ND	0.359		-	0.0490	Total TCDD	ND	0.0985	
1,2,3,7,8,9-HxCDD	ND	0.353		-	0.0488	Total PeCDD	ND	0.236	
1,2,3,4,6,7,8-HpCDD	0.703	-	J	0.00703	0.0541	Total HxCDD	ND	0.372	
OCDD	4.89	-	J	0.00147	0.0888	Total HpCDD	1.46	-	J
2,3,7,8-TCDF	ND	0.0911		-	0.0243				
1,2,3,7,8-PeCDF	ND	0.185		-	0.0285				
2,3,4,7,8-PeCDF	ND	0.173		-	0.0298				
1,2,3,4,7,8-HxCDF	ND	0.210		-	0.0255				
1,2,3,6,7,8-HxCDF	ND	0.212		-	0.0253				
2,3,4,6,7,8-HxCDF	ND	0.230		-	0.0279				
1,2,3,7,8,9-HxCDF	ND	0.282		-	0.0367	Total TCDF	ND	0.0911	
1,2,3,4,6,7,8-HpCDF	ND	0.186		-	0.0321	Total PeCDF	ND	0.185	
1,2,3,4,7,8,9-HpCDF	ND	0.247		-	0.0396	Total HxCDF	ND	0.282	
OCDF	ND	0.328		-	0.0843	Total HpCDF	ND	0.247	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	105	25.0 - 164	
13C-1,2,3,7,8-PeCDD	93.9	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	87.6	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	95.8	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	105	23.0 - 140	
13C-OCDD	87.5	17.0 - 157	
13C-2,3,7,8-TCDF	104	24.0 - 169	
13C-1,2,3,7,8-PeCDF	82.5	24.0 - 185	
13C-2,3,4,7,8-PeCDF	85.2	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	110	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	111	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	108	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	106	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	92.5	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	98.1	26.0 - 138	
13C-OCDF	91.8	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	97.6	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/17/2018

Reviewed By: _____
Date: 4/17/2018

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EPA Method 1613
PCDD/F

FAL ID: 11414-004-SA
Client ID: VS7
Matrix: Soil
Batch No: X4472

Date Extracted: 04-13-2018
Date Received: 04-02-2018
Amount: 5.01 g
% Solids: 96.52

ICal: PCDDFAL3-12-22-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-17-2018
2005 WHO TEQ: 0.665
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.138		-	0.0315				
1,2,3,7,8-PeCDD	ND	0.331		-	0.0468				
1,2,3,4,7,8-HxCDD	ND	0.290		-	0.0503				
1,2,3,6,7,8-HxCDD	0.714	-	J	0.0714	0.0490	Total TCDD	ND	0.138	
1,2,3,7,8,9-HxCDD	0.526	-	J	0.0526	0.0488	Total PeCDD	ND	0.331	
1,2,3,4,6,7,8-HpCDD	10.4	-		0.104	0.0541	Total HxCDD	5.34	-	
OCDD	67.9	-		0.0204	0.0888	Total HpCDD	19.1	-	
2,3,7,8-TCDF	0.523	-	J	0.0523	0.0243				
1,2,3,7,8-PeCDF	ND	0.204		-	0.0285				
2,3,4,7,8-PeCDF	0.637	-	J	0.191	0.0298				
1,2,3,4,7,8-HxCDF	0.571	-	J	0.0571	0.0255				
1,2,3,6,7,8-HxCDF	0.407	-	J	0.0407	0.0253				
2,3,4,6,7,8-HxCDF	0.366	-	J	0.0366	0.0279				
1,2,3,7,8,9-HxCDF	ND	0.218		-	0.0367	Total TCDF	3.35	-	
1,2,3,4,6,7,8-HpCDF	3.64	-	J	0.0364	0.0321	Total PeCDF	7.46	-	
1,2,3,4,7,8,9-HpCDF	ND	0.377		-	0.0396	Total HxCDF	6.54	-	
OCDF	7.64	-	J	0.00229	0.0843	Total HpCDF	8.50	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	104	25.0 - 164	
13C-1,2,3,7,8-PeCDD	89.6	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	85.1	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	94.7	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	101	23.0 - 140	
13C-OCDD	86.2	17.0 - 157	
13C-2,3,7,8-TCDF	104	24.0 - 169	
13C-1,2,3,7,8-PeCDF	80.7	24.0 - 185	
13C-2,3,4,7,8-PeCDF	82.7	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	103	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	107	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	105	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	105	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	86.9	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	97.9	26.0 - 138	
13C-OCDF	85.4	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	98.5	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/17/2018

Reviewed By: _____
Date: 4/17/2018

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El Dorado Hills, CA 95762
Tel: 916-934-0900
Fax: 916-934-0999

FAL USE ONLY
Laboratory Project No.: 11414
Temperature: 0 °C

Chain of Custody

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Please Print in Pen **Page** 1 **of** 1

CLIENT INFORMATION	**INVOICE INFORMATION** (if different from client info)	**PROJECT INFORMATION**
Company Name: Brusca Associates, Inc.	Company Name: Same	FAL Quote #: 3310
Contact Name: Joe Brusca	Contact Name:	P.O. #:
Address: 7633 Stonewood Court, Granite Bay, CA 95746	Address:	Project #: 137-002
Phone: 916-677-1470 Fax:	Phone: Fax:	Project Name: LATHROP 48-AC PROPERTY
Email: jbrusca@bruscaassociates.com	Email:	TAT (business days): ☐ 15 ☒ 10 ☐ 5* ☐ 3* (None)
		* FAL must agree with price and RUSH TAT in writing.

REPORT INFORMATION	**REPORT DISTRIBUTION** (email only is preferred)	**ADDITIONAL INSTRUCTIONS**
Report Level: ☐ I/II ☐ III ☐ IV	☐ Hardcopy	
☐ EDD: ☐ FAL Basic ☐ Geotracker ☐ Other: ☐ Custom: Contact FAL	☐ CD (.pdf including EDDs if requested)	
☐ California State Drinking Water Form	☒ Email (.pdf including EDDs if requested)	
System #: Source #		
Sampler: Employer:		

	Sample ID	Date Collected	Time	Matrix	# of containers	EPA 1613**	EPA 8290**	DLM 02.0	EPA 8280**	Appendix IX	EPA TO-9/9A	EPA 23/23A	EPA 1668	FAL 15	Other	Remarks
1	VS1	4/2/18	11:45	SOIL		☒										
2	VS3		11:52			☒										
3	VS5		11:57			☒										
4	VS7		12:03			☒										
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																

**CONGENERS: ☐ 2,3,7,8-TCDD only ☐ 2,3,7,8-TCDD/F only ☐ PCDD/F (Cl_4-Cl_8)

**TEQ: ☐ 1998 WHO ☒ 2005 WHO ☐ Other

Samples will be disposed of 90 days after sample receipt unless other arrangements have been made and agreed upon in writing.

Relinquished by: (Signature and Printed Name)	Date	Time	**Received by:** (Signature and Printed Name)	Date	Time
	4/2/18	15:25	Kathy Jop	4/2/2018	1525

Client understands that all terms described in the proposals, quotations, and/or the general terms provided in the current FAL price schedules will be followed.
FAL reserves the rights to terminate its service or withhold delivery of reports, if in FAL's sole discretion the terms of the project have been broken.

White Copy – Report Yellow Copy – Laboratory Pink Copy - Originator

Frontier Analytical Laboratory

Sample Login Form

FAL Project ID: **11414**

Client:	Brusca Associates, Inc.
Client Project ID:	137-002
Date Received:	04/02/2018
Time Received:	03:25 pm
Received By:	KZ
Logged In By:	KZ
# of Samples Received:	4
Duplicates:	0
Storage Location:	R-4

Method of Delivery:	Courier
Tracking Number:	NA
Shipping Container Received Intact	Yes
Custody seals(s) present?	No
Custody seals(s) intact?	No
Sample Arrival Temperature (C)	0
Cooling Method	Blue Ice/Ice
Chain Of Custody Present?	Yes
Return Shipping Container To Client	Yes
Test aqueous sample for residual Chlorine	No
Sodium Thiosulfate Added	No
Adequate Sample Volume	Yes
Appropriate Sample Container	Yes
pH Range of Aqueous Sample	N/A
Anomalies or additional comments:	

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April 30, 2018

FAL Project ID: 11441

Mr. Joe Brusca
Brusca Associates
7633 Stonewood Court
Granite Bay, CA 95746

Dear Mr. Brusca,

The following results are associated with Frontier Analytical Laboratory project **11441**. This corresponds to your **Lathrop 48-Ac Property** project under project number **137-002**. Eight solid samples were received on 4/11/2018 in good condition. These samples were extracted and analyzed by EPA Method 1613 for tetra through octa chlorinated dibenzo dioxins and furans. The Toxic Equivalency (TEQ) for your samples has been calculated using the 2005 World Health Organization's (WHO's) toxic equivalency factors (TEFs).The total TEQ is reported on the upper right hand corner of each sample data sheet. Brusca Associates requested a turnaround time of ten business days for project **11441**.

The following report consists of an Analytical Data section and a Sample Receipt section. The Analytical Data section contains our sample tracking log and the analytical results. The Sample Receipt section contains your chain of custody, our sample login form and the sample photos. The attached results are specifically for the samples referenced in this report only. These results meet all NELAC requirements and shall not be reproduced except in full. Frontier Analytical Laboratory's State of Oregon NELAP certificate number is **4041**. Our State of California ELAP certificate number is **2934**. This report has been emailed to you as a portable document format (PDF) file. A hardcopy will not be sent to you unless specifically requested.

If you have any questions regarding project **11441**, please contact me at (916) 934-0900. Thank you for choosing Frontier Analytical Laboratory for your analytical testing needs.

Sincerely,

Bradley B. Silverbush
Director of Operations

Frontier Analytical Laboratory

Sample Tracking Log

FAL Project ID: **11441**

Received on: **04/11/2018** Project Due: **04/26/2018** Storage: **R-4**

FAL Sample ID	Dup	Client Project ID	Client Sample ID	Requested Method	Matrix	Sampling Date	Sampling Time	Hold Time Due Date
11441-001-SA	0	137-002	VS18	EPA 1613 D/F	Soil	04/11/2018	11:22 am	04/11/2019
11441-002-SA	0	137-002	VS20	EPA 1613 D/F	Soil	04/11/2018	11:29 am	04/11/2019
11441-003-SA	0	137-002	VS22	EPA 1613 D/F	Soil	04/11/2018	11:34 am	04/11/2019
11441-004-SA	0	137-002	VS24	EPA 1613 D/F	Soil	04/11/2018	11:37 am	04/11/2019
11441-005-SA	0	137-002	VS35	EPA 1613 D/F	Soil	04/11/2018	12:43 pm	04/11/2019
11441-006-SA	0	137-002	VS37	EPA 1613 D/F	Soil	04/11/2018	12:48 pm	04/11/2019
11441-007-SA	0	137-002	VS39	EPA 1613 D/F	Soil	04/11/2018	12:52 pm	04/11/2019
11441-008-SA	0	137-002	VS41	EPA 1613 D/F	Soil	04/11/2018	12:57 pm	04/11/2019

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EPA Method 1613
PCDD/F

FAL ID: 11441-001-MB
Client ID: Method Blank
Matrix: Soil
Batch No: X4491

Date Extracted: 04-26-2018
Date Received: NA
Amount: 5.00 g

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-27-2018
2005 WHO TEQ: 0.0
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.226		-	0.0273				
1,2,3,7,8-PeCDD	ND	0.321		-	0.0570				
1,2,3,4,7,8-HxCDD	ND	0.379		-	0.0793				
1,2,3,6,7,8-HxCDD	ND	0.367		-	0.0940	Total TCDD	ND	0.226	
1,2,3,7,8,9-HxCDD	ND	0.342		-	0.0823	Total PeCDD	ND	0.321	
1,2,3,4,6,7,8-HpCDD	ND	0.421		-	0.0842	Total HxCDD	ND	0.379	
OCDD	ND	1.22		-	0.172	Total HpCDD	ND	0.421	
2,3,7,8-TCDF	ND	0.187		-	0.0269				
1,2,3,7,8-PeCDF	ND	0.222		-	0.0449				
2,3,4,7,8-PeCDF	ND	0.239		-	0.0468				
1,2,3,4,7,8-HxCDF	ND	0.186		-	0.0437				
1,2,3,6,7,8-HxCDF	ND	0.196		-	0.0417				
2,3,4,6,7,8-HxCDF	ND	0.200		-	0.0574				
1,2,3,7,8,9-HxCDF	ND	0.228		-	0.0657	Total TCDF	ND	0.187	
1,2,3,4,6,7,8-HpCDF	ND	0.229		-	0.0747	Total PeCDF	ND	0.239	
1,2,3,4,7,8,9-HpCDF	ND	0.256		-	0.0883	Total HxCDF	ND	0.228	
OCDF	ND	0.545		-	0.170	Total HpCDF	ND	0.256	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	66.1	25.0 - 164	
13C-1,2,3,7,8-PeCDD	68.9	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	67.5	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	67.2	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	64.5	23.0 - 140	
13C-OCDD	56.3	17.0 - 157	
13C-2,3,7,8-TCDF	67.6	24.0 - 169	
13C-1,2,3,7,8-PeCDF	66.6	24.0 - 185	
13C-2,3,4,7,8-PeCDF	66.2	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	64.8	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	63.2	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	62.6	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	62.4	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	62.2	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	64.4	26.0 - 138	
13C-OCDF	59.4	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	63.0	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/30/2018

Reviewed By: _____
Date: 4/30/2018

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EPA Method 1613
PCDD/F

FAL ID: 11441-001-OPR
Client ID: OPR
Matrix: Soil
Batch No: X4491

Date Extracted: 04-26-2018
Date Received: NA
Amount: 5.00 g

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: ng/ml

Acquired: 04-27-2018
2005 WHO TEQ: NA

Compound	Conc	QC Limits	Qual
2,3,7,8-TCDD	10.5	6.70 - 15.8	
1,2,3,7,8-PeCDD	51.4	35.0 - 71.0	
1,2,3,4,7,8-HxCDD	47.6	35.0 - 82.0	
1,2,3,6,7,8-HxCDD	49.1	38.0 - 67.0	
1,2,3,7,8,9-HxCDD	47.5	32.0 - 81.0	
1,2,3,4,6,7,8-HpCDD	49.4	35.0 - 70.0	
OCDD	104	78.0 - 144	
2,3,7,8-TCDF	9.90	7.50 - 15.8	
1,2,3,7,8-PeCDF	49.9	40.0 - 67.0	
2,3,4,7,8-PeCDF	49.4	34.0 - 80.0	
1,2,3,4,7,8-HxCDF	49.3	36.0 - 67.0	
1,2,3,6,7,8-HxCDF	49.4	42.0 - 65.0	
2,3,4,6,7,8-HxCDF	49.4	35.0 - 78.0	
1,2,3,7,8,9-HxCDF	49.9	39.0 - 65.0	
1,2,3,4,6,7,8-HpCDF	49.7	41.0 - 61.0	
1,2,3,4,7,8,9-HpCDF	50.3	39.0 - 69.0	
OCDF	96.8	63.0 - 170	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	85.2	20.0 - 175	
13C-1,2,3,7,8-PeCDD	86.3	21.0 - 227	
13C-1,2,3,4,7,8-HxCDD	92.2	21.0 - 193	
13C-1,2,3,6,7,8-HxCDD	88.6	25.0 - 163	
13C-1,2,3,4,6,7,8-HpCDD	86.5	26.0 - 166	
13C-OCDD	72.1	13.0 - 198	
13C-2,3,7,8-TCDF	90.5	22.0 - 152	
13C-1,2,3,7,8-PeCDF	82.7	21.0 - 192	
13C-2,3,4,7,8-PeCDF	85.3	13.0 - 328	
13C-1,2,3,4,7,8-HxCDF	85.0	19.0 - 202	
13C-1,2,3,6,7,8-HxCDF	83.7	21.0 - 159	
13C-2,3,4,6,7,8-HxCDF	83.3	22.0 - 176	
13C-1,2,3,7,8,9-HxCDF	83.5	17.0 - 205	
13C-1,2,3,4,6,7,8-HpCDF	83.3	21.0 - 158	
13C-1,2,3,4,7,8,9-HpCDF	86.4	20.0 - 186	
13C-OCDF	76.5	13.0 - 198	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	78.7	31.0 - 191	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____

Date: 4/30/2018

Reviewed By: _____

Date: 4/30/2018

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EPA Method 1613
PCDD/F

FAL ID: 11441-001-SA
Client ID: VS18
Matrix: Soil
Batch No: X4491

Date Extracted: 04-26-2018
Date Received: 04-11-2018
Amount: 5.01 g
% Solids: 92.06

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-28-2018
2005 WHO TEQ: 0.0453
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.166		-	0.0273				
1,2,3,7,8-PeCDD	ND	0.185		-	0.0570				
1,2,3,4,7,8-HxCDD	ND	0.201		-	0.0793				
1,2,3,6,7,8-HxCDD	ND	0.215		-	0.0940	Total TCDD	ND	0.166	
1,2,3,7,8,9-HxCDD	0.351	-	J	0.0351	0.0823	Total PeCDD	ND	0.185	
1,2,3,4,6,7,8-HpCDD	0.868	-	J	0.00868	0.0842	Total HxCDD	0.817	-	J
OCDD	5.17	-	J	0.00155	0.172	Total HpCDD	1.99	-	J
2,3,7,8-TCDF	ND	0.129		-	0.0269				
1,2,3,7,8-PeCDF	ND	0.143		-	0.0449				
2,3,4,7,8-PeCDF	ND	0.153		-	0.0468				
1,2,3,4,7,8-HxCDF	ND	0.182		-	0.0437				
1,2,3,6,7,8-HxCDF	ND	0.189		-	0.0417				
2,3,4,6,7,8-HxCDF	ND	0.197		-	0.0574				
1,2,3,7,8,9-HxCDF	ND	0.207		-	0.0657	Total TCDF	0.314	-	J
1,2,3,4,6,7,8-HpCDF	ND	0.131		-	0.0747	Total PeCDF	ND	0.156	
1,2,3,4,7,8,9-HpCDF	ND	0.177		-	0.0883	Total HxCDF	ND	0.207	
OCDF	ND	0.373		-	0.170	Total HpCDF	ND	0.177	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	91.7	25.0 - 164	
13C-1,2,3,7,8-PeCDD	95.4	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	99.6	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	95.1	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	92.8	23.0 - 140	
13C-OCDD	82.1	17.0 - 157	
13C-2,3,7,8-TCDF	94.8	24.0 - 169	
13C-1,2,3,7,8-PeCDF	91.5	24.0 - 185	
13C-2,3,4,7,8-PeCDF	91.5	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	94.0	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	89.6	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	88.6	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	90.2	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	92.2	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	90.9	26.0 - 138	
13C-OCDF	82.6	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	83.4	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____

Date: 4/30/2018

Reviewed By: _____

Date: 4/30/2018

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EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 11441-002-SA
Client ID: VS20
Matrix: Soil
Batch No: X4491

Date Extracted: 04-26-2018
Date Received: 04-11-2018
Amount: 5.01 g
% Solids: 90.84

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-28-2018
2005 WHO TEQ: 0.252
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.216		-	0.0273				
1,2,3,7,8-PeCDD	ND	0.269		-	0.0570				
1,2,3,4,7,8-HxCDD	ND	0.226		-	0.0793				
1,2,3,6,7,8-HxCDD	0.844	-	J	0.0844	0.0940	Total TCDD	0.855	-	J
1,2,3,7,8,9-HxCDD	ND	0.216		-	0.0823	Total PeCDD	ND	0.269	
1,2,3,4,6,7,8-HpCDD	4.16	-	J	0.0416	0.0842	Total HxCDD	3.76	-	J
OCDD	19.3	-		0.00579	0.172	Total HpCDD	8.35	-	
2,3,7,8-TCDF	ND	0.170		-	0.0269				
1,2,3,7,8-PeCDF	ND	0.184		-	0.0449				
2,3,4,7,8-PeCDF	ND	0.196		-	0.0468				
1,2,3,4,7,8-HxCDF	0.339	-	J	0.0339	0.0437				
1,2,3,6,7,8-HxCDF	0.595	-	J	0.0595	0.0417				
2,3,4,6,7,8-HxCDF	ND	0.148		-	0.0574				
1,2,3,7,8,9-HxCDF	ND	0.156		-	0.0657	Total TCDF	1.39	-	
1,2,3,4,6,7,8-HpCDF	2.52	-	J	0.0252	0.0747	Total PeCDF	3.58	-	D,J,M
1,2,3,4,7,8,9-HpCDF	ND	0.247		-	0.0883	Total HxCDF	10.3	-	D,M
OCDF	4.00	-	J	0.00120	0.170	Total HpCDF	9.04	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	81.6	25.0 - 164	
13C-1,2,3,7,8-PeCDD	86.0	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	87.4	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	87.5	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	80.3	23.0 - 140	
13C-OCDD	68.9	17.0 - 157	
13C-2,3,7,8-TCDF	84.3	24.0 - 169	
13C-1,2,3,7,8-PeCDF	82.0	24.0 - 185	
13C-2,3,4,7,8-PeCDF	83.2	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	84.5	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	81.1	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	78.6	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	78.9	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	79.2	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	79.6	26.0 - 138	
13C-OCDF	69.0	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	78.9	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/30/2018

Reviewed By: _____
Date: 4/30/2018

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EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 11441-003-SA
Client ID: VS22
Matrix: Soil
Batch No: X4491

Date Extracted: 04-26-2018
Date Received: 04-11-2018
Amount: 5.01 g
% Solids: 92.99

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-28-2018
2005 WHO TEQ: 0.0430
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.184		-	0.0273				
1,2,3,7,8-PeCDD	ND	0.237		-	0.0570				
1,2,3,4,7,8-HxCDD	ND	0.283		-	0.0793				
1,2,3,6,7,8-HxCDD	ND	0.287		-	0.0940	Total TCDD	ND	0.184	
1,2,3,7,8,9-HxCDD	ND	0.261		-	0.0823	Total PeCDD	ND	0.237	
1,2,3,4,6,7,8-HpCDD	2.64	-	J	0.0264	0.0842	Total HxCDD	ND	0.287	
OCDD	53.2	-		0.0160	0.172	Total HpCDD	7.57	-	
2,3,7,8-TCDF	ND	0.132		-	0.0269				
1,2,3,7,8-PeCDF	ND	0.191		-	0.0449				
2,3,4,7,8-PeCDF	ND	0.191		-	0.0468				
1,2,3,4,7,8-HxCDF	ND	0.220		-	0.0437				
1,2,3,6,7,8-HxCDF	ND	0.204		-	0.0417				
2,3,4,6,7,8-HxCDF	ND	0.225		-	0.0574				
1,2,3,7,8,9-HxCDF	ND	0.259		-	0.0657	Total TCDF	ND	0.132	
1,2,3,4,6,7,8-HpCDF	ND	0.206		-	0.0747	Total PeCDF	ND	0.191	
1,2,3,4,7,8,9-HpCDF	ND	0.224		-	0.0883	Total HxCDF	ND	0.259	
OCDF	2.20	-	J	0.000660	0.170	Total HpCDF	0.950	-	J

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	88.6	25.0 - 164	
13C-1,2,3,7,8-PeCDD	89.5	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	97.5	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	93.2	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	92.0	23.0 - 140	
13C-OCDD	82.0	17.0 - 157	
13C-2,3,7,8-TCDF	92.4	24.0 - 169	
13C-1,2,3,7,8-PeCDF	87.5	24.0 - 185	
13C-2,3,4,7,8-PeCDF	90.1	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	90.7	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	89.3	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	87.8	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	86.7	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	88.8	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	93.2	26.0 - 138	
13C-OCDF	83.9	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	84.2	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/30/2018

Reviewed By: _____
Date: 4/30/2018

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EPA Method 1613
PCDD/F

FAL ID: 11441-004-SA
Client ID: VS24
Matrix: Soil
Batch No: X4491

Date Extracted: 04-26-2018
Date Received: 04-11-2018
Amount: 5.02 g
% Solids: 93.09

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-28-2018
2005 WHO TEQ: 1.05
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.165		-	0.0273				
1,2,3,7,8-PeCDD	ND	0.247		-	0.0570				
1,2,3,4,7,8-HxCDD	ND	0.243		-	0.0793				
1,2,3,6,7,8-HxCDD	0.743	-	J	0.0743	0.0940	Total TCDD	ND	0.165	
1,2,3,7,8,9-HxCDD	0.510	-	J	0.0510	0.0823	Total PeCDD	ND	0.247	
1,2,3,4,6,7,8-HpCDD	12.8	-		0.128	0.0842	Total HxCDD	4.78	-	J
OCDD	112	-		0.0336	0.172	Total HpCDD	23.3	-	
2,3,7,8-TCDF	1.53	-		0.153	0.0269				
1,2,3,7,8-PeCDF	ND	0.228		-	0.0449				
2,3,4,7,8-PeCDF	0.995	-	J	0.299	0.0468				
1,2,3,4,7,8-HxCDF	1.02	-	J	0.102	0.0437				
1,2,3,6,7,8-HxCDF	0.528	-	J	0.0528	0.0417				
2,3,4,6,7,8-HxCDF	0.633	-	J	0.0633	0.0574				
1,2,3,7,8,9-HxCDF	0.486	-	J	0.0486	0.0657	Total TCDF	7.52	-	
1,2,3,4,6,7,8-HpCDF	4.12	-	J	0.0412	0.0747	Total PeCDF	6.47	-	
1,2,3,4,7,8,9-HpCDF	0.426	-	J	0.00426	0.0883	Total HxCDF	7.76	-	
OCDF	6.53	-	J	0.00196	0.170	Total HpCDF	9.52	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	89.2	25.0 - 164	
13C-1,2,3,7,8-PeCDD	92.9	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	95.1	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	92.5	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	89.4	23.0 - 140	
13C-OCDD	76.9	17.0 - 157	
13C-2,3,7,8-TCDF	93.7	24.0 - 169	
13C-1,2,3,7,8-PeCDF	91.6	24.0 - 185	
13C-2,3,4,7,8-PeCDF	92.6	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	90.0	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	88.9	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	87.5	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	86.4	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	87.1	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	87.1	26.0 - 138	
13C-OCDF	78.0	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	81.7	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/30/2018

Reviewed By: _____
Date: 4/30/2018

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EPA Method 1613
PCDD/F

FAL ID: 11441-005-SA
Client ID: VS35
Matrix: Soil
Batch No: X4491

Date Extracted: 04-26-2018
Date Received: 04-11-2018
Amount: 5.02 g
% Solids: 88.92

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-28-2018
2005 WHO TEQ: 0.158
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.229		-	0.0273				
1,2,3,7,8-PeCDD	ND	0.269		-	0.0570				
1,2,3,4,7,8-HxCDD	ND	0.204		-	0.0793				
1,2,3,6,7,8-HxCDD	0.501	-	J	0.0501	0.0940	Total TCDD	ND	0.229	
1,2,3,7,8,9-HxCDD	0.433	-	J	0.0433	0.0823	Total PeCDD	ND	0.269	
1,2,3,4,6,7,8-HpCDD	1.86	-	J	0.0186	0.0842	Total HxCDD	0.935	-	J
OCDD	14.9	-		0.00447	0.172	Total HpCDD	3.51	-	J
2,3,7,8-TCDF	ND	0.194		-	0.0269				
1,2,3,7,8-PeCDF	ND	0.202		-	0.0449				
2,3,4,7,8-PeCDF	ND	0.223		-	0.0468				
1,2,3,4,7,8-HxCDF	ND	0.172		-	0.0437				
1,2,3,6,7,8-HxCDF	ND	0.188		-	0.0417				
2,3,4,6,7,8-HxCDF	ND	0.202		-	0.0574				
1,2,3,7,8,9-HxCDF	0.368	-	J	0.0368	0.0657	Total TCDF	0.935	-	J
1,2,3,4,6,7,8-HpCDF	0.478	-	J	0.00478	0.0747	Total PeCDF	0.530	-	J
1,2,3,4,7,8,9-HpCDF	ND	0.189		-	0.0883	Total HxCDF	0.871	-	J,M
OCDF	1.44	-	J	0.000432	0.170	Total HpCDF	1.81	-	J

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	85.0	25.0 - 164	
13C-1,2,3,7,8-PeCDD	82.5	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	84.7	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	80.8	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	73.8	23.0 - 140	
13C-OCDD	59.6	17.0 - 157	
13C-2,3,7,8-TCDF	84.6	24.0 - 169	
13C-1,2,3,7,8-PeCDF	80.1	24.0 - 185	
13C-2,3,4,7,8-PeCDF	78.4	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	79.5	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	76.4	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	74.7	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	74.4	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	74.2	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	73.9	26.0 - 138	
13C-OCDF	63.3	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	79.2	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/30/2018

Reviewed By: _____
Date: 4/30/2018

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EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 11441-006-SA
Client ID: VS37
Matrix: Soil
Batch No: X4491

Date Extracted: 04-26-2018
Date Received: 04-11-2018
Amount: 5.02 g
% Solids: 87.73

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-28-2018
2005 WHO TEQ: 0.0529
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.147		-	0.0273				
1,2,3,7,8-PeCDD	ND	0.207		-	0.0570				
1,2,3,4,7,8-HxCDD	ND	0.187		-	0.0793				
1,2,3,6,7,8-HxCDD	ND	0.213		-	0.0940	Total TCDD	ND	0.147	
1,2,3,7,8,9-HxCDD	ND	0.183		-	0.0823	Total PeCDD	ND	0.207	
1,2,3,4,6,7,8-HpCDD	1.75	-	J	0.0175	0.0842	Total HxCDD	0.648	-	J
OCDD	14.7	-		0.00441	0.172	Total HpCDD	3.88	-	J
2,3,7,8-TCDF	ND	0.142		-	0.0269				
1,2,3,7,8-PeCDF	ND	0.154		-	0.0449				
2,3,4,7,8-PeCDF	ND	0.160		-	0.0468				
1,2,3,4,7,8-HxCDF	ND	0.133		-	0.0437				
1,2,3,6,7,8-HxCDF	ND	0.145		-	0.0417				
2,3,4,6,7,8-HxCDF	ND	0.146		-	0.0574				
1,2,3,7,8,9-HxCDF	0.310	-	J	0.0310	0.0657	Total TCDF	0.275	-	J
1,2,3,4,6,7,8-HpCDF	ND	0.190		-	0.0747	Total PeCDF	ND	0.160	
1,2,3,4,7,8,9-HpCDF	ND	0.222		-	0.0883	Total HxCDF	0.310	-	J
OCDF	ND	0.451		-	0.170	Total HpCDF	ND	0.222	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	94.6	25.0 - 164	
13C-1,2,3,7,8-PeCDD	98.9	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	105	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	99.7	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	93.5	23.0 - 140	
13C-OCDD	80.5	17.0 - 157	
13C-2,3,7,8-TCDF	98.5	24.0 - 169	
13C-1,2,3,7,8-PeCDF	94.8	24.0 - 185	
13C-2,3,4,7,8-PeCDF	95.9	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	97.0	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	92.7	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	93.7	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	91.7	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	94.2	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	95.0	26.0 - 138	
13C-OCDF	84.9	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	85.3	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/30/2018

Reviewed By: _____
Date: 4/30/2018

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EPA Method 1613
PCDD/F

FAL ID: 11441-007-SA
Client ID: VS39
Matrix: Soil
Batch No: X4491

Date Extracted: 04-26-2018
Date Received: 04-11-2018
Amount: 5.01 g
% Solids: 87.32

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-28-2018
2005 WHO TEQ: 0.117
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.200		-	0.0273				
1,2,3,7,8-PeCDD	ND	0.230		-	0.0570				
1,2,3,4,7,8-HxCDD	ND	0.249		-	0.0793				
1,2,3,6,7,8-HxCDD	0.428	-	J	0.0428	0.0940	Total TCDD	ND	0.200	
1,2,3,7,8,9-HxCDD	0.492	-	J	0.0492	0.0823	Total PeCDD	ND	0.230	
1,2,3,4,6,7,8-HpCDD	1.99	-	J	0.0199	0.0842	Total HxCDD	1.92	-	J
OCDD	17.3	-		0.00519	0.172	Total HpCDD	4.52	-	J
2,3,7,8-TCDF	ND	0.151		-	0.0269				
1,2,3,7,8-PeCDF	ND	0.147		-	0.0449				
2,3,4,7,8-PeCDF	ND	0.156		-	0.0468				
1,2,3,4,7,8-HxCDF	ND	0.188		-	0.0437				
1,2,3,6,7,8-HxCDF	ND	0.207		-	0.0417				
2,3,4,6,7,8-HxCDF	ND	0.212		-	0.0574				
1,2,3,7,8,9-HxCDF	ND	0.246		-	0.0657	Total TCDF	ND	0.151	
1,2,3,4,6,7,8-HpCDF	ND	0.264		-	0.0747	Total PeCDF	ND	0.156	
1,2,3,4,7,8,9-HpCDF	ND	0.295		-	0.0883	Total HxCDF	ND	0.246	
OCDF	1.20	-	J	0.000360	0.170	Total HpCDF	0.655	-	J

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	89.1	25.0 - 164	
13C-1,2,3,7,8-PeCDD	94.2	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	96.3	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	92.2	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	89.4	23.0 - 140	
13C-OCDD	71.3	17.0 - 157	
13C-2,3,7,8-TCDF	90.3	24.0 - 169	
13C-1,2,3,7,8-PeCDF	90.8	24.0 - 185	
13C-2,3,4,7,8-PeCDF	89.2	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	89.7	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	86.2	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	87.5	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	85.2	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	86.4	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	89.0	26.0 - 138	
13C-OCDF	78.8	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	83.3	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/30/2018

Reviewed By: _____
Date: 4/30/2018

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EPA Method 1613
PCDD/F

FAL ID: 11441-008-SA
Client ID: VS41
Matrix: Soil
Batch No: X4491

Date Extracted: 04-26-2018
Date Received: 04-11-2018
Amount: 5.02 g
% Solids: 92.82

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-28-2018
2005 WHO TEQ: 0.215
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.180		-	0.0273				
1,2,3,7,8-PeCDD	ND	0.226		-	0.0570				
1,2,3,4,7,8-HxCDD	ND	0.236		-	0.0793				
1,2,3,6,7,8-HxCDD	0.529	-	J	0.0529	0.0940	Total TCDD	ND	0.180	
1,2,3,7,8,9-HxCDD	0.369	-	J	0.0369	0.0823	Total PeCDD	ND	0.226	
1,2,3,4,6,7,8-HpCDD	8.24	-		0.0824	0.0842	Total HxCDD	2.96	-	J
OCDD	67.3	-		0.0202	0.172	Total HpCDD	15.0	-	
2,3,7,8-TCDF	ND	0.154		-	0.0269				
1,2,3,7,8-PeCDF	ND	0.202		-	0.0449				
2,3,4,7,8-PeCDF	ND	0.226		-	0.0468				
1,2,3,4,7,8-HxCDF	ND	0.177		-	0.0437				
1,2,3,6,7,8-HxCDF	ND	0.181		-	0.0417				
2,3,4,6,7,8-HxCDF	ND	0.175		-	0.0574				
1,2,3,7,8,9-HxCDF	ND	0.200		-	0.0657	Total TCDF	ND	0.154	
1,2,3,4,6,7,8-HpCDF	2.01	-	J	0.0201	0.0747	Total PeCDF	ND	0.226	
1,2,3,4,7,8,9-HpCDF	ND	0.171		-	0.0883	Total HxCDF	1.98	-	J
OCDF	7.03	-	J	0.00211	0.170	Total HpCDF	5.80	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	89.9	25.0 - 164	
13C-1,2,3,7,8-PeCDD	91.0	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	96.8	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	94.6	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	89.6	23.0 - 140	
13C-OCDD	81.3	17.0 - 157	
13C-2,3,7,8-TCDF	95.0	24.0 - 169	
13C-1,2,3,7,8-PeCDF	88.1	24.0 - 185	
13C-2,3,4,7,8-PeCDF	91.1	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	86.3	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	85.5	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	87.7	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	86.9	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	88.7	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	89.6	26.0 - 138	
13C-OCDF	80.9	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	84.0	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/30/2018

Reviewed By: _____
Date: 4/30/2018

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FRONTIER ANALYTICAL LABORATORY

Frontier Analytical Laboratory
5172 Hillsdale Circle
El Dorado Hills, CA 95762
Tel: 916-934-0900
Fax: 916-934-0999

FAL USE ONLY
Laboratory Project No.: 11441
Temperature: 0 °C

Chain of Custody

www.frontieranalytical.com

Please Print in Pen **Page** 1 **of** 1

CLIENT INFORMATION	**INVOICE INFORMATION** (if different from client info)	**PROJECT INFORMATION**
Company Name: Brusca Associates, Inc.	Company Name: Same	FAL Quote #: 3310
Contact Name: Joe Brusca	Contact Name:	P.O. #:
Address: PO Box 332, Roseville, CA 95661	Address:	Project #: 137-002
Phone: 916-677-1470 Fax:	Phone: Fax:	Project Name: LATHROP 48-Ac PROPERTY
Email: jbrusca@bruscaassociates.com	Email:	TAT (business days): ☐ 15 ☒ 10 ☐ 5* ☐ 3* (√ one)
		* FAL must agree with price and RUSH TAT in writing.

REPORT INFORMATION	**REPORT DISTRIBUTION** (email only is preferred)	**ADDITIONAL INSTRUCTIONS**
Report Level: ☐ I/II ☐ III ☐ IV	☐ Hardcopy	
☐ EDD: ☐ FAL Basic ☐ Geotracker ☐ Other: ____ ☐ Custom: Contact FAL	☐ CD (.pdf including EDDs if requested)	
☐ California State Drinking Water Form	☐ Email (.pdf including EDDs if requested)	
System #: Source #:		
Sampler: Employer:		

	Sample ID	Date Collected	Time Collected	Matrix	# of containers	EPA 1613**	EPA 8290**	DLM 02.0	EPA 8280**	Appendix IX	EPA TO-9/9A	EPA 23/23A	EPA 1668	FAL 15	Other	Remarks
1	VS18	4/11/18	11:22	SOIL		X										
2	VS20		11:29			X										
3	VS22		11:34			X										
4	VS24		11:37			X										
5	VS35		12:43			X										
6	VS37		12:48			X										
7	VS39		12:52			X										
8	VS41		12:57			X										
9																
10																
11																
12																
13																
14																
15																

****CONGENERS**	****TEQ**
☐ 2,3,7,8-TCDD only	☐ 1998 WHO
☐ 2,3,7,8-TCDD/F only	☑ 2005 WHO
☑ PCDD/F (Cl_4-Cl_8)	☐ Other

Samples will be disposed of 90 days after sample receipt unless other arrangements have been made and agreed upon in writing.

Relinquished by: (Signature and Printed Name)	**Date**	**Time**	**Received by:** (Signature and Printed Name)	**Date**	**Time**
	4/11/18	3:45pm	Kathy Zipp 1C-ZIPP	4/11/18	345

White Copy – Report Yellow Copy – Laboratory Pink Copy - Originator

Frontier Analytical Laboratory

Sample Login Form

FAL Project ID: **11441**

Client:	Brusca Associates, Inc.
Client Project ID:	137-002
Date Received:	04/11/2018
Time Received:	03:45 pm
Received By:	KZ
Logged In By:	KZ
# of Samples Received:	8
Duplicates:	0
Storage Location:	R-4

Method of Delivery:	Courier
Tracking Number:	NA
Shipping Container Received Intact	Yes
Custody seals(s) present?	No
Custody seals(s) intact?	No
Sample Arrival Temperature (C)	0
Cooling Method	Ice
Chain Of Custody Present?	Yes
Return Shipping Container To Client	Yes
Test aqueous sample for residual Chlorine	No
Sodium Thiosulfate Added	No
Adequate Sample Volume	Yes
Appropriate Sample Container	Yes
pH Range of Aqueous Sample	N/A
Anomalies or additional comments:	

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May 2, 2018

FAL Project ID: 11471

Mr. Joe Brusca
Brusca Associates
7633 Stonewood Court
Granite Bay, CA 95746

Dear Mr. Brusca,

The following results are associated with Frontier Analytical Laboratory project **11471**. This corresponds to your **Lathrop 48-Ac Property** project under project number **137-002**. Five soil samples were received on 4/13/2018 in good condition. These samples were extracted and analyzed by EPA Method 1613 for tetra through octa chlorinated dibenzo dioxins and furans. The Toxic Equivalency (TEQ) for your samples has been calculated using the 2005 World Health Organization's (WHO's) toxic equivalency factors (TEFs).The total TEQ is reported on the upper right hand corner of each sample data sheet. Brusca Associates requested a turnaround time of fifteen business days for project **11471**.

The following report consists of an Analytical Data section and a Sample Receipt section. The Analytical Data section contains our sample tracking log and the analytical results. The Sample Receipt section contains your chain of custody, our sample login form and a sample photo. The attached results are specifically for the samples referenced in this report only. These results meet all NELAC requirements and shall not be reproduced except in full. Frontier Analytical Laboratory's State of Oregon NELAP certificate number is **4041**. Our State of California ELAP certificate number is **2934**. This report has been emailed to you as a portable document format (PDF) file. A hardcopy will not be sent to you unless specifically requested.

If you have any questions regarding project **11471**, please contact me at (916) 934-0900. Thank you for choosing Frontier Analytical Laboratory for your analytical testing needs.

Sincerely,

Bradley B. Silverbush
Director of Operations

Frontier Analytical Laboratory

Sample Tracking Log

FAL Project ID: **11471**

Received on: **04/13/2018** Project Due: **05/07/2018** Storage: **R-3**

FAL Sample ID	Dup	Client Project ID	Client Sample ID	Requested Method	Matrix	Sampling Date	Sampling Time	Hold Time Due Date
11471-001-SA	0	137-002	VS53	EPA 1613 D/F	Soil	04/13/2018	10:44 am	04/15/2019
11471-002-SA	0	137-002	VS55	EPA 1613 D/F	Soil	04/13/2018	10:49 am	04/15/2019
11471-003-SA	0	137-002	VS57	EPA 1613 D/F	Soil	04/13/2018	10:54 am	04/15/2019
11471-004-SA	0	137-002	VS59	EPA 1613 D/F	Soil	04/13/2018	10:57 am	04/15/2019
11471-005-SA	0	137-002	VS65	EPA 1613 D/F	Soil	04/13/2018	11:23 am	04/15/2019

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EPA Method 1613
PCDD/F

FAL ID: 11471-001-MB
Client ID: Method Blank
Matrix: Soil
Batch No: X4493

Date Extracted: 04-30-2018
Date Received: NA
Amount: 5.00 g

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 05-01-2018
2005 WHO TEQ: 0.0
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.151		-	0.0273				
1,2,3,7,8-PeCDD	ND	0.182		-	0.0570				
1,2,3,4,7,8-HxCDD	ND	0.197		-	0.0793				
1,2,3,6,7,8-HxCDD	ND	0.221		-	0.0940	Total TCDD	ND	0.151	
1,2,3,7,8,9-HxCDD	ND	0.191		-	0.0823	Total PeCDD	ND	0.182	
1,2,3,4,6,7,8-HpCDD	ND	0.180		-	0.0842	Total HxCDD	ND	0.221	
OCDD	ND	0.314		-	0.172	Total HpCDD	ND	0.180	
2,3,7,8-TCDF	ND	0.116		-	0.0269				
1,2,3,7,8-PeCDF	ND	0.140		-	0.0449				
2,3,4,7,8-PeCDF	ND	0.141		-	0.0468				
1,2,3,4,7,8-HxCDF	ND	0.126		-	0.0437				
1,2,3,6,7,8-HxCDF	ND	0.137		-	0.0417				
2,3,4,6,7,8-HxCDF	ND	0.132		-	0.0574				
1,2,3,7,8,9-HxCDF	ND	0.160		-	0.0657	Total TCDF	ND	0.116	
1,2,3,4,6,7,8-HpCDF	ND	0.122		-	0.0747	Total PeCDF	ND	0.141	
1,2,3,4,7,8,9-HpCDF	ND	0.211		-	0.0883	Total HxCDF	ND	0.160	
OCDF	ND	0.225		-	0.170	Total HpCDF	ND	0.211	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	104	25.0 - 164	
13C-1,2,3,7,8-PeCDD	107	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	110	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	107	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	105	23.0 - 140	
13C-OCDD	101	17.0 - 157	
13C-2,3,7,8-TCDF	111	24.0 - 169	
13C-1,2,3,7,8-PeCDF	104	24.0 - 185	
13C-2,3,4,7,8-PeCDF	108	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	99.4	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	98.5	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	99.1	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	97.8	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	98.8	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	75.9	26.0 - 138	
13C-OCDF	97.2	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	94.0	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____

Date: 5/2/2018

Reviewed By: DPV

Date: 5/2/2018

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EPA Method 1613
PCDD/F

FAL ID: 11471-001-OPR
Client ID: OPR
Matrix: Soil
Batch No: X4493

Date Extracted: 04-30-2018
Date Received: NA
Amount: 5.00 g

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: ng/ml

Acquired: 05-01-2018
2005 WHO TEQ: NA

Compound	Conc	QC Limits	Qual
2,3,7,8-TCDD	10.5	6.70 - 15.8	
1,2,3,7,8-PeCDD	50.2	35.0 - 71.0	
1,2,3,4,7,8-HxCDD	50.0	35.0 - 82.0	
1,2,3,6,7,8-HxCDD	49.6	38.0 - 67.0	
1,2,3,7,8,9-HxCDD	47.4	32.0 - 81.0	
1,2,3,4,6,7,8-HpCDD	51.5	35.0 - 70.0	
OCDD	99.1	78.0 - 144	
2,3,7,8-TCDF	11.3	7.50 - 15.8	
1,2,3,7,8-PeCDF	50.8	40.0 - 67.0	
2,3,4,7,8-PeCDF	50.8	34.0 - 80.0	
1,2,3,4,7,8-HxCDF	51.2	36.0 - 67.0	
1,2,3,6,7,8-HxCDF	52.2	42.0 - 65.0	
2,3,4,6,7,8-HxCDF	51.5	35.0 - 78.0	
1,2,3,7,8,9-HxCDF	51.8	39.0 - 65.0	
1,2,3,4,6,7,8-HpCDF	51.6	41.0 - 61.0	
1,2,3,4,7,8,9-HpCDF	52.6	39.0 - 69.0	
OCDF	101	63.0 - 170	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	76.9	20.0 - 175	
13C-1,2,3,7,8-PeCDD	84.4	21.0 - 227	
13C-1,2,3,4,7,8-HxCDD	97.8	21.0 - 193	
13C-1,2,3,6,7,8-HxCDD	96.9	25.0 - 163	
13C-1,2,3,4,6,7,8-HpCDD	87.3	26.0 - 166	
13C-OCDD	84.1	13.0 - 198	
13C-2,3,7,8-TCDF	80.3	22.0 - 152	
13C-1,2,3,7,8-PeCDF	88.2	21.0 - 192	
13C-2,3,4,7,8-PeCDF	90.0	13.0 - 328	
13C-1,2,3,4,7,8-HxCDF	88.7	19.0 - 202	
13C-1,2,3,6,7,8-HxCDF	86.6	21.0 - 159	
13C-2,3,4,6,7,8-HxCDF	86.1	22.0 - 176	
13C-1,2,3,7,8,9-HxCDF	74.7	17.0 - 205	
13C-1,2,3,4,6,7,8-HpCDF	81.5	21.0 - 158	
13C-1,2,3,4,7,8,9-HpCDF	78.0	20.0 - 186	
13C-OCDF	79.1	13.0 - 198	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	72.0	31.0 - 191	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____

Date: 5/2/2018

Reviewed By: DPV

Date: 5/2/2018

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EPA Method 1613
PCDD/F

FAL ID: 11471-001-SA
Client ID: VS53
Matrix: Soil
Batch No: X4493

Date Extracted: 04-30-2018
Date Received: 04-13-2018
Amount: 5.04 g
% Solids: 92.01

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 05-01-2018
2005 WHO TEQ: 0.0123
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.172		-	0.0273				
1,2,3,7,8-PeCDD	ND	0.233		-	0.0570				
1,2,3,4,7,8-HxCDD	ND	0.234		-	0.0793				
1,2,3,6,7,8-HxCDD	ND	0.235		-	0.0940	Total TCDD	ND	0.172	
1,2,3,7,8,9-HxCDD	ND	0.215		-	0.0823	Total PeCDD	ND	0.233	
1,2,3,4,6,7,8-HpCDD	0.986	-	J	0.00986	0.0842	Total HxCDD	ND	0.235	
OCDD	8.05	-	J	0.00242	0.172	Total HpCDD	2.18	-	J
2,3,7,8-TCDF	ND	0.130		-	0.0269				
1,2,3,7,8-PeCDF	ND	0.145		-	0.0449				
2,3,4,7,8-PeCDF	ND	0.156		-	0.0468				
1,2,3,4,7,8-HxCDF	ND	0.148		-	0.0437				
1,2,3,6,7,8-HxCDF	ND	0.151		-	0.0417				
2,3,4,6,7,8-HxCDF	ND	0.160		-	0.0574				
1,2,3,7,8,9-HxCDF	ND	0.186		-	0.0657	Total TCDF	ND	0.130	
1,2,3,4,6,7,8-HpCDF	ND	0.246		-	0.0747	Total PeCDF	ND	0.156	
1,2,3,4,7,8,9-HpCDF	ND	0.285		-	0.0883	Total HxCDF	ND	0.186	
OCDF	ND	0.648		-	0.170	Total HpCDF	ND	0.285	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	81.8	25.0 - 164	
13C-1,2,3,7,8-PeCDD	90.8	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	105	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	102	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	92.7	23.0 - 140	
13C-OCDD	88.4	17.0 - 157	
13C-2,3,7,8-TCDF	76.6	24.0 - 169	
13C-1,2,3,7,8-PeCDF	91.7	24.0 - 185	
13C-2,3,4,7,8-PeCDF	93.7	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	93.9	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	92.3	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	90.9	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	88.0	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	91.1	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	93.4	26.0 - 138	
13C-OCDF	83.4	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	71.0	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____

Date: 5/2/2018

Reviewed By: DPV

Date: 5/2/2018

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EPA Method 1613
PCDD/F

FAL ID: 11471-002-SA
Client ID: VS55
Matrix: Soil
Batch No: X4493

Date Extracted: 04-30-2018
Date Received: 04-13-2018
Amount: 5.05 g
% Solids: 91.40

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 05-01-2018
2005 WHO TEQ: 0.0501
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.192		-	0.0273				
1,2,3,7,8-PeCDD	ND	0.208		-	0.0570				
1,2,3,4,7,8-HxCDD	ND	0.352		-	0.0793				
1,2,3,6,7,8-HxCDD	ND	0.339		-	0.0940	Total TCDD	ND	0.192	
1,2,3,7,8,9-HxCDD	ND	0.317		-	0.0823	Total PeCDD	ND	0.208	
1,2,3,4,6,7,8-HpCDD	3.14	-	J	0.0314	0.0842	Total HxCDD	0.728	-	J
OCDD	32.0	-		0.00960	0.172	Total HpCDD	6.23	-	
2,3,7,8-TCDF	ND	0.191		-	0.0269				
1,2,3,7,8-PeCDF	ND	0.209		-	0.0449				
2,3,4,7,8-PeCDF	ND	0.219		-	0.0468				
1,2,3,4,7,8-HxCDF	ND	0.167		-	0.0437				
1,2,3,6,7,8-HxCDF	ND	0.156		-	0.0417				
2,3,4,6,7,8-HxCDF	ND	0.177		-	0.0574				
1,2,3,7,8,9-HxCDF	ND	0.212		-	0.0657	Total TCDF	ND	0.191	
1,2,3,4,6,7,8-HpCDF	0.850	-	J	0.00850	0.0747	Total PeCDF	0.874	-	J,M
1,2,3,4,7,8,9-HpCDF	ND	0.241		-	0.0883	Total HxCDF	1.53	-	J
OCDF	1.92	-	J	0.000576	0.170	Total HpCDF	2.98	-	J

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	79.6	25.0 - 164	
13C-1,2,3,7,8-PeCDD	90.2	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	107	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	105	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	92.1	23.0 - 140	
13C-OCDD	88.3	17.0 - 157	
13C-2,3,7,8-TCDF	80.7	24.0 - 169	
13C-1,2,3,7,8-PeCDF	92.0	24.0 - 185	
13C-2,3,4,7,8-PeCDF	93.6	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	96.4	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	96.5	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	92.5	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	82.4	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	78.6	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	79.6	26.0 - 138	
13C-OCDF	84.8	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	73.4	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____

Date: 5/2/2018

Reviewed By: DPV

Date: 5/2/2018

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EPA Method 1613
PCDD/F

FAL ID: 11471-003-SA
Client ID: VS57
Matrix: Soil
Batch No: X4493

Date Extracted: 04-30-2018
Date Received: 04-13-2018
Amount: 5.09 g
% Solids: 91.21

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 05-01-2018
2005 WHO TEQ: 0.0622
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.205		-	0.0273				
1,2,3,7,8-PeCDD	ND	0.255		-	0.0570				
1,2,3,4,7,8-HxCDD	ND	0.200		-	0.0793				
1,2,3,6,7,8-HxCDD	ND	0.220		-	0.0940	Total TCDD	ND	0.205	
1,2,3,7,8,9-HxCDD	ND	0.192		-	0.0823	Total PeCDD	ND	0.255	
1,2,3,4,6,7,8-HpCDD	4.06	-	J	0.0406	0.0842	Total HxCDD	1.01	-	J
OCDD	31.8	-		0.00954	0.172	Total HpCDD	7.32	-	
2,3,7,8-TCDF	ND	0.153		-	0.0269				
1,2,3,7,8-PeCDF	ND	0.190		-	0.0449				
2,3,4,7,8-PeCDF	ND	0.206		-	0.0468				
1,2,3,4,7,8-HxCDF	ND	0.165		-	0.0437				
1,2,3,6,7,8-HxCDF	ND	0.182		-	0.0417				
2,3,4,6,7,8-HxCDF	ND	0.182		-	0.0574				
1,2,3,7,8,9-HxCDF	ND	0.229		-	0.0657	Total TCDF	ND	0.153	
1,2,3,4,6,7,8-HpCDF	1.11	-	J	0.0111	0.0747	Total PeCDF	ND	0.206	
1,2,3,4,7,8,9-HpCDF	ND	0.181		-	0.0883	Total HxCDF	0.433	-	J
OCDF	3.14	-	J	0.000942	0.170	Total HpCDF	2.56	-	J

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	80.3	25.0 - 164	
13C-1,2,3,7,8-PeCDD	89.0	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	107	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	107	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	91.7	23.0 - 140	
13C-OCDD	90.5	17.0 - 157	
13C-2,3,7,8-TCDF	81.0	24.0 - 169	
13C-1,2,3,7,8-PeCDF	95.5	24.0 - 185	
13C-2,3,4,7,8-PeCDF	94.5	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	95.8	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	93.9	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	93.6	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	84.8	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	80.3	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	88.6	26.0 - 138	
13C-OCDF	85.1	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	71.4	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____

Date: 5/2/2018

Reviewed By: DPV

Date: 5/2/2018

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EPA Method 1613
PCDD/F

FAL ID: 11471-004-SA
Client ID: VS59
Matrix: Soil
Batch No: X4493

Date Extracted: 04-30-2018
Date Received: 04-13-2018
Amount: 5.02 g
% Solids: 93.03

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 05-01-2018
2005 WHO TEQ: 0.332
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.154		-	0.0273				
1,2,3,7,8-PeCDD	ND	0.260		-	0.0570				
1,2,3,4,7,8-HxCDD	ND	0.323		-	0.0793				
1,2,3,6,7,8-HxCDD	ND	0.351		-	0.0940	Total TCDD	0.433	-	J
1,2,3,7,8,9-HxCDD	ND	0.308		-	0.0823	Total PeCDD	ND	0.260	
1,2,3,4,6,7,8-HpCDD	3.03	-	J	0.0303	0.0842	Total HxCDD	ND	0.351	
OCDD	31.5	-		0.00945	0.172	Total HpCDD	5.92	-	
2,3,7,8-TCDF	ND	0.197		-	0.0269				
1,2,3,7,8-PeCDF	ND	0.167		-	0.0449				
2,3,4,7,8-PeCDF	0.952	-	J	0.286	0.0468				
1,2,3,4,7,8-HxCDF	ND	0.157		-	0.0437				
1,2,3,6,7,8-HxCDF	ND	0.157		-	0.0417				
2,3,4,6,7,8-HxCDF	ND	0.163		-	0.0574				
1,2,3,7,8,9-HxCDF	ND	0.205		-	0.0657	Total TCDF	1.37	-	M
1,2,3,4,6,7,8-HpCDF	0.586	-	J	0.00586	0.0747	Total PeCDF	5.22	-	
1,2,3,4,7,8,9-HpCDF	ND	0.139		-	0.0883	Total HxCDF	1.02	-	J
OCDF	3.44	-	J	0.00103	0.170	Total HpCDF	2.28	-	J

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	80.5	25.0 - 164	
13C-1,2,3,7,8-PeCDD	88.1	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	106	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	102	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	87.8	23.0 - 140	
13C-OCDD	82.7	17.0 - 157	
13C-2,3,7,8-TCDF	80.7	24.0 - 169	
13C-1,2,3,7,8-PeCDF	91.6	24.0 - 185	
13C-2,3,4,7,8-PeCDF	92.0	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	96.5	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	93.0	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	90.5	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	83.4	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	78.4	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	81.6	26.0 - 138	
13C-OCDF	79.4	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	74.8	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 5/2/2018

Reviewed By: DPV
Date: 5/2/2018

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EPA Method 1613
PCDD/F

FAL ID: 11471-005-SA
Client ID: VS65
Matrix: Soil
Batch No: X4493

Date Extracted: 04-30-2018
Date Received: 04-13-2018
Amount: 5.01 g
% Solids: 95.58

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 05-01-2018
2005 WHO TEQ: 0.139
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.184		-	0.0273				
1,2,3,7,8-PeCDD	ND	0.232		-	0.0570				
1,2,3,4,7,8-HxCDD	ND	0.222		-	0.0793				
1,2,3,6,7,8-HxCDD	ND	0.239		-	0.0940	Total TCDD	ND	0.184	
1,2,3,7,8,9-HxCDD	ND	0.211		-	0.0823	Total PeCDD	ND	0.232	
1,2,3,4,6,7,8-HpCDD	5.37	-		0.0537	0.0842	Total HxCDD	2.20	-	J
OCDD	52.8	-		0.0158	0.172	Total HpCDD	10.2	-	
2,3,7,8-TCDF	0.561	-	J	0.0561	0.0269				
1,2,3,7,8-PeCDF	ND	0.131		-	0.0449				
2,3,4,7,8-PeCDF	ND	0.140		-	0.0468				
1,2,3,4,7,8-HxCDF	ND	0.131		-	0.0437				
1,2,3,6,7,8-HxCDF	ND	0.139		-	0.0417				
2,3,4,6,7,8-HxCDF	ND	0.148		-	0.0574				
1,2,3,7,8,9-HxCDF	ND	0.194		-	0.0657	Total TCDF	1.91	-	
1,2,3,4,6,7,8-HpCDF	1.18	-	J	0.0118	0.0747	Total PeCDF	0.776	-	J
1,2,3,4,7,8,9-HpCDF	ND	0.143		-	0.0883	Total HxCDF	1.20	-	J
OCDF	4.63	-	J	0.00139	0.170	Total HpCDF	4.03	-	J

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	78.2	25.0 - 164	
13C-1,2,3,7,8-PeCDD	86.3	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	107	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	100	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	88.8	23.0 - 140	
13C-OCDD	86.0	17.0 - 157	
13C-2,3,7,8-TCDF	77.8	24.0 - 169	
13C-1,2,3,7,8-PeCDF	91.3	24.0 - 185	
13C-2,3,4,7,8-PeCDF	91.2	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	95.1	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	92.6	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	89.5	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	78.6	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	78.8	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	74.4	26.0 - 138	
13C-OCDF	82.5	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	69.2	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 5/2/2018

Reviewed By: DPV
Date: 5/2/2018

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FRONTIER ANALYTICAL LABORATORY

Frontier Analytical Laboratory
5172 Hillsdale Circle
El Dorado Hills, CA 95762
Tel: 916-934-0900
Fax: 916-934-0999

FAL USE ONLY

Laboratory Project No.: 11471

Temperature: 0 °C

Chain of Custody

www.frontieranalytical.com

Please Print in Pen Page 1 of 1

CLIENT INFORMATION	**INVOICE INFORMATION** (if different from client info)	**PROJECT INFORMATION**
Company Name: Brusca Associates, Inc.	Company Name: Same	FAL Quote #: 3310
Contact Name: Joe Brusca	Contact Name:	P.O. #:
Address: PO Box 332, Roseville, CA 95661	Address:	Project #: 137-002
Phone: 916-677-1470 Fax:	Phone: Fax:	Project Name: LATHROP 48-AC PROPERTY
Email: jbrusca@bruscaassociates.com	Email:	TAT (business days): ☐ 15 ☒ 10 ☐ 5* ☐ 3* (√ one)
		* FAL must agree with price and RUSH TAT in writing.

REPORT INFORMATION	**REPORT DISTRIBUTION** (email only is preferred)	**ADDITIONAL INSTRUCTIONS**
Report Level: ☐ I/II ☐ III ☐ IV	☐ Hardcopy	Kathy to Joe 15-TAT
☐ EDD: ☐ FAL Basic ☐ Geotracker ☐ Other: ☐ Custom: Contact FAL	☐ CD (.pdf including EDDs if requested)	
☐ California State Drinking Water Form	☐ Email (.pdf including EDDs if requested)	
System #: Source #:		
Sampler: Employer:		

	Sample ID	Date Collected	Time	Matrix	# of containers	EPA 1613**	EPA 8290**	DLM 02.0	EPA 8280**	Appendix IX	EPA TO-9/9A	EPA 23/23A	EPA 1668	FAL 15	Other	Remarks
1	VS53	4/13/18	10:44	SOIL												
2	VS55		10:49													
3	VS57		10:54													
4	VS59		10:57													
5	VS65		11:23													
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																

**CONGENERS	**TEQ
☐ 2,3,7,8-TCDD only	☐ 1998 WHO
☐ 2,3,7,8-TCDD/F only	☑ 2005 WHO
☑ PCDD/F (Cl_4-Cl_8)	☐ Other

Samples will be disposed of 90 days after sample receipt unless other arrangements have been made and agreed upon in writing.

Relinquished by: (Signature and Printed Name)	Date	Time	**Received by:** (Signature and Printed Name)	Date	Time
	4/13/18	2:12PM	Kathy Zoo Krupp	4/13/18	1412

Client understands that all terms described in the proposals, quotations, and/or the general terms provided in the current FAL price schedules will be followed.
FAL reserves the rights to terminate its service or withhold delivery of reports, if in FAL's sole discretion the terms of the project have been broken.

White Copy – Report Yellow Copy – Laboratory Pink Copy - Originator

Frontier Analytical Laboratory

Sample Login Form

FAL Project ID: **11471**

Client:	Brusca Associates, Inc.
Client Project ID:	137-002
Date Received:	04/13/2018
Time Received:	02:12 pm
Received By:	KZ
Logged In By:	KZ
# of Samples Received:	5
Duplicates:	0
Storage Location:	R-3

Method of Delivery:	Courier
Tracking Number:	NA
Shipping Container Received Intact	Yes
Custody seals(s) present?	No
Custody seals(s) intact?	No
Sample Arrival Temperature (C)	0
Cooling Method	Ice
Chain Of Custody Present?	Yes
Return Shipping Container To Client	Yes
Test aqueous sample for residual Chlorine	No
Sodium Thiosulfate Added	No
Adequate Sample Volume	Yes
Appropriate Sample Container	Yes
pH Range of Aqueous Sample	N/A
Anomalies or additional comments:	

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SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

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

17 April 2018

Joe Brusca
Brusca Associates Inc.
PO Box 332
Roseville, CA 95661

RE: Lathrop 48 Acre Property

Enclosed are the results of analyses for samples received by the laboratory on 04/05/18 09:55. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Mike Jaroudi
Project Manager

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

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

Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/17/18 15:58

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SP1-1	T181153-01	Soil	04/04/18 11:59	04/05/18 09:55
SP1-5	T181153-05	Soil	04/04/18 12:12	04/05/18 09:55
SP1-6	T181153-06	Soil	04/04/18 12:13	04/05/18 09:55
SP1-8	T181153-08	Soil	04/04/18 12:22	04/05/18 09:55

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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.

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

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

Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/17/18 15:58

DETECTIONS SUMMARY

Sample ID: SP1-1 **Laboratory ID:** T181153-01

Analyte	Result	Reporting Limit	Units	Method	Notes
Antimony	**1.5**	1.0	ug/l	6020 ICP-MS	AO-1
Arsenic	**30**	1.0	ug/l	6020 ICP-MS	AO-1
Barium	**480**	1.0	ug/l	6020 ICP-MS	AO-1
Beryllium	**1.2**	1.0	ug/l	6020 ICP-MS	AO-1
Cadmium	**2.1**	1.0	ug/l	6020 ICP-MS	AO-1
Chromium	**69**	1.0	ug/l	6020 ICP-MS	AO-1
Cobalt	**45**	1.0	ug/l	6020 ICP-MS	AO-1
Copper	**120**	1.0	ug/l	6020 ICP-MS	AO-1
Lead	**300**	2.0	ug/l	6020 ICP-MS	AO-1
Mercury	**0.18**	0.10	ug/l	6020 ICP-MS	AO-1
Molybdenum	**21**	1.0	ug/l	6020 ICP-MS	AO-1
Nickel	**60**	1.0	ug/l	6020 ICP-MS	AO-1
Silver	**5.3**	1.0	ug/l	6020 ICP-MS	AO-1
Vanadium	**260**	1.0	ug/l	6020 ICP-MS	AO-1
Zinc	**440**	1.0	ug/l	6020 ICP-MS	AO-1

Sample ID: SP1-5 **Laboratory ID:** T181153-05

Analyte	Result	Reporting Limit	Units	Method	Notes
Antimony	**1.5**	1.0	ug/l	6020 ICP-MS	AO-1
Arsenic	**20**	1.0	ug/l	6020 ICP-MS	AO-1
Barium	**340**	1.0	ug/l	6020 ICP-MS	AO-1
Cadmium	**1.6**	1.0	ug/l	6020 ICP-MS	AO-1
Chromium	**60**	1.0	ug/l	6020 ICP-MS	AO-1
Cobalt	**39**	1.0	ug/l	6020 ICP-MS	AO-1
Copper	**200**	1.0	ug/l	6020 ICP-MS	AO-1
Lead	**360**	2.0	ug/l	6020 ICP-MS	AO-1
Mercury	**0.28**	0.10	ug/l	6020 ICP-MS	AO-1
Molybdenum	**16**	1.0	ug/l	6020 ICP-MS	AO-1
Nickel	**45**	1.0	ug/l	6020 ICP-MS	AO-1
Silver	**9.0**	1.0	ug/l	6020 ICP-MS	AO-1
Vanadium	**160**	1.0	ug/l	6020 ICP-MS	AO-1

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Mike Jaroudi, Project Manager

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Providing Quality Analytical Services Nationwide

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

Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/17/18 15:58

Sample ID: SP1-5 **Laboratory ID:** T181153-05

Analyte	Result	Reporting Limit	Units	Method	Notes
Zinc	**350**	1.0	ug/l	6020 ICP-MS	AO-1

Sample ID: SP1-6 **Laboratory ID:** T181153-06

Analyte	Result	Reporting Limit	Units	Method	Notes
Antimony	**1.5**	1.0	ug/l	6020 ICP-MS	AO-1
Arsenic	**24**	1.0	ug/l	6020 ICP-MS	AO-1
Barium	**510**	1.0	ug/l	6020 ICP-MS	AO-1
Beryllium	**1.1**	1.0	ug/l	6020 ICP-MS	AO-1
Cadmium	**2.0**	1.0	ug/l	6020 ICP-MS	AO-1
Chromium	**56**	1.0	ug/l	6020 ICP-MS	AO-1
Cobalt	**39**	1.0	ug/l	6020 ICP-MS	AO-1
Copper	**110**	1.0	ug/l	6020 ICP-MS	AO-1
Lead	**390**	2.0	ug/l	6020 ICP-MS	AO-1
Mercury	**0.22**	0.10	ug/l	6020 ICP-MS	AO-1
Molybdenum	**16**	1.0	ug/l	6020 ICP-MS	AO-1
Nickel	**54**	1.0	ug/l	6020 ICP-MS	AO-1
Silver	**5.0**	1.0	ug/l	6020 ICP-MS	AO-1
Vanadium	**190**	1.0	ug/l	6020 ICP-MS	AO-1
Zinc	**380**	1.0	ug/l	6020 ICP-MS	AO-1

Sample ID: SP1-8 **Laboratory ID:** T181153-08

Analyte	Result	Reporting Limit	Units	Method	Notes
Antimony	**1.0**	1.0	ug/l	6020 ICP-MS	AO-1
Arsenic	**27**	1.0	ug/l	6020 ICP-MS	AO-1
Barium	**520**	1.0	ug/l	6020 ICP-MS	AO-1
Beryllium	**1.1**	1.0	ug/l	6020 ICP-MS	AO-1
Cadmium	**1.1**	1.0	ug/l	6020 ICP-MS	AO-1
Chromium	**57**	1.0	ug/l	6020 ICP-MS	AO-1
Cobalt	**37**	1.0	ug/l	6020 ICP-MS	AO-1
Copper	**85**	1.0	ug/l	6020 ICP-MS	AO-1
Lead	**140**	2.0	ug/l	6020 ICP-MS	AO-1
Mercury	**0.14**	0.10	ug/l	6020 ICP-MS	AO-1
Molybdenum	**24**	1.0	ug/l	6020 ICP-MS	AO-1

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/17/18 15:58

Sample ID: SP1-8 **Laboratory ID:** T181153-08

Analyte	Result	Reporting Limit	Units	Method	Notes
Nickel	**53**	1.0	ug/l	6020 ICP-MS	AO-1
Silver	**3.5**	1.0	ug/l	6020 ICP-MS	AO-1
Vanadium	**240**	1.0	ug/l	6020 ICP-MS	AO-1
Zinc	**370**	1.0	ug/l	6020 ICP-MS	AO-1

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/17/18 15:58

SP1-1

T181153-01 (Soil)

SunStar Laboratories, Inc.

Metals by EPA 6020 Method

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Antimony	**1.5**	1.0	ug/l	1	8041135	04/12/18	04/17/18	6020 ICP-MS	AO-1
Arsenic	**30**	1.0	"	"	"	"	"	"	AO-1
Barium	**480**	1.0	"	"	"	"	"	"	AO-1
Beryllium	**1.2**	1.0	"	"	"	"	"	"	AO-1
Cadmium	**2.1**	1.0	"	"	"	"	"	"	AO-1
Chromium	**69**	1.0	"	"	"	"	"	"	AO-1
Cobalt	**45**	1.0	"	"	"	"	"	"	AO-1
Copper	**120**	1.0	"	"	"	"	"	"	AO-1
Lead	**300**	2.0	"	"	"	"	"	"	AO-1
Mercury	**0.18**	0.10	"	"	"	"	"	"	AO-1
Molybdenum	**21**	1.0	"	"	"	"	"	"	AO-1
Nickel	**60**	1.0	"	"	"	"	"	"	AO-1
Selenium	ND	5.0	"	"	"	"	"	"	AO-1
Silver	**5.3**	1.0	"	"	"	"	"	"	AO-1
Thallium	ND	1.0	"	"	"	"	"	"	AO-1
Vanadium	**260**	1.0	"	"	"	"	"	"	AO-1
Zinc	**440**	1.0	"	"	"	"	"	"	AO-1

SunStar Laboratories, Inc.

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Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/17/18 15:58

SP1-5

T181153-05 (Soil)

SunStar Laboratories, Inc.

Metals by EPA 6020 Method

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Antimony	**1.5**	1.0	ug/l	1	8041135	04/11/18	04/17/18	6020 ICP-MS	AO-1
Arsenic	**20**	1.0	"	"	"	"	"	"	AO-1
Barium	**340**	1.0	"	"	"	"	"	"	AO-1
Beryllium	ND	1.0	"	"	"	"	"	"	AO-1
Cadmium	**1.6**	1.0	"	"	"	"	"	"	AO-1
Chromium	**60**	1.0	"	"	"	"	"	"	AO-1
Cobalt	**39**	1.0	"	"	"	"	"	"	AO-1
Copper	**200**	1.0	"	"	"	"	"	"	AO-1
Lead	**360**	2.0	"	"	"	"	"	"	AO-1
Mercury	**0.28**	0.10	"	"	"	"	"	"	AO-1
Molybdenum	**16**	1.0	"	"	"	"	"	"	AO-1
Nickel	**45**	1.0	"	"	"	"	"	"	AO-1
Selenium	ND	5.0	"	"	"	"	"	"	AO-1
Silver	**9.0**	1.0	"	"	"	"	"	"	AO-1
Thallium	ND	1.0	"	"	"	"	"	"	AO-1
Vanadium	**160**	1.0	"	"	"	"	"	"	AO-1
Zinc	**350**	1.0	"	"	"	"	"	"	AO-1

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/17/18 15:58

SP1-6

T181153-06 (Soil)

SunStar Laboratories, Inc.

Metals by EPA 6020 Method

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Antimony	**1.5**	1.0	ug/l	1	8041135	04/12/18	04/17/18	6020 ICP-MS	AO-1
Arsenic	**24**	1.0	"	"	"	"	"	"	AO-1
Barium	**510**	1.0	"	"	"	"	"	"	AO-1
Beryllium	**1.1**	1.0	"	"	"	"	"	"	AO-1
Cadmium	**2.0**	1.0	"	"	"	"	"	"	AO-1
Chromium	**56**	1.0	"	"	"	"	"	"	AO-1
Cobalt	**39**	1.0	"	"	"	"	"	"	AO-1
Copper	**110**	1.0	"	"	"	"	"	"	AO-1
Lead	**390**	2.0	"	"	"	"	"	"	AO-1
Mercury	**0.22**	0.10	"	"	"	"	"	"	AO-1
Molybdenum	**16**	1.0	"	"	"	"	"	"	AO-1
Nickel	**54**	1.0	"	"	"	"	"	"	AO-1
Selenium	ND	5.0	"	"	"	"	"	"	AO-1
Silver	**5.0**	1.0	"	"	"	"	"	"	AO-1
Thallium	ND	1.0	"	"	"	"	"	"	AO-1
Vanadium	**190**	1.0	"	"	"	"	"	"	AO-1
Zinc	**380**	1.0	"	"	"	"	"	"	AO-1

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/17/18 15:58

SP1-8

T181153-08 (Soil)

SunStar Laboratories, Inc.

Metals by EPA 6020 Method

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Antimony	**1.0**	1.0	ug/l	1	8041135	04/12/18	04/17/18	6020 ICP-MS	AO-1
Arsenic	**27**	1.0	"	"	"	"	"	"	AO-1
Barium	**520**	1.0	"	"	"	"	"	"	AO-1
Beryllium	**1.1**	1.0	"	"	"	"	"	"	AO-1
Cadmium	**1.1**	1.0	"	"	"	"	"	"	AO-1
Chromium	**57**	1.0	"	"	"	"	"	"	AO-1
Cobalt	**37**	1.0	"	"	"	"	"	"	AO-1
Copper	**85**	1.0	"	"	"	"	"	"	AO-1
Lead	**140**	2.0	"	"	"	"	"	"	AO-1
Mercury	**0.14**	0.10	"	"	"	"	"	"	AO-1
Molybdenum	**24**	1.0	"	"	"	"	"	"	AO-1
Nickel	**53**	1.0	"	"	"	"	"	"	AO-1
Selenium	ND	5.0	"	"	"	"	"	"	AO-1
Silver	**3.5**	1.0	"	"	"	"	"	"	AO-1
Thallium	ND	1.0	"	"	"	"	"	"	AO-1
Vanadium	**240**	1.0	"	"	"	"	"	"	AO-1
Zinc	**370**	1.0	"	"	"	"	"	"	AO-1

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/17/18 15:58

Metals by EPA 6020 Method - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8041135 - EPA 3010A										
Blank (8041135-BLK1)				Prepared: 04/11/18 Analyzed: 04/17/18						
Antimony	ND	1.0	ug/l							AO-1
Arsenic	ND	1.0	"							AO-1
Barium	16.1	1.0	"							AO-1, QB-01
Beryllium	ND	1.0	"							AO-1
Cadmium	ND	1.0	"							AO-1
Chromium	1.93	1.0	"							AO-1, QB-01
Cobalt	ND	1.0	"							AO-1
Copper	1.50	1.0	"							AO-1, QB-01
Lead	ND	2.0	"							AO-1
Mercury	ND	0.10	"							AO-1
Molybdenum	ND	1.0	"							AO-1
Nickel	ND	1.0	"							AO-1
Selenium	ND	5.0	"							AO-1
Silver	ND	1.0	"							AO-1
Thallium	ND	1.0	"							AO-1
Vanadium	3.01	1.0	"							AO-1, QB-01
Zinc	11.1	1.0	"							AO-1, QB-01
LCS (8041135-BS1)				Prepared: 04/11/18 Analyzed: 04/17/18						
Arsenic	48.2	1.0	ug/l	50.0		96.4	80-120			AO-1
Barium	48.8	1.0	"	50.0		97.5	80-120			AO-1
Cadmium	47.7	1.0	"	50.0		95.4	80-120			AO-1
Chromium	52.4	1.0	"	50.0		105	80-120			AO-1
Lead	51.3	2.0	"	50.0		103	80-120			AO-1
Duplicate (8041135-DUP1)		**Source: T181153-05**		Prepared: 04/11/18 Analyzed: 04/17/18						
Barium	432	5.0	ug/l		341			23.6	200	AO-1
Lead	445	10	"		361			20.8	200	AO-1

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/17/18 15:58

Metals by EPA 6020 Method - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8041135 - EPA 3010A										
Matrix Spike (8041135-MS1)	**Source: T181153-05**			Prepared: 04/11/18 Analyzed: 04/17/18						
Arsenic	62.4	1.0	ug/l	50.0	19.8	85.2	75-125			AO-1
Barium	363	1.0	"	50.0	341	44.9	75-125			AO-1, QM-05
Cadmium	45.9	1.0	"	50.0	1.59	88.7	75-125			AO-1
Chromium	107	1.0	"	50.0	59.6	94.3	75-125			AO-1
Lead	368	2.0	"	50.0	361	12.3	75-125			AO-1, QM-05
Matrix Spike Dup (8041135-MSD1)	**Source: T181153-05**			Prepared: 04/11/18 Analyzed: 04/17/18						
Arsenic	61.3	1.0	ug/l	50.0	19.8	82.9	75-125	1.81	20	AO-1
Barium	372	1.0	"	50.0	341	62.8	75-125	2.43	20	AO-1, QM-05
Cadmium	45.7	1.0	"	50.0	1.59	88.2	75-125	0.541	20	AO-1
Chromium	107	1.0	"	50.0	59.6	94.9	75-125	0.296	20	AO-1
Lead	389	2.0	"	50.0	361	55.4	75-125	5.69	20	AO-1, QM-05
Post Spike (8041135-PS1)	**Source: T181153-05**			Prepared: 04/11/18 Analyzed: 04/17/18						
Barium	188		ug/l	2.50	0.341	NR	80-120			AO-1, QM-05
Lead	199		"	2.50	0.361	NR	80-120			AO-1, QM-05

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/17/18 15:58

Notes and Definitions

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.
QB-01	The method blank contains analyte at a concentration above the MRL; however, concentration is less than 10% of the sample result, which is negligible according to method criteria.
AO-1	STLC Leach Ran 6020 Water
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.

Mike Jaroudi, Project Manager

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PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

25712 Commercentre Drive, Lake Forest, CA 92630
949-297-5020

Chain of Custody Record

Client: BRUSCA ASSOCIATES, INC.
Address: PO BOX 332, ROSEVILLE, CA 95661
Phone: (916) 677-1470 Fax: (916) 677-1471
Project Manager: TOM BRUSCA

Date: 4/4/18 Page: 1 Of 2
Project Name: LATHROP 48-AC PROPERTY
Collector: BRUSCA Client Project #: 137-002
Batch #: T181153 EDF #:

Sample ID	Date Sampled	Time	Sample Type (SOLID)	Container Type	~~8260~~ SVOCs 8270	8260 + OXY	8260 BTEX, OXY only	~~8270~~ PCBs 8082	8021 BTEX	8015M (gasoline)	8015M (diesel)	8015M Ext./Carbon Chain C_{44} C_{24}	6010/7000 Title 22 Metals	6020 ICP-MS Metals	LEAD AND ARSENIC			Laboratory ID #	Comments/Preservative	Total # of containers
SP1-1	4/4/18	11:59	SOLID	JAR	X			X				X	X					01		1
SP1-2		12:01	SOLID		X			X				X	X					02		1
SP1-3		12:03			X			X				X	X					03		1
SP1-4		12:05			X			X				X	X					04		1
SP1-5		12:12			X			X				X	X					05		1
SP1-6		12:13			X			X				X	X					06		1
SP1-7		12:17			X			X				X	X					07		1
SP1-8		12:22			X			X				X	X					08		1
SP1-9		12:25			X			X				X	X					09		1
SP1-10		12:31			X			X				X	X					10		1
SP1-11		12:35			X			X				X	X					11		1
SP1-12		12:37			X			X				X	X					12		1
SP1-13		12:42			X			X				X	X					13		1
SP1-14		12:45			X			X				X	X					14		1
SP1-15		12:47			X			X				X	X					15		1

Relinquished by: (signature)	Date / Time 4/4/18 14:38	Received by: (signature)	Date / Time 4/4/18 14:38
Relinquished by: (signature) GSO	Date / Time 4-5-18 955	Received by: (signature)	Date / Time 4-5-18 955
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time

Total # of containers
Chain of Custody seals Y/N/NA
Seals intact? Y/N/NA
Received good condition/cold 4.1°

Notes: * 3 DAY TAT ON METALS

Turn around time: NORMAL EXCEPT METALS — 3 DAY TAT ON METALS

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

COC 160906

SunStar Laboratories, Inc.

PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

25712 Commercentre Drive, Lake Forest, CA 92630
949-297-5020

Chain of Custody Record

Client: BRUSCA ASSOCIATES, INC.
Address: PO BOX 332, ROSEVILLE, CA 95661
Phone: (916) 677-1470 Fax: (916) 677-1471
Project Manager: JOE BRUSCA

Date: 4/4/18 Page: 2 Of 2
Project Name: LATHROP 48-AC PROPERTY
Collector: BRUSCA Client Project #: 137-002
Batch #: T181153 EDF #:

Sample ID	Date Sampled	Time	Sample Type	Container Type	~~8260~~ SVOCs 8270	8260 + OXY	8260 BTEX, OXY only	~~8270~~ PCBs 8082	8021 BTEX	8015M (gasoline)	8015M (diesel)	8015M Ext./Carbon Chain Silica Gel Cleanup	6010/7000 Title 22 Metals	6020 ICP-MS Metals				Laboratory ID #	Comments/Preservative	Total # of containers
SP1-16	4/4/18	12:51	SOLID	JAR	X			X				X	X					16		1
SP1-17		12:53			X			X				X	X					17		1
SP1-18		12:56			X			X				X	X					18		1
SP1-19		13:05			X			X				X	X					19		1
SP1-20		13:09			X													20		1

Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
	4/4/18 14:38		4/4/18 14:38
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
GSO	4-5-18 955		4-5-18 955
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time

Total # of containers
Chain of Custody seals Y/N/NA
Seals intact? Y/N/NA
Received good condition/cold 4.1°

Notes
* 3 DAY TAT ON METALS

Turn around time: NORMAL
EXCEPT METALS - 3 DAY TAT ON METALS

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

COC 160912

April 19, 2018

FAL Project ID: 11423

Mr. Joe Brusca
Brusca Associates
7633 Stonewood Court
Granite Bay, CA 95746

Dear Mr. Brusca,

The following results are associated with Frontier Analytical Laboratory project **11423**. This corresponds to your **Lathrop 48-Ac Property** project under project number **137-002**. Twenty solid samples were received on 4/4/2018 in good condition. All twenty samples were extracted and analyzed by EPA Method 1613 for tetra through octa chlorinated dibenzo dioxins and furans. The Toxic Equivalency (TEQ) for your samples has been calculated using the 2005 World Health Organization's (WHO's) toxic equivalency factors (TEFs).The total TEQ is reported on the upper right hand corner of each sample data sheet. Brusca Associates requested a turnaround time of ten business days for project **11423**.

The following report consists of an Analytical Data section and a Sample Receipt section. The Analytical Data section contains our sample tracking log and the analytical results. The Sample Receipt section contains your chain of custody, our sample login form and a sample photo. The attached results are specifically for the samples referenced in this report only. These results meet all NELAC requirements and shall not be reproduced except in full. Frontier Analytical Laboratory's State of Oregon NELAP certificate number is **4041**. Our State of California ELAP certificate number is **2934**. This report has been emailed to you as a portable document format (PDF) file. A hardcopy will not be sent to you unless specifically requested.

If you have any questions regarding project **11423**, please contact me at (916) 934-0900. Thank you for choosing Frontier Analytical Laboratory for your analytical testing needs.

Sincerely,

Bradley B. Silverbush
Director of Operations

Frontier Analytical Laboratory

Sample Tracking Log

FAL Project ID: **11423**

Received on: **04/04/2018** Project Due: **04/19/2018** Storage: **R-4**

FAL Sample ID	Dup	Client Project ID	Client Sample ID	Requested Method	Matrix	Sampling Date	Sampling Time	Hold Time Due Date
11423-001-SA	0	137-002	SP1-1	EPA 1613 D/F	Solid	04/04/2018	11:59 am	04/04/2019
11423-002-SA	0	137-002	SP1-2	EPA 1613 D/F	Solid	04/04/2018	12:01 pm	04/04/2019
11423-003-SA	0	137-002	SP1-3	EPA 1613 D/F	Solid	04/04/2018	12:03 pm	04/04/2019
11423-004-SA	0	137-002	SP1-4	EPA 1613 D/F	Solid	04/04/2018	12:05 pm	04/04/2019
11423-005-SA	0	137-002	SP1-5	EPA 1613 D/F	Solid	04/04/2018	12:12 pm	04/04/2019
11423-006-SA	0	137-002	SP1-6	EPA 1613 D/F	Solid	04/04/2018	12:13 pm	04/04/2019
11423-007-SA	0	137-002	SP1-7	EPA 1613 D/F	Solid	04/04/2018	12:17 pm	04/04/2019
11423-008-SA	0	137-002	SP1-8	EPA 1613 D/F	Solid	04/04/2018	12:22 pm	04/04/2019
11423-009-SA	0	137-002	SP1-9	EPA 1613 D/F	Solid	04/04/2018	12:25 pm	04/04/2019
11423-010-SA	0	137-002	SP1-10	EPA 1613 D/F	Solid	04/04/2018	12:31 pm	04/04/2019
11423-011-SA	0	137-002	SP1-11	EPA 1613 D/F	Solid	04/04/2018	12:35 pm	04/04/2019
11423-012-SA	0	137-002	SP1-12	EPA 1613 D/F	Solid	04/04/2018	12:37 pm	04/04/2019
11423-013-SA	0	137-002	SP1-13	EPA 1613 D/F	Solid	04/04/2018	12:42 pm	04/04/2019
11423-014-SA	0	137-002	SP1-14	EPA 1613 D/F	Solid	04/04/2018	12:45 pm	04/04/2019
11423-015-SA	0	137-002	SP1-15	EPA 1613 D/F	Solid	04/04/2018	12:47 pm	04/04/2019
11423-016-SA	0	137-002	SP1-16	EPA 1613 D/F	Solid	04/04/2018	12:51 pm	04/04/2019
11423-017-SA	0	137-002	SP1-17	EPA 1613 D/F	Solid	04/04/2018	12:53 pm	04/04/2019
11423-018-SA	0	137-002	SP1-18	EPA 1613 D/F	Solid	04/04/2018	12:56 pm	04/04/2019
11423-019-SA	0	137-002	SP1-19	EPA 1613 D/F	Solid	04/04/2018	01:05 pm	04/04/2019
11423-020-SA	0	137-002	SP1-20	EPA 1613 D/F	Solid	04/04/2018	01:08 pm	04/04/2019

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EPA Method 1613
PCDD/F

FAL ID: 11423-001-MB
Client ID: Method Blank
Matrix: Solid
Batch No: X4473

Date Extracted: 04-16-2018
Date Received: NA
Amount: 5.00 g

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-18-2018
2005 WHO TEQ: 0.0
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.271		-	0.0273				
1,2,3,7,8-PeCDD	ND	0.342		-	0.0570				
1,2,3,4,7,8-HxCDD	ND	0.395		-	0.0793				
1,2,3,6,7,8-HxCDD	ND	0.463		-	0.0940	Total TCDD	ND	0.271	
1,2,3,7,8,9-HxCDD	ND	0.393		-	0.0823	Total PeCDD	ND	0.342	
1,2,3,4,6,7,8-HpCDD	ND	0.544		-	0.0842	Total HxCDD	ND	0.463	
OCDD	ND	0.711		-	0.172	Total HpCDD	ND	0.544	
2,3,7,8-TCDF	ND	0.200		-	0.0269				
1,2,3,7,8-PeCDF	ND	0.222		-	0.0449				
2,3,4,7,8-PeCDF	ND	0.233		-	0.0468				
1,2,3,4,7,8-HxCDF	ND	0.251		-	0.0437				
1,2,3,6,7,8-HxCDF	ND	0.253		-	0.0417				
2,3,4,6,7,8-HxCDF	ND	0.281		-	0.0574				
1,2,3,7,8,9-HxCDF	ND	0.320		-	0.0657	Total TCDF	ND	0.200	
1,2,3,4,6,7,8-HpCDF	ND	0.339		-	0.0747	Total PeCDF	ND	0.233	
1,2,3,4,7,8,9-HpCDF	ND	0.430		-	0.0883	Total HxCDF	ND	0.320	
OCDF	ND	0.606		-	0.170	Total HpCDF	ND	0.430	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	80.2	25.0 - 164	
13C-1,2,3,7,8-PeCDD	82.2	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	82.5	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	84.6	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	78.2	23.0 - 140	
13C-OCDD	65.4	17.0 - 157	
13C-2,3,7,8-TCDF	83.0	24.0 - 169	
13C-1,2,3,7,8-PeCDF	78.9	24.0 - 185	
13C-2,3,4,7,8-PeCDF	78.9	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	80.4	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	79.3	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	75.3	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	73.8	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	75.9	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	77.0	26.0 - 138	
13C-OCDF	67.4	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	76.9	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/18/2018

Reviewed By: _____
Date: 4/18/2018

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EPA Method 1613
PCDD/F

FAL ID: 11423-001-OPR
Client ID: OPR
Matrix: Solid
Batch No: X4473

Date Extracted: 04-16-2018
Date Received: NA
Amount: 5.00 g

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: ng/ml

Acquired: 04-18-2018
2005 WHO TEQ: NA

Compound	Conc	QC Limits	Qual
2,3,7,8-TCDD	10.6	6.70 - 15.8	
1,2,3,7,8-PeCDD	52.3	35.0 - 71.0	
1,2,3,4,7,8-HxCDD	49.6	35.0 - 82.0	
1,2,3,6,7,8-HxCDD	50.5	38.0 - 67.0	
1,2,3,7,8,9-HxCDD	49.5	32.0 - 81.0	
1,2,3,4,6,7,8-HpCDD	52.1	35.0 - 70.0	
OCDD	103	78.0 - 144	
2,3,7,8-TCDF	10.6	7.50 - 15.8	
1,2,3,7,8-PeCDF	52.4	40.0 - 67.0	
2,3,4,7,8-PeCDF	52.9	34.0 - 80.0	
1,2,3,4,7,8-HxCDF	51.9	36.0 - 67.0	
1,2,3,6,7,8-HxCDF	52.2	42.0 - 65.0	
2,3,4,6,7,8-HxCDF	52.4	35.0 - 78.0	
1,2,3,7,8,9-HxCDF	53.1	39.0 - 65.0	
1,2,3,4,6,7,8-HpCDF	51.3	41.0 - 61.0	
1,2,3,4,7,8,9-HpCDF	54.1	39.0 - 69.0	
OCDF	105	63.0 - 170	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	78.8	20.0 - 175	
13C-1,2,3,7,8-PeCDD	85.3	21.0 - 227	
13C-1,2,3,4,7,8-HxCDD	82.7	21.0 - 193	
13C-1,2,3,6,7,8-HxCDD	80.1	25.0 - 163	
13C-1,2,3,4,6,7,8-HpCDD	78.0	26.0 - 166	
13C-OCDD	67.4	13.0 - 198	
13C-2,3,7,8-TCDF	81.0	22.0 - 152	
13C-1,2,3,7,8-PeCDF	80.3	21.0 - 192	
13C-2,3,4,7,8-PeCDF	79.5	13.0 - 328	
13C-1,2,3,4,7,8-HxCDF	77.7	19.0 - 202	
13C-1,2,3,6,7,8-HxCDF	74.5	21.0 - 159	
13C-2,3,4,6,7,8-HxCDF	74.6	22.0 - 176	
13C-1,2,3,7,8,9-HxCDF	74.5	17.0 - 205	
13C-1,2,3,4,6,7,8-HpCDF	77.4	21.0 - 158	
13C-1,2,3,4,7,8,9-HpCDF	77.0	20.0 - 186	
13C-OCDF	67.9	13.0 - 198	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	76.4	31.0 - 191	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____

Date: 4/18/2018

Reviewed By: _____

Date: 4/18/2018

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EPA Method 1613
PCDD/F

FAL ID: 11423-001-MB
Client ID: Method Blank
Matrix: Solid
Batch No: X4475

Date Extracted: 04-17-2018
Date Received: NA
Amount: 5.00 g

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-18-2018
2005 WHO TEQ: 0.0
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.162		-	0.0273				
1,2,3,7,8-PeCDD	ND	0.199		-	0.0570				
1,2,3,4,7,8-HxCDD	ND	0.283		-	0.0793				
1,2,3,6,7,8-HxCDD	ND	0.287		-	0.0940	Total TCDD	ND	0.162	
1,2,3,7,8,9-HxCDD	ND	0.261		-	0.0823	Total PeCDD	ND	0.199	
1,2,3,4,6,7,8-HpCDD	ND	0.328		-	0.0842	Total HxCDD	ND	0.287	
OCDD	ND	0.708		-	0.172	Total HpCDD	ND	0.328	
2,3,7,8-TCDF	ND	0.110		-	0.0269				
1,2,3,7,8-PeCDF	ND	0.171		-	0.0449				
2,3,4,7,8-PeCDF	ND	0.172		-	0.0468				
1,2,3,4,7,8-HxCDF	ND	0.261		-	0.0437				
1,2,3,6,7,8-HxCDF	ND	0.256		-	0.0417				
2,3,4,6,7,8-HxCDF	ND	0.276		-	0.0574				
1,2,3,7,8,9-HxCDF	ND	0.309		-	0.0657	Total TCDF	ND	0.110	
1,2,3,4,6,7,8-HpCDF	ND	0.314		-	0.0747	Total PeCDF	ND	0.172	
1,2,3,4,7,8,9-HpCDF	ND	0.358		-	0.0883	Total HxCDF	ND	0.309	
OCDF	ND	0.688		-	0.170	Total HpCDF	ND	0.358	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	96.4	25.0 - 164	
13C-1,2,3,7,8-PeCDD	97.4	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	102	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	102	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	89.7	23.0 - 140	
13C-OCDD	72.0	17.0 - 157	
13C-2,3,7,8-TCDF	95.4	24.0 - 169	
13C-1,2,3,7,8-PeCDF	93.3	24.0 - 185	
13C-2,3,4,7,8-PeCDF	92.9	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	93.8	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	91.1	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	90.3	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	88.1	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	90.6	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	90.5	26.0 - 138	
13C-OCDF	75.8	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	89.1	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/19/2018

Reviewed By: _____
Date: 4/19/2018

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EPA Method 1613
PCDD/F

FAL ID: 11423-001-OPR
Client ID: OPR
Matrix: Solid
Batch No: X4475

Date Extracted: 04-17-2018
Date Received: NA
Amount: 5.00 g

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: ng/ml

Acquired: 04-18-2018
2005 WHO TEQ: NA

Compound	Conc	QC Limits	Qual
2,3,7,8-TCDD	10.6	6.70 - 15.8	
1,2,3,7,8-PeCDD	52.1	35.0 - 71.0	
1,2,3,4,7,8-HxCDD	48.7	35.0 - 82.0	
1,2,3,6,7,8-HxCDD	49.2	38.0 - 67.0	
1,2,3,7,8,9-HxCDD	46.8	32.0 - 81.0	
1,2,3,4,6,7,8-HpCDD	50.3	35.0 - 70.0	
OCDD	103	78.0 - 144	
2,3,7,8-TCDF	10.4	7.50 - 15.8	
1,2,3,7,8-PeCDF	51.3	40.0 - 67.0	
2,3,4,7,8-PeCDF	52.4	34.0 - 80.0	
1,2,3,4,7,8-HxCDF	50.7	36.0 - 67.0	
1,2,3,6,7,8-HxCDF	51.2	42.0 - 65.0	
2,3,4,6,7,8-HxCDF	51.3	35.0 - 78.0	
1,2,3,7,8,9-HxCDF	52.7	39.0 - 65.0	
1,2,3,4,6,7,8-HpCDF	52.9	41.0 - 61.0	
1,2,3,4,7,8,9-HpCDF	52.7	39.0 - 69.0	
OCDF	103	63.0 - 170	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	93.0	20.0 - 175	
13C-1,2,3,7,8-PeCDD	97.1	21.0 - 227	
13C-1,2,3,4,7,8-HxCDD	100	21.0 - 193	
13C-1,2,3,6,7,8-HxCDD	102	25.0 - 163	
13C-1,2,3,4,6,7,8-HpCDD	91.1	26.0 - 166	
13C-OCDD	76.3	13.0 - 198	
13C-2,3,7,8-TCDF	96.9	22.0 - 152	
13C-1,2,3,7,8-PeCDF	93.1	21.0 - 192	
13C-2,3,4,7,8-PeCDF	92.9	13.0 - 328	
13C-1,2,3,4,7,8-HxCDF	94.3	19.0 - 202	
13C-1,2,3,6,7,8-HxCDF	91.2	21.0 - 159	
13C-2,3,4,6,7,8-HxCDF	89.1	22.0 - 176	
13C-1,2,3,7,8,9-HxCDF	86.5	17.0 - 205	
13C-1,2,3,4,6,7,8-HpCDF	87.3	21.0 - 158	
13C-1,2,3,4,7,8,9-HpCDF	88.1	20.0 - 186	
13C-OCDF	77.7	13.0 - 198	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	85.8	31.0 - 191	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____

Date: 4/19/2018

Reviewed By: _____

Date: 4/19/2018

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EPA Method 1613
PCDD/F

FAL ID: 11423-001-SA
Client ID: SP1-1
Matrix: Solid
Batch No: X4473

Date Extracted: 04-16-2018
Date Received: 04-04-2018
Amount: 5.04 g
% Solids: 93.84

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-18-2018
2005 WHO TEQ: 6.49
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	0.375	-	J	0.375	0.0273				
1,2,3,7,8-PeCDD	1.48	-	J	1.48	0.0570				
1,2,3,4,7,8-HxCDD	2.29	-	J	0.229	0.0793				
1,2,3,6,7,8-HxCDD	6.04	-		0.604	0.0940	Total TCDD	2.38	-	
1,2,3,7,8,9-HxCDD	3.47	-	J	0.347	0.0823	Total PeCDD	11.2	-	
1,2,3,4,6,7,8-HpCDD	171	-		1.71	0.0842	Total HxCDD	47.6	-	
OCDD	1270	-		0.381	0.172	Total HpCDD	294	-	
2,3,7,8-TCDF	2.26	-	F	0.226	0.0269				
1,2,3,7,8-PeCDF	0.749	-	J	0.0225	0.0449				
2,3,4,7,8-PeCDF	1.29	-	J	0.387	0.0468				
1,2,3,4,7,8-HxCDF	1.36	-	J	0.136	0.0437				
1,2,3,6,7,8-HxCDF	1.49	-	J	0.149	0.0417				
2,3,4,6,7,8-HxCDF	1.66	-	J	0.166	0.0574				
1,2,3,7,8,9-HxCDF	ND	0.296		-	0.0657	Total TCDF	17.6	-	
1,2,3,4,6,7,8-HpCDF	23.4	-		0.234	0.0747	Total PeCDF	17.2	-	
1,2,3,4,7,8,9-HpCDF	1.88	-	J	0.0188	0.0883	Total HxCDF	32.0	-	
OCDF	91.2	-		0.0274	0.170	Total HpCDF	80.0	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	87.9	25.0 - 164	
13C-1,2,3,7,8-PeCDD	91.0	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	95.4	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	89.6	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	85.1	23.0 - 140	
13C-OCDD	70.8	17.0 - 157	
13C-2,3,7,8-TCDF	92.2	24.0 - 169	
13C-1,2,3,7,8-PeCDF	87.4	24.0 - 185	
13C-2,3,4,7,8-PeCDF	87.5	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	87.1	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	83.3	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	81.2	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	80.0	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	84.2	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	85.1	26.0 - 138	
13C-OCDF	73.5	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	84.0	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/18/2018

Reviewed By: _____
Date: 4/18/2018

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EPA Method 1613
PCDD/F

FAL ID: 11423-002-SA
Client ID: SP1-2
Matrix: Solid
Batch No: X4473

Date Extracted: 04-16-2018
Date Received: 04-04-2018
Amount: 5.03 g
% Solids: 94.12

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-18-2018
2005 WHO TEQ: 0.668
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.209		-	0.0273				
1,2,3,7,8-PeCDD	ND	0.390		-	0.0570				
1,2,3,4,7,8-HxCDD	ND	0.353		-	0.0793				
1,2,3,6,7,8-HxCDD	1.12	-	J	0.112	0.0940	Total TCDD	0.542	-	J
1,2,3,7,8,9-HxCDD	0.700	-	J	0.0700	0.0823	Total PeCDD	ND	0.390	
1,2,3,4,6,7,8-HpCDD	16.1	-		0.161	0.0842	Total HxCDD	6.96	-	
OCDD	126	-		0.0378	0.172	Total HpCDD	30.6	-	
2,3,7,8-TCDF	0.628	-	J	0.0628	0.0269				
1,2,3,7,8-PeCDF	ND	0.182		-	0.0449				
2,3,4,7,8-PeCDF	0.464	-	J	0.139	0.0468				
1,2,3,4,7,8-HxCDF	0.443	-	J	0.0443	0.0437				
1,2,3,6,7,8-HxCDF	ND	0.193		-	0.0417				
2,3,4,6,7,8-HxCDF	ND	0.222		-	0.0574				
1,2,3,7,8,9-HxCDF	ND	0.238		-	0.0657	Total TCDF	2.57	-	
1,2,3,4,6,7,8-HpCDF	3.80	-	J	0.0380	0.0747	Total PeCDF	3.62	-	J
1,2,3,4,7,8,9-HpCDF	ND	0.255		-	0.0883	Total HxCDF	4.88	-	J
OCDF	9.14	-	J	0.00274	0.170	Total HpCDF	9.45	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	92.1	25.0 - 164	
13C-1,2,3,7,8-PeCDD	95.3	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	98.1	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	96.1	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	93.3	23.0 - 140	
13C-OCDD	83.7	17.0 - 157	
13C-2,3,7,8-TCDF	94.5	24.0 - 169	
13C-1,2,3,7,8-PeCDF	88.7	24.0 - 185	
13C-2,3,4,7,8-PeCDF	89.5	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	91.8	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	89.3	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	89.3	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	88.4	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	90.7	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	91.9	26.0 - 138	
13C-OCDF	82.0	17.0 - 157	

Cleanup Surrogate		
37Cl-2,3,7,8-TCDD	82.6	35.0 - 197

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____

Date: 4/18/2018

Reviewed By: _____

Date: 4/18/2018

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EPA Method 1613
PCDD/F

FAL ID: 11423-003-SA
Client ID: SP1-3
Matrix: Solid
Batch No: X4473

Date Extracted: 04-16-2018
Date Received: 04-04-2018
Amount: 5.02 g
% Solids: 94.41

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-18-2018
2005 WHO TEQ: 1.10
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.194		-	0.0273				
1,2,3,7,8-PeCDD	ND	0.281		-	0.0570				
1,2,3,4,7,8-HxCDD	0.702	-	J	0.0702	0.0793				
1,2,3,6,7,8-HxCDD	1.47	-	J	0.147	0.0940	Total TCDD	0.443	-	J
1,2,3,7,8,9-HxCDD	1.04	-	J	0.104	0.0823	Total PeCDD	0.610	-	J
1,2,3,4,6,7,8-HpCDD	24.3	-		0.243	0.0842	Total HxCDD	9.86	-	
OCDD	194	-		0.0582	0.172	Total HpCDD	45.0	-	
2,3,7,8-TCDF	1.01	-		0.101	0.0269				
1,2,3,7,8-PeCDF	ND	0.241		-	0.0449				
2,3,4,7,8-PeCDF	0.515	-	J	0.155	0.0468				
1,2,3,4,7,8-HxCDF	0.630	-	J	0.0630	0.0437				
1,2,3,6,7,8-HxCDF	0.422	-	J	0.0422	0.0417				
2,3,4,6,7,8-HxCDF	0.601	-	J	0.0601	0.0574				
1,2,3,7,8,9-HxCDF	ND	0.248		-	0.0657	Total TCDF	3.15	-	
1,2,3,4,6,7,8-HpCDF	5.11	-		0.0511	0.0747	Total PeCDF	4.92	-	J
1,2,3,4,7,8,9-HpCDF	ND	0.262		-	0.0883	Total HxCDF	7.74	-	
OCDF	14.0	-		0.00420	0.170	Total HpCDF	13.6	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	84.7	25.0 - 164	
13C-1,2,3,7,8-PeCDD	89.7	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	93.0	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	90.3	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	83.4	23.0 - 140	
13C-OCDD	66.9	17.0 - 157	
13C-2,3,7,8-TCDF	89.1	24.0 - 169	
13C-1,2,3,7,8-PeCDF	87.3	24.0 - 185	
13C-2,3,4,7,8-PeCDF	86.4	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	86.8	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	83.2	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	78.8	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	80.5	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	83.0	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	81.9	26.0 - 138	
13C-OCDF	71.1	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	81.6	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/18/2018

Reviewed By: _____
Date: 4/18/2018

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EPA Method 1613
PCDD/F

FAL ID: 11423-004-SA
Client ID: SP1-4
Matrix: Solid
Batch No: X4473

Date Extracted: 04-16-2018
Date Received: 04-04-2018
Amount: 5.02 g
% Solids: 95.60

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-18-2018
2005 WHO TEQ: 0.510
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.212		-	0.0273				
1,2,3,7,8-PeCDD	ND	0.388		-	0.0570				
1,2,3,4,7,8-HxCDD	ND	0.340		-	0.0793				
1,2,3,6,7,8-HxCDD	0.999	-	J	0.0999	0.0940	Total TCDD	ND	0.212	
1,2,3,7,8,9-HxCDD	0.825	-	J	0.0825	0.0823	Total PeCDD	ND	0.388	
1,2,3,4,6,7,8-HpCDD	18.1	-		0.181	0.0842	Total HxCDD	7.26	-	
OCDD	166	-		0.0498	0.172	Total HpCDD	33.2	-	
2,3,7,8-TCDF	0.653	-	J	0.0653	0.0269				
1,2,3,7,8-PeCDF	ND	0.216		-	0.0449				
2,3,4,7,8-PeCDF	ND	0.237		-	0.0468				
1,2,3,4,7,8-HxCDF	ND	0.439		-	0.0437				
1,2,3,6,7,8-HxCDF	ND	0.443		-	0.0417				
2,3,4,6,7,8-HxCDF	ND	0.469		-	0.0574				
1,2,3,7,8,9-HxCDF	ND	0.517		-	0.0657	Total TCDF	3.18	-	
1,2,3,4,6,7,8-HpCDF	2.92	-	J	0.0292	0.0747	Total PeCDF	2.42	-	J
1,2,3,4,7,8,9-HpCDF	ND	0.236		-	0.0883	Total HxCDF	3.80	-	J
OCDF	6.59	-	J	0.00198	0.170	Total HpCDF	7.14	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	84.2	25.0 - 164	
13C-1,2,3,7,8-PeCDD	92.2	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	90.2	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	87.9	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	84.0	23.0 - 140	
13C-OCDD	70.6	17.0 - 157	
13C-2,3,7,8-TCDF	88.8	24.0 - 169	
13C-1,2,3,7,8-PeCDF	85.6	24.0 - 185	
13C-2,3,4,7,8-PeCDF	87.6	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	83.6	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	81.6	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	80.5	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	80.5	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	82.0	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	83.4	26.0 - 138	
13C-OCDF	73.0	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	80.7	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/18/2018

Reviewed By: _____
Date: 4/18/2018

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EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 11423-005-SA
Client ID: SP1-5
Matrix: Solid
Batch No: X4473

Date Extracted: 04-16-2018
Date Received: 04-04-2018
Amount: 5.05 g
% Solids: 96.53

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-18-2018
2005 WHO TEQ: 4.88
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.245		-	0.0273				
1,2,3,7,8-PeCDD	0.682	-	J	0.682	0.0570				
1,2,3,4,7,8-HxCDD	1.44	-	J	0.144	0.0793				
1,2,3,6,7,8-HxCDD	5.76	-		0.576	0.0940	Total TCDD	0.702	-	J
1,2,3,7,8,9-HxCDD	2.92	-	J	0.292	0.0823	Total PeCDD	7.92	-	M
1,2,3,4,6,7,8-HpCDD	152	-		1.52	0.0842	Total HxCDD	43.4	-	
OCDD	1540	-		0.462	0.172	Total HpCDD	280	-	
2,3,7,8-TCDF	2.49	-	F	0.249	0.0269				
1,2,3,7,8-PeCDF	0.683	-	J	0.0205	0.0449				
2,3,4,7,8-PeCDF	1.25	-	J	0.375	0.0468				
1,2,3,4,7,8-HxCDF	1.31	-	J	0.131	0.0437				
1,2,3,6,7,8-HxCDF	1.22	-	J	0.122	0.0417				
2,3,4,6,7,8-HxCDF	1.38	-	J	0.138	0.0574				
1,2,3,7,8,9-HxCDF	ND	0.276		-	0.0657	Total TCDF	15.5	-	
1,2,3,4,6,7,8-HpCDF	13.8	-		0.138	0.0747	Total PeCDF	13.0	-	
1,2,3,4,7,8,9-HpCDF	1.51	-	J	0.0151	0.0883	Total HxCDF	18.9	-	
OCDF	36.7	-		0.0110	0.170	Total HpCDF	39.6	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	89.0	25.0 - 164	
13C-1,2,3,7,8-PeCDD	92.6	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	94.0	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	89.8	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	82.3	23.0 - 140	
13C-OCDD	65.1	17.0 - 157	
13C-2,3,7,8-TCDF	93.5	24.0 - 169	
13C-1,2,3,7,8-PeCDF	85.8	24.0 - 185	
13C-2,3,4,7,8-PeCDF	87.6	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	87.1	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	83.3	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	80.0	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	79.6	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	79.7	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	80.5	26.0 - 138	
13C-OCDF	68.7	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	84.1	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/18/2018

Reviewed By: _____
Date: 4/18/2018

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EPA Method 1613
PCDD/F

FAL ID: 11423-006-SA
Client ID: SP1-6
Matrix: Solid
Batch No: X4473

Date Extracted: 04-16-2018
Date Received: 04-04-2018
Amount: 5.02 g
% Solids: 96.16

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-18-2018
2005 WHO TEQ: 5.00
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.232		-	0.0273				
1,2,3,7,8-PeCDD	1.06	-	J	1.06	0.0570				
1,2,3,4,7,8-HxCDD	1.72	-	J	0.172	0.0793				
1,2,3,6,7,8-HxCDD	4.93	-	J	0.493	0.0940	Total TCDD	ND	0.232	
1,2,3,7,8,9-HxCDD	3.17	-	J	0.317	0.0823	Total PeCDD	2.91	-	J
1,2,3,4,6,7,8-HpCDD	115	-		1.15	0.0842	Total HxCDD	31.8	-	
OCDD	1070	-		0.321	0.172	Total HpCDD	206	-	
2,3,7,8-TCDF	1.35	-		0.135	0.0269				
1,2,3,7,8-PeCDF	ND	0.269		-	0.0449				
2,3,4,7,8-PeCDF	1.38	-	J	0.414	0.0468				
1,2,3,4,7,8-HxCDF	2.27	-	J	0.227	0.0437				
1,2,3,6,7,8-HxCDF	1.47	-	J	0.147	0.0417				
2,3,4,6,7,8-HxCDF	1.81	-	J	0.181	0.0574				
1,2,3,7,8,9-HxCDF	0.677	-	J	0.0677	0.0657	Total TCDF	7.40	-	
1,2,3,4,6,7,8-HpCDF	27.9	-		0.279	0.0747	Total PeCDF	13.2	-	
1,2,3,4,7,8,9-HpCDF	1.81	-	J	0.0181	0.0883	Total HxCDF	39.9	-	
OCDF	65.4	-		0.0196	0.170	Total HpCDF	78.0	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	89.9	25.0 - 164	
13C-1,2,3,7,8-PeCDD	90.5	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	94.1	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	92.4	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	89.5	23.0 - 140	
13C-OCDD	78.6	17.0 - 157	
13C-2,3,7,8-TCDF	93.0	24.0 - 169	
13C-1,2,3,7,8-PeCDF	86.3	24.0 - 185	
13C-2,3,4,7,8-PeCDF	87.1	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	88.4	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	85.6	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	85.4	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	84.8	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	87.3	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	88.6	26.0 - 138	
13C-OCDF	77.2	17.0 - 157	

Cleanup Surrogate		
37Cl-2,3,7,8-TCDD	85.7	35.0 - 197

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/18/2018

Reviewed By: _____
Date: 4/18/2018

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EPA Method 1613
PCDD/F

FAL ID: 11423-007-SA
Client ID: SP1-7
Matrix: Solid
Batch No: X4473

Date Extracted: 04-16-2018
Date Received: 04-04-2018
Amount: 5.05 g
% Solids: 95.81

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-18-2018
2005 WHO TEQ: 1.65
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.251		-	0.0273				
1,2,3,7,8-PeCDD	ND	0.356		-	0.0570				
1,2,3,4,7,8-HxCDD	ND	0.431		-	0.0793				
1,2,3,6,7,8-HxCDD	2.12	-	J	0.212	0.0940	Total TCDD	ND	0.251	
1,2,3,7,8,9-HxCDD	1.44	-	J	0.144	0.0823	Total PeCDD	0.923	-	J
1,2,3,4,6,7,8-HpCDD	47.6	-		0.476	0.0842	Total HxCDD	14.3	-	
OCDD	398	-		0.119	0.172	Total HpCDD	84.9	-	
2,3,7,8-TCDF	1.43	-		0.143	0.0269				
1,2,3,7,8-PeCDF	ND	0.372		-	0.0449				
2,3,4,7,8-PeCDF	0.725	-	J	0.218	0.0468				
1,2,3,4,7,8-HxCDF	0.829	-	J	0.0829	0.0437				
1,2,3,6,7,8-HxCDF	0.626	-	J	0.0626	0.0417				
2,3,4,6,7,8-HxCDF	0.703	-	J	0.0703	0.0574				
1,2,3,7,8,9-HxCDF	ND	0.344		-	0.0657	Total TCDF	6.16	-	
1,2,3,4,6,7,8-HpCDF	10.3	-		0.103	0.0747	Total PeCDF	5.88	-	
1,2,3,4,7,8,9-HpCDF	0.832	-	J	0.00832	0.0883	Total HxCDF	12.9	-	
OCDF	33.0	-		0.00990	0.170	Total HpCDF	30.7	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	64.6	25.0 - 164	
13C-1,2,3,7,8-PeCDD	67.5	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	70.3	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	69.0	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	66.8	23.0 - 140	
13C-OCDD	59.2	17.0 - 157	
13C-2,3,7,8-TCDF	68.0	24.0 - 169	
13C-1,2,3,7,8-PeCDF	66.0	24.0 - 185	
13C-2,3,4,7,8-PeCDF	63.2	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	67.2	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	64.2	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	63.4	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	64.0	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	64.6	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	65.7	26.0 - 138	
13C-OCDF	60.0	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	60.6	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/18/2018

Reviewed By: _____
Date: 4/18/2018

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EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 11423-008-SA
Client ID: SP1-8
Matrix: Solid
Batch No: X4473

Date Extracted: 04-16-2018
Date Received: 04-04-2018
Amount: 5.02 g
% Solids: 94.62

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-18-2018
2005 WHO TEQ: 2.93
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.255		-	0.0273				
1,2,3,7,8-PeCDD	0.953	-	J	0.953	0.0570				
1,2,3,4,7,8-HxCDD	0.934	-	J	0.0934	0.0793				
1,2,3,6,7,8-HxCDD	2.85	-	J	0.285	0.0940	Total TCDD	ND	0.255	
1,2,3,7,8,9-HxCDD	1.73	-	J	0.173	0.0823	Total PeCDD	4.11	-	J
1,2,3,4,6,7,8-HpCDD	54.9	-		0.549	0.0842	Total HxCDD	24.4	-	
OCDD	453	-		0.136	0.172	Total HpCDD	105	-	
2,3,7,8-TCDF	1.73	-		0.173	0.0269				
1,2,3,7,8-PeCDF	ND	0.387		-	0.0449				
2,3,4,7,8-PeCDF	0.736	-	J	0.221	0.0468				
1,2,3,4,7,8-HxCDF	0.886	-	J	0.0886	0.0437				
1,2,3,6,7,8-HxCDF	0.699	-	J	0.0699	0.0417				
2,3,4,6,7,8-HxCDF	0.803	-	J	0.0803	0.0574				
1,2,3,7,8,9-HxCDF	ND	0.281		-	0.0657	Total TCDF	9.10	-	
1,2,3,4,6,7,8-HpCDF	9.38	-		0.0938	0.0747	Total PeCDF	9.08	-	
1,2,3,4,7,8,9-HpCDF	0.802	-	J	0.00802	0.0883	Total HxCDF	13.2	-	
OCDF	22.1	-		0.00663	0.170	Total HpCDF	24.6	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	79.8	25.0 - 164	
13C-1,2,3,7,8-PeCDD	81.7	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	85.3	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	79.9	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	76.9	23.0 - 140	
13C-OCDD	60.1	17.0 - 157	
13C-2,3,7,8-TCDF	78.5	24.0 - 169	
13C-1,2,3,7,8-PeCDF	78.2	24.0 - 185	
13C-2,3,4,7,8-PeCDF	76.9	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	80.2	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	77.7	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	71.9	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	72.3	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	76.8	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	75.2	26.0 - 138	
13C-OCDF	63.7	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	75.5	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/18/2018

Reviewed By: _____
Date: 4/18/2018

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EPA Method 1613
PCDD/F

FAL ID: 11423-009-SA
Client ID: SP1-9
Matrix: Solid
Batch No: X4473

Date Extracted: 04-16-2018
Date Received: 04-04-2018
Amount: 5.03 g
% Solids: 93.92

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-18-2018
2005 WHO TEQ: 0.139
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.223		-	0.0273				
1,2,3,7,8-PeCDD	ND	0.339		-	0.0570				
1,2,3,4,7,8-HxCDD	ND	0.420		-	0.0793				
1,2,3,6,7,8-HxCDD	ND	0.431		-	0.0940	Total TCDD	ND	0.223	
1,2,3,7,8,9-HxCDD	ND	0.390		-	0.0823	Total PeCDD	ND	0.339	
1,2,3,4,6,7,8-HpCDD	5.47	-		0.0547	0.0842	Total HxCDD	1.72	-	J
OCDD	44.1	-		0.0132	0.172	Total HpCDD	10.7	-	
2,3,7,8-TCDF	0.560	-	J	0.0560	0.0269				
1,2,3,7,8-PeCDF	ND	0.326		-	0.0449				
2,3,4,7,8-PeCDF	ND	0.319		-	0.0468				
1,2,3,4,7,8-HxCDF	ND	0.349		-	0.0437				
1,2,3,6,7,8-HxCDF	ND	0.357		-	0.0417				
2,3,4,6,7,8-HxCDF	ND	0.400		-	0.0574				
1,2,3,7,8,9-HxCDF	ND	0.430		-	0.0657	Total TCDF	1.15	-	
1,2,3,4,6,7,8-HpCDF	1.48	-	J	0.0148	0.0747	Total PeCDF	0.564	-	J
1,2,3,4,7,8,9-HpCDF	ND	0.308		-	0.0883	Total HxCDF	0.710	-	J
OCDF	2.56	-	J	0.000768	0.170	Total HpCDF	3.02	-	J

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	88.8	25.0 - 164	
13C-1,2,3,7,8-PeCDD	93.2	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	92.2	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	90.3	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	86.3	23.0 - 140	
13C-OCDD	76.3	17.0 - 157	
13C-2,3,7,8-TCDF	93.2	24.0 - 169	
13C-1,2,3,7,8-PeCDF	89.7	24.0 - 185	
13C-2,3,4,7,8-PeCDF	91.8	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	86.5	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	82.3	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	81.4	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	83.1	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	82.9	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	87.8	26.0 - 138	
13C-OCDF	75.6	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	84.6	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/18/2018

Reviewed By: _____
Date: 4/18/2018

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EPA Method 1613
PCDD/F

FAL ID: 11423-010-SA
Client ID: SP1-10
Matrix: Solid
Batch No: X4473

Date Extracted: 04-16-2018
Date Received: 04-04-2018
Amount: 5.06 g
% Solids: 93.98

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-18-2018
2005 WHO TEQ: 1.23
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.237		-	0.0273				
1,2,3,7,8-PeCDD	ND	0.493		-	0.0570				
1,2,3,4,7,8-HxCDD	0.700	-	J	0.0700	0.0793				
1,2,3,6,7,8-HxCDD	1.71	-	J	0.171	0.0940	Total TCDD	ND	0.237	
1,2,3,7,8,9-HxCDD	1.34	-	J	0.134	0.0823	Total PeCDD	ND	0.493	
1,2,3,4,6,7,8-HpCDD	35.6	-		0.356	0.0842	Total HxCDD	13.4	-	
OCDD	285	-		0.0855	0.172	Total HpCDD	63.3	-	
2,3,7,8-TCDF	1.16	-		0.116	0.0269				
1,2,3,7,8-PeCDF	ND	0.336		-	0.0449				
2,3,4,7,8-PeCDF	ND	0.363		-	0.0468				
1,2,3,4,7,8-HxCDF	0.791	-	J	0.0791	0.0437				
1,2,3,6,7,8-HxCDF	0.644	-	J	0.0644	0.0417				
2,3,4,6,7,8-HxCDF	0.736	-	J	0.0736	0.0574				
1,2,3,7,8,9-HxCDF	ND	0.356		-	0.0657	Total TCDF	5.59	-	
1,2,3,4,6,7,8-HpCDF	7.49	-		0.0749	0.0747	Total PeCDF	4.71	-	J,M
1,2,3,4,7,8,9-HpCDF	ND	0.239		-	0.0883	Total HxCDF	10.9	-	
OCDF	17.5	-		0.00525	0.170	Total HpCDF	19.8	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	91.9	25.0 - 164	
13C-1,2,3,7,8-PeCDD	95.9	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	96.3	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	94.2	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	92.1	23.0 - 140	
13C-OCDD	80.8	17.0 - 157	
13C-2,3,7,8-TCDF	93.2	24.0 - 169	
13C-1,2,3,7,8-PeCDF	91.8	24.0 - 185	
13C-2,3,4,7,8-PeCDF	91.8	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	89.7	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	86.8	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	86.1	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	87.1	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	89.0	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	91.6	26.0 - 138	
13C-OCDF	81.5	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	89.8	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____

Date: 4/18/2018

Reviewed By: _____

Date: 4/18/2018

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EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 11423-011-SA
Client ID: SP1-11
Matrix: Solid
Batch No: X4475

Date Extracted: 04-17-2018
Date Received: 04-04-2018
Amount: 5.01 g
% Solids: 92.86

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-18-2018
2005 WHO TEQ: 2.94
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.192		-	0.0273				
1,2,3,7,8-PeCDD	0.565	-	J	0.565	0.0570				
1,2,3,4,7,8-HxCDD	0.956	-	J	0.0956	0.0793				
1,2,3,6,7,8-HxCDD	2.57	-	J	0.257	0.0940	Total TCDD	ND	0.192	
1,2,3,7,8,9-HxCDD	1.68	-	J	0.168	0.0823	Total PeCDD	3.01	-	J
1,2,3,4,6,7,8-HpCDD	61.1	-		0.611	0.0842	Total HxCDD	19.0	-	
OCDD	556	-		0.167	0.172	Total HpCDD	114	-	
2,3,7,8-TCDF	1.58	-		0.158	0.0269				
1,2,3,7,8-PeCDF	0.472	-	J	0.0142	0.0449				
2,3,4,7,8-PeCDF	1.11	-	J	0.333	0.0468				
1,2,3,4,7,8-HxCDF	1.44	-	J	0.144	0.0437				
1,2,3,6,7,8-HxCDF	1.04	-	J	0.104	0.0417				
2,3,4,6,7,8-HxCDF	1.03	-	J	0.103	0.0574				
1,2,3,7,8,9-HxCDF	0.694	-	J	0.0694	0.0657	Total TCDF	9.88	-	
1,2,3,4,6,7,8-HpCDF	13.5	-		0.135	0.0747	Total PeCDF	11.5	-	
1,2,3,4,7,8,9-HpCDF	1.14	-	J	0.0114	0.0883	Total HxCDF	18.6	-	
OCDF	29.9	-		0.00897	0.170	Total HpCDF	35.7	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	96.8	25.0 - 164	
13C-1,2,3,7,8-PeCDD	100	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	105	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	99.9	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	93.6	23.0 - 140	
13C-OCDD	76.3	17.0 - 157	
13C-2,3,7,8-TCDF	99.9	24.0 - 169	
13C-1,2,3,7,8-PeCDF	98.5	24.0 - 185	
13C-2,3,4,7,8-PeCDF	99.3	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	95.2	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	93.2	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	91.4	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	91.1	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	91.7	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	92.2	26.0 - 138	
13C-OCDF	77.7	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	89.3	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/19/2018

Reviewed By: _____
Date: 4/19/2018

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EPA Method 1613
PCDD/F

FAL ID: 11423-012-SA
Client ID: SP1-12
Matrix: Solid
Batch No: X4475

Date Extracted: 04-17-2018
Date Received: 04-04-2018
Amount: 5.05 g
% Solids: 96.77

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-18-2018
2005 WHO TEQ: 1.08
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.174		-	0.0273				
1,2,3,7,8-PeCDD	ND	0.318		-	0.0570				
1,2,3,4,7,8-HxCDD	0.494	-	J	0.0494	0.0793				
1,2,3,6,7,8-HxCDD	1.73	-	J	0.173	0.0940	Total TCDD	ND	0.174	
1,2,3,7,8,9-HxCDD	1.06	-	J	0.106	0.0823	Total PeCDD	ND	0.318	
1,2,3,4,6,7,8-HpCDD	33.3	-		0.333	0.0842	Total HxCDD	11.1	-	
OCDD	302	-		0.0906	0.172	Total HpCDD	61.2	-	
2,3,7,8-TCDF	0.699	-	J	0.0699	0.0269				
1,2,3,7,8-PeCDF	ND	0.200		-	0.0449				
2,3,4,7,8-PeCDF	ND	0.205		-	0.0468				
1,2,3,4,7,8-HxCDF	0.621	-	J	0.0621	0.0437				
1,2,3,6,7,8-HxCDF	0.522	-	J	0.0522	0.0417				
2,3,4,6,7,8-HxCDF	0.673	-	J	0.0673	0.0574				
1,2,3,7,8,9-HxCDF	ND	0.144		-	0.0657	Total TCDF	3.68	-	
1,2,3,4,6,7,8-HpCDF	6.91	-		0.0691	0.0747	Total PeCDF	3.76	-	J
1,2,3,4,7,8,9-HpCDF	0.576	-	J	0.00576	0.0883	Total HxCDF	10.0	-	
OCDF	21.2	-		0.00636	0.170	Total HpCDF	19.4	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	95.7	25.0 - 164	
13C-1,2,3,7,8-PeCDD	102	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	99.8	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	98.0	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	90.0	23.0 - 140	
13C-OCDD	73.3	17.0 - 157	
13C-2,3,7,8-TCDF	96.8	24.0 - 169	
13C-1,2,3,7,8-PeCDF	97.2	24.0 - 185	
13C-2,3,4,7,8-PeCDF	97.8	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	91.9	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	86.5	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	84.6	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	86.9	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	87.0	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	90.6	26.0 - 138	
13C-OCDF	76.7	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	85.9	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/19/2018

Reviewed By: _____
Date: 4/19/2018

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EPA Method 1613
PCDD/F

FAL ID: 11423-013-SA
Client ID: SP1-13
Matrix: Solid
Batch No: X4475

Date Extracted: 04-17-2018
Date Received: 04-04-2018
Amount: 5.05 g
% Solids: 94.87

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-18-2018
2005 WHO TEQ: 2.89
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.170		-	0.0273				
1,2,3,7,8-PeCDD	0.663	-	J	0.663	0.0570				
1,2,3,4,7,8-HxCDD	0.877	-	J	0.0877	0.0793				
1,2,3,6,7,8-HxCDD	2.60	-	J	0.260	0.0940	Total TCDD	ND	0.170	
1,2,3,7,8,9-HxCDD	1.45	-	J	0.145	0.0823	Total PeCDD	2.30	-	J
1,2,3,4,6,7,8-HpCDD	71.3	-		0.713	0.0842	Total HxCDD	18.8	-	
OCDD	629	-		0.189	0.172	Total HpCDD	128	-	
2,3,7,8-TCDF	1.22	-		0.122	0.0269				
1,2,3,7,8-PeCDF	0.397	-	J	0.0119	0.0449				
2,3,4,7,8-PeCDF	0.927	-	J	0.278	0.0468				
1,2,3,4,7,8-HxCDF	0.913	-	J	0.0913	0.0437				
1,2,3,6,7,8-HxCDF	0.845	-	J	0.0845	0.0417				
2,3,4,6,7,8-HxCDF	1.03	-	J	0.103	0.0574				
1,2,3,7,8,9-HxCDF	ND	0.233		-	0.0657	Total TCDF	6.98	-	
1,2,3,4,6,7,8-HpCDF	12.5	-		0.125	0.0747	Total PeCDF	8.44	-	
1,2,3,4,7,8,9-HpCDF	0.901	-	J	0.00901	0.0883	Total HxCDF	16.6	-	
OCDF	37.1	-		0.0111	0.170	Total HpCDF	36.9	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	96.7	25.0 - 164	
13C-1,2,3,7,8-PeCDD	99.1	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	100	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	99.6	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	87.4	23.0 - 140	
13C-OCDD	75.2	17.0 - 157	
13C-2,3,7,8-TCDF	98.0	24.0 - 169	
13C-1,2,3,7,8-PeCDF	97.5	24.0 - 185	
13C-2,3,4,7,8-PeCDF	96.5	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	93.8	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	90.9	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	88.3	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	85.6	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	88.6	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	89.4	26.0 - 138	
13C-OCDF	76.8	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	91.8	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/19/2018

Reviewed By: _____
Date: 4/19/2018

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EPA Method 1613
PCDD/F

FAL ID: 11423-014-SA
Client ID: SP1-14
Matrix: Solid
Batch No: X4475

Date Extracted: 04-17-2018
Date Received: 04-04-2018
Amount: 5.00 g
% Solids: 94.79

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-18-2018
2005 WHO TEQ: 0.316
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.179		-	0.0273				
1,2,3,7,8-PeCDD	ND	0.251		-	0.0570				
1,2,3,4,7,8-HxCDD	ND	0.261		-	0.0793				
1,2,3,6,7,8-HxCDD	0.750	-	J	0.0750	0.0940	Total TCDD	ND	0.179	
1,2,3,7,8,9-HxCDD	ND	0.240		-	0.0823	Total PeCDD	ND	0.251	
1,2,3,4,6,7,8-HpCDD	14.3	-		0.143	0.0842	Total HxCDD	4.09	-	J
OCDD	147	-		0.0441	0.172	Total HpCDD	26.0	-	
2,3,7,8-TCDF	0.308	-	J	0.0308	0.0269				
1,2,3,7,8-PeCDF	ND	0.254		-	0.0449				
2,3,4,7,8-PeCDF	ND	0.247		-	0.0468				
1,2,3,4,7,8-HxCDF	ND	0.201		-	0.0437				
1,2,3,6,7,8-HxCDF	ND	0.196		-	0.0417				
2,3,4,6,7,8-HxCDF	ND	0.226		-	0.0574				
1,2,3,7,8,9-HxCDF	ND	0.249		-	0.0657	Total TCDF	0.308	-	J
1,2,3,4,6,7,8-HpCDF	2.17	-	J	0.0217	0.0747	Total PeCDF	0.496	-	J
1,2,3,4,7,8,9-HpCDF	ND	0.213		-	0.0883	Total HxCDF	1.97	-	J
OCDF	5.61	-	J	0.00168	0.170	Total HpCDF	5.67	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	92.7	25.0 - 164	
13C-1,2,3,7,8-PeCDD	97.8	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	96.9	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	94.0	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	85.6	23.0 - 140	
13C-OCDD	62.3	17.0 - 157	
13C-2,3,7,8-TCDF	95.2	24.0 - 169	
13C-1,2,3,7,8-PeCDF	96.7	24.0 - 185	
13C-2,3,4,7,8-PeCDF	97.9	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	90.0	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	87.2	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	83.1	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	81.7	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	81.5	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	83.5	26.0 - 138	
13C-OCDF	68.7	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	90.0	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____

Date: 4/19/2018

Reviewed By: _____

Date: 4/19/2018

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EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 11423-015-SA
Client ID: SP1-15
Matrix: Solid
Batch No: X4475

Date Extracted: 04-17-2018
Date Received: 04-04-2018
Amount: 5.02 g
% Solids: 94.28

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-18-2018
2005 WHO TEQ: 3.20
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.179		-	0.0273				
1,2,3,7,8-PeCDD	0.753	-	J	0.753	0.0570				
1,2,3,4,7,8-HxCDD	0.897	-	J	0.0897	0.0793				
1,2,3,6,7,8-HxCDD	2.91	-	J	0.291	0.0940	Total TCDD	0.467	-	J
1,2,3,7,8,9-HxCDD	1.93	-	J	0.193	0.0823	Total PeCDD	4.35	-	J
1,2,3,4,6,7,8-HpCDD	67.2	-		0.672	0.0842	Total HxCDD	22.6	-	
OCDD	546	-		0.164	0.172	Total HpCDD	122	-	
2,3,7,8-TCDF	1.78	-		0.178	0.0269				
1,2,3,7,8-PeCDF	0.368	-	J	0.0110	0.0449				
2,3,4,7,8-PeCDF	1.11	-	J	0.333	0.0468				
1,2,3,4,7,8-HxCDF	1.25	-	J	0.125	0.0437				
1,2,3,6,7,8-HxCDF	0.872	-	J	0.0872	0.0417				
2,3,4,6,7,8-HxCDF	1.02	-	J	0.102	0.0574				
1,2,3,7,8,9-HxCDF	0.450	-	J	0.0450	0.0657	Total TCDF	10.7	-	
1,2,3,4,6,7,8-HpCDF	14.0	-		0.140	0.0747	Total PeCDF	11.1	-	
1,2,3,4,7,8,9-HpCDF	0.992	-	J	0.00992	0.0883	Total HxCDF	19.9	-	
OCDF	33.5	-		0.0101	0.170	Total HpCDF	37.6	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	94.1	25.0 - 164	
13C-1,2,3,7,8-PeCDD	96.9	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	99.7	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	96.8	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	87.6	23.0 - 140	
13C-OCDD	75.9	17.0 - 157	
13C-2,3,7,8-TCDF	97.3	24.0 - 169	
13C-1,2,3,7,8-PeCDF	94.6	24.0 - 185	
13C-2,3,4,7,8-PeCDF	96.1	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	91.5	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	88.3	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	86.4	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	86.2	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	87.6	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	88.5	26.0 - 138	
13C-OCDF	76.9	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	92.6	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/19/2018

Reviewed By: _____
Date: 4/19/2018

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EPA Method 1613
PCDD/F

FAL ID: 11423-016-SA
Client ID: SP1-16
Matrix: Solid
Batch No: X4475

Date Extracted: 04-17-2018
Date Received: 04-04-2018
Amount: 5.00 g
% Solids: 94.97

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-18-2018
2005 WHO TEQ: 1.97
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.180		-	0.0273				
1,2,3,7,8-PeCDD	0.556	-	J	0.556	0.0570				
1,2,3,4,7,8-HxCDD	0.701	-	J	0.0701	0.0793				
1,2,3,6,7,8-HxCDD	1.64	-	J	0.164	0.0940	Total TCDD	ND	0.180	
1,2,3,7,8,9-HxCDD	1.48	-	J	0.148	0.0823	Total PeCDD	1.78	-	J
1,2,3,4,6,7,8-HpCDD	34.8	-		0.348	0.0842	Total HxCDD	12.6	-	
OCDD	269	-		0.0807	0.172	Total HpCDD	62.9	-	
2,3,7,8-TCDF	0.863	-	J	0.0863	0.0269				
1,2,3,7,8-PeCDF	ND	0.209		-	0.0449				
2,3,4,7,8-PeCDF	0.519	-	J	0.156	0.0468				
1,2,3,4,7,8-HxCDF	0.552	-	J	0.0552	0.0437				
1,2,3,6,7,8-HxCDF	0.830	-	J	0.0830	0.0417				
2,3,4,6,7,8-HxCDF	1.06	-	J	0.106	0.0574				
1,2,3,7,8,9-HxCDF	ND	0.219		-	0.0657	Total TCDF	4.02	-	
1,2,3,4,6,7,8-HpCDF	10.6	-		0.106	0.0747	Total PeCDF	5.39	-	
1,2,3,4,7,8,9-HpCDF	0.758	-	J	0.00758	0.0883	Total HxCDF	14.0	-	
OCDF	20.2	-		0.00606	0.170	Total HpCDF	23.7	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	93.3	25.0 - 164	
13C-1,2,3,7,8-PeCDD	94.4	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	101	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	98.5	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	88.4	23.0 - 140	
13C-OCDD	71.2	17.0 - 157	
13C-2,3,7,8-TCDF	95.3	24.0 - 169	
13C-1,2,3,7,8-PeCDF	93.2	24.0 - 185	
13C-2,3,4,7,8-PeCDF	94.4	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	93.4	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	88.9	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	85.4	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	86.2	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	87.3	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	87.8	26.0 - 138	
13C-OCDF	74.5	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	85.2	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/19/2018

Reviewed By: _____
Date: 4/19/2018

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EPA Method 1613
PCDD/F

FAL ID: 11423-017-SA
Client ID: SP1-17
Matrix: Solid
Batch No: X4475

Date Extracted: 04-17-2018
Date Received: 04-04-2018
Amount: 5.04 g
% Solids: 95.05

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-18-2018
2005 WHO TEQ: 0.429
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.179		-	0.0273				
1,2,3,7,8-PeCDD	ND	0.217		-	0.0570				
1,2,3,4,7,8-HxCDD	ND	0.240		-	0.0793				
1,2,3,6,7,8-HxCDD	1.07	-	J	0.107	0.0940	Total TCDD	ND	0.179	
1,2,3,7,8,9-HxCDD	0.689	-	J	0.0689	0.0823	Total PeCDD	ND	0.217	
1,2,3,4,6,7,8-HpCDD	16.0	-		0.160	0.0842	Total HxCDD	6.81	-	
OCDD	131	-		0.0393	0.172	Total HpCDD	29.2	-	
2,3,7,8-TCDF	0.274	-	J	0.0274	0.0269				
1,2,3,7,8-PeCDF	ND	0.166		-	0.0449				
2,3,4,7,8-PeCDF	ND	0.176		-	0.0468				
1,2,3,4,7,8-HxCDF	ND	0.211		-	0.0437				
1,2,3,6,7,8-HxCDF	ND	0.219		-	0.0417				
2,3,4,6,7,8-HxCDF	ND	0.232		-	0.0574				
1,2,3,7,8,9-HxCDF	ND	0.253		-	0.0657	Total TCDF	0.932	-	J,M
1,2,3,4,6,7,8-HpCDF	2.48	-	J	0.0248	0.0747	Total PeCDF	1.71	-	J
1,2,3,4,7,8,9-HpCDF	ND	0.224		-	0.0883	Total HxCDF	3.08	-	J
OCDF	6.08	-	J	0.00182	0.170	Total HpCDF	6.12	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	94.0	25.0 - 164	
13C-1,2,3,7,8-PeCDD	97.5	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	98.8	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	97.9	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	88.8	23.0 - 140	
13C-OCDD	73.4	17.0 - 157	
13C-2,3,7,8-TCDF	95.8	24.0 - 169	
13C-1,2,3,7,8-PeCDF	93.8	24.0 - 185	
13C-2,3,4,7,8-PeCDF	94.7	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	92.3	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	87.8	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	86.3	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	86.2	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	84.6	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	88.7	26.0 - 138	
13C-OCDF	76.9	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	85.0	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____

Date: 4/19/2018

Reviewed By: _____

Date: 4/19/2018

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EPA Method 1613
PCDD/F

FAL ID: 11423-018-SA
Client ID: SP1-18
Matrix: Solid
Batch No: X4475

Date Extracted: 04-17-2018
Date Received: 04-04-2018
Amount: 5.00 g
% Solids: 93.52

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-18-2018
2005 WHO TEQ: 0.891
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.171		-	0.0273				
1,2,3,7,8-PeCDD	ND	0.292		-	0.0570				
1,2,3,4,7,8-HxCDD	ND	0.272		-	0.0793				
1,2,3,6,7,8-HxCDD	0.832	-	J	0.0832	0.0940	Total TCDD	ND	0.171	
1,2,3,7,8,9-HxCDD	0.762	-	J	0.0762	0.0823	Total PeCDD	0.581	-	J
1,2,3,4,6,7,8-HpCDD	11.5	-		0.115	0.0842	Total HxCDD	6.39	-	
OCDD	89.3	-		0.0268	0.172	Total HpCDD	22.0	-	
2,3,7,8-TCDF	1.52	-		0.152	0.0269				
1,2,3,7,8-PeCDF	ND	0.203		-	0.0449				
2,3,4,7,8-PeCDF	0.821	-	J	0.246	0.0468				
1,2,3,4,7,8-HxCDF	0.671	-	J	0.0671	0.0437				
1,2,3,6,7,8-HxCDF	0.451	-	J	0.0451	0.0417				
2,3,4,6,7,8-HxCDF	0.489	-	J	0.0489	0.0574				
1,2,3,7,8,9-HxCDF	ND	0.208		-	0.0657	Total TCDF	5.49	-	
1,2,3,4,6,7,8-HpCDF	2.91	-	J	0.0291	0.0747	Total PeCDF	5.82	-	
1,2,3,4,7,8,9-HpCDF	ND	0.321		-	0.0883	Total HxCDF	5.46	-	
OCDF	4.76	-	J	0.00143	0.170	Total HpCDF	6.72	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	98.4	25.0 - 164	
13C-1,2,3,7,8-PeCDD	101	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	101	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	101	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	91.5	23.0 - 140	
13C-OCDD	74.2	17.0 - 157	
13C-2,3,7,8-TCDF	100	24.0 - 169	
13C-1,2,3,7,8-PeCDF	97.3	24.0 - 185	
13C-2,3,4,7,8-PeCDF	97.5	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	95.0	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	91.3	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	89.9	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	86.2	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	89.4	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	91.3	26.0 - 138	
13C-OCDF	79.0	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	92.7	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/19/2018

Reviewed By: _____
Date: 4/19/2018

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EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 11423-019-SA
Client ID: SP1-19
Matrix: Solid
Batch No: X4475

Date Extracted: 04-17-2018
Date Received: 04-04-2018
Amount: 5.01 g
% Solids: 95.10

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-19-2018
2005 WHO TEQ: 2.84
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.197		-	0.0273				
1,2,3,7,8-PeCDD	0.774	-	J	0.774	0.0570				
1,2,3,4,7,8-HxCDD	0.932	-	J	0.0932	0.0793				
1,2,3,6,7,8-HxCDD	2.78	-	J	0.278	0.0940	Total TCDD	ND	0.197	
1,2,3,7,8,9-HxCDD	1.92	-	J	0.192	0.0823	Total PeCDD	3.60	-	J
1,2,3,4,6,7,8-HpCDD	58.5	-		0.585	0.0842	Total HxCDD	20.3	-	
OCDD	496	-		0.149	0.172	Total HpCDD	103	-	
2,3,7,8-TCDF	0.921	-	J	0.0921	0.0269				
1,2,3,7,8-PeCDF	0.364	-	J	0.0109	0.0449				
2,3,4,7,8-PeCDF	0.556	-	J	0.167	0.0468				
1,2,3,4,7,8-HxCDF	0.901	-	J	0.0901	0.0437				
1,2,3,6,7,8-HxCDF	1.06	-	J	0.106	0.0417				
2,3,4,6,7,8-HxCDF	1.31	-	J	0.131	0.0574				
1,2,3,7,8,9-HxCDF	ND	0.248		-	0.0657	Total TCDF	4.61	-	
1,2,3,4,6,7,8-HpCDF	15.3	-		0.153	0.0747	Total PeCDF	8.55	-	
1,2,3,4,7,8,9-HpCDF	0.952	-	J	0.00952	0.0883	Total HxCDF	20.6	-	
OCDF	32.8	-		0.00984	0.170	Total HpCDF	37.7	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	95.8	25.0 - 164	
13C-1,2,3,7,8-PeCDD	93.4	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	98.7	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	97.2	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	88.3	23.0 - 140	
13C-OCDD	71.8	17.0 - 157	
13C-2,3,7,8-TCDF	98.9	24.0 - 169	
13C-1,2,3,7,8-PeCDF	94.7	24.0 - 185	
13C-2,3,4,7,8-PeCDF	95.2	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	91.5	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	87.8	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	85.8	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	86.2	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	84.1	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	88.3	26.0 - 138	
13C-OCDF	75.7	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	85.5	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/19/2018

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EPA Method 1613
PCDD/F

FAL ID: 11423-020-SA
Client ID: SP1-20
Matrix: Solid
Batch No: X4475

Date Extracted: 04-17-2018
Date Received: 04-04-2018
Amount: 5.03 g
% Solids: 93.51

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-19-2018
2005 WHO TEQ: 3.62
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.210		-	0.0273				
1,2,3,7,8-PeCDD	0.856	-	J	0.856	0.0570				
1,2,3,4,7,8-HxCDD	1.19	-	J	0.119	0.0793				
1,2,3,6,7,8-HxCDD	3.04	-	J	0.304	0.0940	Total TCDD	0.546	-	J
1,2,3,7,8,9-HxCDD	2.00	-	J	0.200	0.0823	Total PeCDD	4.16	-	J
1,2,3,4,6,7,8-HpCDD	55.7	-		0.557	0.0842	Total HxCDD	20.1	-	
OCDD	455	-		0.137	0.172	Total HpCDD	100	-	
2,3,7,8-TCDF	2.58	-	F	0.258	0.0269				
1,2,3,7,8-PeCDF	0.736	-	J	0.0221	0.0449				
2,3,4,7,8-PeCDF	1.66	-	J	0.498	0.0468				
1,2,3,4,7,8-HxCDF	1.88	-	J	0.188	0.0437				
1,2,3,6,7,8-HxCDF	1.12	-	J	0.112	0.0417				
2,3,4,6,7,8-HxCDF	1.45	-	J	0.145	0.0574				
1,2,3,7,8,9-HxCDF	0.856	-	J	0.0856	0.0657	Total TCDF	14.6	-	
1,2,3,4,6,7,8-HpCDF	11.3	-		0.113	0.0747	Total PeCDF	13.2	-	
1,2,3,4,7,8,9-HpCDF	1.60	-	J	0.0160	0.0883	Total HxCDF	18.4	-	
OCDF	27.4	-		0.00822	0.170	Total HpCDF	32.2	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	97.5	25.0 - 164	
13C-1,2,3,7,8-PeCDD	101	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	104	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	99.2	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	93.2	23.0 - 140	
13C-OCDD	76.8	17.0 - 157	
13C-2,3,7,8-TCDF	102	24.0 - 169	
13C-1,2,3,7,8-PeCDF	96.9	24.0 - 185	
13C-2,3,4,7,8-PeCDF	98.5	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	93.1	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	91.3	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	89.2	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	89.7	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	91.0	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	93.5	26.0 - 138	
13C-OCDF	81.8	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	89.8	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/19/2018

Reviewed By: _____
Date: 4/19/2018

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Frontier Analytical Laboratory
5172 Hillsdale Circle
El Dorado Hills, CA 95762
Tel: 916-934-0900
Fax: 916-934-0999

FAL USE ONLY
Laboratory Project No.: 11423
Temperature: 0 °C

Chain of Custody

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Please Print in Pen Page 1 of 2

CLIENT INFORMATION	INVOICE INFORMATION (if different from client info)	PROJECT INFORMATION
Company Name: Brusca Associates, Inc.	Company Name: Same	FAL Quote #: 3310
Contact Name: Joe Brusca	Contact Name:	P.O. #:
Address: PO Box 332, Roseville, CA 95661	Address:	Project #: 137-002
Phone: 916-677-1470 Fax:	Phone: Fax:	Project Name: LATHROP 48-Ac PROPERTY
Email: jbrusca@bruscaassociates.com	Email:	TAT (business days): ☐ 15 ☒ 10 ☐ 5* ☐ 3* (√ one)
		* FAL must agree with price and RUSH TAT in writing.

REPORT INFORMATION	REPORT DISTRIBUTION (email only is preferred)	ADDITIONAL INSTRUCTIONS
Report Level: ☐ I/II ☐ III ☐ IV	☐ Hardcopy	
☐ EDD: ☐ FAL Basic ☐ Geotracker ☐ Other: ☐ Custom: Contact FAL	☐ CD (.pdf including EDDs if requested)	
	☒ Email (.pdf including EDDs if requested)	
☐ California State Drinking Water Form		
System #: Source #:		
Sampler: Employer:		

	Sample ID	Date Collected	Time	Matrix	# of containers	EPA 1613**	EPA 8290**	DLM 02.0	EPA 8280**	Appendix IX	EPA TO-9/9A	EPA 23/23A	EPA 1668	FAL 15	Other
1	SP1-1	4/4/18	11:59	SOLID		X									
2	SP1-2		12:01			X									
3	SP1-3		12:03			X									
4	SP1-4		12:05			X									
5	SP1-5		12:12			X									
6	SP1-6		12:13			X									
7	SP1-7		12:17			X									
8	SP1-8		12:22			X									
9	SP1-9		12:25			X									
10	SP1-10		12:31			X									
11	SP1-11		12:35			X									
12	SP1-12		12:37			X									
13	SP1-13		12:42			X									
14	SP1-14		12:45			X									
15	SP1-15		12:47			X									

**CONGENERS	**TEQ
☐ 2,3,7,8-TCDD only	☐ 1998 WHO
☐ 2,3,7,8-TCDD/F only	☑ 2005 WHO
☑ PCDD/F (Cl_4-Cl_8)	☐ Other

Remarks

Samples will be disposed of 90 days after sample receipt unless other arrangements have been made and agreed upon in writing.

Relinquished by: (Signature and Printed Name)	Date	Time	Received by: (Signature and Printed Name)	Date	Time
	4/4/18	15:13	K. Zipp	04/04/18	1513

Client understands that all terms described in the proposals, quotations, and/or the general terms provided in the current FAL price schedules will be followed.
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Frontier Analytical Laboratory
5172 Hillsdale Circle
El Dorado Hills, CA 95762
Tel: 916-934-0900
Fax: 916-934-0999

FAL USE ONLY
Laboratory Project No.: 11423
Temperature: 0 °C

Chain of Custody

www.frontieranalytical.com

Please Print in Pen **Page** 2 **of** 2

CLIENT INFORMATION	**INVOICE INFORMATION** (if different from client info)	**PROJECT INFORMATION**
Company Name: Brusca Associates, Inc.	Company Name: Same	FAL Quote #: 3310
Contact Name: Joe Brusca	Contact Name:	P.O. #:
Address: PO Box 332, Roseville, CA 95661	Address:	Project #: 137-002
Phone: 916-677-1470 Fax:	Phone: Fax:	Project Name: LATHROP 48-AC PROPERTY
Email: jbrusca@bruscaassociates.com	Email:	TAT (business days): ☐ 15 ☒ 10 ☐ 5* ☐ 3* (√ one)
		* FAL must agree with price and RUSH TAT in writing.

REPORT INFORMATION
Report Level: ☐ I/II ☐ III ☐ IV
☐ EDD: ☐ FAL Basic ☐ Geotracker ☐ Other: ☐ Custom: Contact FAL
☐ California State Drinking Water Form
System #: Source #:
Sampler: Employer:

REPORT DISTRIBUTION (email only is preferred)
☐ Hardcopy
☐ CD (.pdf including EDDs if requested)
☐ Email (.pdf including EDDs if requested)

ADDITIONAL INSTRUCTIONS

	Sample ID	Date Collected	Time	Matrix	# of containers	EPA 1613**	EPA 8290**	DLM 02.0	EPA 8280**	Appendix IX	EPA TO-9/9A	EPA 23/23A	EPA 1668	FAL 15	Other	Remarks
1	SP1-16	4/4/18	12:51	SOLID		X										
2	SP1-17		12:53			X										
3	SP1-18		12:56			X										
4	SP1-19		13:05			X										
5	SP1-20		13:08			X										
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																

****CONGENERS**
☐ 2,3,7,8-TCDD only
☐ 2,3,7,8-TCDD/F only
☑ PCDD/F (Cl_4-Cl_8)

****TEQ**
☐ 1998 WHO
☑ 2005 WHO
☐ Other

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	4/4/18	15:13	Kathy Zipp K. Zipp	04/04/2018	1513

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000028 of 000033

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Frontier Analytical Laboratory

Sample Login Form

FAL Project ID: **11423**

Client:	Brusca Associates, Inc.
Client Project ID:	137-002
Date Received:	04/04/2018
Time Received:	03:13 pm
Received By:	KZ
Logged In By:	KZ
# of Samples Received:	20
Duplicates:	0
Storage Location:	R-4

Method of Delivery:	Courier
Tracking Number:	NA
Shipping Container Received Intact	Yes
Custody seals(s) present?	No
Custody seals(s) intact?	No
Sample Arrival Temperature (C)	0
Cooling Method	Ice
Chain Of Custody Present?	Yes
Return Shipping Container To Client	Yes
Test aqueous sample for residual Chlorine	No
Sodium Thiosulfate Added	No
Adequate Sample Volume	Yes
Appropriate Sample Container	Yes
pH Range of Aqueous Sample	N/A
Anomalies or additional comments:	

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Lake Forest, California 92630
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12 April 2018

Joe Brusca
Brusca Associates Inc.
PO Box 332
Roseville, CA 95661

RE: Lathrop 48 Acre Property

Enclosed are the results of analyses for samples received by the laboratory on 04/05/18 09:55. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Mike Jaroudi
Project Manager

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

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949.297.5020 Phone
949.297.5027 Fax

Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SP1-1	T181153-01	Soil	04/04/18 11:59	04/05/18 09:55
SP1-2	T181153-02	Soil	04/04/18 12:01	04/05/18 09:55
SP1-3	T181153-03	Soil	04/04/18 12:03	04/05/18 09:55
SP1-4	T181153-04	Soil	04/04/18 12:05	04/05/18 09:55
SP1-5	T181153-05	Soil	04/04/18 12:12	04/05/18 09:55
SP1-6	T181153-06	Soil	04/04/18 12:13	04/05/18 09:55
SP1-7	T181153-07	Soil	04/04/18 12:17	04/05/18 09:55
SP1-8	T181153-08	Soil	04/04/18 12:22	04/05/18 09:55
SP1-9	T181153-09	Soil	04/04/18 12:25	04/05/18 09:55
SP1-10	T181153-10	Soil	04/04/18 12:31	04/05/18 09:55
SP1-11	T181153-11	Soil	04/04/18 12:35	04/05/18 09:55
SP1-12	T181153-12	Soil	04/04/18 12:37	04/05/18 09:55
SP1-13	T181153-13	Soil	04/04/18 12:42	04/05/18 09:55
SP1-14	T181153-14	Soil	04/04/18 12:45	04/05/18 09:55
SP1-15	T181153-15	Soil	04/04/18 12:47	04/05/18 09:55
SP1-16	T181153-16	Soil	04/04/18 12:51	04/05/18 09:55
SP1-17	T181153-17	Soil	04/04/18 12:53	04/05/18 09:55
SP1-18	T181153-18	Soil	04/04/18 12:56	04/05/18 09:55
SP1-19	T181153-19	Soil	04/04/18 13:05	04/05/18 09:55
SP1-20	T181153-20	Soil	04/04/18 13:08	04/05/18 09:55

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Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

DETECTIONS SUMMARY

Sample ID: SP1-1 **Laboratory ID:** T181153-01

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**47**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**100**	10	mg/kg	EPA 8015B	
Barium	**54**	1.0	mg/kg	EPA 6010B	
Chromium	**5.4**	2.0	mg/kg	EPA 6010B	
Cobalt	**3.7**	2.0	mg/kg	EPA 6010B	
Copper	**7.8**	1.0	mg/kg	EPA 6010B	
Lead	**22**	3.0	mg/kg	EPA 6010B	
Nickel	**5.1**	2.0	mg/kg	EPA 6010B	
Vanadium	**12**	5.0	mg/kg	EPA 6010B	
Zinc	**36**	1.0	mg/kg	EPA 6010B	
PCB-1254	**35**	10	ug/kg	EPA 8082	
Pyrene	**2400**	300	ug/kg	EPA 8270C	
Benzo (a) anthracene	**900**	300	ug/kg	EPA 8270C	
Benzo (b) fluoranthene	**730**	300	ug/kg	EPA 8270C	
Benzo (k) fluoranthene	**410**	300	ug/kg	EPA 8270C	
Benzo (a) pyrene	**360**	300	ug/kg	EPA 8270C	
Chrysene	**1100**	300	ug/kg	EPA 8270C	
Fluoranthene	**2100**	300	ug/kg	EPA 8270C	
Indeno (1,2,3-cd) pyrene	**340**	300	ug/kg	EPA 8270C	
Phenanthrene	**1300**	300	ug/kg	EPA 8270C	

Sample ID: SP1-2 **Laboratory ID:** T181153-02

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**13**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**86**	10	mg/kg	EPA 8015B	
Barium	**65**	1.0	mg/kg	EPA 6010B	
Chromium	**5.4**	2.0	mg/kg	EPA 6010B	
Cobalt	**4.0**	2.0	mg/kg	EPA 6010B	
Copper	**3.7**	1.0	mg/kg	EPA 6010B	
Nickel	**5.4**	2.0	mg/kg	EPA 6010B	
Vanadium	**16**	5.0	mg/kg	EPA 6010B	

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Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

Sample ID: SP1-2 **Laboratory ID:** T181153-02

Analyte	Result	Reporting Limit	Units	Method	Notes
Zinc	**29**	1.0	mg/kg	EPA 6010B	

Sample ID: SP1-3 **Laboratory ID:** T181153-03

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**47**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**68**	10	mg/kg	EPA 8015B	
Barium	**61**	1.0	mg/kg	EPA 6010B	
Chromium	**5.3**	2.0	mg/kg	EPA 6010B	
Cobalt	**3.9**	2.0	mg/kg	EPA 6010B	
Copper	**4.0**	1.0	mg/kg	EPA 6010B	
Nickel	**5.1**	2.0	mg/kg	EPA 6010B	
Vanadium	**16**	5.0	mg/kg	EPA 6010B	
Zinc	**28**	1.0	mg/kg	EPA 6010B	
PCB-1254	**25**	10	ug/kg	EPA 8082	
Pyrene	**300**	300	ug/kg	EPA 8270C	

Sample ID: SP1-4 **Laboratory ID:** T181153-04

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**24**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**75**	10	mg/kg	EPA 8015B	
Barium	**69**	1.0	mg/kg	EPA 6010B	
Chromium	**5.3**	2.0	mg/kg	EPA 6010B	
Cobalt	**4.6**	2.0	mg/kg	EPA 6010B	
Copper	**4.2**	1.0	mg/kg	EPA 6010B	
Lead	**8.4**	3.0	mg/kg	EPA 6010B	
Nickel	**5.9**	2.0	mg/kg	EPA 6010B	
Vanadium	**17**	5.0	mg/kg	EPA 6010B	
Zinc	**32**	1.0	mg/kg	EPA 6010B	
PCB-1254	**13**	10	ug/kg	EPA 8082	

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Sample ID: SP1-5 **Laboratory ID:** T181153-05

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**96**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**52**	10	mg/kg	EPA 8015B	
Barium	**41**	1.0	mg/kg	EPA 6010B	
Chromium	**4.6**	2.0	mg/kg	EPA 6010B	
Cobalt	**3.0**	2.0	mg/kg	EPA 6010B	
Copper	**11**	1.0	mg/kg	EPA 6010B	
Lead	**45**	3.0	mg/kg	EPA 6010B	
Nickel	**3.9**	2.0	mg/kg	EPA 6010B	
Vanadium	**8.0**	5.0	mg/kg	EPA 6010B	
Zinc	**30**	1.0	mg/kg	EPA 6010B	
PCB-1254	**47**	10	ug/kg	EPA 8082	
Pyrene	**420**	300	ug/kg	EPA 8270C	
Fluoranthene	**360**	300	ug/kg	EPA 8270C	

Sample ID: SP1-6 **Laboratory ID:** T181153-06

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**44**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**78**	10	mg/kg	EPA 8015B	
Barium	**44**	1.0	mg/kg	EPA 6010B	
Chromium	**4.2**	2.0	mg/kg	EPA 6010B	
Cobalt	**3.0**	2.0	mg/kg	EPA 6010B	
Copper	**5.1**	1.0	mg/kg	EPA 6010B	
Lead	**24**	3.0	mg/kg	EPA 6010B	
Nickel	**4.2**	2.0	mg/kg	EPA 6010B	
Vanadium	**11**	5.0	mg/kg	EPA 6010B	
Zinc	**24**	1.0	mg/kg	EPA 6010B	
PCB-1254	**52**	10	ug/kg	EPA 8082	

Sample ID: SP1-7 **Laboratory ID:** T181153-07

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**88**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**92**	10	mg/kg	EPA 8015B	
Barium	**60**	1.0	mg/kg	EPA 6010B	

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

Sample ID: SP1-7 **Laboratory ID:** T181153-07

Analyte	Result	Reporting Limit	Units	Method	Notes
Chromium	**5.3**	2.0	mg/kg	EPA 6010B	
Cobalt	**4.2**	2.0	mg/kg	EPA 6010B	
Copper	**5.1**	1.0	mg/kg	EPA 6010B	
Lead	**11**	3.0	mg/kg	EPA 6010B	
Nickel	**5.5**	2.0	mg/kg	EPA 6010B	
Vanadium	**14**	5.0	mg/kg	EPA 6010B	
Zinc	**29**	1.0	mg/kg	EPA 6010B	
PCB-1254	**43**	10	ug/kg	EPA 8082	
Pyrene	**490**	300	ug/kg	EPA 8270C	
Fluoranthene	**420**	300	ug/kg	EPA 8270C	

Sample ID: SP1-8 **Laboratory ID:** T181153-08

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**28**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**64**	10	mg/kg	EPA 8015B	
Barium	**66**	1.0	mg/kg	EPA 6010B	
Chromium	**6.1**	2.0	mg/kg	EPA 6010B	
Cobalt	**3.6**	2.0	mg/kg	EPA 6010B	
Copper	**7.2**	1.0	mg/kg	EPA 6010B	
Lead	**13**	3.0	mg/kg	EPA 6010B	
Nickel	**5.1**	2.0	mg/kg	EPA 6010B	
Vanadium	**15**	5.0	mg/kg	EPA 6010B	
Zinc	**46**	1.0	mg/kg	EPA 6010B	
PCB-1254	**32**	10	ug/kg	EPA 8082	
Pyrene	**360**	300	ug/kg	EPA 8270C	

Sample ID: SP1-9 **Laboratory ID:** T181153-09

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**44**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**28**	10	mg/kg	EPA 8015B	
Barium	**67**	1.0	mg/kg	EPA 6010B	
Chromium	**5.7**	2.0	mg/kg	EPA 6010B	
Cobalt	**4.1**	2.0	mg/kg	EPA 6010B	

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

Sample ID: SP1-9 **Laboratory ID:** T181153-09

Analyte	Result	Reporting Limit	Units	Method	Notes
Copper	**5.3**	1.0	mg/kg	EPA 6010B	
Nickel	**5.6**	2.0	mg/kg	EPA 6010B	
Vanadium	**17**	5.0	mg/kg	EPA 6010B	
Zinc	**35**	1.0	mg/kg	EPA 6010B	
PCB-1254	**11**	10	ug/kg	EPA 8082	

Sample ID: SP1-10 **Laboratory ID:** T181153-10

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**18**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**58**	10	mg/kg	EPA 8015B	
Barium	**64**	1.0	mg/kg	EPA 6010B	
Chromium	**5.5**	2.0	mg/kg	EPA 6010B	
Cobalt	**3.9**	2.0	mg/kg	EPA 6010B	
Copper	**5.8**	1.0	mg/kg	EPA 6010B	
Nickel	**5.8**	2.0	mg/kg	EPA 6010B	
Vanadium	**16**	5.0	mg/kg	EPA 6010B	
Zinc	**28**	1.0	mg/kg	EPA 6010B	
PCB-1254	**13**	10	ug/kg	EPA 8082	

Sample ID: SP1-11 **Laboratory ID:** T181153-11

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**75**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**87**	10	mg/kg	EPA 8015B	
Barium	**54**	1.0	mg/kg	EPA 6010B	
Chromium	**5.4**	2.0	mg/kg	EPA 6010B	
Cobalt	**3.7**	2.0	mg/kg	EPA 6010B	
Copper	**6.1**	1.0	mg/kg	EPA 6010B	
Lead	**13**	3.0	mg/kg	EPA 6010B	
Nickel	**4.9**	2.0	mg/kg	EPA 6010B	
Vanadium	**13**	5.0	mg/kg	EPA 6010B	
Zinc	**28**	1.0	mg/kg	EPA 6010B	
PCB-1254	**61**	10	ug/kg	EPA 8082	

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Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

Sample ID: SP1-12 **Laboratory ID:** T181153-12

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**97**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**55**	10	mg/kg	EPA 8015B	
Barium	**55**	1.0	mg/kg	EPA 6010B	
Chromium	**4.5**	2.0	mg/kg	EPA 6010B	
Cobalt	**3.7**	2.0	mg/kg	EPA 6010B	
Copper	**4.6**	1.0	mg/kg	EPA 6010B	
Lead	**12**	3.0	mg/kg	EPA 6010B	
Nickel	**4.9**	2.0	mg/kg	EPA 6010B	
Vanadium	**14**	5.0	mg/kg	EPA 6010B	
Zinc	**26**	1.0	mg/kg	EPA 6010B	
PCB-1254	**24**	10	ug/kg	EPA 8082	

Sample ID: SP1-13 **Laboratory ID:** T181153-13

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**71**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**74**	10	mg/kg	EPA 8015B	
Barium	**52**	1.0	mg/kg	EPA 6010B	
Chromium	**4.6**	2.0	mg/kg	EPA 6010B	
Cobalt	**3.6**	2.0	mg/kg	EPA 6010B	
Copper	**6.0**	1.0	mg/kg	EPA 6010B	
Lead	**22**	3.0	mg/kg	EPA 6010B	
Nickel	**4.5**	2.0	mg/kg	EPA 6010B	
Vanadium	**13**	5.0	mg/kg	EPA 6010B	
Zinc	**29**	1.0	mg/kg	EPA 6010B	
PCB-1254	**43**	10	ug/kg	EPA 8082	

Sample ID: SP1-14 **Laboratory ID:** T181153-14

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**16**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**35**	10	mg/kg	EPA 8015B	
Barium	**52**	1.0	mg/kg	EPA 6010B	
Chromium	**4.2**	2.0	mg/kg	EPA 6010B	
Cobalt	**3.6**	2.0	mg/kg	EPA 6010B	

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

Sample ID: SP1-14 **Laboratory ID:** T181153-14

Analyte	Result	Reporting Limit	Units	Method	Notes
Copper	**3.2**	1.0	mg/kg	EPA 6010B	
Lead	**21**	3.0	mg/kg	EPA 6010B	
Nickel	**3.9**	2.0	mg/kg	EPA 6010B	
Vanadium	**12**	5.0	mg/kg	EPA 6010B	
Zinc	**21**	1.0	mg/kg	EPA 6010B	
PCB-1254	**19**	10	ug/kg	EPA 8082	

Sample ID: SP1-15 **Laboratory ID:** T181153-15

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**170**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**240**	10	mg/kg	EPA 8015B	
Barium	**52**	1.0	mg/kg	EPA 6010B	
Chromium	**6.0**	2.0	mg/kg	EPA 6010B	
Cobalt	**3.9**	2.0	mg/kg	EPA 6010B	
Copper	**5.7**	1.0	mg/kg	EPA 6010B	
Lead	**18**	3.0	mg/kg	EPA 6010B	
Nickel	**5.0**	2.0	mg/kg	EPA 6010B	
Vanadium	**14**	5.0	mg/kg	EPA 6010B	
Zinc	**27**	1.0	mg/kg	EPA 6010B	
PCB-1254	**110**	10	ug/kg	EPA 8082	

Sample ID: SP1-16 **Laboratory ID:** T181153-16

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**85**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**55**	10	mg/kg	EPA 8015B	
Barium	**64**	1.0	mg/kg	EPA 6010B	
Chromium	**5.6**	2.0	mg/kg	EPA 6010B	
Cobalt	**5.1**	2.0	mg/kg	EPA 6010B	
Copper	**5.2**	1.0	mg/kg	EPA 6010B	
Nickel	**6.5**	2.0	mg/kg	EPA 6010B	
Vanadium	**17**	5.0	mg/kg	EPA 6010B	
Zinc	**31**	1.0	mg/kg	EPA 6010B	
PCB-1254	**25**	10	ug/kg	EPA 8082	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

Sample ID: SP1-17 **Laboratory ID:** T181153-17

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**81**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**40**	10	mg/kg	EPA 8015B	
Barium	**49**	1.0	mg/kg	EPA 6010B	
Chromium	**5.0**	2.0	mg/kg	EPA 6010B	
Cobalt	**3.6**	2.0	mg/kg	EPA 6010B	
Copper	**3.9**	1.0	mg/kg	EPA 6010B	
Lead	**9.4**	3.0	mg/kg	EPA 6010B	
Nickel	**4.6**	2.0	mg/kg	EPA 6010B	
Vanadium	**13**	5.0	mg/kg	EPA 6010B	
Zinc	**23**	1.0	mg/kg	EPA 6010B	
PCB-1254	**18**	10	ug/kg	EPA 8082	

Sample ID: SP1-18 **Laboratory ID:** T181153-18

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**26**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**82**	10	mg/kg	EPA 8015B	
Barium	**62**	1.0	mg/kg	EPA 6010B	
Chromium	**5.2**	2.0	mg/kg	EPA 6010B	
Cobalt	**3.9**	2.0	mg/kg	EPA 6010B	
Copper	**4.4**	1.0	mg/kg	EPA 6010B	
Lead	**13**	3.0	mg/kg	EPA 6010B	
Nickel	**5.7**	2.0	mg/kg	EPA 6010B	
Vanadium	**15**	5.0	mg/kg	EPA 6010B	
Zinc	**27**	1.0	mg/kg	EPA 6010B	
PCB-1254	**42**	10	ug/kg	EPA 8082	

Sample ID: SP1-19 **Laboratory ID:** T181153-19

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**39**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**51**	10	mg/kg	EPA 8015B	
Barium	**58**	1.0	mg/kg	EPA 6010B	
Chromium	**5.4**	2.0	mg/kg	EPA 6010B	
Cobalt	**3.8**	2.0	mg/kg	EPA 6010B	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

Sample ID: SP1-19 **Laboratory ID:** T181153-19

Analyte	Result	Reporting Limit	Units	Method	Notes
Copper	**4.6**	1.0	mg/kg	EPA 6010B	
Nickel	**5.3**	2.0	mg/kg	EPA 6010B	
Vanadium	**14**	5.0	mg/kg	EPA 6010B	
Zinc	**28**	1.0	mg/kg	EPA 6010B	
PCB-1254	**21**	10	ug/kg	EPA 8082	

Sample ID: SP1-20 **Laboratory ID:** T181153-20

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**76**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**150**	10	mg/kg	EPA 8015B	
Barium	**57**	1.0	mg/kg	EPA 6010B	
Chromium	**5.9**	2.0	mg/kg	EPA 6010B	
Cobalt	**3.9**	2.0	mg/kg	EPA 6010B	
Copper	**4.6**	1.0	mg/kg	EPA 6010B	
Lead	**10**	3.0	mg/kg	EPA 6010B	
Nickel	**5.3**	2.0	mg/kg	EPA 6010B	
Vanadium	**16**	5.0	mg/kg	EPA 6010B	
Zinc	**30**	1.0	mg/kg	EPA 6010B	
PCB-1254	**50**	10	ug/kg	EPA 8082	
Pyrene	**420**	300	ug/kg	EPA 8270C	
Fluoranthene	**340**	300	ug/kg	EPA 8270C	

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SP1-1

T181153-01 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8040518	04/05/18	04/09/18	EPA 8015B	
C13-C28 (DRO)	**47**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**100**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*74.3 %*		*65-135*	"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8040603	04/06/18	04/06/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**54**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**5.4**	2.0	"	"	"	"	"	"	
Cobalt	**3.7**	2.0	"	"	"	"	"	"	
Copper	**7.8**	1.0	"	"	"	"	"	"	
Lead	**22**	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**5.1**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**12**	5.0	"	"	"	"	"	"	
Zinc	**36**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8040605	04/06/18	04/06/18	EPA 7471A Soil	

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Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-1

T181153-01 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8040520	04/05/18	04/06/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	**35**	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*131 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*136 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	**2400**	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	**900**	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	**730**	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	**410**	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	
Benzo (a) pyrene	**360**	300	"	"	"	"	"	"	

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SP1-1

T181153-01 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzyl alcohol	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	**1100**	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	**2100**	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	**340**	300	"	"	"	"	"	"	
Isophorone	ND	300	"	"	"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-1

T181153-01 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
2-Methylphenol	ND	1000	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	**1300**	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*52.5 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*56.4 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*74.7 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*67.5 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*74.9 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*118 %*	*29.1-130*		"	"	"	"	

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Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-2

T181153-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8040518	04/05/18	04/09/18	EPA 8015B	
C13-C28 (DRO)	**13**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**86**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*75.8 %*		*65-135*	"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8040603	04/06/18	04/06/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**65**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**5.4**	2.0	"	"	"	"	"	"	
Cobalt	**4.0**	2.0	"	"	"	"	"	"	
Copper	**3.7**	1.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**5.4**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**16**	5.0	"	"	"	"	"	"	
Zinc	**29**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8040605	04/06/18	04/06/18	EPA 7471A Soil	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-2

T181153-02 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8040520	04/05/18	04/06/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*119 %*	*35-140*		"	"	"	"	
Surrogate: Decachlorobiphenyl		*127 %*	*35-140*		"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-2

T181153-02 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-2

T181153-02 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*58.2 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*58.8 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*79.6 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*70.4 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*70.2 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*116 %*	*29.1-130*		"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-3

T181153-03 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8040518	04/05/18	04/09/18	EPA 8015B	
C13-C28 (DRO)	**47**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**68**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*77.9 %*		*65-135*	"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8040603	04/06/18	04/06/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**61**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**5.3**	2.0	"	"	"	"	"	"	
Cobalt	**3.9**	2.0	"	"	"	"	"	"	
Copper	**4.0**	1.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**5.1**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**16**	5.0	"	"	"	"	"	"	
Zinc	**28**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8040605	04/06/18	04/06/18	EPA 7471A Soil	

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-3

T181153-03 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8040520	04/05/18	04/06/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	**25**	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*122 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*132 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	**300**	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-3

T181153-03 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-3

T181153-03 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*59.7 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*63.1 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*80.9 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*75.6 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*73.9 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*121 %*	*29.1-130*		"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-4

T181153-04 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8040518	04/05/18	04/09/18	EPA 8015B	
C13-C28 (DRO)	**24**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**75**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*76.2 %*		*65-135*	"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8040603	04/06/18	04/06/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**69**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**5.3**	2.0	"	"	"	"	"	"	
Cobalt	**4.6**	2.0	"	"	"	"	"	"	
Copper	**4.2**	1.0	"	"	"	"	"	"	
Lead	**8.4**	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**5.9**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**17**	5.0	"	"	"	"	"	"	
Zinc	**32**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8040605	04/06/18	04/06/18	EPA 7471A Soil	

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-4

T181153-04 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8040520	04/05/18	04/06/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	**13**	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*106 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*123 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-4

T181153-04 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-4

T181153-04 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*42.7 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*45.7 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*60.3 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*56.3 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*61.2 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*108 %*	*29.1-130*		"	"	"	"	

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Mike Jaroudi, Project Manager

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-5

T181153-05 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8040518	04/05/18	04/10/18	EPA 8015B	
C13-C28 (DRO)	**96**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**52**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*74.7 %*		*65-135*	"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8040603	04/06/18	04/06/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**41**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**4.6**	2.0	"	"	"	"	"	"	
Cobalt	**3.0**	2.0	"	"	"	"	"	"	
Copper	**11**	1.0	"	"	"	"	"	"	
Lead	**45**	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**3.9**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**8.0**	5.0	"	"	"	"	"	"	
Zinc	**30**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8040605	04/06/18	04/06/18	EPA 7471A Soil	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-5

T181153-05 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8040520	04/05/18	04/06/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	**47**	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*118 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*123 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	**420**	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-5

T181153-05 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	**360**	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-5

T181153-05 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*57.7 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*61.4 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*80.7 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*75.5 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*75.7 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*126 %*	*29.1-130*		"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-6

T181153-06 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8040518	04/05/18	04/10/18	EPA 8015B	
C13-C28 (DRO)	**44**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**78**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*78.7 %*		*65-135*	"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8040603	04/06/18	04/06/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**44**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**4.2**	2.0	"	"	"	"	"	"	
Cobalt	**3.0**	2.0	"	"	"	"	"	"	
Copper	**5.1**	1.0	"	"	"	"	"	"	
Lead	**24**	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**4.2**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**11**	5.0	"	"	"	"	"	"	
Zinc	**24**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8040605	04/06/18	04/06/18	EPA 7471A Soil	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-6

T181153-06 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8040520	04/05/18	04/06/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	**52**	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*133 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*128 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-6

T181153-06 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-6

T181153-06 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*58.6 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*62.0 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*80.3 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*73.8 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*74.3 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*127 %*	*29.1-130*		"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-7

T181153-07 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8040518	04/05/18	04/10/18	EPA 8015B	
C13-C28 (DRO)	**88**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**92**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*81.8 %*		*65-135*	"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8040603	04/06/18	04/06/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**60**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**5.3**	2.0	"	"	"	"	"	"	
Cobalt	**4.2**	2.0	"	"	"	"	"	"	
Copper	**5.1**	1.0	"	"	"	"	"	"	
Lead	**11**	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**5.5**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**14**	5.0	"	"	"	"	"	"	
Zinc	**29**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8040605	04/06/18	04/06/18	EPA 7471A Soil	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-7

T181153-07 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8040520	04/05/18	04/06/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	**43**	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*128 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*140 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	**490**	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-7

T181153-07 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	**420**	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-7

T181153-07 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*63.6 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*66.3 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*86.5 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*80.1 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*80.0 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*136 %*	*29.1-130*		"	"	"	"	*S-GC*

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-8

T181153-08 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8040518	04/05/18	04/10/18	EPA 8015B	
C13-C28 (DRO)	**28**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**64**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*77.5 %*		*65-135*	"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8040603	04/06/18	04/06/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**66**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**6.1**	2.0	"	"	"	"	"	"	
Cobalt	**3.6**	2.0	"	"	"	"	"	"	
Copper	**7.2**	1.0	"	"	"	"	"	"	
Lead	**13**	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**5.1**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**15**	5.0	"	"	"	"	"	"	
Zinc	**46**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8040605	04/06/18	04/06/18	EPA 7471A Soil	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-8

T181153-08 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8040520	04/05/18	04/06/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	**32**	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*118 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*140 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
Aniline	ND	300	"	"	"	"	"	"	
Phenol	ND	1000	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	**360**	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-8

T181153-08 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-8

T181153-08 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*57.6 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*60.4 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*77.3 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*72.4 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*71.7 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*118 %*	*29.1-130*		"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-9

T181153-09 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8040518	04/05/18	04/10/18	EPA 8015B	
C13-C28 (DRO)	**44**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**28**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*78.0 %*		*65-135*	"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8040603	04/06/18	04/06/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**67**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**5.7**	2.0	"	"	"	"	"	"	
Cobalt	**4.1**	2.0	"	"	"	"	"	"	
Copper	**5.3**	1.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**5.6**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**17**	5.0	"	"	"	"	"	"	
Zinc	**35**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8040605	04/06/18	04/06/18	EPA 7471A Soil	

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-9

T181153-09 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8040520	04/05/18	04/06/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	**11**	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*112 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*112 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-9

T181153-09 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
Semivolatile Organic Compounds by EPA Method 8270C									
Benzo (a) pyrene	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-9

T181153-09 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*52.0 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*54.4 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*70.5 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*66.0 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*75.9 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*116 %*	*29.1-130*		"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-10

T181153-10 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8040518	04/05/18	04/10/18	EPA 8015B	
C13-C28 (DRO)	**18**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**58**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*80.4 %*		*65-135*	"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8040603	04/06/18	04/06/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**64**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**5.5**	2.0	"	"	"	"	"	"	
Cobalt	**3.9**	2.0	"	"	"	"	"	"	
Copper	**5.8**	1.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**5.8**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**16**	5.0	"	"	"	"	"	"	
Zinc	**28**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8040605	04/06/18	04/06/18	EPA 7471A Soil	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-10

T181153-10 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8040520	04/05/18	04/06/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	**13**	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*116 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*133 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-10

T181153-10 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-10

T181153-10 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*53.1 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*56.2 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*73.1 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*66.8 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*69.5 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*119 %*	*29.1-130*		"	"	"	"	

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Mike Jaroudi, Project Manager

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-11

T181153-11 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8040518	04/05/18	04/10/18	EPA 8015B	
C13-C28 (DRO)	**75**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**87**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*80.8 %*		*65-135*	"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8040603	04/06/18	04/06/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**54**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**5.4**	2.0	"	"	"	"	"	"	
Cobalt	**3.7**	2.0	"	"	"	"	"	"	
Copper	**6.1**	1.0	"	"	"	"	"	"	
Lead	**13**	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**4.9**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**13**	5.0	"	"	"	"	"	"	
Zinc	**28**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8040605	04/06/18	04/06/18	EPA 7471A Soil	

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-11

T181153-11 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8040520	04/05/18	04/06/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	**61**	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*115 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*129 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-11

T181153-11 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-11

T181153-11 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*57.8 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*61.0 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*77.9 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*72.1 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*72.8 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*124 %*	*29.1-130*		"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-12

T181153-12 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8040518	04/05/18	04/10/18	EPA 8015B	
C13-C28 (DRO)	**97**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**55**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*83.8 %*		*65-135*	"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8040603	04/06/18	04/06/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**55**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**4.5**	2.0	"	"	"	"	"	"	
Cobalt	**3.7**	2.0	"	"	"	"	"	"	
Copper	**4.6**	1.0	"	"	"	"	"	"	
Lead	**12**	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**4.9**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**14**	5.0	"	"	"	"	"	"	
Zinc	**26**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8040605	04/06/18	04/06/18	EPA 7471A Soil	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-12

T181153-12 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8040520	04/05/18	04/06/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	**24**	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*122 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*134 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-12

T181153-12 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-12

T181153-12 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*52.8 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*57.1 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*72.5 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*70.1 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*71.9 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*126 %*	*29.1-130*		"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-13

T181153-13 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8040518	04/05/18	04/10/18	EPA 8015B	
C13-C28 (DRO)	**71**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**74**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*75.7 %*		*65-135*	"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8040603	04/06/18	04/06/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**52**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**4.6**	2.0	"	"	"	"	"	"	
Cobalt	**3.6**	2.0	"	"	"	"	"	"	
Copper	**6.0**	1.0	"	"	"	"	"	"	
Lead	**22**	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**4.5**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**13**	5.0	"	"	"	"	"	"	
Zinc	**29**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8040605	04/06/18	04/06/18	EPA 7471A Soil	

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-13

T181153-13 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8040520	04/05/18	04/06/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	**43**	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*118 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*140 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
Aniline	ND	300	"	"	"	"	"	"	
Phenol	ND	1000	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-13

T181153-13 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-13

T181153-13 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*48.9 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*53.2 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*68.6 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*67.8 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*71.4 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*125 %*	*29.1-130*		"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-14

T181153-14 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8040518	04/05/18	04/10/18	EPA 8015B	
C13-C28 (DRO)	**16**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**35**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*72.6 %*		*65-135*	"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8040603	04/06/18	04/06/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**52**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**4.2**	2.0	"	"	"	"	"	"	
Cobalt	**3.6**	2.0	"	"	"	"	"	"	
Copper	**3.2**	1.0	"	"	"	"	"	"	
Lead	**21**	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**3.9**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**12**	5.0	"	"	"	"	"	"	
Zinc	**21**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8040605	04/06/18	04/06/18	EPA 7471A Soil	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-14

T181153-14 (Soil)

SunStar Laboratories, Inc.

Polychlorinated Biphenyls by EPA Method 8082

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
PCB-1016	ND	10	ug/kg	1	8040520	04/05/18	04/06/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	**19**	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*116 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*122 %*		*35-140*	"	"	"	"	

Semivolatile Organic Compounds by EPA Method 8270C

Carbazole	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
Aniline	ND	300	"	"	"	"	"	"	
Phenol	ND	1000	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-14

T181153-14 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-14

T181153-14 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*55.7 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*56.3 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*74.6 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*69.0 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*68.6 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*120 %*	*29.1-130*		"	"	"	"	

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-15

T181153-15 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8040518	04/05/18	04/10/18	EPA 8015B	
C13-C28 (DRO)	**170**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**240**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*73.1 %*		*65-135*	"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8040603	04/06/18	04/06/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**52**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**6.0**	2.0	"	"	"	"	"	"	
Cobalt	**3.9**	2.0	"	"	"	"	"	"	
Copper	**5.7**	1.0	"	"	"	"	"	"	
Lead	**18**	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**5.0**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**14**	5.0	"	"	"	"	"	"	
Zinc	**27**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8040605	04/06/18	04/06/18	EPA 7471A Soil	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-15

T181153-15 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8040520	04/05/18	04/06/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	**110**	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*119 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*133 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-15

T181153-15 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-15

T181153-15 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*45.2 %*	*15-121*		*"*	*"*	*"*	*"*	
Surrogate: Phenol-d6		*49.3 %*	*24-113*		*"*	*"*	*"*	*"*	
Surrogate: Nitrobenzene-d5		*62.1 %*	*21.3-119*		*"*	*"*	*"*	*"*	
Surrogate: 2-Fluorobiphenyl		*61.0 %*	*32.4-102*		*"*	*"*	*"*	*"*	
Surrogate: 2,4,6-Tribromophenol		*62.6 %*	*18.1-105*		*"*	*"*	*"*	*"*	
Surrogate: Terphenyl-dl4		*107 %*	*29.1-130*		*"*	*"*	*"*	*"*	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-16

T181153-16 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8040518	04/05/18	04/10/18	EPA 8015B	
C13-C28 (DRO)	**85**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**55**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*75.3 %*		*65-135*	"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8040603	04/06/18	04/06/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**64**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**5.6**	2.0	"	"	"	"	"	"	
Cobalt	**5.1**	2.0	"	"	"	"	"	"	
Copper	**5.2**	1.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**6.5**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**17**	5.0	"	"	"	"	"	"	
Zinc	**31**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8040605	04/06/18	04/06/18	EPA 7471A Soil	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-16

T181153-16 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8040520	04/05/18	04/06/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	**25**	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*109 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*111 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-16

T181153-16 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-16

T181153-16 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*49.5 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*52.4 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*67.4 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*66.4 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*68.2 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*120 %*	*29.1-130*		"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-17

T181153-17 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8040518	04/05/18	04/10/18	EPA 8015B	
C13-C28 (DRO)	**81**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**40**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*88.5 %*		*65-135*	"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8040603	04/06/18	04/06/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**49**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**5.0**	2.0	"	"	"	"	"	"	
Cobalt	**3.6**	2.0	"	"	"	"	"	"	
Copper	**3.9**	1.0	"	"	"	"	"	"	
Lead	**9.4**	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**4.6**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**13**	5.0	"	"	"	"	"	"	
Zinc	**23**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8040605	04/06/18	04/06/18	EPA 7471A Soil	

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-17

T181153-17 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8040520	04/05/18	04/06/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	**18**	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*125 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*131 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-17

T181153-17 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-17

T181153-17 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8040523	04/05/18	04/09/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*56.8 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*57.0 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*76.6 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*73.5 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*70.7 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*111 %*	*29.1-130*		"	"	"	"	

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-18

T181153-18 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8040518	04/05/18	04/10/18	EPA 8015B	
C13-C28 (DRO)	**26**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**82**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*76.5 %*		*65-135*	"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8040603	04/06/18	04/06/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**62**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**5.2**	2.0	"	"	"	"	"	"	
Cobalt	**3.9**	2.0	"	"	"	"	"	"	
Copper	**4.4**	1.0	"	"	"	"	"	"	
Lead	**13**	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**5.7**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**15**	5.0	"	"	"	"	"	"	
Zinc	**27**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8040605	04/06/18	04/06/18	EPA 7471A Soil	

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-18

T181153-18 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8040520	04/05/18	04/06/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	**42**	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*120 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*136 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8040523	04/05/18	04/10/18	EPA 8270C	
Aniline	ND	300	"	"	"	"	"	"	
Phenol	ND	1000	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-18

T181153-18 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8040523	04/05/18	04/10/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-18

T181153-18 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8040523	04/05/18	04/10/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*61.6 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*64.3 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*80.0 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*73.7 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*72.8 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*115 %*	*29.1-130*		"	"	"	"	

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-19

T181153-19 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8040518	04/05/18	04/10/18	EPA 8015B	
C13-C28 (DRO)	**39**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**51**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*73.6 %*		*65-135*	"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8040603	04/06/18	04/06/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**58**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**5.4**	2.0	"	"	"	"	"	"	
Cobalt	**3.8**	2.0	"	"	"	"	"	"	
Copper	**4.6**	1.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**5.3**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**14**	5.0	"	"	"	"	"	"	
Zinc	**28**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8040605	04/06/18	04/06/18	EPA 7471A Soil	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-19

T181153-19 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8040520	04/05/18	04/06/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	**21**	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*101 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*116 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8040523	04/05/18	04/10/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-19

T181153-19 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8040523	04/05/18	04/10/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-19

T181153-19 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8040523	04/05/18	04/10/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*54.3 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*57.3 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*72.8 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*69.4 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*72.8 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*120 %*	*29.1-130*		"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-20

T181153-20 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8040518	04/05/18	04/10/18	EPA 8015B	
C13-C28 (DRO)	**76**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**150**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*81.0 %*		*65-135*	"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8040603	04/06/18	04/06/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**57**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**5.9**	2.0	"	"	"	"	"	"	
Cobalt	**3.9**	2.0	"	"	"	"	"	"	
Copper	**4.6**	1.0	"	"	"	"	"	"	
Lead	**10**	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**5.3**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**16**	5.0	"	"	"	"	"	"	
Zinc	**30**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8040605	04/06/18	04/06/18	EPA 7471A Soil	

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Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-20

T181153-20 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8040520	04/05/18	04/07/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	**50**	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*134 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*131 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8040523	04/05/18	04/10/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	**420**	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-20

T181153-20 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8040523	04/05/18	04/10/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	**340**	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

SP1-20

T181153-20 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8040523	04/05/18	04/10/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*52.3 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*57.0 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*72.1 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*69.4 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*73.2 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*117 %*	*29.1-130*		"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8040518 - EPA 3550B GC										
Blank (8040518-BLK1)				Prepared: 04/05/18 Analyzed: 04/09/18						
C6-C12 (GRO)	ND	10	mg/kg							
C13-C28 (DRO)	ND	10	"							
C29-C40 (MORO)	ND	10	"							
Surrogate: p-Terphenyl	*77.1*		*"*	*100*		*77.1*	*65-135*			
LCS (8040518-BS1)				Prepared: 04/05/18 Analyzed: 04/09/18						
C13-C28 (DRO)	500	10	mg/kg	500		101	75-125			
Surrogate: p-Terphenyl	*81.2*		*"*	*100*		*81.2*	*65-135*			
Matrix Spike (8040518-MS1)	**Source: T181153-01**			Prepared: 04/05/18 Analyzed: 04/09/18						
C13-C28 (DRO)	580	10	mg/kg	500	47	107	75-125			
Surrogate: p-Terphenyl	*84.4*		*"*	*100*		*84.4*	*65-135*			
Matrix Spike Dup (8040518-MSD1)	**Source: T181153-01**			Prepared: 04/05/18 Analyzed: 04/09/18						
C13-C28 (DRO)	520	10	mg/kg	495	47	95.8	75-125	10.8	20	
Surrogate: p-Terphenyl	*74.9*		*"*	*99.0*		*75.6*	*65-135*			

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

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 8040603 - EPA 3050B										
Blank (8040603-BLK1)				Prepared & Analyzed: 04/06/18						
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	1.60	1.0	"							QB-01
LCS (8040603-BS1)				Prepared & Analyzed: 04/06/18						
Arsenic	105	5.0	mg/kg	100		105	75-125			
Barium	105	1.0	"	100		105	75-125			
Cadmium	104	2.0	"	100		104	75-125			
Chromium	105	2.0	"	100		105	75-125			
Lead	109	3.0	"	100		109	75-125			
Matrix Spike (8040603-MS1)	**Source: T181153-01**			Prepared & Analyzed: 04/06/18						
Arsenic	96.5	5.0	mg/kg	100	2.35	94.2	75-125			
Barium	155	1.0	"	100	53.7	101	75-125			
Cadmium	95.9	2.0	"	100	0.220	95.7	75-125			
Chromium	103	2.0	"	100	5.36	97.6	75-125			
Lead	117	3.0	"	100	21.6	95.8	75-125			

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Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

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 8040603 - EPA 3050B										
Matrix Spike Dup (8040603-MSD1)	**Source: T181153-01**			Prepared & Analyzed: 04/06/18						
Arsenic	96.2	5.0	mg/kg	100	2.35	93.9	75-125	0.314	20	
Barium	158	1.0	"	100	53.7	104	75-125	1.77	20	
Cadmium	92.7	2.0	"	100	0.220	92.5	75-125	3.42	20	
Chromium	99.9	2.0	"	100	5.36	94.6	75-125	3.02	20	
Lead	118	3.0	"	100	21.6	96.2	75-125	0.371	20	

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
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Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

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 8040605 - EPA 7471A Soil										
Blank (8040605-BLK1)				Prepared & Analyzed: 04/06/18						
Mercury	ND	0.10	mg/kg							
LCS (8040605-BS1)				Prepared & Analyzed: 04/06/18						
Mercury	0.433	0.10	mg/kg	0.417		104	80-120			
Matrix Spike (8040605-MS1)	**Source: T181153-01**			Prepared & Analyzed: 04/06/18						
Mercury	0.446	0.10	mg/kg	0.417	ND	107	75-125			
Matrix Spike Dup (8040605-MSD1)	**Source: T181153-01**			Prepared & Analyzed: 04/06/18						
Mercury	0.447	0.10	mg/kg	0.417	ND	107	75-125	0.150	20	

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

Polychlorinated Biphenyls by EPA Method 8082 - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8040520 - EPA 3550 ECD/GCMS										
Blank (8040520-BLK1)				Prepared: 04/05/18 Analyzed: 04/06/18						
PCB-1016	ND	10	ug/kg							
PCB-1221	ND	10	"							
PCB-1232	ND	10	"							
PCB-1242	ND	10	"							
PCB-1248	ND	10	"							
PCB-1254	ND	10	"							
PCB-1260	ND	10	"							
Surrogate: Tetrachloro-meta-xylene	*13.4*		"	*10.0*		*134*	*35-140*			
Surrogate: Decachlorobiphenyl	*14.4*		"	*10.0*		*144*	*35-140*			*S-GC*
LCS (8040520-BS1)				Prepared: 04/05/18 Analyzed: 04/06/18						
PCB-1016	63.2	10	ug/kg	100		63.2	40-130			
PCB-1260	63.7	10	"	100		63.7	40-130			
Surrogate: Tetrachloro-meta-xylene	*13.0*		"	*10.0*		*130*	*35-140*			
Surrogate: Decachlorobiphenyl	*14.6*		"	*10.0*		*146*	*35-140*			*S-GC*
Matrix Spike (8040520-MS1)	**Source: T181153-01**			Prepared: 04/05/18 Analyzed: 04/06/18						
PCB-1016	62.7	10	ug/kg	98.0	ND	64.0	40-130			
PCB-1260	56.1	10	"	98.0	ND	57.2	40-130			
Surrogate: Tetrachloro-meta-xylene	*11.7*		"	*9.80*		*120*	*35-140*			
Surrogate: Decachlorobiphenyl	*12.9*		"	*9.80*		*132*	*35-140*			
Matrix Spike Dup (8040520-MSD1)	**Source: T181153-01**			Prepared: 04/05/18 Analyzed: 04/06/18						
PCB-1016	62.6	10	ug/kg	98.0	ND	63.9	40-130	0.156	30	
PCB-1260	52.3	10	"	98.0	ND	53.3	40-130	7.06	30	
Surrogate: Tetrachloro-meta-xylene	*10.4*		"	*9.80*		*106*	*35-140*			
Surrogate: Decachlorobiphenyl	*11.7*		"	*9.80*		*120*	*35-140*			

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8040523 - EPA 3550 ECD/GCMS										
Blank (8040523-BLK1)				Prepared: 04/05/18 Analyzed: 04/09/18						
Carbazole	ND	300	ug/kg							
Phenol	ND	1000	"							
Aniline	ND	300	"							
2-Chlorophenol	ND	1000	"							
1,4-Dichlorobenzene	ND	300	"							
N-Nitrosodi-n-propylamine	ND	300	"							
1,2,4-Trichlorobenzene	ND	300	"							
4-Chloro-3-methylphenol	ND	1000	"							
1-Methylnaphthalene	ND	300	"							
2-Methylnaphthalene	ND	300	"							
Acenaphthene	ND	300	"							
4-Nitrophenol	ND	1000	"							
2,4-Dinitrotoluene	ND	300	"							
Pentachlorophenol	ND	1000	"							
Pyrene	ND	300	"							
Acenaphthylene	ND	300	"							
Anthracene	ND	300	"							
Benzo (a) anthracene	ND	300	"							
Benzo (b) fluoranthene	ND	300	"							
Benzo (k) fluoranthene	ND	300	"							
Benzo (g,h,i) perylene	ND	1000	"							
Benzo (a) pyrene	ND	300	"							
Benzyl alcohol	ND	300	"							
Bis(2-chloroethoxy)methane	ND	300	"							
Bis(2-chloroethyl)ether	ND	300	"							
Bis(2-chloroisopropyl)ether	ND	300	"							
Bis(2-ethylhexyl)phthalate	ND	300	"							
4-Bromophenyl phenyl ether	ND	300	"							
Butyl benzyl phthalate	ND	300	"							
4-Chloroaniline	ND	300	"							
2-Chloronaphthalene	ND	300	"							
4-Chlorophenyl phenyl ether	ND	300	"							
Chrysene	ND	300	"							
Dibenz (a,h) anthracene	ND	300	"							
Dibenzofuran	ND	300	"							
Di-n-butyl phthalate	ND	300	"							

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Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8040523 - EPA 3550 ECD/GCMS										
Blank (8040523-BLK1)				Prepared: 04/05/18 Analyzed: 04/09/18						
1,2-Dichlorobenzene	ND	300	ug/kg							
1,3-Dichlorobenzene	ND	300	"							
2,4-Dichlorophenol	ND	1000	"							
Diethyl phthalate	ND	300	"							
2,4-Dimethylphenol	ND	1000	"							
Dimethyl phthalate	ND	300	"							
4,6-Dinitro-2-methylphenol	ND	1000	"							
2,4-Dinitrophenol	ND	1000	"							
2,6-Dinitrotoluene	ND	1000	"							
Di-n-octyl phthalate	ND	300	"							
Fluoranthene	ND	300	"							
Fluorene	ND	300	"							
Hexachlorobenzene	ND	1500	"							
Hexachlorobutadiene	ND	300	"							
Hexachlorocyclopentadiene	ND	1000	"							
Hexachloroethane	ND	300	"							
Indeno (1,2,3-cd) pyrene	ND	300	"							
Isophorone	ND	300	"							
2-Methylphenol	ND	1000	"							
4-Methylphenol	ND	1000	"							
Naphthalene	ND	300	"							
2-Nitroaniline	ND	300	"							
3-Nitroaniline	ND	300	"							
4-Nitroaniline	ND	300	"							
Nitrobenzene	ND	1000	"							
2-Nitrophenol	ND	1000	"							
N-Nitrosodimethylamine	ND	300	"							
N-Nitrosodiphenylamine	ND	300	"							
2,3,5,6-Tetrachlorophenol	ND	300	"							
2,3,4,6-Tetrachlorophenol	ND	300	"							
Phenanthrene	ND	300	"							
Azobenzene	ND	300	"							
Pyridine	ND	300	"							
2,4,5-Trichlorophenol	ND	1000	"							
2,4,6-Trichlorophenol	ND	1000	"							

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Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8040523 - EPA 3550 ECD/GCMS										
Blank (8040523-BLK1)				Prepared: 04/05/18 Analyzed: 04/09/18						
Surrogate: 2-Fluorophenol	*1800*		*ug/kg*	*3320*		*54.2*	*15-121*			
Surrogate: Phenol-d6	*1820*		*"*	*3320*		*54.8*	*24-113*			
Surrogate: Nitrobenzene-d5	*2540*		*"*	*3320*		*76.3*	*21.3-119*			
Surrogate: 2-Fluorobiphenyl	*2260*		*"*	*3320*		*67.9*	*32.4-102*			
Surrogate: 2,4,6-Tribromophenol	*2120*		*"*	*3320*		*63.7*	*18.1-105*			
Surrogate: Terphenyl-dl4	*4060*		*"*	*3320*		*122*	*29.1-130*			
LCS (8040523-BS1)				Prepared: 04/05/18 Analyzed: 04/09/18						
Phenol	1960	1000	ug/kg	3320		59.0	34-114			
2-Chlorophenol	1990	1000	"	3320		59.8	34-114			
1,4-Dichlorobenzene	2100	300	"	3320		63.1	34-114			
N-Nitrosodi-n-propylamine	2580	300	"	3320		77.6	30-110			
1,2,4-Trichlorobenzene	2300	300	"	3320		69.2	39-119			
4-Chloro-3-methylphenol	2780	1000	"	3320		83.7	50-130			
Acenaphthene	2510	300	"	3320		75.7	34-114			
Pentachlorophenol	1730	1000	"	3320		52.1	50-130			
Pyrene	2550	300	"	3320		76.8	30-110			
Surrogate: 2-Fluorophenol	*1760*		*"*	*3320*		*53.1*	*15-121*			
Surrogate: Phenol-d6	*1780*		*"*	*3320*		*53.7*	*24-113*			
Surrogate: Nitrobenzene-d5	*2520*		*"*	*3320*		*75.9*	*21.3-119*			
Surrogate: 2-Fluorobiphenyl	*2250*		*"*	*3320*		*67.7*	*32.4-102*			
Surrogate: 2,4,6-Tribromophenol	*2360*		*"*	*3320*		*71.2*	*18.1-105*			
Surrogate: Terphenyl-dl4	*4160*		*"*	*3320*		*125*	*29.1-130*			
Matrix Spike (8040523-MS1)	**Source: T181153-01**			Prepared: 04/05/18 Analyzed: 04/09/18						
Phenol	2040	1000	ug/kg	3300	ND	61.8	34-114			
2-Chlorophenol	1920	1000	"	3300	ND	58.2	34-114			
1,4-Dichlorobenzene	1940	300	"	3300	ND	58.8	34-114			
N-Nitrosodi-n-propylamine	2240	300	"	3300	ND	68.0	30-110			
1,2,4-Trichlorobenzene	2310	300	"	3300	ND	70.1	39-119			
4-Chloro-3-methylphenol	2920	1000	"	3300	ND	88.5	50-130			
Acenaphthene	2580	300	"	3300	98.0	75.1	34-114			
Pentachlorophenol	1860	1000	"	3300	ND	56.5	50-130			
Pyrene	5710	300	"	3300	2380	101	30-110			
Surrogate: 2-Fluorophenol	*1670*		*"*	*3300*		*50.7*	*15-121*			
Surrogate: Phenol-d6	*1910*		*"*	*3300*		*58.0*	*24-113*			

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Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8040523 - EPA 3550 ECD/GCMS										
Matrix Spike (8040523-MS1)	**Source: T181153-01**			Prepared: 04/05/18 Analyzed: 04/09/18						
Surrogate: Nitrobenzene-d5	*2430*		*ug/kg*	*3300*		*73.6*	*21.3-119*			
Surrogate: 2-Fluorobiphenyl	*2210*		*"*	*3300*		*66.9*	*32.4-102*			
Surrogate: 2,4,6-Tribromophenol	*2470*		*"*	*3300*		*74.9*	*18.1-105*			
Surrogate: Terphenyl-dl4	*3700*		*"*	*3300*		*112*	*29.1-130*			
Matrix Spike Dup (8040523-MSD1)	**Source: T181153-01**			Prepared: 04/05/18 Analyzed: 04/09/18						
Phenol	1920	1000	ug/kg	3290	ND	58.3	34-114	6.11	42	
2-Chlorophenol	1790	1000	"	3290	ND	54.5	34-114	6.95	40	
1,4-Dichlorobenzene	1850	300	"	3290	ND	56.1	34-114	4.99	28	
N-Nitrosodi-n-propylamine	2130	300	"	3290	ND	64.8	30-110	5.10	38	
1,2,4-Trichlorobenzene	2150	300	"	3290	ND	65.5	39-119	7.17	28	
4-Chloro-3-methylphenol	3050	1000	"	3290	ND	92.8	50-130	4.37	42	
Acenaphthene	2450	300	"	3290	98.0	71.5	34-114	4.93	31	
Pentachlorophenol	1820	1000	"	3290	ND	55.3	50-130	2.53	50	
Pyrene	4600	300	"	3290	2380	67.6	30-110	21.5	31	
Surrogate: 2-Fluorophenol	*1600*		*"*	*3290*		*48.7*	*15-121*			
Surrogate: Phenol-d6	*1680*		*"*	*3290*		*51.1*	*24-113*			
Surrogate: Nitrobenzene-d5	*2250*		*"*	*3290*		*68.4*	*21.3-119*			
Surrogate: 2-Fluorobiphenyl	*2070*		*"*	*3290*		*62.9*	*32.4-102*			
Surrogate: 2,4,6-Tribromophenol	*2380*		*"*	*3290*		*72.3*	*18.1-105*			
Surrogate: Terphenyl-dl4	*3650*		*"*	*3290*		*111*	*29.1-130*			

SunStar Laboratories, Inc.

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

Mike Jaroudi, Project Manager

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

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

Brusca Associates Inc.	Project: Lathrop 48 Acre Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/12/18 15:44

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).
QB-01	The method blank contains analyte at a concentration above the MRL; however, concentration is less than 10% of the sample result, which is negligible according to method criteria.
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.

Mike Jaroudi, Project Manager

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SunStar Laboratories, Inc.

PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

25712 Commercentre Drive, Lake Forest, CA 92630
949-297-5020

Chain of Custody Record

Client: BRUSCA ASSOCIATES, INC.
Address: PO BOX 332, ROSEVILLE, CA 95661
Phone: (916) 677-1470 Fax: (916) 677-1471
Project Manager: TOM BRUSCA

Date: 4/4/18 Page: 1 Of 2
Project Name: LATHROP 48-AC PROPERTY
Collector: BRUSCA Client Project #: 137-002
Batch #: T181153 EDF #:

Sample ID	Date Sampled	Time	Sample Type (SOLID)	Container Type	~~8260~~ SVOCs 8270	8260 + OXY	8260 BTEX, OXY only	~~8270~~ PCBs 8082	8021 BTEX	8015M (gasoline)	8015M (diesel)	8015M Ext./Carbon Chain C_{44} C_{24}	6010/7000 Title 22 Metals	6020 ICP-MS Metals	LEAD AND ARSENIC			Laboratory ID #	Comments/Preservative	Total # of containers
SP1-1	4/4/18	11:59	SOLID	JAR	X			X				X	X					01		1
SP1-2		12:01	SOLID		X			X				X	X					02		1
SP1-3		12:03			X			X				X	X					03		1
SP1-4		12:05			X			X				X	X					04		1
SP1-5		12:12			X			X				X	X					05		1
SP1-6		12:13			X			X				X	X					06		1
SP1-7		12:17			X			X				X	X					07		1
SP1-8		12:22			X			X				X	X					08		1
SP1-9		12:25			X			X				X	X					09		1
SP1-10		12:31			X			X				X	X					10		1
SP1-11		12:35			X			X				X	X					11		1
SP1-12		12:37			X			X				X	X					12		1
SP1-13		12:42			X			X				X	X					13		1
SP1-14		12:45			X			X				X	X					14		1
SP1-15		12:47			X			X				X	X					15		1

Relinquished by: (signature)	Date / Time 4/4/18 14:38	Received by: (signature)	Date / Time 4/4/18 14:38
Relinquished by: (signature) GSO	Date / Time 4-5-18 955	Received by: (signature)	Date / Time 4-5-18 955
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time

Total # of containers
Chain of Custody seals Y/N/NA
Seals intact? Y/N/NA
Received good condition/cold 4.1°

Notes: * 3 DAY TAT ON METALS

Turn around time: NORMAL EXCEPT METALS — 3 DAY TAT ON METALS

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

COC 160906

SunStar Laboratories, Inc.

PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

25712 Commercentre Drive, Lake Forest, CA 92630
949-297-5020

Chain of Custody Record

Client: BRUSCA ASSOCIATES, INC.
Address: PO BOX 332, ROSEVILLE, CA 95661
Phone: (916) 677-1470 Fax: (916) 677-1471
Project Manager: JOE BRUSCA

Date: 4/4/18 Page: 2 Of 2
Project Name: LATHROP 48-AC PROPERTY
Collector: BRUSCA Client Project #: 137-002
Batch #: T181153 EDF #:

Sample ID	Date Sampled	Time	Sample Type	Container Type	~~8260~~ SVOCs 8270	8260 + OXY	8260 BTEX, OXY only	~~8270~~ PCBs 8082	8021 BTEX	8015M (gasoline)	8015M (diesel)	8015M Ext./Carbon Chain Silica Gel Cleanup	6010/7000 Title 22 Metals	6020 ICP-MS Metals				Laboratory ID #	Comments/Preservative	Total # of containers
SP1-16	4/4/18	12:51	SOLID	JAR	X			X				X	X					16		1
SP1-17		12:53			X			X				X	X					17		1
SP1-18		12:56			X			X				X	X					18		1
SP1-19		13:05			X			X				X	X					19		1
SP1-20		13:09			X													20		1

Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
	4/4/18 14:38		4/4/18 14:38
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
GSO	4-5-18 955		4-5-18 955
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time

Total # of containers
Chain of Custody seals Y/N/NA
Seals intact? Y/N/NA
Received good condition/cold 4.1°

Notes
* 3 DAY TAT ON METALS

Turn around time: NORMAL
EXCEPT METALS - 3 DAY TAT ON METALS

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

COC 160912

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

25712 Commercentre Drive
Lake Forest, California 92630
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949.297.5027 Fax

18 April 2018

Joe Brusca
Brusca Associates Inc.
PO Box 332
Roseville, CA 95661

RE: Lathrop 48-Ac Property

Enclosed are the results of analyses for samples received by the laboratory on 04/06/18 10:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Mike Jaroudi
Project Manager

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

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

Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/18/18 09:13

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SP2-1	T181179-01	Soil	04/05/18 08:54	04/06/18 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.

Mike Jaroudi, Project Manager

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/18/18 09:13

DETECTIONS SUMMARY

Sample ID: SP2-1 **Laboratory ID:** T181179-01

Analyte	Result	Reporting Limit	Units	Method	Notes
Arsenic	**17**	1.0	ug/l	6020 ICP-MS	AO-1
Barium	**450**	1.0	ug/l	6020 ICP-MS	AO-1
Beryllium	**1.3**	1.0	ug/l	6020 ICP-MS	AO-1
Chromium	**65**	1.0	ug/l	6020 ICP-MS	AO-1
Cobalt	**49**	1.0	ug/l	6020 ICP-MS	AO-1
Copper	**96**	1.0	ug/l	6020 ICP-MS	AO-1
Lead	**170**	2.0	ug/l	6020 ICP-MS	AO-1
Mercury	**0.33**	0.10	ug/l	6020 ICP-MS	AO-1
Molybdenum	**9.1**	1.0	ug/l	6020 ICP-MS	AO-1
Nickel	**61**	1.0	ug/l	6020 ICP-MS	AO-1
Silver	**5.0**	1.0	ug/l	6020 ICP-MS	AO-1
Vanadium	**220**	1.0	ug/l	6020 ICP-MS	AO-1
Zinc	**340**	1.0	ug/l	6020 ICP-MS	AO-1

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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Providing Quality Analytical Services Nationwide

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/18/18 09:13

SP2-1

T181179-01 (Soil)

SunStar Laboratories, Inc.

Metals by EPA 6020 Method

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Antimony	ND	1.0	ug/l	1	8041135	04/12/18	04/17/18	6020 ICP-MS	AO-1
Arsenic	**17**	1.0	"	"	"	"	"	"	AO-1
Barium	**450**	1.0	"	"	"	"	"	"	AO-1
Beryllium	**1.3**	1.0	"	"	"	"	"	"	AO-1
Cadmium	ND	1.0	"	"	"	"	"	"	AO-1
Chromium	**65**	1.0	"	"	"	"	"	"	AO-1
Cobalt	**49**	1.0	"	"	"	"	"	"	AO-1
Copper	**96**	1.0	"	"	"	"	"	"	AO-1
Lead	**170**	2.0	"	"	"	"	"	"	AO-1
Mercury	**0.33**	0.10	"	"	"	"	"	"	AO-1
Molybdenum	**9.1**	1.0	"	"	"	"	"	"	AO-1
Nickel	**61**	1.0	"	"	"	"	"	"	AO-1
Selenium	ND	5.0	"	"	"	"	"	"	AO-1
Silver	**5.0**	1.0	"	"	"	"	"	"	AO-1
Thallium	ND	1.0	"	"	"	"	"	"	AO-1
Vanadium	**220**	1.0	"	"	"	"	"	"	AO-1
Zinc	**340**	1.0	"	"	"	"	"	"	AO-1

SunStar Laboratories, Inc.

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Mike Jaroudi, Project Manager

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

25712 Commercentre Drive
Lake Forest, California 92630
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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/18/18 09:13

Metals by EPA 6020 Method - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8041135 - EPA 3010A										
Blank (8041135-BLK1)				Prepared: 04/11/18 Analyzed: 04/17/18						
Antimony	ND	1.0	ug/l							AO-1
Arsenic	ND	1.0	"							AO-1
Barium	16.1	1.0	"							AO-1, QB-01
Beryllium	ND	1.0	"							AO-1
Cadmium	ND	1.0	"							AO-1
Chromium	1.93	1.0	"							AO-1, QB-01
Cobalt	ND	1.0	"							AO-1
Copper	1.50	1.0	"							AO-1, QB-01
Lead	ND	2.0	"							AO-1
Mercury	ND	0.10	"							AO-1
Molybdenum	ND	1.0	"							AO-1
Nickel	ND	1.0	"							AO-1
Selenium	ND	5.0	"							AO-1
Silver	ND	1.0	"							AO-1
Thallium	ND	1.0	"							AO-1
Vanadium	3.01	1.0	"							AO-1, QB-01
Zinc	11.1	1.0	"							AO-1, QB-01
LCS (8041135-BS1)				Prepared: 04/11/18 Analyzed: 04/17/18						
Arsenic	48.2	1.0	ug/l	50.0		96.4	80-120			AO-1
Barium	48.8	1.0	"	50.0		97.5	80-120			AO-1
Cadmium	47.7	1.0	"	50.0		95.4	80-120			AO-1
Chromium	52.4	1.0	"	50.0		105	80-120			AO-1
Lead	51.3	2.0	"	50.0		103	80-120			AO-1
Duplicate (8041135-DUP1)		**Source: T181153-05**		Prepared: 04/11/18 Analyzed: 04/17/18						
Barium	432	5.0	ug/l		341			23.6	200	AO-1
Lead	445	10	"		361			20.8	200	AO-1

SunStar Laboratories, Inc.

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Mike Jaroudi, Project Manager

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

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Lake Forest, California 92630
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949.297.5027 Fax

Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/18/18 09:13

Metals by EPA 6020 Method - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8041135 - EPA 3010A										
Matrix Spike (8041135-MS1)	**Source: T181153-05**			Prepared: 04/11/18 Analyzed: 04/17/18						
Arsenic	62.4	1.0	ug/l	50.0	19.8	85.2	75-125			AO-1
Barium	363	1.0	"	50.0	341	44.9	75-125			AO-1, QM-05
Cadmium	45.9	1.0	"	50.0	1.59	88.7	75-125			AO-1
Chromium	107	1.0	"	50.0	59.6	94.3	75-125			AO-1
Lead	368	2.0	"	50.0	361	12.3	75-125			AO-1, QM-05
Matrix Spike Dup (8041135-MSD1)	**Source: T181153-05**			Prepared: 04/11/18 Analyzed: 04/17/18						
Arsenic	61.3	1.0	ug/l	50.0	19.8	82.9	75-125	1.81	20	AO-1
Barium	372	1.0	"	50.0	341	62.8	75-125	2.43	20	AO-1, QM-05
Cadmium	45.7	1.0	"	50.0	1.59	88.2	75-125	0.541	20	AO-1
Chromium	107	1.0	"	50.0	59.6	94.9	75-125	0.296	20	AO-1
Lead	389	2.0	"	50.0	361	55.4	75-125	5.69	20	AO-1, QM-05
Post Spike (8041135-PS1)	**Source: T181153-05**			Prepared: 04/11/18 Analyzed: 04/17/18						
Barium	188		ug/l	2.50	0.341	NR	80-120			AO-1, QM-05
Lead	199		"	2.50	0.361	NR	80-120			AO-1, QM-05

SunStar Laboratories, Inc.

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Mike Jaroudi, Project Manager

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

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

Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/18/18 09:13

Notes and Definitions

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.
QB-01	The method blank contains analyte at a concentration above the MRL; however, concentration is less than 10% of the sample result, which is negligible according to method criteria.
AO-1	STLC Leach Ran 6020 Water
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.

Mike Jaroudi, Project Manager

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.

SunStar Laboratories, Inc.

PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

25712 Commercentre Drive, Lake Forest, CA 92630
949-297-5020

Chain of Custody Record

Client: BRUSCA ASSOCIATES, INC.
Address: PO Box 332, ROSEVILLE, CA 95661
Phone: (916) 677-1470 Fax: (916) 677-1471
Project Manager: JOE BRUSCA

Date: 4/5/18 Page: 1 Of 1
Project Name: LATHROP 43-AC PROPERTY
Collector: BRUSCA Client Project #: 137-002
Batch #: TT81179 EDF #:

Sample ID	Date Sampled	Time	Sample Type	Container Type	~~8260~~ SVOCs 8270	8260 + OXY	8260 BTEX, OXY only	~~8270~~ PCBs 8082	8021 BTEX	8015M (gasoline)	8015M (diesel)	8015M Ext./Carbon Chain	6010/7000 Title 22 Metals	6020 ICP-MS Metals				Laboratory ID #	Comments/Preservative	Total # of containers
												Silica Gel Cleanup								
SP2-1	4/5/18	9:54	SOLID	JAR	X			X				X	X					01		1
SP2-2		9:57			X			X				X	X					02		1
SP2-3		9:59			X			X				X	X					03		1
SP2-4		9:02			X			X				X	X					04		1
SP2-5		9:04			X			X				X	X					05		1
SP2-6		9:08			X			X				X	X					06		1
SP2-7		9:14			X			X				X	X					07		1
SP2-8		9:18			X			X				X	X					08		1
SP2-9		9:21			X			X				X	X					09		1
SP2-10		9:24			X			X				X	X					10		1
SP2-11		9:26			X			X				X	X					11		1
SP2-12		9:29			X			X				X	X					12		1

Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
	4/5/18 13:10		4/5/18 13:10
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
GSD 4.6.18	10:00		4.6.18 10:00
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time

Total # of containers
Chain of Custody seals Y/N/NA
Seals intact? Y/N/NA
Received good condition/cold 4.8

Turn around time: NORMAL EXCEPT 3 DAY TAT ON METALS

Notes
* 3 DAY TAT ON METALS

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

COC 160913

April 26, 2018

FAL Project ID: 11426

Mr. Joe Brusca
Brusca Associates
7633 Stonewood Court
Granite Bay, CA 95746

Dear Mr. Brusca,

The following results are associated with Frontier Analytical Laboratory project **11426**. This corresponds to your **Lathrop 48-Ac Property** project under project number **137-002**. Twelve solid samples were received on 4/5/2018 in good condition. These samples were extracted and analyzed by EPA Method 1613 for tetra through octa chlorinated dibenzo dioxins and furans. The Toxic Equivalency (TEQ) for your samples has been calculated using the 2005 World Health Organization's (WHO's) toxic equivalency factors (TEFs).The total TEQ is reported on the upper right hand corner of each sample data sheet. Brusca Associates requested a turnaround time of ten business days for project **11426**.

The following report consists of an Analytical Data section and a Sample Receipt section. The Analytical Data section contains our sample tracking log and the analytical results. The Sample Receipt section contains your chain of custody, our sample login form and the sample photos. The attached results are specifically for the samples referenced in this report only. These results meet all NELAC requirements and shall not be reproduced except in full. Frontier Analytical Laboratory's State of Oregon NELAP certificate number is **4041**. Our State of California ELAP certificate number is **2934**. This report has been emailed to you as a portable document format (PDF) file. A hardcopy will not be sent to you unless specifically requested.

If you have any questions regarding project **11426**, please contact me at (916) 934-0900. Thank you for choosing Frontier Analytical Laboratory for your analytical testing needs.

Sincerely,

Thomas C. Crabtree
Director

Frontier Analytical Laboratory

Sample Tracking Log

FAL Project ID: **11426**

Received on: **04/05/2018** Project Due: **04/20/2018** Storage: **R-4**

FAL Sample ID	Dup	Client Project ID	Client Sample ID	Requested Method	Matrix	Sampling Date	Sampling Time	Hold Time Due Date
11426-001-SA	0	137-002	SP2-1	EPA 1613 D/F	Solid	04/05/2018	08:54 am	04/05/2019
11426-002-SA	0	137-002	SP2-2	EPA 1613 D/F	Solid	04/05/2018	08:57 am	04/05/2019
11426-003-SA	0	137-002	SP2-3	EPA 1613 D/F	Solid	04/05/2018	08:59 am	04/05/2019
11426-004-SA	0	137-002	SP2-4	EPA 1613 D/F	Solid	04/05/2018	09:02 am	04/05/2019
11426-005-SA	0	137-002	SP2-5	EPA 1613 D/F	Solid	04/05/2018	09:04 am	04/05/2019
11426-006-SA	0	137-002	SP2-6	EPA 1613 D/F	Solid	04/05/2018	09:08 am	04/05/2019
11426-007-SA	0	137-002	SP2-7	EPA 1613 D/F	Solid	04/05/2018	09:14 am	04/05/2019
11426-008-SA	0	137-002	SP2-8	EPA 1613 D/F	Solid	04/05/2018	09:18 am	04/05/2019
11426-009-SA	0	137-002	SP2-9	EPA 1613 D/F	Solid	04/05/2018	09:21 am	04/05/2019
11426-010-SA	0	137-002	SP2-10	EPA 1613 D/F	Solid	04/05/2018	09:24 am	04/05/2019
11426-011-SA	0	137-002	SP2-11	EPA 1613 D/F	Solid	04/05/2018	09:26 am	04/05/2019
11426-012-SA	0	137-002	SP2-12	EPA 1613 D/F	Solid	04/05/2018	09:29 am	04/05/2019

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EPA Method 1613
PCDD/F

FAL ID: 11426-001-MB
Client ID: Method Blank
Matrix: Solid
Batch No: X4479

Date Extracted: 04-19-2018
Date Received: NA
Amount: 5.00 g

ICal: PCDDFAL3-12-22-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-20-2018
2005 WHO TEQ: 0.0
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.123		-	0.0315				
1,2,3,7,8-PeCDD	ND	0.223		-	0.0468				
1,2,3,4,7,8-HxCDD	ND	0.289		-	0.0503				
1,2,3,6,7,8-HxCDD	ND	0.294		-	0.0490	Total TCDD	ND	0.123	
1,2,3,7,8,9-HxCDD	ND	0.282		-	0.0488	Total PeCDD	ND	0.223	
1,2,3,4,6,7,8-HpCDD	ND	0.426		-	0.0541	Total HxCDD	ND	0.294	
OCDD	ND	0.812		-	0.0888	Total HpCDD	ND	0.426	
2,3,7,8-TCDF	ND	0.109		-	0.0243				
1,2,3,7,8-PeCDF	ND	0.179		-	0.0285				
2,3,4,7,8-PeCDF	ND	0.192		-	0.0298				
1,2,3,4,7,8-HxCDF	ND	0.144		-	0.0255				
1,2,3,6,7,8-HxCDF	ND	0.146		-	0.0253				
2,3,4,6,7,8-HxCDF	ND	0.160		-	0.0279				
1,2,3,7,8,9-HxCDF	ND	0.202		-	0.0367	Total TCDF	ND	0.109	
1,2,3,4,6,7,8-HpCDF	ND	0.207		-	0.0321	Total PeCDF	ND	0.192	
1,2,3,4,7,8,9-HpCDF	ND	0.270		-	0.0396	Total HxCDF	ND	0.202	
OCDF	ND	0.418		-	0.0843	Total HpCDF	ND	0.270	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	98.2	25.0 - 164	
13C-1,2,3,7,8-PeCDD	86.5	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	85.9	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	98.2	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	82.1	23.0 - 140	
13C-OCDD	70.4	17.0 - 157	
13C-2,3,7,8-TCDF	98.2	24.0 - 169	
13C-1,2,3,7,8-PeCDF	80.6	24.0 - 185	
13C-2,3,4,7,8-PeCDF	79.5	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	90.7	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	98.0	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	92.2	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	96.8	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	83.3	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	94.6	26.0 - 138	
13C-OCDF	75.1	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	92.9	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/25/2018

Reviewed By: _____
Date: 4/26/2018

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EPA Method 1613
PCDD/F

FAL ID: 11426-001-OPR
Client ID: OPR
Matrix: Solid
Batch No: X4479

Date Extracted: 04-19-2018
Date Received: NA
Amount: 5.00 g

ICal: PCDDFAL3-12-22-17
GC Column: DB5MS
Units: ng/ml

Acquired: 04-20-2018
2005 WHO TEQ: NA

Compound	Conc	QC Limits	Qual
2,3,7,8-TCDD	11.7	6.70 - 15.8	
1,2,3,7,8-PeCDD	53.0	35.0 - 71.0	
1,2,3,4,7,8-HxCDD	53.3	35.0 - 82.0	
1,2,3,6,7,8-HxCDD	54.1	38.0 - 67.0	
1,2,3,7,8,9-HxCDD	56.4	32.0 - 81.0	
1,2,3,4,6,7,8-HpCDD	55.6	35.0 - 70.0	
OCDD	110	78.0 - 144	
2,3,7,8-TCDF	11.9	7.50 - 15.8	
1,2,3,7,8-PeCDF	52.4	40.0 - 67.0	
2,3,4,7,8-PeCDF	54.1	34.0 - 80.0	
1,2,3,4,7,8-HxCDF	50.7	36.0 - 67.0	
1,2,3,6,7,8-HxCDF	51.2	42.0 - 65.0	
2,3,4,6,7,8-HxCDF	53.1	35.0 - 78.0	
1,2,3,7,8,9-HxCDF	50.1	39.0 - 65.0	
1,2,3,4,6,7,8-HpCDF	56.1	41.0 - 61.0	
1,2,3,4,7,8,9-HpCDF	55.0	39.0 - 69.0	
OCDF	105	63.0 - 170	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	94.6	20.0 - 175	
13C-1,2,3,7,8-PeCDD	89.0	21.0 - 227	
13C-1,2,3,4,7,8-HxCDD	86.6	21.0 - 193	
13C-1,2,3,6,7,8-HxCDD	97.1	25.0 - 163	
13C-1,2,3,4,6,7,8-HpCDD	79.5	26.0 - 166	
13C-OCDD	63.1	13.0 - 198	
13C-2,3,7,8-TCDF	96.6	22.0 - 152	
13C-1,2,3,7,8-PeCDF	81.9	21.0 - 192	
13C-2,3,4,7,8-PeCDF	79.1	13.0 - 328	
13C-1,2,3,4,7,8-HxCDF	94.5	19.0 - 202	
13C-1,2,3,6,7,8-HxCDF	99.5	21.0 - 159	
13C-2,3,4,6,7,8-HxCDF	91.2	22.0 - 176	
13C-1,2,3,7,8,9-HxCDF	96.8	17.0 - 205	
13C-1,2,3,4,6,7,8-HpCDF	81.2	21.0 - 158	
13C-1,2,3,4,7,8,9-HpCDF	91.3	20.0 - 186	
13C-OCDF	70.2	13.0 - 198	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	90.8	31.0 - 191	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____

Date: 4/25/2018

Reviewed By: _____

Date: 4/26/2018

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EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 11426-001-SA
Client ID: SP2-1
Matrix: Solid
Batch No: X4479

Date Extracted: 04-19-2018
Date Received: 04-05-2018
Amount: 5.06 g
% Solids: 93.19

ICal: PCDDFAL3-12-22-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-21-2018
2005 WHO TEQ: 1.77
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.153		-	0.0315				
1,2,3,7,8-PeCDD	ND	0.326		-	0.0468				
1,2,3,4,7,8-HxCDD	0.545	-	J	0.0545	0.0503				
1,2,3,6,7,8-HxCDD	1.66	-	J	0.166	0.0490	Total TCDD	0.439	-	J
1,2,3,7,8,9-HxCDD	1.01	-	J	0.101	0.0488	Total PeCDD	1.26	-	J,M
1,2,3,4,6,7,8-HpCDD	40.1	-		0.401	0.0541	Total HxCDD	14.4	-	
OCDD	334	-		0.100	0.0888	Total HpCDD	80.5	-	
2,3,7,8-TCDF	1.59	-		0.159	0.0243				
1,2,3,7,8-PeCDF	0.430	-	J	0.0129	0.0285				
2,3,4,7,8-PeCDF	0.859	-	J	0.258	0.0298				
1,2,3,4,7,8-HxCDF	1.18	-	J	0.118	0.0255				
1,2,3,6,7,8-HxCDF	1.50	-	J	0.150	0.0253				
2,3,4,6,7,8-HxCDF	0.823	-	J	0.0823	0.0279				
1,2,3,7,8,9-HxCDF	0.471	-	J	0.0471	0.0367	Total TCDF	10.4	-	
1,2,3,4,6,7,8-HpCDF	9.74	-		0.0974	0.0321	Total PeCDF	7.53	-	
1,2,3,4,7,8,9-HpCDF	1.54	-	J	0.0154	0.0396	Total HxCDF	10.8	-	
OCDF	20.3	-		0.00609	0.0843	Total HpCDF	21.5	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	93.0	25.0 - 164	
13C-1,2,3,7,8-PeCDD	81.5	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	83.5	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	84.6	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	61.8	23.0 - 140	
13C-OCDD	45.5	17.0 - 157	
13C-2,3,7,8-TCDF	88.9	24.0 - 169	
13C-1,2,3,7,8-PeCDF	75.3	24.0 - 185	
13C-2,3,4,7,8-PeCDF	73.6	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	83.2	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	88.2	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	78.7	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	80.1	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	70.0	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	75.2	26.0 - 138	
13C-OCDF	48.6	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	88.0	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/25/2018

Reviewed By: _____
Date: 4/26/2018

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EPA Method 1613
PCDD/F

FAL ID: 11426-002-SA
Client ID: SP2-2
Matrix: Solid
Batch No: X4479

Date Extracted: 04-19-2018
Date Received: 04-05-2018
Amount: 5.00 g
% Solids: 95.91

ICal: PCDDFAL3-12-22-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-21-2018
2005 WHO TEQ: 4.65
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.176		-	0.0315				
1,2,3,7,8-PeCDD	0.494	-	J	0.494	0.0468				
1,2,3,4,7,8-HxCDD	1.03	-	J	0.103	0.0503				
1,2,3,6,7,8-HxCDD	4.52	-	J	0.452	0.0490	Total TCDD	0.836	-	J
1,2,3,7,8,9-HxCDD	2.42	-	J	0.242	0.0488	Total PeCDD	5.77	-	M
1,2,3,4,6,7,8-HpCDD	123	-		1.23	0.0541	Total HxCDD	35.3	-	
OCDD	1110	-		0.333	0.0888	Total HpCDD	236	-	
2,3,7,8-TCDF	2.17	-	F	0.217	0.0243				
1,2,3,7,8-PeCDF	0.818	-	J	0.0245	0.0285				
2,3,4,7,8-PeCDF	1.38	-	J	0.414	0.0298				
1,2,3,4,7,8-HxCDF	2.55	-	J	0.255	0.0255				
1,2,3,6,7,8-HxCDF	3.14	-	J	0.314	0.0253				
2,3,4,6,7,8-HxCDF	1.76	-	J	0.176	0.0279				
1,2,3,7,8,9-HxCDF	1.01	-	J	0.101	0.0367	Total TCDF	17.3	-	
1,2,3,4,6,7,8-HpCDF	24.3	-		0.243	0.0321	Total PeCDF	12.6	-	
1,2,3,4,7,8,9-HpCDF	4.09	-	J	0.0409	0.0396	Total HxCDF	22.7	-	
OCDF	51.3	-		0.0154	0.0843	Total HpCDF	54.6	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	102	25.0 - 164	
13C-1,2,3,7,8-PeCDD	86.0	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	95.4	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	81.5	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	73.0	23.0 - 140	
13C-OCDD	60.3	17.0 - 157	
13C-2,3,7,8-TCDF	102	24.0 - 169	
13C-1,2,3,7,8-PeCDF	83.0	24.0 - 185	
13C-2,3,4,7,8-PeCDF	81.9	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	82.1	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	83.4	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	84.9	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	83.6	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	72.3	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	82.3	26.0 - 138	
13C-OCDF	60.6	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	94.4	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/25/2018

Reviewed By: _____
Date: 4/26/2018

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EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 11426-003-SA
Client ID: SP2-3
Matrix: Solid
Batch No: X4479

Date Extracted: 04-19-2018
Date Received: 04-05-2018
Amount: 5.03 g
% Solids: 91.60

ICal: PCDDFAL3-12-22-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-21-2018
2005 WHO TEQ: 2.73
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.154		-	0.0315				
1,2,3,7,8-PeCDD	0.568	-	J	0.568	0.0468				
1,2,3,4,7,8-HxCDD	0.857	-	J	0.0857	0.0503				
1,2,3,6,7,8-HxCDD	1.98	-	J	0.198	0.0490	Total TCDD	0.652	-	J
1,2,3,7,8,9-HxCDD	1.51	-	J	0.151	0.0488	Total PeCDD	3.75	-	J,M
1,2,3,4,6,7,8-HpCDD	41.2	-		0.412	0.0541	Total HxCDD	18.4	-	
OCDD	301	-		0.0903	0.0888	Total HpCDD	79.8	-	
2,3,7,8-TCDF	2.72	-	F	0.272	0.0243				
1,2,3,7,8-PeCDF	0.515	-	J	0.0155	0.0285				
2,3,4,7,8-PeCDF	1.57	-	J	0.471	0.0298				
1,2,3,4,7,8-HxCDF	1.42	-	J	0.142	0.0255				
1,2,3,6,7,8-HxCDF	0.828	-	J	0.0828	0.0253				
2,3,4,6,7,8-HxCDF	0.938	-	J	0.0938	0.0279				
1,2,3,7,8,9-HxCDF	0.478	-	J	0.0478	0.0367	Total TCDF	15.1	-	M
1,2,3,4,6,7,8-HpCDF	9.19	-		0.0919	0.0321	Total PeCDF	12.8	-	
1,2,3,4,7,8,9-HpCDF	0.629	-	J	0.00629	0.0396	Total HxCDF	16.2	-	
OCDF	18.8	-		0.00564	0.0843	Total HpCDF	24.5	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	101	25.0 - 164	
13C-1,2,3,7,8-PeCDD	87.4	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	89.4	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	94.2	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	80.5	23.0 - 140	
13C-OCDD	71.2	17.0 - 157	
13C-2,3,7,8-TCDF	98.9	24.0 - 169	
13C-1,2,3,7,8-PeCDF	78.4	24.0 - 185	
13C-2,3,4,7,8-PeCDF	77.8	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	98.2	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	100	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	94.1	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	98.7	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	83.8	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	94.7	26.0 - 138	
13C-OCDF	73.2	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	93.4	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/25/2018

Reviewed By: _____
Date: 4/26/2018

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EPA Method 1613
PCDD/F

FAL ID: 11426-004-SA
Client ID: SP2-4
Matrix: Solid
Batch No: X4479

Date Extracted: 04-19-2018
Date Received: 04-05-2018
Amount: 5.04 g
% Solids: 92.56

ICal: PCDDFAL3-12-22-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-21-2018
2005 WHO TEQ: 2.96
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.191		-	0.0315				
1,2,3,7,8-PeCDD	0.588	-	J	0.588	0.0468				
1,2,3,4,7,8-HxCDD	0.810	-	J	0.0810	0.0503				
1,2,3,6,7,8-HxCDD	2.24	-	J	0.224	0.0490	Total TCDD	0.388	-	J
1,2,3,7,8,9-HxCDD	1.42	-	J	0.142	0.0488	Total PeCDD	3.70	-	J,M
1,2,3,4,6,7,8-HpCDD	56.2	-		0.562	0.0541	Total HxCDD	18.2	-	
OCDD	495	-		0.149	0.0888	Total HpCDD	105	-	
2,3,7,8-TCDF	1.93	-		0.193	0.0243				
1,2,3,7,8-PeCDF	0.497	-	J	0.0149	0.0285				
2,3,4,7,8-PeCDF	1.33	-	J	0.399	0.0298				
1,2,3,4,7,8-HxCDF	1.65	-	J	0.165	0.0255				
1,2,3,6,7,8-HxCDF	1.20	-	J	0.120	0.0253				
2,3,4,6,7,8-HxCDF	0.978	-	J	0.0978	0.0279				
1,2,3,7,8,9-HxCDF	0.563	-	J	0.0563	0.0367	Total TCDF	12.4	-	M
1,2,3,4,6,7,8-HpCDF	13.6	-		0.136	0.0321	Total PeCDF	10.8	-	
1,2,3,4,7,8,9-HpCDF	1.58	-	J	0.0158	0.0396	Total HxCDF	16.5	-	
OCDF	40.7	-		0.0122	0.0843	Total HpCDF	38.4	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	101	25.0 - 164	
13C-1,2,3,7,8-PeCDD	96.8	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	91.3	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	92.4	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	79.7	23.0 - 140	
13C-OCDD	67.8	17.0 - 157	
13C-2,3,7,8-TCDF	101	24.0 - 169	
13C-1,2,3,7,8-PeCDF	89.6	24.0 - 185	
13C-2,3,4,7,8-PeCDF	87.4	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	95.0	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	98.5	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	93.7	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	94.1	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	80.8	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	87.1	26.0 - 138	
13C-OCDF	69.5	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	94.1	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/25/2018

Reviewed By: _____
Date: 4/26/2018

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EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 11426-005-SA
Client ID: SP2-5
Matrix: Solid
Batch No: X4479

Date Extracted: 04-19-2018
Date Received: 04-05-2018
Amount: 5.04 g
% Solids: 94.36

ICal: PCDDFAL3-12-22-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-21-2018
2005 WHO TEQ: 1.64
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.172		-	0.0315				
1,2,3,7,8-PeCDD	0.341	-	J	0.341	0.0468				
1,2,3,4,7,8-HxCDD	0.445	-	J	0.0445	0.0503				
1,2,3,6,7,8-HxCDD	1.30	-	J	0.130	0.0490	Total TCDD	0.322	-	J
1,2,3,7,8,9-HxCDD	0.941	-	J	0.0941	0.0488	Total PeCDD	2.50	-	J,M
1,2,3,4,6,7,8-HpCDD	33.3	-		0.333	0.0541	Total HxCDD	12.5	-	
OCDD	280	-		0.0840	0.0888	Total HpCDD	64.2	-	
2,3,7,8-TCDF	1.38	-		0.138	0.0243				
1,2,3,7,8-PeCDF	0.322	-	J	0.00966	0.0285				
2,3,4,7,8-PeCDF	0.716	-	J	0.215	0.0298				
1,2,3,4,7,8-HxCDF	0.572	-	J	0.0572	0.0255				
1,2,3,6,7,8-HxCDF	0.462	-	J	0.0462	0.0253				
2,3,4,6,7,8-HxCDF	0.530	-	J	0.0530	0.0279				
1,2,3,7,8,9-HxCDF	0.287	-	J	0.0287	0.0367	Total TCDF	8.35	-	M
1,2,3,4,6,7,8-HpCDF	5.46	-		0.0546	0.0321	Total PeCDF	6.62	-	
1,2,3,4,7,8,9-HpCDF	0.530	-	J	0.00530	0.0396	Total HxCDF	8.96	-	
OCDF	12.0	-		0.00360	0.0843	Total HpCDF	14.6	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	99.8	25.0 - 164	
13C-1,2,3,7,8-PeCDD	98.5	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	85.4	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	91.1	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	74.9	23.0 - 140	
13C-OCDD	65.3	17.0 - 157	
13C-2,3,7,8-TCDF	97.7	24.0 - 169	
13C-1,2,3,7,8-PeCDF	90.2	24.0 - 185	
13C-2,3,4,7,8-PeCDF	84.3	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	91.3	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	97.0	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	89.8	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	91.8	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	81.2	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	85.7	26.0 - 138	
13C-OCDF	65.7	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	95.7	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____

Date: 4/25/2018

Reviewed By: _____

Date: 4/26/2018

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EPA Method 1613
PCDD/F

FAL ID: 11426-006-SA
Client ID: SP2-6
Matrix: Solid
Batch No: X4479

Date Extracted: 04-19-2018
Date Received: 04-05-2018
Amount: 5.01 g
% Solids: 92.42

ICal: PCDDFAL3-12-22-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-21-2018
2005 WHO TEQ: 2.71
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.116		-	0.0315				
1,2,3,7,8-PeCDD	0.596	-	J	0.596	0.0468				
1,2,3,4,7,8-HxCDD	0.431	-	J	0.0431	0.0503				
1,2,3,6,7,8-HxCDD	1.62	-	J	0.162	0.0490	Total TCDD	2.23	-	
1,2,3,7,8,9-HxCDD	1.08	-	J	0.108	0.0488	Total PeCDD	3.86	-	J,M
1,2,3,4,6,7,8-HpCDD	32.3	-		0.323	0.0541	Total HxCDD	14.8	-	
OCDD	257	-		0.0771	0.0888	Total HpCDD	63.0	-	
2,3,7,8-TCDF	1.95	-		0.195	0.0243				
1,2,3,7,8-PeCDF	0.532	-	J	0.0160	0.0285				
2,3,4,7,8-PeCDF	1.29	-	J	0.387	0.0298				
1,2,3,4,7,8-HxCDF	2.13	-	J	0.213	0.0255				
1,2,3,6,7,8-HxCDF	2.19	-	J	0.219	0.0253				
2,3,4,6,7,8-HxCDF	1.23	-	J	0.123	0.0279				
1,2,3,7,8,9-HxCDF	0.780	-	J	0.0780	0.0367	Total TCDF	12.7	-	
1,2,3,4,6,7,8-HpCDF	13.5	-		0.135	0.0321	Total PeCDF	10.5	-	
1,2,3,4,7,8,9-HpCDF	2.59	-	J	0.0259	0.0396	Total HxCDF	14.2	-	
OCDF	20.3	-		0.00609	0.0843	Total HpCDF	25.4	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	100	25.0 - 164	
13C-1,2,3,7,8-PeCDD	85.4	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	93.0	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	81.8	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	68.3	23.0 - 140	
13C-OCDD	56.9	17.0 - 157	
13C-2,3,7,8-TCDF	106	24.0 - 169	
13C-1,2,3,7,8-PeCDF	81.9	24.0 - 185	
13C-2,3,4,7,8-PeCDF	80.3	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	84.6	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	86.4	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	86.1	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	83.6	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	71.2	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	78.7	26.0 - 138	
13C-OCDF	57.1	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	97.5	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/25/2018

Reviewed By: _____
Date: 4/26/2018

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EPA Method 1613
PCDD/F

FAL ID: 11426-007-SA
Client ID: SP2-7
Matrix: Solid
Batch No: X4479

Date Extracted: 04-19-2018
Date Received: 04-05-2018
Amount: 5.04 g
% Solids: 94.30

ICal: PCDDFAL3-12-22-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-21-2018
2005 WHO TEQ: 2.45
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.186		-	0.0315				
1,2,3,7,8-PeCDD	ND	0.233		-	0.0468				
1,2,3,4,7,8-HxCDD	0.351	-	J	0.0351	0.0503				
1,2,3,6,7,8-HxCDD	0.685	-	J	0.0685	0.0490	Total TCDD	0.371	-	J
1,2,3,7,8,9-HxCDD	0.618	-	J	0.0618	0.0488	Total PeCDD	0.969	-	J,M
1,2,3,4,6,7,8-HpCDD	15.4	-		0.154	0.0541	Total HxCDD	6.62	-	
OCDD	126	-		0.0378	0.0888	Total HpCDD	30.5	-	
2,3,7,8-TCDF	1.66	-		0.166	0.0243				
1,2,3,7,8-PeCDF	0.618	-	J	0.0185	0.0285				
2,3,4,7,8-PeCDF	2.70	-	J	0.810	0.0298				
1,2,3,4,7,8-HxCDF	5.26	-		0.526	0.0255				
1,2,3,6,7,8-HxCDF	1.83	-	J	0.183	0.0253				
2,3,4,6,7,8-HxCDF	1.55	-	J	0.155	0.0279				
1,2,3,7,8,9-HxCDF	1.56	-	J	0.156	0.0367	Total TCDF	12.8	-	
1,2,3,4,6,7,8-HpCDF	5.68	-		0.0568	0.0321	Total PeCDF	15.3	-	
1,2,3,4,7,8,9-HpCDF	1.45	-	J	0.0145	0.0396	Total HxCDF	19.6	-	
OCDF	11.6	-		0.00348	0.0843	Total HpCDF	15.2	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	99.8	25.0 - 164	
13C-1,2,3,7,8-PeCDD	86.1	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	91.2	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	96.6	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	80.9	23.0 - 140	
13C-OCDD	69.5	17.0 - 157	
13C-2,3,7,8-TCDF	103	24.0 - 169	
13C-1,2,3,7,8-PeCDF	85.2	24.0 - 185	
13C-2,3,4,7,8-PeCDF	82.8	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	96.1	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	104	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	97.4	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	99.3	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	85.3	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	93.8	26.0 - 138	
13C-OCDF	71.5	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	88.9	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/25/2018

Reviewed By: _____
Date: 4/26/2018

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EPA Method 1613
PCDD/F

FAL ID: 11426-008-SA
Client ID: SP2-8
Matrix: Solid
Batch No: X4479

Date Extracted: 04-19-2018
Date Received: 04-05-2018
Amount: 5.01 g
% Solids: 96.02

ICal: PCDDFAL3-12-22-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-21-2018
2005 WHO TEQ: 2.57
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.212		-	0.0315				
1,2,3,7,8-PeCDD	0.487	-	J	0.487	0.0468				
1,2,3,4,7,8-HxCDD	0.602	-	J	0.0602	0.0503				
1,2,3,6,7,8-HxCDD	1.78	-	J	0.178	0.0490	Total TCDD	0.491	-	J
1,2,3,7,8,9-HxCDD	1.22	-	J	0.122	0.0488	Total PeCDD	3.77	-	J,M
1,2,3,4,6,7,8-HpCDD	41.4	-		0.414	0.0541	Total HxCDD	15.4	-	
OCDD	358	-		0.107	0.0888	Total HpCDD	79.8	-	
2,3,7,8-TCDF	2.47	-	F	0.247	0.0243				
1,2,3,7,8-PeCDF	0.486	-	J	0.0146	0.0285				
2,3,4,7,8-PeCDF	1.40	-	J	0.420	0.0298				
1,2,3,4,7,8-HxCDF	1.67	-	J	0.167	0.0255				
1,2,3,6,7,8-HxCDF	1.17	-	J	0.117	0.0253				
2,3,4,6,7,8-HxCDF	0.815	-	J	0.0815	0.0279				
1,2,3,7,8,9-HxCDF	0.489	-	J	0.0489	0.0367	Total TCDF	13.9	-	
1,2,3,4,6,7,8-HpCDF	8.92	-		0.0892	0.0321	Total PeCDF	10.6	-	
1,2,3,4,7,8,9-HpCDF	1.21	-	J	0.0121	0.0396	Total HxCDF	13.3	-	
OCDF	24.3	-		0.00729	0.0843	Total HpCDF	24.3	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	94.2	25.0 - 164	
13C-1,2,3,7,8-PeCDD	79.9	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	85.6	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	87.6	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	71.6	23.0 - 140	
13C-OCDD	64.6	17.0 - 157	
13C-2,3,7,8-TCDF	99.0	24.0 - 169	
13C-1,2,3,7,8-PeCDF	76.0	24.0 - 185	
13C-2,3,4,7,8-PeCDF	72.3	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	89.4	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	94.9	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	91.4	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	88.6	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	79.0	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	87.5	26.0 - 138	
13C-OCDF	64.8	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	86.6	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/25/2018

Reviewed By: _____
Date: 4/26/2018

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EPA Method 1613
PCDD/F

FAL ID: 11426-009-SA
Client ID: SP2-9
Matrix: Solid
Batch No: X4479

Date Extracted: 04-19-2018
Date Received: 04-05-2018
Amount: 5.00 g
% Solids: 93.81

ICal: PCDDFAL3-12-22-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-21-2018
2005 WHO TEQ: 3.43
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.165		-	0.0315				
1,2,3,7,8-PeCDD	0.809	-	J	0.809	0.0468				
1,2,3,4,7,8-HxCDD	0.719	-	J	0.0719	0.0503				
1,2,3,6,7,8-HxCDD	2.06	-	J	0.206	0.0490	Total TCDD	0.523	-	J
1,2,3,7,8,9-HxCDD	1.67	-	J	0.167	0.0488	Total PeCDD	4.41	-	J,M
1,2,3,4,6,7,8-HpCDD	46.6	-		0.466	0.0541	Total HxCDD	21.4	-	
OCDD	309	-		0.0927	0.0888	Total HpCDD	90.0	-	
2,3,7,8-TCDF	4.32	-	F	0.432	0.0243				
1,2,3,7,8-PeCDF	0.699	-	J	0.0210	0.0285				
2,3,4,7,8-PeCDF	1.99	-	J	0.597	0.0298				
1,2,3,4,7,8-HxCDF	1.96	-	J	0.196	0.0255				
1,2,3,6,7,8-HxCDF	1.15	-	J	0.115	0.0253				
2,3,4,6,7,8-HxCDF	1.04	-	J	0.104	0.0279				
1,2,3,7,8,9-HxCDF	0.505	-	J	0.0505	0.0367	Total TCDF	21.8	-	M
1,2,3,4,6,7,8-HpCDF	9.07	-		0.0907	0.0321	Total PeCDF	15.5	-	
1,2,3,4,7,8,9-HpCDF	0.828	-	J	0.00828	0.0396	Total HxCDF	15.3	-	
OCDF	14.0	-		0.00420	0.0843	Total HpCDF	20.5	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	93.1	25.0 - 164	
13C-1,2,3,7,8-PeCDD	84.6	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	81.2	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	90.3	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	74.0	23.0 - 140	
13C-OCDD	62.8	17.0 - 157	
13C-2,3,7,8-TCDF	95.3	24.0 - 169	
13C-1,2,3,7,8-PeCDF	77.4	24.0 - 185	
13C-2,3,4,7,8-PeCDF	76.2	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	91.7	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	98.8	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	91.5	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	92.0	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	80.0	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	86.6	26.0 - 138	
13C-OCDF	67.6	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	85.7	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/25/2018

Reviewed By: _____
Date: 4/26/2018

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EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 11426-010-SA
Client ID: SP2-10
Matrix: Solid
Batch No: X4479

Date Extracted: 04-19-2018
Date Received: 04-05-2018
Amount: 5.01 g
% Solids: 92.69

ICal: PCDDFAL3-12-22-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-21-2018
2005 WHO TEQ: 1.08
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.170		-	0.0315				
1,2,3,7,8-PeCDD	ND	0.244		-	0.0468				
1,2,3,4,7,8-HxCDD	ND	0.267		-	0.0503				
1,2,3,6,7,8-HxCDD	0.772	-	J	0.0772	0.0490	Total TCDD	ND	0.170	
1,2,3,7,8,9-HxCDD	0.515	-	J	0.0515	0.0488	Total PeCDD	0.350	-	J
1,2,3,4,6,7,8-HpCDD	15.3	-		0.153	0.0541	Total HxCDD	5.24	-	
OCDD	132	-		0.0396	0.0888	Total HpCDD	28.9	-	
2,3,7,8-TCDF	1.34	-		0.134	0.0243				
1,2,3,7,8-PeCDF	0.313	-	J	0.00939	0.0285				
2,3,4,7,8-PeCDF	0.758	-	J	0.227	0.0298				
1,2,3,4,7,8-HxCDF	1.14	-	J	0.114	0.0255				
1,2,3,6,7,8-HxCDF	0.933	-	J	0.0933	0.0253				
2,3,4,6,7,8-HxCDF	0.617	-	J	0.0617	0.0279				
1,2,3,7,8,9-HxCDF	0.453	-	J	0.0453	0.0367	Total TCDF	7.51	-	
1,2,3,4,6,7,8-HpCDF	6.46	-		0.0646	0.0321	Total PeCDF	5.33	-	
1,2,3,4,7,8,9-HpCDF	0.797	-	J	0.00797	0.0396	Total HxCDF	7.31	-	
OCDF	8.97	-	J	0.00269	0.0843	Total HpCDF	12.2	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	98.4	25.0 - 164	
13C-1,2,3,7,8-PeCDD	86.1	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	92.4	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	90.7	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	73.5	23.0 - 140	
13C-OCDD	60.7	17.0 - 157	
13C-2,3,7,8-TCDF	101	24.0 - 169	
13C-1,2,3,7,8-PeCDF	82.0	24.0 - 185	
13C-2,3,4,7,8-PeCDF	82.7	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	94.1	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	96.8	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	95.2	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	95.3	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	80.1	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	89.7	26.0 - 138	
13C-OCDF	66.1	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	97.8	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/25/2018

Reviewed By: _____
Date: 4/26/2018

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EPA Method 1613
PCDD/F

FAL ID: 11426-011-SA
Client ID: SP2-11
Matrix: Solid
Batch No: X4479

Date Extracted: 04-19-2018
Date Received: 04-05-2018
Amount: 5.01 g
% Solids: 91.92

ICal: PCDDFAL3-12-22-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-21-2018
2005 WHO TEQ: 1.75
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.189		-	0.0315				
1,2,3,7,8-PeCDD	0.401	-	J	0.401	0.0468				
1,2,3,4,7,8-HxCDD	0.496	-	J	0.0496	0.0503				
1,2,3,6,7,8-HxCDD	1.42	-	J	0.142	0.0490	Total TCDD	ND	0.189	
1,2,3,7,8,9-HxCDD	0.911	-	J	0.0911	0.0488	Total PeCDD	3.26	-	J,M
1,2,3,4,6,7,8-HpCDD	31.0	-		0.310	0.0541	Total HxCDD	13.6	-	
OCDD	262	-		0.0786	0.0888	Total HpCDD	61.4	-	
2,3,7,8-TCDF	1.66	-		0.166	0.0243				
1,2,3,7,8-PeCDF	0.294	-	J	0.00882	0.0285				
2,3,4,7,8-PeCDF	0.785	-	J	0.236	0.0298				
1,2,3,4,7,8-HxCDF	0.711	-	J	0.0711	0.0255				
1,2,3,6,7,8-HxCDF	0.617	-	J	0.0617	0.0253				
2,3,4,6,7,8-HxCDF	0.612	-	J	0.0612	0.0279				
1,2,3,7,8,9-HxCDF	ND	0.347		-	0.0367	Total TCDF	9.31	-	
1,2,3,4,6,7,8-HpCDF	6.04	-		0.0604	0.0321	Total PeCDF	7.08	-	
1,2,3,4,7,8,9-HpCDF	0.628	-	J	0.00628	0.0396	Total HxCDF	8.60	-	
OCDF	14.0	-		0.00420	0.0843	Total HpCDF	15.9	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	99.4	25.0 - 164	
13C-1,2,3,7,8-PeCDD	102	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	91.3	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	97.4	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	81.3	23.0 - 140	
13C-OCDD	72.6	17.0 - 157	
13C-2,3,7,8-TCDF	105	24.0 - 169	
13C-1,2,3,7,8-PeCDF	94.5	24.0 - 185	
13C-2,3,4,7,8-PeCDF	90.1	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	101	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	110	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	103	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	103	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	93.2	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	101	26.0 - 138	
13C-OCDF	77.8	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	93.0	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/25/2018

Reviewed By: _____
Date: 4/26/2018

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EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 11426-012-SA
Client ID: SP2-12
Matrix: Solid
Batch No: X4479

Date Extracted: 04-19-2018
Date Received: 04-05-2018
Amount: 5.01 g
% Solids: 93.26

ICal: PCDDFAL3-12-22-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-21-2018
2005 WHO TEQ: 2.21
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.199		-	0.0315				
1,2,3,7,8-PeCDD	ND	0.308		-	0.0468				
1,2,3,4,7,8-HxCDD	0.444	-	J	0.0444	0.0503				
1,2,3,6,7,8-HxCDD	1.31	-	J	0.131	0.0490	Total TCDD	0.457	-	J
1,2,3,7,8,9-HxCDD	0.957	-	J	0.0957	0.0488	Total PeCDD	1.40	-	J,M
1,2,3,4,6,7,8-HpCDD	25.9	-		0.259	0.0541	Total HxCDD	11.1	-	
OCDD	225	-		0.0675	0.0888	Total HpCDD	50.4	-	
2,3,7,8-TCDF	4.13	-	F	0.413	0.0243				
1,2,3,7,8-PeCDF	0.542	-	J	0.0163	0.0285				
2,3,4,7,8-PeCDF	2.04	-	J	0.612	0.0298				
1,2,3,4,7,8-HxCDF	2.32	-	J	0.232	0.0255				
1,2,3,6,7,8-HxCDF	0.924	-	J	0.0924	0.0253				
2,3,4,6,7,8-HxCDF	0.986	-	J	0.0986	0.0279				
1,2,3,7,8,9-HxCDF	0.638	-	J	0.0638	0.0367	Total TCDF	19.5	-	
1,2,3,4,6,7,8-HpCDF	7.25	-		0.0725	0.0321	Total PeCDF	12.5	-	
1,2,3,4,7,8,9-HpCDF	0.813	-	J	0.00813	0.0396	Total HxCDF	14.0	-	
OCDF	15.4	-		0.00462	0.0843	Total HpCDF	18.2	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	87.1	25.0 - 164	
13C-1,2,3,7,8-PeCDD	83.7	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	81.8	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	86.3	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	69.5	23.0 - 140	
13C-OCDD	53.7	17.0 - 157	
13C-2,3,7,8-TCDF	89.5	24.0 - 169	
13C-1,2,3,7,8-PeCDF	73.1	24.0 - 185	
13C-2,3,4,7,8-PeCDF	71.2	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	89.9	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	98.8	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	89.0	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	90.0	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	78.7	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	81.5	26.0 - 138	
13C-OCDF	59.1	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	85.3	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
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M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 4/25/2018

Reviewed By: _____
Date: 4/26/2018

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Frontier Analytical Laboratory
5172 Hillsdale Circle
El Dorado Hills, CA 95762
Tel: 916-934-0900
Fax: 916-934-0999

FAL USE ONLY
Laboratory Project No.: 11426
Temperature: 0 °C

Chain of Custody

www.frontieranalytical.com

Please Print in Pen **Page** 1 **of** 1

CLIENT INFORMATION	**INVOICE INFORMATION** (if different from client info)	**PROJECT INFORMATION**
Company Name: Brusca Associates, Inc.	Company Name: Same	FAL Quote #: 3310
Contact Name: Joe Brusca	Contact Name:	P.O. #:
Address: PO Box 332, Roseville, CA 95661	Address:	Project #: 137-002
Phone: 916-677-1470 Fax:	Phone: Fax:	Project Name: LATHROP 48-AC PROPERTY
Email: jbrusca@bruscaassociates.com	Email:	TAT (business days): ☐ 15 ☒ 10 ☐ 5* ☐ 3* (√ one)
		* FAL must agree with price and RUSH TAT in writing.

REPORT INFORMATION	**REPORT DISTRIBUTION** (email only is preferred)	**ADDITIONAL INSTRUCTIONS**
Report Level: ☐ I/II ☐ III ☐ IV	☐ Hardcopy	
☐ EDD: ☐ FAL Basic ☐ Geotracker ☐ Other: ☐ Custom: Contact FAL	☐ CD (.pdf including EDDs if requested)	
☐ California State Drinking Water Form	☐ Email (.pdf including EDDs if requested)	
System #: Source #		
Sampler: Employer:		

	Sample ID	Date Collected	Time Collected	Matrix	# of containers	EPA 1613**	EPA 8290**	DLM 02.0	EPA 8280**	Appendix IX	EPA TO-9/9A	EPA 23/23A	EPA 1668	FAL 15	Other	Remarks
1	SP2-1	4/5/18	8:54	SOLID		X										
2	SP2-2		8:57			X										
3	SP2-3		8:59			X										
4	SP2-4		9:02			X										
5	SP2-5		9:04			X										
6	SP2-6		9:08			X										
7	SP2-7		9:14			X										
8	SP2-8		9:18			X										
9	SP2-9		9:21			X										
10	SP2-10		9:24			X										
11	SP2-11		9:26			X										
12	SP2-12		9:29			X										
13																
14																
15																

****CONGENERS**	****TEQ**
☐ 2,3,7,8-TCDD only	☐ 1998 WHO
☐ 2,3,7,8-TCDD/F only	☑ 2005 WHO
☑ PCDD/F (Cl_4-Cl_8)	☐ Other

Samples will be disposed of 90 days after sample receipt unless other arrangements have been made and agreed upon in writing.

Relinquished by: (Signature and Printed Name)	**Date**	**Time**	**Received by:** (Signature and Printed Name)	**Date**	**Time**
	4/5/18	13:46	Kathy Jobe K. Zuff	4/5/18	1346

Client understands that all terms described in the proposals, quotations, and/or the general terms provided in the current FAL price schedules will be followed.
FAL reserves the rights to terminate its service or withhold delivery of reports, if in FAL's sole discretion the terms of the project have been broken.

White Copy – Report Yellow Copy – Laboratory Pink Copy - Originator

Frontier Analytical Laboratory

Sample Login Form

FAL Project ID: **11426**

Client:	Brusca Associates, Inc.
Client Project ID:	137-002
Date Received:	04/05/2018
Time Received:	01:46 pm
Received By:	KZ
Logged In By:	KZ
# of Samples Received:	12
Duplicates:	0
Storage Location:	R-4

Method of Delivery:	Courier
Tracking Number:	NA
Shipping Container Received Intact	Yes
Custody seals(s) present?	No
Custody seals(s) intact?	No
Sample Arrival Temperature (C)	0
Cooling Method	Ice
Chain Of Custody Present?	Yes
Return Shipping Container To Client	Yes
Test aqueous sample for residual Chlorine	N/A
Sodium Thiosulfate Added	No
Adequate Sample Volume	Yes
Appropriate Sample Container	Yes
pH Range of Aqueous Sample	N/A
Anomalies or additional comments:	

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SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

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

13 April 2018

Joe Brusca
Brusca Associates Inc.
PO Box 332
Roseville, CA 95661

RE: Lathrop 48-Ac Property

Enclosed are the results of analyses for samples received by the laboratory on 04/06/18 10:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Mike Jaroudi
Project Manager

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

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

Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SP2-1	T181179-01	Soil	04/05/18 08:54	04/06/18 10:00
SP2-2	T181179-02	Soil	04/05/18 08:57	04/06/18 10:00
SP2-3	T181179-03	Soil	04/05/18 08:59	04/06/18 10:00
SP2-4	T181179-04	Soil	04/05/18 09:02	04/06/18 10:00
SP2-5	T181179-05	Soil	04/05/18 09:04	04/06/18 10:00
SP2-6	T181179-06	Soil	04/05/18 09:08	04/06/18 10:00
SP2-7	T181179-07	Soil	04/05/18 09:14	04/06/18 10:00
SP2-8	T181179-08	Soil	04/05/18 09:18	04/06/18 10:00
SP2-9	T181179-09	Soil	04/05/18 09:21	04/06/18 10:00
SP2-10	T181179-10	Soil	04/05/18 09:24	04/06/18 10:00
SP2-11	T181179-11	Soil	04/05/18 09:26	04/06/18 10:00
SP2-12	T181179-12	Soil	04/05/18 09:29	04/06/18 10:00

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

DETECTIONS SUMMARY

Sample ID: SP2-1 **Laboratory ID:** T181179-01

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**62**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**59**	10	mg/kg	EPA 8015B	
Barium	**58**	1.0	mg/kg	EPA 6010B	
Chromium	**6.2**	2.0	mg/kg	EPA 6010B	
Cobalt	**4.9**	2.0	mg/kg	EPA 6010B	
Copper	**5.2**	1.0	mg/kg	EPA 6010B	
Lead	**13**	3.0	mg/kg	EPA 6010B	
Nickel	**5.9**	2.0	mg/kg	EPA 6010B	
Vanadium	**20**	5.0	mg/kg	EPA 6010B	
Zinc	**33**	1.0	mg/kg	EPA 6010B	
Mercury	**0.52**	0.10	mg/kg	EPA 7471A Soil	
PCB-1260	**29**	10	ug/kg	EPA 8082	

Sample ID: SP2-2 **Laboratory ID:** T181179-02

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**24**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**42**	10	mg/kg	EPA 8015B	
Barium	**55**	1.0	mg/kg	EPA 6010B	
Chromium	**5.5**	2.0	mg/kg	EPA 6010B	
Cobalt	**4.7**	2.0	mg/kg	EPA 6010B	
Copper	**3.5**	1.0	mg/kg	EPA 6010B	
Lead	**11**	3.0	mg/kg	EPA 6010B	
Nickel	**5.3**	2.0	mg/kg	EPA 6010B	
Vanadium	**20**	5.0	mg/kg	EPA 6010B	
Zinc	**29**	1.0	mg/kg	EPA 6010B	
PCB-1016	**66**	10	ug/kg	EPA 8082	
PCB-1260	**72**	10	ug/kg	EPA 8082	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

Sample ID: SP2-3 **Laboratory ID:** T181179-03

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**18**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**55**	10	mg/kg	EPA 8015B	
Barium	**63**	1.0	mg/kg	EPA 6010B	
Chromium	**6.7**	2.0	mg/kg	EPA 6010B	
Cobalt	**4.2**	2.0	mg/kg	EPA 6010B	
Copper	**5.5**	1.0	mg/kg	EPA 6010B	
Nickel	**6.2**	2.0	mg/kg	EPA 6010B	
Vanadium	**22**	5.0	mg/kg	EPA 6010B	
Zinc	**33**	1.0	mg/kg	EPA 6010B	
PCB-1254	**36**	10	ug/kg	EPA 8082	

Sample ID: SP2-4 **Laboratory ID:** T181179-04

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**94**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**69**	10	mg/kg	EPA 8015B	
Barium	**62**	1.0	mg/kg	EPA 6010B	
Chromium	**6.5**	2.0	mg/kg	EPA 6010B	
Cobalt	**4.9**	2.0	mg/kg	EPA 6010B	
Copper	**5.5**	1.0	mg/kg	EPA 6010B	
Lead	**9.8**	3.0	mg/kg	EPA 6010B	
Nickel	**6.6**	2.0	mg/kg	EPA 6010B	
Vanadium	**22**	5.0	mg/kg	EPA 6010B	
Zinc	**30**	1.0	mg/kg	EPA 6010B	
PCB-1260	**77**	10	ug/kg	EPA 8082	

Sample ID: SP2-5 **Laboratory ID:** T181179-05

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**51**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**46**	10	mg/kg	EPA 8015B	
Barium	**59**	1.0	mg/kg	EPA 6010B	
Chromium	**6.2**	2.0	mg/kg	EPA 6010B	
Cobalt	**4.4**	2.0	mg/kg	EPA 6010B	
Copper	**5.6**	1.0	mg/kg	EPA 6010B	

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Sample ID: SP2-5 **Laboratory ID:** T181179-05

Analyte	Result	Reporting Limit	Units	Method	Notes
Lead	**17**	3.0	mg/kg	EPA 6010B	
Nickel	**5.9**	2.0	mg/kg	EPA 6010B	
Vanadium	**18**	5.0	mg/kg	EPA 6010B	
Zinc	**31**	1.0	mg/kg	EPA 6010B	
PCB-1260	**32**	10	ug/kg	EPA 8082	
Pyrene	**950**	300	ug/kg	EPA 8270C	
Benzo (a) anthracene	**340**	300	ug/kg	EPA 8270C	
Chrysene	**440**	300	ug/kg	EPA 8270C	
Fluoranthene	**880**	300	ug/kg	EPA 8270C	
Phenanthrene	**530**	300	ug/kg	EPA 8270C	

Sample ID: SP2-6 **Laboratory ID:** T181179-06

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**90**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**49**	10	mg/kg	EPA 8015B	
Barium	**68**	1.0	mg/kg	EPA 6010B	
Chromium	**7.1**	2.0	mg/kg	EPA 6010B	
Cobalt	**5.0**	2.0	mg/kg	EPA 6010B	
Copper	**5.7**	1.0	mg/kg	EPA 6010B	
Lead	**13**	3.0	mg/kg	EPA 6010B	
Nickel	**7.5**	2.0	mg/kg	EPA 6010B	
Vanadium	**24**	5.0	mg/kg	EPA 6010B	
Zinc	**33**	1.0	mg/kg	EPA 6010B	
PCB-1260	**58**	10	ug/kg	EPA 8082	
Pyrene	**1200**	300	ug/kg	EPA 8270C	
Benzo (a) anthracene	**490**	300	ug/kg	EPA 8270C	
Benzo (b) fluoranthene	**410**	300	ug/kg	EPA 8270C	
Chrysene	**570**	300	ug/kg	EPA 8270C	
Fluoranthene	**1100**	300	ug/kg	EPA 8270C	
Phenanthrene	**750**	300	ug/kg	EPA 8270C	

Sample ID: SP2-7 **Laboratory ID:** T181179-07

Analyte	Result	Reporting Limit	Units	Method	Notes

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Sample ID: SP2-7 **Laboratory ID:** T181179-07

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**60**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**57**	10	mg/kg	EPA 8015B	
Barium	**58**	1.0	mg/kg	EPA 6010B	
Chromium	**6.0**	2.0	mg/kg	EPA 6010B	
Cobalt	**4.6**	2.0	mg/kg	EPA 6010B	
Copper	**4.1**	1.0	mg/kg	EPA 6010B	
Nickel	**6.4**	2.0	mg/kg	EPA 6010B	
Vanadium	**22**	5.0	mg/kg	EPA 6010B	
Zinc	**24**	1.0	mg/kg	EPA 6010B	
PCB-1260	**86**	10	ug/kg	EPA 8082	

Sample ID: SP2-8 **Laboratory ID:** T181179-08

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**170**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**120**	10	mg/kg	EPA 8015B	
Barium	**61**	1.0	mg/kg	EPA 6010B	
Chromium	**5.5**	2.0	mg/kg	EPA 6010B	
Cobalt	**4.4**	2.0	mg/kg	EPA 6010B	
Copper	**6.5**	1.0	mg/kg	EPA 6010B	
Lead	**11**	3.0	mg/kg	EPA 6010B	
Nickel	**5.1**	2.0	mg/kg	EPA 6010B	
Vanadium	**16**	5.0	mg/kg	EPA 6010B	
Zinc	**27**	1.0	mg/kg	EPA 6010B	
PCB-1260	**58**	10	ug/kg	EPA 8082	

Sample ID: SP2-9 **Laboratory ID:** T181179-09

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**370**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**380**	10	mg/kg	EPA 8015B	
Barium	**52**	1.0	mg/kg	EPA 6010B	
Chromium	**5.5**	2.0	mg/kg	EPA 6010B	
Cobalt	**5.6**	2.0	mg/kg	EPA 6010B	
Copper	**8.5**	1.0	mg/kg	EPA 6010B	

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Sample ID: SP2-9 **Laboratory ID:** T181179-09

Analyte	Result	Reporting Limit	Units	Method	Notes
Lead	**32**	3.0	mg/kg	EPA 6010B	
Nickel	**9.5**	2.0	mg/kg	EPA 6010B	
Vanadium	**17**	5.0	mg/kg	EPA 6010B	
Zinc	**28**	1.0	mg/kg	EPA 6010B	
PCB-1260	**58**	10	ug/kg	EPA 8082	

Sample ID: SP2-10 **Laboratory ID:** T181179-10

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**150**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**76**	10	mg/kg	EPA 8015B	
Barium	**61**	1.0	mg/kg	EPA 6010B	
Chromium	**6.1**	2.0	mg/kg	EPA 6010B	
Cobalt	**4.6**	2.0	mg/kg	EPA 6010B	
Copper	**4.1**	1.0	mg/kg	EPA 6010B	
Nickel	**6.2**	2.0	mg/kg	EPA 6010B	
Vanadium	**21**	5.0	mg/kg	EPA 6010B	
Zinc	**26**	1.0	mg/kg	EPA 6010B	
PCB-1016	**72**	10	ug/kg	EPA 8082	
PCB-1260	**45**	10	ug/kg	EPA 8082	

Sample ID: SP2-11 **Laboratory ID:** T181179-11

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**110**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**68**	10	mg/kg	EPA 8015B	
Barium	**58**	1.0	mg/kg	EPA 6010B	
Chromium	**6.7**	2.0	mg/kg	EPA 6010B	
Cobalt	**4.4**	2.0	mg/kg	EPA 6010B	
Copper	**6.5**	1.0	mg/kg	EPA 6010B	
Lead	**17**	3.0	mg/kg	EPA 6010B	
Nickel	**6.4**	2.0	mg/kg	EPA 6010B	
Vanadium	**20**	5.0	mg/kg	EPA 6010B	
Zinc	**31**	1.0	mg/kg	EPA 6010B	
PCB-1260	**26**	10	ug/kg	EPA 8082	

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Sample ID: SP2-12 **Laboratory ID:** T181179-12

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**140**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**150**	10	mg/kg	EPA 8015B	
Barium	**58**	1.0	mg/kg	EPA 6010B	
Chromium	**5.8**	2.0	mg/kg	EPA 6010B	
Cobalt	**4.5**	2.0	mg/kg	EPA 6010B	
Copper	**5.8**	1.0	mg/kg	EPA 6010B	
Lead	**11**	3.0	mg/kg	EPA 6010B	
Nickel	**5.4**	2.0	mg/kg	EPA 6010B	
Vanadium	**17**	5.0	mg/kg	EPA 6010B	
Zinc	**29**	1.0	mg/kg	EPA 6010B	
PCB-1260	**61**	10	ug/kg	EPA 8082	

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SP2-1

T181179-01 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8040617	04/06/18	04/06/18	EPA 8015B	
C13-C28 (DRO)	**62**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**59**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*68.4 %*	*65-135*		"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8040616	04/06/18	04/09/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**58**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**6.2**	2.0	"	"	"	"	"	"	
Cobalt	**4.9**	2.0	"	"	"	"	"	"	
Copper	**5.2**	1.0	"	"	"	"	"	"	
Lead	**13**	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**5.9**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**20**	5.0	"	"	"	"	"	"	
Zinc	**33**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	**0.52**	0.10	mg/kg	1	8040615	04/06/18	04/09/18	EPA 7471A Soil	

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SP2-1

T181179-01 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8040620	04/06/18	04/10/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	**29**	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*134 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*132 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8040619	04/06/18	04/11/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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SP2-1

T181179-01 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8040619	04/06/18	04/11/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

SP2-1

T181179-01 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8040619	04/06/18	04/11/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*46.4 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*52.9 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*57.7 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*63.4 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*86.7 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*90.3 %*	*29.1-130*		"	"	"	"	

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

SP2-2

T181179-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8040617	04/06/18	04/06/18	EPA 8015B	
C13-C28 (DRO)	**24**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**42**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*80.9 %*		*65-135*	"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8040616	04/06/18	04/09/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**55**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**5.5**	2.0	"	"	"	"	"	"	
Cobalt	**4.7**	2.0	"	"	"	"	"	"	
Copper	**3.5**	1.0	"	"	"	"	"	"	
Lead	**11**	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**5.3**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**20**	5.0	"	"	"	"	"	"	
Zinc	**29**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8040615	04/06/18	04/09/18	EPA 7471A Soil	

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

SP2-2

T181179-02 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	**66**	10	ug/kg	1	8040620	04/06/18	04/10/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	**72**	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*140 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*135 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8040619	04/06/18	04/11/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

SP2-2

T181179-02 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8040619	04/06/18	04/11/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

SP2-2

T181179-02 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8040619	04/06/18	04/11/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*47.9 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*52.4 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*60.8 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*66.9 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*83.2 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*83.5 %*	*29.1-130*		"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

SP2-3

T181179-03 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8040617	04/06/18	04/06/18	EPA 8015B	
C13-C28 (DRO)	**18**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**55**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*70.2 %*		*65-135*	"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8040616	04/06/18	04/09/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**63**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**6.7**	2.0	"	"	"	"	"	"	
Cobalt	**4.2**	2.0	"	"	"	"	"	"	
Copper	**5.5**	1.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**6.2**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**22**	5.0	"	"	"	"	"	"	
Zinc	**33**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8040615	04/06/18	04/09/18	EPA 7471A Soil	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

SP2-3

T181179-03 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8040620	04/06/18	04/10/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	**36**	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*137 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*144 %*		*35-140*	"	"	"	"	*S-GC*
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8040619	04/06/18	04/11/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

SP2-3

T181179-03 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8040619	04/06/18	04/11/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

SP2-3

T181179-03 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8040619	04/06/18	04/11/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*54.9 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*60.2 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*65.4 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*66.0 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*86.1 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*85.7 %*	*29.1-130*		"	"	"	"	

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Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

SP2-4

T181179-04 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8040617	04/06/18	04/06/18	EPA 8015B	
C13-C28 (DRO)	**94**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**69**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*69.4 %*		*65-135*	"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8040616	04/06/18	04/09/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**62**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**6.5**	2.0	"	"	"	"	"	"	
Cobalt	**4.9**	2.0	"	"	"	"	"	"	
Copper	**5.5**	1.0	"	"	"	"	"	"	
Lead	**9.8**	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**6.6**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**22**	5.0	"	"	"	"	"	"	
Zinc	**30**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8040615	04/06/18	04/09/18	EPA 7471A Soil	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

SP2-4

T181179-04 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8040620	04/06/18	04/10/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	**77**	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*138 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*134 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8040619	04/06/18	04/11/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

SP2-4

T181179-04 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8040619	04/06/18	04/11/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

SP2-4

T181179-04 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8040619	04/06/18	04/11/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*55.5 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*60.4 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*65.1 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*65.4 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*87.0 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*88.3 %*	*29.1-130*		"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

SP2-5

T181179-05 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8040617	04/06/18	04/06/18	EPA 8015B	
C13-C28 (DRO)	**51**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**46**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*83.7 %*	*65-135*		"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8040616	04/06/18	04/09/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**59**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**6.2**	2.0	"	"	"	"	"	"	
Cobalt	**4.4**	2.0	"	"	"	"	"	"	
Copper	**5.6**	1.0	"	"	"	"	"	"	
Lead	**17**	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**5.9**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**18**	5.0	"	"	"	"	"	"	
Zinc	**31**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8040615	04/06/18	04/09/18	EPA 7471A Soil	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

SP2-5

T181179-05 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8040620	04/06/18	04/10/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	**32**	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*135 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*137 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8040619	04/06/18	04/11/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	**950**	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	**340**	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	
Benzo (a) pyrene	ND	300	"	"	"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

SP2-5

T181179-05 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzyl alcohol	ND	300	ug/kg	1	8040619	04/06/18	04/11/18	EPA 8270C	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	**440**	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	**880**	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	
Isophorone	ND	300	"	"	"	"	"	"	

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Providing Quality Analytical Services Nationwide

25712 Commercentre Drive
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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

SP2-5

T181179-05 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
2-Methylphenol	ND	1000	ug/kg	1	8040619	04/06/18	04/11/18	EPA 8270C	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	**530**	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*54.2 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*59.1 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*62.7 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*66.3 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*90.3 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*89.8 %*	*29.1-130*		"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

SP2-6

T181179-06 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8040617	04/06/18	04/06/18	EPA 8015B	
C13-C28 (DRO)	**90**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**49**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*70.7 %*		*65-135*	"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8040616	04/06/18	04/09/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**68**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**7.1**	2.0	"	"	"	"	"	"	
Cobalt	**5.0**	2.0	"	"	"	"	"	"	
Copper	**5.7**	1.0	"	"	"	"	"	"	
Lead	**13**	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**7.5**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**24**	5.0	"	"	"	"	"	"	
Zinc	**33**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8040615	04/06/18	04/09/18	EPA 7471A Soil	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

SP2-6

T181179-06 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8040620	04/06/18	04/10/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	**58**	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*137 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*127 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8040619	04/06/18	04/11/18	EPA 8270C	
Aniline	ND	300	"	"	"	"	"	"	
Phenol	ND	1000	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	**1200**	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	**490**	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	**410**	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	
Benzo (a) pyrene	ND	300	"	"	"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

SP2-6

T181179-06 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzyl alcohol	ND	300	ug/kg	1	8040619	04/06/18	04/11/18	EPA 8270C	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	**570**	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	**1100**	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	
Isophorone	ND	300	"	"	"	"	"	"	

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Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

SP2-6

T181179-06 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
2-Methylphenol	ND	1000	ug/kg	1	8040619	04/06/18	04/11/18	EPA 8270C	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	**750**	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*55.3 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*60.1 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*65.6 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*67.2 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*92.0 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*88.9 %*	*29.1-130*		"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

SP2-7

T181179-07 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8040617	04/06/18	04/06/18	EPA 8015B	
C13-C28 (DRO)	**60**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**57**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*72.0 %*		*65-135*	"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8040616	04/06/18	04/09/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**58**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**6.0**	2.0	"	"	"	"	"	"	
Cobalt	**4.6**	2.0	"	"	"	"	"	"	
Copper	**4.1**	1.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**6.4**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**22**	5.0	"	"	"	"	"	"	
Zinc	**24**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8040615	04/06/18	04/09/18	EPA 7471A Soil	

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Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

SP2-7

T181179-07 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8040620	04/06/18	04/10/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	**86**	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*133 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*125 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8040619	04/06/18	04/11/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

SP2-7

T181179-07 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8040619	04/06/18	04/11/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

SP2-7

T181179-07 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8040619	04/06/18	04/11/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*56.0 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*63.3 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*65.7 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*69.3 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*90.1 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*94.1 %*	*29.1-130*		"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

SP2-8

T181179-08 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8040617	04/06/18	04/06/18	EPA 8015B	
C13-C28 (DRO)	**170**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**120**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*77.2 %*		*65-135*	"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8040616	04/06/18	04/09/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**61**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**5.5**	2.0	"	"	"	"	"	"	
Cobalt	**4.4**	2.0	"	"	"	"	"	"	
Copper	**6.5**	1.0	"	"	"	"	"	"	
Lead	**11**	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**5.1**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**16**	5.0	"	"	"	"	"	"	
Zinc	**27**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8040615	04/06/18	04/09/18	EPA 7471A Soil	

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

SP2-8

T181179-08 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8040620	04/06/18	04/10/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	**58**	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*139 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*134 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8040619	04/06/18	04/11/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

SP2-8

T181179-08 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8040619	04/06/18	04/11/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

SP2-8

T181179-08 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8040619	04/06/18	04/11/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*54.7 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*62.2 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*64.4 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*68.7 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*90.8 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*96.9 %*	*29.1-130*		"	"	"	"	

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Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

SP2-9

T181179-09 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8040617	04/06/18	04/06/18	EPA 8015B	
C13-C28 (DRO)	**370**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**380**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*79.2 %*		*65-135*	"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8040616	04/06/18	04/09/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**52**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**5.5**	2.0	"	"	"	"	"	"	
Cobalt	**5.6**	2.0	"	"	"	"	"	"	
Copper	**8.5**	1.0	"	"	"	"	"	"	
Lead	**32**	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**9.5**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**17**	5.0	"	"	"	"	"	"	
Zinc	**28**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8040615	04/06/18	04/09/18	EPA 7471A Soil	

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Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

SP2-9

T181179-09 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8040620	04/06/18	04/10/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	**58**	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*132 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*119 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8040619	04/06/18	04/11/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

SP2-9

T181179-09 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8040619	04/06/18	04/11/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

SP2-9

T181179-09 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8040619	04/06/18	04/11/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*50.7 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*58.9 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*62.2 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*71.7 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*88.9 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*86.1 %*	*29.1-130*		"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

SP2-10

T181179-10 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8040617	04/06/18	04/06/18	EPA 8015B	
C13-C28 (DRO)	**150**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**76**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*70.1 %*		*65-135*	"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8040616	04/06/18	04/09/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**61**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**6.1**	2.0	"	"	"	"	"	"	
Cobalt	**4.6**	2.0	"	"	"	"	"	"	
Copper	**4.1**	1.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**6.2**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**21**	5.0	"	"	"	"	"	"	
Zinc	**26**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8040615	04/06/18	04/09/18	EPA 7471A Soil	

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Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

SP2-10

T181179-10 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	**72**	10	ug/kg	1	8040620	04/06/18	04/10/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	**45**	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*142 %*		*35-140*	"	"	"	"	*S-GC*
Surrogate: Decachlorobiphenyl		*120 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8040619	04/06/18	04/11/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

SP2-10

T181179-10 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8040619	04/06/18	04/11/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

SP2-10

T181179-10 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8040619	04/06/18	04/11/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*51.5 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*56.8 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*60.0 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*67.2 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*91.0 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*95.8 %*	*29.1-130*		"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

SP2-11

T181179-11 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8040617	04/06/18	04/06/18	EPA 8015B	
C13-C28 (DRO)	**110**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**68**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*82.1 %*		*65-135*	"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8040616	04/06/18	04/09/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**58**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**6.7**	2.0	"	"	"	"	"	"	
Cobalt	**4.4**	2.0	"	"	"	"	"	"	
Copper	**6.5**	1.0	"	"	"	"	"	"	
Lead	**17**	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**6.4**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**20**	5.0	"	"	"	"	"	"	
Zinc	**31**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8040615	04/06/18	04/09/18	EPA 7471A Soil	

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Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

SP2-11

T181179-11 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8040620	04/06/18	04/10/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	**26**	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*134 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*129 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8040619	04/06/18	04/11/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

SP2-11

T181179-11 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8040619	04/06/18	04/11/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

SP2-11

T181179-11 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8040619	04/06/18	04/11/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*54.1 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*60.5 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*62.2 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*67.8 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*96.6 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*93.2 %*	*29.1-130*		"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

SP2-12

T181179-12 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8040617	04/06/18	04/06/18	EPA 8015B	
C13-C28 (DRO)	**140**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**150**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*77.4 %*		*65-135*	"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8040616	04/06/18	04/09/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**58**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**5.8**	2.0	"	"	"	"	"	"	
Cobalt	**4.5**	2.0	"	"	"	"	"	"	
Copper	**5.8**	1.0	"	"	"	"	"	"	
Lead	**11**	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**5.4**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**17**	5.0	"	"	"	"	"	"	
Zinc	**29**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8040615	04/06/18	04/09/18	EPA 7471A Soil	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
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Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

SP2-12

T181179-12 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8040620	04/06/18	04/10/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	**61**	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*137 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*127 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8040619	04/06/18	04/11/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

SP2-12

T181179-12 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8040619	04/06/18	04/11/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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SP2-12

T181179-12 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8040619	04/06/18	04/11/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*50.6 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*58.5 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*59.6 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*67.5 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*93.0 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*94.0 %*	*29.1-130*		"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8040617 - EPA 3550B GC										
Blank (8040617-BLK1)				Prepared & Analyzed: 04/06/18						
C6-C12 (GRO)	ND	10	mg/kg							
C13-C28 (DRO)	ND	10	"							
C29-C40 (MORO)	ND	10	"							
Surrogate: p-Terphenyl	*81.1*		*"*	*100*		*81.1*	*65-135*			
LCS (8040617-BS1)				Prepared & Analyzed: 04/06/18						
C13-C28 (DRO)	450	10	mg/kg	500		90.2	75-125			
Surrogate: p-Terphenyl	*77.4*		*"*	*100*		*77.4*	*65-135*			
LCS Dup (8040617-BSD1)				Prepared & Analyzed: 04/06/18						
C13-C28 (DRO)	490	10	mg/kg	500		98.3	75-125	8.56	20	
Surrogate: p-Terphenyl	*82.8*		*"*	*100*		*82.8*	*65-135*			

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

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 8040616 - EPA 3050B										
Blank (8040616-BLK1)				Prepared: 04/06/18 Analyzed: 04/09/18						
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 (8040616-BS1)				Prepared: 04/06/18 Analyzed: 04/09/18						
Arsenic	95.3	5.0	mg/kg	100		95.3	75-125			
Barium	95.6	1.0	"	100		95.6	75-125			
Cadmium	95.8	2.0	"	100		95.8	75-125			
Chromium	95.8	2.0	"	100		95.8	75-125			
Lead	98.3	3.0	"	100		98.3	75-125			
Matrix Spike (8040616-MS1)	**Source: T181174-01**			Prepared: 04/06/18 Analyzed: 04/09/18						
Arsenic	99.8	5.0	mg/kg	99.0	4.03	96.7	75-125			
Barium	142	1.0	"	99.0	45.4	97.3	75-125			
Cadmium	97.8	2.0	"	99.0	ND	98.7	75-125			
Chromium	102	2.0	"	99.0	4.73	98.5	75-125			
Lead	99.4	3.0	"	99.0	1.84	98.5	75-125			

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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 8040616 - EPA 3050B										
Matrix Spike Dup (8040616-MSD1)	**Source: T181174-01**			Prepared: 04/06/18 Analyzed: 04/09/18						
Arsenic	83.9	4.5	mg/kg	90.9	4.03	87.8	75-125	17.3	20	
Barium	130	0.91	"	90.9	45.4	93.2	75-125	8.51	20	
Cadmium	82.3	1.8	"	90.9	ND	90.6	75-125	17.1	20	
Chromium	89.3	1.8	"	90.9	4.73	93.0	75-125	13.5	20	
Lead	84.0	2.7	"	90.9	1.84	90.3	75-125	16.8	20	

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Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

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 8040615 - EPA 7471A Soil										
Blank (8040615-BLK1)				Prepared: 04/06/18 Analyzed: 04/09/18						
Mercury	ND	0.10	mg/kg							
LCS (8040615-BS1)				Prepared: 04/06/18 Analyzed: 04/09/18						
Mercury	0.438	0.10	mg/kg	0.410		107	80-120			
Matrix Spike (8040615-MS1)	**Source: T181174-01**			Prepared: 04/06/18 Analyzed: 04/09/18						
Mercury	0.453	0.10	mg/kg	0.417	ND	109	75-125			
Matrix Spike Dup (8040615-MSD1)	**Source: T181174-01**			Prepared: 04/06/18 Analyzed: 04/09/18						
Mercury	0.414	0.10	mg/kg	0.391	ND	106	75-125	8.91	20	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

Polychlorinated Biphenyls by EPA Method 8082 - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8040620 - EPA 3550 ECD/GCMS										
Blank (8040620-BLK1)				Prepared: 04/06/18 Analyzed: 04/09/18						
PCB-1016	ND	10	ug/kg							
PCB-1221	ND	10	"							
PCB-1232	ND	10	"							
PCB-1242	ND	10	"							
PCB-1248	ND	10	"							
PCB-1254	ND	10	"							
PCB-1260	ND	10	"							
Surrogate: Tetrachloro-meta-xylene	*13.3*		"	*9.90*		*134*	*35-140*			
Surrogate: Decachlorobiphenyl	*15.9*		"	*9.90*		*160*	*35-140*			*S-GC*
LCS (8040620-BS1)				Prepared: 04/06/18 Analyzed: 04/09/18						
PCB-1016	84.5	10	ug/kg	99.0		85.3	40-130			
PCB-1260	68.5	10	"	99.0		69.2	40-130			
Surrogate: Tetrachloro-meta-xylene	*13.6*		"	*9.90*		*138*	*35-140*			
Surrogate: Decachlorobiphenyl	*16.0*		"	*9.90*		*162*	*35-140*			*S-GC*
Matrix Spike (8040620-MS1)	**Source: T181174-01**			Prepared: 04/06/18 Analyzed: 04/09/18						
PCB-1016	68.6	10	ug/kg	98.0	ND	70.0	40-130			
PCB-1260	62.9	10	"	98.0	ND	64.2	40-130			
Surrogate: Tetrachloro-meta-xylene	*14.8*		"	*9.80*		*151*	*35-140*			*QM-05*
Surrogate: Decachlorobiphenyl	*15.9*		"	*9.80*		*162*	*35-140*			*QM-05*
Matrix Spike Dup (8040620-MSD1)	**Source: T181174-01**			Prepared: 04/06/18 Analyzed: 04/09/18						
PCB-1016	74.2	10	ug/kg	99.0	ND	74.9	40-130	7.75	30	
PCB-1260	68.0	10	"	99.0	ND	68.7	40-130	7.76	30	
Surrogate: Tetrachloro-meta-xylene	*15.3*		"	*9.90*		*155*	*35-140*			*QM-05*
Surrogate: Decachlorobiphenyl	*16.4*		"	*9.90*		*165*	*35-140*			*QM-05*

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8040619 - EPA 3550 ECD/GCMS										
Blank (8040619-BLK1)				Prepared: 04/06/18 Analyzed: 04/11/18						
Carbazole	ND	300	ug/kg							
Aniline	ND	300	"							
Phenol	ND	1000	"							
2-Chlorophenol	ND	1000	"							
1,4-Dichlorobenzene	ND	300	"							
N-Nitrosodi-n-propylamine	ND	300	"							
1,2,4-Trichlorobenzene	ND	300	"							
4-Chloro-3-methylphenol	ND	1000	"							
1-Methylnaphthalene	ND	300	"							
2-Methylnaphthalene	ND	300	"							
Acenaphthene	ND	300	"							
4-Nitrophenol	ND	1000	"							
2,4-Dinitrotoluene	ND	300	"							
Pentachlorophenol	ND	1000	"							
Pyrene	ND	300	"							
Acenaphthylene	ND	300	"							
Anthracene	ND	300	"							
Benzo (a) anthracene	ND	300	"							
Benzo (b) fluoranthene	ND	300	"							
Benzo (k) fluoranthene	ND	300	"							
Benzo (g,h,i) perylene	ND	1000	"							
Benzo (a) pyrene	ND	300	"							
Benzyl alcohol	ND	300	"							
Bis(2-chloroethoxy)methane	ND	300	"							
Bis(2-chloroethyl)ether	ND	300	"							
Bis(2-chloroisopropyl)ether	ND	300	"							
Bis(2-ethylhexyl)phthalate	ND	300	"							
4-Bromophenyl phenyl ether	ND	300	"							
Butyl benzyl phthalate	ND	300	"							
4-Chloroaniline	ND	300	"							
2-Chloronaphthalene	ND	300	"							
4-Chlorophenyl phenyl ether	ND	300	"							
Chrysene	ND	300	"							
Dibenz (a,h) anthracene	ND	300	"							
Dibenzofuran	ND	300	"							
Di-n-butyl phthalate	ND	300	"							

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Mike Jaroudi, Project Manager

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Providing Quality Analytical Services Nationwide

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Lake Forest, California 92630
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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8040619 - EPA 3550 ECD/GCMS										
Blank (8040619-BLK1)				Prepared: 04/06/18 Analyzed: 04/11/18						
1,2-Dichlorobenzene	ND	300	ug/kg							
1,3-Dichlorobenzene	ND	300	"							
2,4-Dichlorophenol	ND	1000	"							
Diethyl phthalate	ND	300	"							
2,4-Dimethylphenol	ND	1000	"							
Dimethyl phthalate	ND	300	"							
4,6-Dinitro-2-methylphenol	ND	1000	"							
2,4-Dinitrophenol	ND	1000	"							
2,6-Dinitrotoluene	ND	1000	"							
Di-n-octyl phthalate	ND	300	"							
Fluoranthene	ND	300	"							
Fluorene	ND	300	"							
Hexachlorobenzene	ND	1500	"							
Hexachlorobutadiene	ND	300	"							
Hexachlorocyclopentadiene	ND	1000	"							
Hexachloroethane	ND	300	"							
Indeno (1,2,3-cd) pyrene	ND	300	"							
Isophorone	ND	300	"							
2-Methylphenol	ND	1000	"							
4-Methylphenol	ND	1000	"							
Naphthalene	ND	300	"							
2-Nitroaniline	ND	300	"							
3-Nitroaniline	ND	300	"							
4-Nitroaniline	ND	300	"							
Nitrobenzene	ND	1000	"							
2-Nitrophenol	ND	1000	"							
N-Nitrosodimethylamine	ND	300	"							
N-Nitrosodiphenylamine	ND	300	"							
2,3,5,6-Tetrachlorophenol	ND	300	"							
2,3,4,6-Tetrachlorophenol	ND	300	"							
Phenanthrene	ND	300	"							
Azobenzene	ND	300	"							
2,4,5-Trichlorophenol	ND	1000	"							
Pyridine	ND	300	"							
2,4,6-Trichlorophenol	ND	1000	"							

SunStar Laboratories, Inc.

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Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8040619 - EPA 3550 ECD/GCMS										
Blank (8040619-BLK1)				Prepared: 04/06/18 Analyzed: 04/11/18						
Surrogate: 2-Fluorophenol	*1920*		*ug/kg*	*3380*		*56.7*	*15-121*			
Surrogate: Phenol-d6	*1890*		*"*	*3380*		*55.9*	*24-113*			
Surrogate: Nitrobenzene-d5	*2290*		*"*	*3380*		*67.7*	*21.3-119*			
Surrogate: 2-Fluorobiphenyl	*2380*		*"*	*3380*		*70.3*	*32.4-102*			
Surrogate: 2,4,6-Tribromophenol	*2600*		*"*	*3380*		*77.0*	*18.1-105*			
Surrogate: Terphenyl-dl4	*2820*		*"*	*3380*		*83.6*	*29.1-130*			
LCS (8040619-BS1)				Prepared: 04/06/18 Analyzed: 04/11/18						
Phenol	1910	1000	ug/kg	3270		58.5	34-114			
2-Chlorophenol	2220	1000	"	3270		68.0	34-114			
1,4-Dichlorobenzene	2250	300	"	3270		68.9	34-114			
N-Nitrosodi-n-propylamine	2620	300	"	3270		80.1	30-110			
1,2,4-Trichlorobenzene	2420	300	"	3270		73.9	39-119			
4-Chloro-3-methylphenol	2270	1000	"	3270		69.4	50-130			
Acenaphthene	2480	300	"	3270		76.0	34-114			
Pentachlorophenol	3980	1000	"	3270		122	50-130			
Pyrene	2150	300	"	3270		65.8	30-110			
Surrogate: 2-Fluorophenol	*1900*		*"*	*3270*		*58.1*	*15-121*			
Surrogate: Phenol-d6	*1970*		*"*	*3270*		*60.4*	*24-113*			
Surrogate: Nitrobenzene-d5	*2250*		*"*	*3270*		*68.8*	*21.3-119*			
Surrogate: 2-Fluorobiphenyl	*2190*		*"*	*3270*		*66.9*	*32.4-102*			
Surrogate: 2,4,6-Tribromophenol	*2840*		*"*	*3270*		*87.0*	*18.1-105*			
Surrogate: Terphenyl-dl4	*2800*		*"*	*3270*		*85.7*	*29.1-130*			
LCS Dup (8040619-BSD1)				Prepared: 04/06/18 Analyzed: 04/11/18						
Phenol	1820	1000	ug/kg	3320		54.8	34-114	4.88	42	
2-Chlorophenol	2140	1000	"	3320		64.3	34-114	3.95	40	
1,4-Dichlorobenzene	2180	300	"	3320		65.7	34-114	3.11	28	
N-Nitrosodi-n-propylamine	2660	300	"	3320		80.1	30-110	1.61	38	
1,2,4-Trichlorobenzene	2380	300	"	3320		71.5	39-119	1.72	28	
4-Chloro-3-methylphenol	2310	1000	"	3320		69.5	50-130	1.76	42	
Acenaphthene	2500	300	"	3320		75.3	34-114	0.788	31	
Pentachlorophenol	4080	1000	"	3320		123	50-130	2.43	50	
Pyrene	2200	300	"	3320		66.2	30-110	2.31	31	
Surrogate: 2-Fluorophenol	*1800*		*"*	*3320*		*54.0*	*15-121*			
Surrogate: Phenol-d6	*1870*		*"*	*3320*		*56.4*	*24-113*			

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Mike Jaroudi, Project Manager

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PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8040619 - EPA 3550 ECD/GCMS										
LCS Dup (8040619-BSD1)				Prepared: 04/06/18 Analyzed: 04/11/18						
Surrogate: Nitrobenzene-d5	*2210*		*ug/kg*	*3320*		*66.4*	*21.3-119*			
Surrogate: 2-Fluorobiphenyl	*2180*		*"*	*3320*		*65.6*	*32.4-102*			
Surrogate: 2,4,6-Tribromophenol	*2870*		*"*	*3320*		*86.3*	*18.1-105*			
Surrogate: Terphenyl-dl4	*2910*		*"*	*3320*		*87.7*	*29.1-130*			

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Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/13/18 15:53

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).
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.

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Mike Jaroudi, Project Manager

SunStar Laboratories, Inc.

PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

25712 Commercentre Drive, Lake Forest, CA 92630
949-297-5020

Chain of Custody Record

Client: BRUSCA ASSOCIATES, INC.
Address: PO Box 332, ROSEVILLE, CA 95661
Phone: (916) 677-1470 Fax: (916) 677-1471
Project Manager: JOE BRUSCA

Date: 4/5/18 Page: 1 Of 1
Project Name: LATHROP 43-AC PROPERTY
Collector: BRUSCA Client Project #: 137-002
Batch #: TT81179 EDF #:

Sample ID	Date Sampled	Time	Sample Type	Container Type	~~8260~~ SVOCs 8270	8260 + OXY	8260 BTEX, OXY only	~~8270~~ PCBs 8082	8021 BTEX	8015M (gasoline)	8015M (diesel)	8015M Ext./Carbon Chain	6010/7000 Title 22 Metals	6020 ICP-MS Metals				Laboratory ID #	Comments/Preservative	Total # of containers
												Silica Gel Cleanup								
SP2-1	4/5/18	9:54	SOLID	JAR	X			X				X	X					01		1
SP2-2		9:57			X			X				X	X					02		1
SP2-3		9:59			X			X				X	X					03		1
SP2-4		9:02			X			X				X	X					04		1
SP2-5		9:04			X			X				X	X					05		1
SP2-6		9:08			X			X				X	X					06		1
SP2-7		9:14			X			X				X	X					07		1
SP2-8		9:18			X			X				X	X					08		1
SP2-9		9:21			X			X				X	X					09		1
SP2-10		9:24			X			X				X	X					10		1
SP2-11		9:26			X			X				X	X					11		1
SP2-12		9:29			X			X				X	X					12		1

Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
	4/5/18 13:10		4/5/18 13:10
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
GSD 4.6.18	10:00		4.6.18 10:00
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time

Total # of containers
Chain of Custody seals Y/N/NA
Seals intact? Y/N/NA
Received good condition/cold 4.8

Turn around time: NORMAL EXCEPT 3 DAY TAT ON METALS

Notes
* 3 DAY TAT ON METALS

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

COC 160913

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

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30 April 2018

Joe Brusca
Brusca Associates Inc.
PO Box 332
Roseville, CA 95661

RE: Lathrop 48-Ac Property

Enclosed are the results of analyses for samples received by the laboratory on 04/06/18 10:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Mike Jaroudi
Project Manager

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/30/18 17:08

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SP2-6	T181179-06	Soil	04/05/18 09:08	04/06/18 10:00
SP2-9	T181179-09	Soil	04/05/18 09:21	04/06/18 10:00

SunStar Laboratories, Inc.

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Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/30/18 17:08

DETECTIONS SUMMARY

Sample ID: SP2-6 **Laboratory ID:** T181179-06

Analyte	Result	Reporting Limit	Units	Method	Notes
Arsenic	**28**	1.0	ug/l	6020 ICP-MS	STLC
Barium	**520**	1.0	ug/l	6020 ICP-MS	STLC
Beryllium	**1.9**	1.0	ug/l	6020 ICP-MS	STLC
Chromium	**54**	1.0	ug/l	6020 ICP-MS	STLC
Cobalt	**44**	1.0	ug/l	6020 ICP-MS	STLC
Copper	**99**	1.0	ug/l	6020 ICP-MS	STLC
Lead	**110**	2.0	ug/l	6020 ICP-MS	STLC
Mercury	**0.21**	0.10	ug/l	6020 ICP-MS	STLC
Molybdenum	**7.2**	1.0	ug/l	6020 ICP-MS	STLC
Nickel	**73**	1.0	ug/l	6020 ICP-MS	STLC
Silver	**3.0**	1.0	ug/l	6020 ICP-MS	STLC
Vanadium	**250**	1.0	ug/l	6020 ICP-MS	STLC
Zinc	**320**	1.0	ug/l	6020 ICP-MS	STLC

Sample ID: SP2-9 **Laboratory ID:** T181179-09

Analyte	Result	Reporting Limit	Units	Method	Notes
Antimony	**0.97**	0.25	ug/l	6020 ICP-MS	STLC
Arsenic	**8.9**	0.25	ug/l	6020 ICP-MS	STLC
Barium	**120**	0.25	ug/l	6020 ICP-MS	STLC
Beryllium	**0.36**	0.25	ug/l	6020 ICP-MS	STLC
Cadmium	**0.25**	0.25	ug/l	6020 ICP-MS	STLC
Chromium	**16**	0.25	ug/l	6020 ICP-MS	STLC
Cobalt	**13**	0.25	ug/l	6020 ICP-MS	STLC
Copper	**34**	0.25	ug/l	6020 ICP-MS	STLC
Lead	**51**	0.25	ug/l	6020 ICP-MS	STLC
Mercury	**0.091**	0.025	ug/l	6020 ICP-MS	STLC
Molybdenum	**5.7**	0.25	ug/l	6020 ICP-MS	STLC
Nickel	**15**	0.25	ug/l	6020 ICP-MS	STLC
Selenium	**1.6**	1.2	ug/l	6020 ICP-MS	STLC
Silver	**0.73**	0.25	ug/l	6020 ICP-MS	STLC
Vanadium	**80**	0.25	ug/l	6020 ICP-MS	STLC

SunStar Laboratories, Inc.

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Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/30/18 17:08

Sample ID: SP2-9 **Laboratory ID:** T181179-09

Analyte	Result	Reporting Limit	Units	Method	Notes
Zinc	**68**	0.25	ug/l	6020 ICP-MS	STLC

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/30/18 17:08

SP2-6

T181179-06 (Soil)

SunStar Laboratories, Inc.

Metals by EPA 6020 Method

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Antimony	ND	1.0	ug/l	1	8042318	04/23/18	04/26/18	6020 ICP-MS	STLC
Arsenic	**28**	1.0	"	"	"	"	"	"	STLC
Barium	**520**	1.0	"	"	"	"	"	"	STLC
Beryllium	**1.9**	1.0	"	"	"	"	04/27/18	"	STLC
Cadmium	ND	1.0	"	"	"	"	04/26/18	"	STLC
Chromium	**54**	1.0	"	"	"	"	"	"	STLC
Cobalt	**44**	1.0	"	"	"	"	"	"	STLC
Copper	**99**	1.0	"	"	"	"	"	"	STLC
Lead	**110**	2.0	"	"	"	"	"	"	STLC
Mercury	**0.21**	0.10	"	"	"	"	"	"	STLC
Molybdenum	**7.2**	1.0	"	"	"	"	"	"	STLC
Nickel	**73**	1.0	"	"	"	"	"	"	STLC
Selenium	ND	5.0	"	"	"	"	"	"	STLC
Silver	**3.0**	1.0	"	"	"	"	"	"	STLC
Thallium	ND	1.0	"	"	"	"	"	"	STLC
Vanadium	**250**	1.0	"	"	"	"	"	"	STLC
Zinc	**320**	1.0	"	"	"	"	"	"	STLC

SunStar Laboratories, Inc.

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/30/18 17:08

SP2-9

T181179-09 (Soil)

SunStar Laboratories, Inc.

Metals by EPA 6020 Method

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Antimony	**0.97**	0.25	ug/l	1	8042319	04/23/18	04/30/18	6020 ICP-MS	STLC
Arsenic	**8.9**	0.25	"	"	"	"	"	"	STLC
Barium	**120**	0.25	"	"	"	"	"	"	STLC
Beryllium	**0.36**	0.25	"	"	"	"	"	"	STLC
Cadmium	**0.25**	0.25	"	"	"	"	"	"	STLC
Chromium	**16**	0.25	"	"	"	"	"	"	STLC
Cobalt	**13**	0.25	"	"	"	"	"	"	STLC
Copper	**34**	0.25	"	"	"	"	"	"	STLC
Lead	**51**	0.25	"	"	"	"	"	"	STLC
Mercury	**0.091**	0.025	"	"	"	"	"	"	STLC
Molybdenum	**5.7**	0.25	"	"	"	"	"	"	STLC
Nickel	**15**	0.25	"	"	"	"	"	"	STLC
Selenium	**1.6**	1.2	"	"	"	"	"	"	STLC
Silver	**0.73**	0.25	"	"	"	"	"	"	STLC
Thallium	ND	0.25	"	"	"	"	"	"	STLC
Vanadium	**80**	0.25	"	"	"	"	"	"	STLC
Zinc	**68**	0.25	"	"	"	"	"	"	STLC

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/30/18 17:08

Metals by EPA 6020 Method - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8042318 - STLC Metals										
Blank (8042318-BLK1)				Prepared: 04/23/18 Analyzed: 04/26/18						
Antimony	ND	1.0	ug/l							
Arsenic	ND	1.0	"							
Barium	ND	1.0	"							
Beryllium	ND	1.0	"							
Cadmium	ND	1.0	"							
Chromium	ND	1.0	"							
Cobalt	ND	1.0	"							
Copper	ND	1.0	"							
Lead	ND	2.0	"							
Mercury	ND	0.10	"							
Molybdenum	ND	1.0	"							
Nickel	ND	1.0	"							
Selenium	ND	5.0	"							
Silver	ND	1.0	"							
Thallium	ND	1.0	"							
Vanadium	ND	1.0	"							
Zinc	ND	1.0	"							
LCS (8042318-BS1)				Prepared: 04/23/18 Analyzed: 04/26/18						
Arsenic	57.4	1.0	ug/l	50.0		115	80-120			
Barium	56.4	1.0	"	50.0		113	80-120			
Cadmium	56.5	1.0	"	50.0		113	80-120			
Chromium	55.6	1.0	"	50.0		111	80-120			
Lead	56.2	2.0	"	50.0		112	80-120			
Duplicate (8042318-DUP1)	**Source: T181179-06**			Prepared: 04/23/18 Analyzed: 04/26/18						
Barium	548	5.0	ug/l		521			4.95	200	
Chromium	54.5	5.0	"		53.8			1.28	200	

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

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Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/30/18 17:08

Metals by EPA 6020 Method - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8042318 - STLC Metals										
Matrix Spike (8042318-MS1)	**Source: T181179-06**			Prepared: 04/23/18 Analyzed: 04/26/18						
Arsenic	72.5	1.0	ug/l	50.0	27.8	89.2	75-125			
Barium	611	1.0	"	50.0	521	178	75-125			QM-PS
Cadmium	46.0	1.0	"	50.0	0.966	90.1	75-125			
Chromium	121	1.0	"	50.0	53.8	134	75-125			QM-PS
Lead	168	2.0	"	50.0	112	112	75-125			
Matrix Spike Dup (8042318-MSD1)	**Source: T181179-06**			Prepared: 04/23/18 Analyzed: 04/26/18						
Arsenic	73.4	1.0	ug/l	50.0	27.8	91.2	75-125	1.36	20	
Barium	595	1.0	"	50.0	521	147	75-125	2.61	20	QM-PS
Cadmium	47.4	1.0	"	50.0	0.966	92.9	75-125	2.97	20	
Chromium	124	1.0	"	50.0	53.8	141	75-125	2.85	20	QM-PS
Lead	164	2.0	"	50.0	112	104	75-125	2.22	20	
Post Spike (8042318-PS1)	**Source: T181179-06**			Prepared: 04/23/18 Analyzed: 04/26/18						
Barium	287		ug/l	25.0	261	104	80-120			
Chromium	56.2		"	25.0	26.9	117	80-120			
Batch 8042319 - STLC Metals										
Blank (8042319-BLK1)				Prepared: 04/23/18 Analyzed: 04/30/18						
Antimony	ND	0.25	ug/l							STLC
Arsenic	0.366	0.25	"							STLC
Barium	4.73	0.25	"							QB-01, STLC
Beryllium	ND	0.25	"							STLC
Cadmium	ND	0.25	"							STLC
Chromium	0.518	0.25	"							QB-01, STLC
Cobalt	ND	0.25	"							STLC
Copper	0.663	0.25	"							QB-01, STLC
Lead	0.269	0.25	"							STLC
Mercury	ND	0.025	"							STLC
Molybdenum	0.282	0.25	"							STLC
Nickel	ND	0.25	"							STLC
Selenium	ND	1.2	"							STLC
Silver	ND	0.25	"							STLC
Thallium	ND	0.25	"							STLC

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/30/18 17:08

Metals by EPA 6020 Method - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8042319 - STLC Metals										
Blank (8042319-BLK1)				Prepared: 04/23/18 Analyzed: 04/30/18						
Vanadium	1.01	0.25	ug/l							QB-01, STLC
Zinc	0.690	0.25	"							QB-01, STLC
LCS (8042319-BS1)				Prepared: 04/23/18 Analyzed: 04/30/18						
Arsenic	45.9	0.25	ug/l	50.0		91.7	80-120			STLC
Barium	51.1	0.25	"	50.0		102	80-120			STLC
Cadmium	45.4	0.25	"	50.0		90.8	80-120			STLC
Chromium	45.9	0.25	"	50.0		91.8	80-120			STLC
Lead	44.8	0.25	"	50.0		89.5	80-120			STLC
Matrix Spike (8042319-MS1)	**Source: T181179-09**			Prepared: 04/23/18 Analyzed: 04/30/18						
Arsenic	55.4	0.25	ug/l	50.0	8.92	93.0	75-125			STLC
Barium	174	0.25	"	50.0	115	117	75-125			STLC
Cadmium	46.3	0.25	"	50.0	0.251	92.0	75-125			STLC
Chromium	67.0	0.25	"	50.0	15.5	103	75-125			STLC
Lead	102	0.25	"	50.0	50.7	103	75-125			STLC
Matrix Spike Dup (8042319-MSD1)	**Source: T181179-09**			Prepared: 04/23/18 Analyzed: 04/30/18						
Arsenic	70.7	0.28	ug/l	56.8	8.92	109	75-125	24.3	20	QR-04, STLC
Barium	211	0.28	"	56.8	115	169	75-125	19.4	20	QR-04, STLC
Cadmium	60.2	0.28	"	56.8	0.251	105	75-125	26.2	20	QR-04, STLC
Chromium	82.6	0.28	"	56.8	15.5	118	75-125	20.9	20	QR-04, STLC
Lead	123	0.28	"	56.8	50.7	127	75-125	17.9	20	QR-04, STLC

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Mike Jaroudi, Project Manager

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PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/30/18 17:08

Notes and Definitions

STLC	Sample prepared in accordance with CCR Chapter 11, Article 5, Appendix II, Waste Extraction Test (WET).
QR-04	The pecent recovery and/or RPD was outside acceptance criteria. Results accepted based upon percent recovery results in duplicate QC sample and the CCV and CCB results.
QM-PS	The percent recovery and/or RPD are outside acceptance criteria. Results accepted based upon percent recovery results in the post spike and/or serial dilution.
QB-01	The method blank contains analyte at a concentration above the MRL; however, concentration is less than 10% of the sample result, which is negligible according to method criteria.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

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Mike Jaroudi, Project Manager

SunStar Laboratories, Inc.

PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

25712 Commercentre Drive, Lake Forest, CA 92630
949-297-5020

Chain of Custody Record

Client: BRUSCA ASSOCIATES, INC.
Address: PO Box 332, ROSEVILLE, CA 95661
Phone: (916) 677-1470 Fax: (916) 677-1471
Project Manager: JOE BRUSCA

Date: 4/5/18 Page: 1 Of 1
Project Name: LATHROP 43-AC PROPERTY
Collector: BRUSCA Client Project #: 137-002
Batch #: TT81179 EDF #:

Sample ID	Date Sampled	Time	Sample Type	Container Type	~~8260~~ SVOCs 8270	8260 + OXY	8260 BTEX, OXY only	~~8270~~ PCBs 8082	8021 BTEX	8015M (gasoline)	8015M (diesel)	8015M Ext./Carbon Chain	6010/7000 Title 22 Metals	6020 ICP-MS Metals				Laboratory ID #	Comments/Preservative	Total # of containers
												Silica Gel Cleanup								
SP2-1	4/5/18	9:54	SOLID	JAR	X			X				X	X					01		1
SP2-2		9:57			X			X				X	X					02		1
SP2-3		9:59			X			X				X	X					03		1
SP2-4		9:02			X			X				X	X					04		1
SP2-5		9:04			X			X				X	X					05		1
SP2-6		9:08			X			X				X	X					06		1
SP2-7		9:14			X			X				X	X					07		1
SP2-8		9:18			X			X				X	X					08		1
SP2-9		9:21			X			X				X	X					09		1
SP2-10		9:24			X			X				X	X					10		1
SP2-11		9:26			X			X				X	X					11		1
SP2-12		9:29			X			X				X	X					12		1

Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
	4/5/18 13:10		4/5/18 13:10
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
GSD 4.6.18	10:00		4.6.18 10:00
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time

Total # of containers
Chain of Custody seals Y/N/NA
Seals intact? Y/N/NA
Received good condition/cold 4.8

Turn around time: NORMAL EXCEPT 3 DAY TAT ON METALS

Notes
* 3 DAY TAT ON METALS

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

COC 160913

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

25712 Commercentre Drive
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27 April 2018

Joe Brusca
Brusca Associates Inc.
PO Box 332
Roseville, CA 95661

RE: Lathrop 48-Ac Property

Enclosed are the results of analyses for samples received by the laboratory on 04/13/18 09:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Mike Jaroudi
Project Manager

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

25712 Commercentre Drive
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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/27/18 11:10

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SP3-3	T181249-03	Soil	04/12/18 11:00	04/13/18 09:30
SP3-12	T181249-12	Soil	04/12/18 11:26	04/13/18 09:30
SP4-1	T181249-13	Soil	04/12/18 11:35	04/13/18 09:30

SunStar Laboratories, Inc.

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Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/27/18 11:10

DETECTIONS SUMMARY

Sample ID: SP3-3 **Laboratory ID:** T181249-03

Analyte	Result	Reporting Limit	Units	Method	Notes
Arsenic	**13**	1.0	ug/l	6020 ICP-MS	STLC
Barium	**340**	1.0	ug/l	6020 ICP-MS	STLC
Cadmium	**1.5**	1.0	ug/l	6020 ICP-MS	STLC
Chromium	**40**	1.0	ug/l	6020 ICP-MS	STLC
Cobalt	**33**	1.0	ug/l	6020 ICP-MS	STLC
Copper	**120**	1.0	ug/l	6020 ICP-MS	STLC
Lead	**170**	2.0	ug/l	6020 ICP-MS	STLC
Mercury	**0.28**	0.10	ug/l	6020 ICP-MS	STLC
Molybdenum	**7.1**	1.0	ug/l	6020 ICP-MS	STLC
Nickel	**41**	1.0	ug/l	6020 ICP-MS	STLC
Silver	**3.1**	1.0	ug/l	6020 ICP-MS	STLC
Vanadium	**99**	1.0	ug/l	6020 ICP-MS	STLC
Zinc	**210**	1.0	ug/l	6020 ICP-MS	STLC

Sample ID: SP3-12 **Laboratory ID:** T181249-12

Analyte	Result	Reporting Limit	Units	Method	Notes
Arsenic	**9.0**	1.0	ug/l	6020 ICP-MS	STLC
Barium	**360**	1.0	ug/l	6020 ICP-MS	STLC
Beryllium	**1.3**	1.0	ug/l	6020 ICP-MS	STLC
Cadmium	**1.6**	1.0	ug/l	6020 ICP-MS	STLC
Chromium	**40**	1.0	ug/l	6020 ICP-MS	STLC
Cobalt	**49**	1.0	ug/l	6020 ICP-MS	STLC
Copper	**110**	1.0	ug/l	6020 ICP-MS	STLC
Lead	**200**	2.0	ug/l	6020 ICP-MS	STLC
Mercury	**0.52**	0.10	ug/l	6020 ICP-MS	STLC
Molybdenum	**4.8**	1.0	ug/l	6020 ICP-MS	STLC
Nickel	**54**	1.0	ug/l	6020 ICP-MS	STLC
Silver	**7.0**	1.0	ug/l	6020 ICP-MS	STLC
Vanadium	**110**	1.0	ug/l	6020 ICP-MS	STLC
Zinc	**230**	1.0	ug/l	6020 ICP-MS	STLC

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/27/18 11:10

Sample ID: SP4-1 **Laboratory ID:** T181249-13

Analyte	Result	Reporting Limit	Units	Method	Notes
Arsenic	**11**	1.0	ug/l	6020 ICP-MS	STLC
Barium	**230**	1.0	ug/l	6020 ICP-MS	STLC
Cadmium	**1.9**	1.0	ug/l	6020 ICP-MS	STLC
Chromium	**33**	1.0	ug/l	6020 ICP-MS	STLC
Cobalt	**31**	1.0	ug/l	6020 ICP-MS	STLC
Copper	**110**	1.0	ug/l	6020 ICP-MS	STLC
Lead	**170**	2.0	ug/l	6020 ICP-MS	STLC
Mercury	**0.32**	0.10	ug/l	6020 ICP-MS	STLC
Molybdenum	**7.4**	1.0	ug/l	6020 ICP-MS	STLC
Nickel	**28**	1.0	ug/l	6020 ICP-MS	STLC
Silver	**3.0**	1.0	ug/l	6020 ICP-MS	STLC
Vanadium	**75**	1.0	ug/l	6020 ICP-MS	STLC
Zinc	**250**	1.0	ug/l	6020 ICP-MS	STLC

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Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/27/18 11:10

SP3-3

T181249-03 (Soil)

SunStar Laboratories, Inc.

Metals by EPA 6020 Method

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Antimony	ND	1.0	ug/l	1	8042318	04/23/18	04/26/18	6020 ICP-MS	STLC
Arsenic	**13**	1.0	"	"	"	"	"	"	STLC
Barium	**340**	1.0	"	"	"	"	"	"	STLC
Beryllium	ND	1.0	"	"	"	"	04/27/18	"	STLC
Cadmium	**1.5**	1.0	"	"	"	"	04/26/18	"	STLC
Chromium	**40**	1.0	"	"	"	"	"	"	STLC
Cobalt	**33**	1.0	"	"	"	"	"	"	STLC
Copper	**120**	1.0	"	"	"	"	"	"	STLC
Lead	**170**	2.0	"	"	"	"	"	"	STLC
Mercury	**0.28**	0.10	"	"	"	"	"	"	STLC
Molybdenum	**7.1**	1.0	"	"	"	"	"	"	STLC
Nickel	**41**	1.0	"	"	"	"	"	"	STLC
Selenium	ND	5.0	"	"	"	"	"	"	STLC
Silver	**3.1**	1.0	"	"	"	"	"	"	STLC
Thallium	ND	1.0	"	"	"	"	"	"	STLC
Vanadium	**99**	1.0	"	"	"	"	"	"	STLC
Zinc	**210**	1.0	"	"	"	"	"	"	STLC

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/27/18 11:10

SP3-12

T181249-12 (Soil)

SunStar Laboratories, Inc.

Metals by EPA 6020 Method

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Antimony	ND	1.0	ug/l	1	8042318	04/23/18	04/26/18	6020 ICP-MS	STLC
Arsenic	**9.0**	1.0	"	"	"	"	"	"	STLC
Barium	**360**	1.0	"	"	"	"	"	"	STLC
Beryllium	**1.3**	1.0	"	"	"	"	04/27/18	"	STLC
Cadmium	**1.6**	1.0	"	"	"	"	04/26/18	"	STLC
Chromium	**40**	1.0	"	"	"	"	"	"	STLC
Cobalt	**49**	1.0	"	"	"	"	"	"	STLC
Copper	**110**	1.0	"	"	"	"	"	"	STLC
Lead	**200**	2.0	"	"	"	"	"	"	STLC
Mercury	**0.52**	0.10	"	"	"	"	"	"	STLC
Molybdenum	**4.8**	1.0	"	"	"	"	"	"	STLC
Nickel	**54**	1.0	"	"	"	"	"	"	STLC
Selenium	ND	5.0	"	"	"	"	"	"	STLC
Silver	**7.0**	1.0	"	"	"	"	"	"	STLC
Thallium	ND	1.0	"	"	"	"	"	"	STLC
Vanadium	**110**	1.0	"	"	"	"	"	"	STLC
Zinc	**230**	1.0	"	"	"	"	"	"	STLC

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/27/18 11:10

SP4-1

T181249-13 (Soil)

SunStar Laboratories, Inc.

Metals by EPA 6020 Method

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Antimony	ND	1.0	ug/l	1	8042318	04/23/18	04/26/18	6020 ICP-MS	STLC
Arsenic	**11**	1.0	"	"	"	"	"	"	STLC
Barium	**230**	1.0	"	"	"	"	"	"	STLC
Beryllium	ND	1.0	"	"	"	"	04/27/18	"	STLC
Cadmium	**1.9**	1.0	"	"	"	"	04/26/18	"	STLC
Chromium	**33**	1.0	"	"	"	"	"	"	STLC
Cobalt	**31**	1.0	"	"	"	"	"	"	STLC
Copper	**110**	1.0	"	"	"	"	"	"	STLC
Lead	**170**	2.0	"	"	"	"	"	"	STLC
Mercury	**0.32**	0.10	"	"	"	"	"	"	STLC
Molybdenum	**7.4**	1.0	"	"	"	"	"	"	STLC
Nickel	**28**	1.0	"	"	"	"	"	"	STLC
Selenium	ND	5.0	"	"	"	"	"	"	STLC
Silver	**3.0**	1.0	"	"	"	"	"	"	STLC
Thallium	ND	1.0	"	"	"	"	"	"	STLC
Vanadium	**75**	1.0	"	"	"	"	"	"	STLC
Zinc	**250**	1.0	"	"	"	"	"	"	STLC

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Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/27/18 11:10

Metals by EPA 6020 Method - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8042318 - STLC Metals										
Blank (8042318-BLK1)				Prepared: 04/23/18 Analyzed: 04/26/18						
Antimony	ND	1.0	ug/l							
Arsenic	ND	1.0	"							
Barium	ND	1.0	"							
Beryllium	ND	1.0	"							
Cadmium	ND	1.0	"							
Chromium	ND	1.0	"							
Cobalt	ND	1.0	"							
Copper	ND	1.0	"							
Lead	ND	2.0	"							
Mercury	ND	0.10	"							
Molybdenum	ND	1.0	"							
Nickel	ND	1.0	"							
Selenium	ND	5.0	"							
Silver	ND	1.0	"							
Thallium	ND	1.0	"							
Vanadium	ND	1.0	"							
Zinc	ND	1.0	"							
LCS (8042318-BS1)				Prepared: 04/23/18 Analyzed: 04/26/18						
Arsenic	57.4	1.0	ug/l	50.0		115	80-120			
Barium	56.4	1.0	"	50.0		113	80-120			
Cadmium	56.5	1.0	"	50.0		113	80-120			
Chromium	55.6	1.0	"	50.0		111	80-120			
Lead	56.2	2.0	"	50.0		112	80-120			
Duplicate (8042318-DUP1)	**Source: T181179-06**			Prepared: 04/23/18 Analyzed: 04/26/18						
Barium	548	5.0	ug/l		521			4.95	200	
Chromium	54.5	5.0	"		53.8			1.28	200	

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.

Mike Jaroudi, Project Manager

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

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

Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/27/18 11:10

Metals by EPA 6020 Method - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8042318 - STLC Metals										
Matrix Spike (8042318-MS1)	**Source: T181179-06**			Prepared: 04/23/18 Analyzed: 04/26/18						
Arsenic	72.5	1.0	ug/l	50.0	27.8	89.2	75-125			
Barium	611	1.0	"	50.0	521	178	75-125			QM-PS
Cadmium	46.0	1.0	"	50.0	0.966	90.1	75-125			
Chromium	121	1.0	"	50.0	53.8	134	75-125			QM-PS
Lead	168	2.0	"	50.0	112	112	75-125			
Matrix Spike Dup (8042318-MSD1)	**Source: T181179-06**			Prepared: 04/23/18 Analyzed: 04/26/18						
Arsenic	73.4	1.0	ug/l	50.0	27.8	91.2	75-125	1.36	20	
Barium	595	1.0	"	50.0	521	147	75-125	2.61	20	QM-PS
Cadmium	47.4	1.0	"	50.0	0.966	92.9	75-125	2.97	20	
Chromium	124	1.0	"	50.0	53.8	141	75-125	2.85	20	QM-PS
Lead	164	2.0	"	50.0	112	104	75-125	2.22	20	
Post Spike (8042318-PS1)	**Source: T181179-06**			Prepared: 04/23/18 Analyzed: 04/26/18						
Barium	287		ug/l	25.0	261	104	80-120			
Chromium	56.2		"	25.0	26.9	117	80-120			

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

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

Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/27/18 11:10

Notes and Definitions

STLC	Sample prepared in accordance with CCR Chapter 11, Article 5, Appendix II, Waste Extraction Test (WET).
QM-PS	The percent recovery and/or RPD are outside acceptance criteria. Results accepted based upon percent recovery results in the post spike and/or serial dilution.
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.

Mike Jaroudi, Project Manager

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SunStar Laboratories, Inc.

PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

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949-297-5020

Chain of Custody Record

Client: BRUSCA ASSOCIATES, INC.
Address: PO BOX 332, ROSEVILLE, CA 95661
Phone: (916) 677-1470 Fax: (916) 677-1471
Project Manager: JOE BRUSCA

Date: 4/12/18 Page: 1 of 1
Project Name: LATHROP 43-AC PROPERTY
Collector: BRUSCA Client Project #: 137-002
Batch #: T181249 EDF #:

Sample ID	Date Sampled	Time	Sample Type	Container Type	~~8260~~ SVOCs 8270	8260 + OXY	8260 BTEX, OXY only	~~8270~~ PCBs 8082	8021 BTEX	8015M (gasoline)	8015M (diesel)	8015M Ext./Carbon Chain Silica Gel Cleanup	6010/7000 Title 22 Metals	6020 ICP-MS Metals				Laboratory ID #	Comments/Preservative	Total # of containers
SP3-1	4/12/18	10:51	SOLID	JAR	X			X				X	X					01		1
SP3-2		10:55			X			X				X	X					02		1
SP3-3		11:00			X			X				X	X					03		1
SP3-4		11:03			X			X				X	X					04		1
SP3-5		11:05			X			X				X	X					05		1
SP3-6		11:09			X			X				X	X					06		1
SP3-7		11:14			X			X				X	X					07		1
SP3-8		11:16			X			X				X	X					08		1
SP3-9		11:19			X			X				X	X					09		1
SP3-10		11:21			X			X				X	X					10		1
SP3-11		11:23			X			X				X	X					11		1
SP3-12		11:26			X			X				X	X					12		1
SP4-1		11:35			X			X				X						13		1

Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
	4/12/18 15:45		4/12/18 1545
GSO 4.12.18 9:30		4.12.18 9:30	

Total # of containers
Chain of Custody seals Y/N/NA
Seals intact? Y/N/NA
Received good condition/cold 3.6

Turn around time: NORMAL

Notes

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

COC 160914

May 1, 2018

FAL Project ID: 11455

Mr. Joe Brusca
Brusca Associates
7633 Stonewood Court
Granite Bay, CA 95746

Dear Mr. Brusca,

The following results are associated with Frontier Analytical Laboratory project **11455**. This corresponds to your **Lathrop 48-Ac Property** project under project number **137-002**. Thirteen solid samples were received on 4/12/2018 in good condition. These samples were extracted and analyzed by EPA Method 1613 for tetra through octa chlorinated dibenzo dioxins and furans. The Toxic Equivalency (TEQ) for your samples has been calculated using the 2005 World Health Organization's (WHO's) toxic equivalency factors (TEFs).The total TEQ is reported on the upper right hand corner of each sample data sheet. Brusca Associates requested a turnaround time of fifteen business days for project **11455**.

The following report consists of an Analytical Data section and a Sample Receipt section. The Analytical Data section contains our sample tracking log and the analytical results. The Sample Receipt section contains your chain of custody, our sample login form and the sample photos. The attached results are specifically for the samples referenced in this report only. These results meet all NELAC requirements and shall not be reproduced except in full. Frontier Analytical Laboratory's State of Oregon NELAP certificate number is **4041**. Our State of California ELAP certificate number is **2934**. This report has been emailed to you as a portable document format (PDF) file. A hardcopy will not be sent to you unless specifically requested.

If you have any questions regarding project **11455**, please contact me at (916) 934-0900. Thank you for choosing Frontier Analytical Laboratory for your analytical testing needs.

Sincerely,

Bradley B. Silverbush
Director of Operations

Frontier Analytical Laboratory

Sample Tracking Log

FAL Project ID: **11455**

Received on: **04/12/2018** Project Due: **05/04/2018** Storage: **R-4**

FAL Sample ID	Dup	Client Project ID	Client Sample ID	Requested Method	Matrix	Sampling Date	Sampling Time	Hold Time Due Date
11455-001-SA	0	137-002	SP3-1	EPA 1613 D/F	Solid	04/12/2018	10:51 am	04/12/2019
11455-002-SA	0	137-002	SP3-2	EPA 1613 D/F	Solid	04/12/2018	10:55 am	04/12/2019
11455-003-SA	0	137-002	SP3-3	EPA 1613 D/F	Solid	04/12/2018	11:00 am	04/12/2019
11455-004-SA	0	137-002	SP3-4	EPA 1613 D/F	Solid	04/12/2018	11:02 am	04/12/2019
11455-005-SA	0	137-002	SP3-5	EPA 1613 D/F	Solid	04/12/2018	11:05 am	04/12/2019
11455-006-SA	0	137-002	SP3-6	EPA 1613 D/F	Solid	04/12/2018	11:09 am	04/12/2019
11455-007-SA	0	137-002	SP3-7	EPA 1613 D/F	Solid	04/12/2018	11:14 am	04/12/2019
11455-008-SA	0	137-002	SP3-8	EPA 1613 D/F	Solid	04/12/2018	11:16 am	04/12/2019
11455-009-SA	0	137-002	SP3-9	EPA 1613 D/F	Solid	04/12/2018	11:19 am	04/12/2019
11455-010-SA	0	137-002	SP3-10	EPA 1613 D/F	Solid	04/12/2018	11:21 am	04/12/2019
11455-011-SA	0	137-002	SP3-11	EPA 1613 D/F	Solid	04/12/2018	11:23 am	04/12/2019
11455-012-SA	0	137-002	SP3-12	EPA 1613 D/F	Solid	04/12/2018	11:26 am	04/12/2019
11455-013-SA	0	137-002	SP4-1	EPA 1613 D/F	Solid	04/12/2018	11:35 am	04/12/2019

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EPA Method 1613
PCDD/F

FAL ID: 11455-001-MB
Client ID: Method Blank
Matrix: Solid
Batch No: X4492

Date Extracted: 04-27-2018
Date Received: NA
Amount: 5.00 g

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-30-2018
2005 WHO TEQ: 0.0
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.137		-	0.0273				
1,2,3,7,8-PeCDD	ND	0.215		-	0.0570				
1,2,3,4,7,8-HxCDD	ND	0.222		-	0.0793				
1,2,3,6,7,8-HxCDD	ND	0.236		-	0.0940	Total TCDD	ND	0.137	
1,2,3,7,8,9-HxCDD	ND	0.210		-	0.0823	Total PeCDD	ND	0.215	
1,2,3,4,6,7,8-HpCDD	ND	0.275		-	0.0842	Total HxCDD	ND	0.236	
OCDD	ND	0.430		-	0.172	Total HpCDD	ND	0.275	
2,3,7,8-TCDF	ND	0.107		-	0.0269				
1,2,3,7,8-PeCDF	ND	0.148		-	0.0449				
2,3,4,7,8-PeCDF	ND	0.159		-	0.0468				
1,2,3,4,7,8-HxCDF	ND	0.155		-	0.0437				
1,2,3,6,7,8-HxCDF	ND	0.151		-	0.0417				
2,3,4,6,7,8-HxCDF	ND	0.161		-	0.0574				
1,2,3,7,8,9-HxCDF	ND	0.183		-	0.0657	Total TCDF	ND	0.107	
1,2,3,4,6,7,8-HpCDF	ND	0.180		-	0.0747	Total PeCDF	ND	0.159	
1,2,3,4,7,8,9-HpCDF	ND	0.195		-	0.0883	Total HxCDF	ND	0.183	
OCDF	ND	0.422		-	0.170	Total HpCDF	ND	0.195	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	93.0	25.0 - 164	
13C-1,2,3,7,8-PeCDD	96.5	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	94.6	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	96.4	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	83.4	23.0 - 140	
13C-OCDD	62.6	17.0 - 157	
13C-2,3,7,8-TCDF	98.3	24.0 - 169	
13C-1,2,3,7,8-PeCDF	90.7	24.0 - 185	
13C-2,3,4,7,8-PeCDF	92.1	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	90.6	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	88.9	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	85.6	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	83.5	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	84.8	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	82.7	26.0 - 138	
13C-OCDF	66.7	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	87.6	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____

Date: 5/1/2018

Reviewed By: _____

Date: 5/1/2018

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EPA Method 1613
PCDD/F

FAL ID: 11455-001-OPR
Client ID: OPR
Matrix: Solid
Batch No: X4492

Date Extracted: 04-27-2018
Date Received: NA
Amount: 5.00 g

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: ng/ml

Acquired: 04-30-2018
2005 WHO TEQ: NA

Compound	Conc	QC Limits	Qual
2,3,7,8-TCDD	10.8	6.70 - 15.8	
1,2,3,7,8-PeCDD	53.0	35.0 - 71.0	
1,2,3,4,7,8-HxCDD	47.7	35.0 - 82.0	
1,2,3,6,7,8-HxCDD	50.6	38.0 - 67.0	
1,2,3,7,8,9-HxCDD	47.5	32.0 - 81.0	
1,2,3,4,6,7,8-HpCDD	51.0	35.0 - 70.0	
OCDD	101	78.0 - 144	
2,3,7,8-TCDF	10.7	7.50 - 15.8	
1,2,3,7,8-PeCDF	50.3	40.0 - 67.0	
2,3,4,7,8-PeCDF	51.6	34.0 - 80.0	
1,2,3,4,7,8-HxCDF	51.1	36.0 - 67.0	
1,2,3,6,7,8-HxCDF	50.1	42.0 - 65.0	
2,3,4,6,7,8-HxCDF	51.1	35.0 - 78.0	
1,2,3,7,8,9-HxCDF	51.1	39.0 - 65.0	
1,2,3,4,6,7,8-HpCDF	51.1	41.0 - 61.0	
1,2,3,4,7,8,9-HpCDF	52.3	39.0 - 69.0	
OCDF	104	63.0 - 170	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	92.4	20.0 - 175	
13C-1,2,3,7,8-PeCDD	96.5	21.0 - 227	
13C-1,2,3,4,7,8-HxCDD	97.1	21.0 - 193	
13C-1,2,3,6,7,8-HxCDD	100	25.0 - 163	
13C-1,2,3,4,6,7,8-HpCDD	88.8	26.0 - 166	
13C-OCDD	81.3	13.0 - 198	
13C-2,3,7,8-TCDF	97.6	22.0 - 152	
13C-1,2,3,7,8-PeCDF	91.3	21.0 - 192	
13C-2,3,4,7,8-PeCDF	92.6	13.0 - 328	
13C-1,2,3,4,7,8-HxCDF	89.0	19.0 - 202	
13C-1,2,3,6,7,8-HxCDF	90.0	21.0 - 159	
13C-2,3,4,6,7,8-HxCDF	88.6	22.0 - 176	
13C-1,2,3,7,8,9-HxCDF	87.6	17.0 - 205	
13C-1,2,3,4,6,7,8-HpCDF	90.3	21.0 - 158	
13C-1,2,3,4,7,8,9-HpCDF	91.3	20.0 - 186	
13C-OCDF	80.4	13.0 - 198	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	89.4	31.0 - 191	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 5/1/2018

Reviewed By: _____
Date: 5/1/2018

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EPA Method 1613
PCDD/F

FAL ID: 11455-001-SA
Client ID: SP3-1
Matrix: Solid
Batch No: X4492

Date Extracted: 04-27-2018
Date Received: 04-12-2018
Amount: 5.01 g
% Solids: 92.26

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-30-2018
2005 WHO TEQ: 1.79
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.206		-	0.0273				
1,2,3,7,8-PeCDD	0.545	-	J	0.545	0.0570				
1,2,3,4,7,8-HxCDD	0.893	-	J	0.0893	0.0793				
1,2,3,6,7,8-HxCDD	1.80	-	J	0.180	0.0940	Total TCDD	ND	0.206	
1,2,3,7,8,9-HxCDD	1.33	-	J	0.133	0.0823	Total PeCDD	4.20	-	J
1,2,3,4,6,7,8-HpCDD	27.0	-		0.270	0.0842	Total HxCDD	17.8	-	
OCDD	194	-		0.0582	0.172	Total HpCDD	55.7	-	
2,3,7,8-TCDF	0.767	-	J	0.0767	0.0269				
1,2,3,7,8-PeCDF	ND	0.224		-	0.0449				
2,3,4,7,8-PeCDF	0.672	-	J	0.202	0.0468				
1,2,3,4,7,8-HxCDF	0.658	-	J	0.0658	0.0437				
1,2,3,6,7,8-HxCDF	0.555	-	J	0.0555	0.0417				
2,3,4,6,7,8-HxCDF	0.473	-	J	0.0473	0.0574				
1,2,3,7,8,9-HxCDF	ND	0.202		-	0.0657	Total TCDF	5.58	-	
1,2,3,4,6,7,8-HpCDF	5.84	-		0.0584	0.0747	Total PeCDF	3.97	-	J
1,2,3,4,7,8,9-HpCDF	0.735	-	J	0.00735	0.0883	Total HxCDF	8.08	-	
OCDF	15.8	-		0.00474	0.170	Total HpCDF	16.7	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	90.0	25.0 - 164	
13C-1,2,3,7,8-PeCDD	90.6	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	95.1	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	93.1	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	87.0	23.0 - 140	
13C-OCDD	76.8	17.0 - 157	
13C-2,3,7,8-TCDF	92.3	24.0 - 169	
13C-1,2,3,7,8-PeCDF	88.2	24.0 - 185	
13C-2,3,4,7,8-PeCDF	88.2	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	87.8	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	86.7	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	84.5	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	82.5	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	84.1	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	84.9	26.0 - 138	
13C-OCDF	76.1	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	88.4	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
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P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 5/1/2018

Reviewed By: _____
Date: 5/1/2018

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EPA Method 1613
PCDD/F

FAL ID: 11455-002-SA
Client ID: SP3-2
Matrix: Solid
Batch No: X4492

Date Extracted: 04-27-2018
Date Received: 04-12-2018
Amount: 5.01 g
% Solids: 94.99

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-30-2018
2005 WHO TEQ: 1.62
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.202		-	0.0273				
1,2,3,7,8-PeCDD	ND	0.456		-	0.0570				
1,2,3,4,7,8-HxCDD	0.707	-	J	0.0707	0.0793				
1,2,3,6,7,8-HxCDD	1.56	-	J	0.156	0.0940	Total TCDD	ND	0.202	
1,2,3,7,8,9-HxCDD	0.878	-	J	0.0878	0.0823	Total PeCDD	ND	0.456	
1,2,3,4,6,7,8-HpCDD	24.6	-		0.246	0.0842	Total HxCDD	11.8	-	
OCDD	173	-		0.0519	0.172	Total HpCDD	47.0	-	
2,3,7,8-TCDF	1.80	-		0.180	0.0269				
1,2,3,7,8-PeCDF	ND	0.264		-	0.0449				
2,3,4,7,8-PeCDF	1.33	-	J	0.399	0.0468				
1,2,3,4,7,8-HxCDF	1.32	-	J	0.132	0.0437				
1,2,3,6,7,8-HxCDF	0.729	-	J	0.0729	0.0417				
2,3,4,6,7,8-HxCDF	0.855	-	J	0.0855	0.0574				
1,2,3,7,8,9-HxCDF	0.513	-	J	0.0513	0.0657	Total TCDF	10.2	-	
1,2,3,4,6,7,8-HpCDF	7.87	-		0.0787	0.0747	Total PeCDF	8.81	-	
1,2,3,4,7,8,9-HpCDF	0.678	-	J	0.00678	0.0883	Total HxCDF	11.6	-	
OCDF	15.2	-		0.00456	0.170	Total HpCDF	18.8	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	82.8	25.0 - 164	
13C-1,2,3,7,8-PeCDD	84.0	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	88.2	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	85.4	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	80.3	23.0 - 140	
13C-OCDD	71.8	17.0 - 157	
13C-2,3,7,8-TCDF	85.0	24.0 - 169	
13C-1,2,3,7,8-PeCDF	78.1	24.0 - 185	
13C-2,3,4,7,8-PeCDF	79.4	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	80.8	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	80.2	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	78.4	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	77.3	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	79.1	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	79.5	26.0 - 138	
13C-OCDF	71.2	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	79.3	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 5/1/2018

Reviewed By: _____
Date: 5/1/2018

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EPA Method 1613
PCDD/F

FAL ID: 11455-003-SA
Client ID: SP3-3
Matrix: Solid
Batch No: X4492

Date Extracted: 04-27-2018
Date Received: 04-12-2018
Amount: 5.02 g
% Solids: 92.65

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-30-2018
2005 WHO TEQ: 0.933
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.149		-	0.0273				
1,2,3,7,8-PeCDD	ND	0.331		-	0.0570				
1,2,3,4,7,8-HxCDD	ND	0.230		-	0.0793				
1,2,3,6,7,8-HxCDD	1.90	-	J	0.190	0.0940	Total TCDD	0.697	-	J
1,2,3,7,8,9-HxCDD	0.732	-	J	0.0732	0.0823	Total PeCDD	0.448	-	J
1,2,3,4,6,7,8-HpCDD	34.3	-		0.343	0.0842	Total HxCDD	12.3	-	
OCDD	302	-		0.0906	0.172	Total HpCDD	60.9	-	
2,3,7,8-TCDF	0.431	-	J	0.0431	0.0269				
1,2,3,7,8-PeCDF	ND	0.197		-	0.0449				
2,3,4,7,8-PeCDF	ND	0.204		-	0.0468				
1,2,3,4,7,8-HxCDF	0.531	-	J	0.0531	0.0437				
1,2,3,6,7,8-HxCDF	0.440	-	J	0.0440	0.0417				
2,3,4,6,7,8-HxCDF	0.389	-	J	0.0389	0.0574				
1,2,3,7,8,9-HxCDF	ND	0.150		-	0.0657	Total TCDF	2.97	-	
1,2,3,4,6,7,8-HpCDF	4.89	-	J	0.0489	0.0747	Total PeCDF	2.01	-	J
1,2,3,4,7,8,9-HpCDF	0.534	-	J	0.00534	0.0883	Total HxCDF	7.73	-	
OCDF	10.5	-		0.00315	0.170	Total HpCDF	13.0	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	95.1	25.0 - 164	
13C-1,2,3,7,8-PeCDD	95.4	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	98.9	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	94.5	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	88.6	23.0 - 140	
13C-OCDD	79.4	17.0 - 157	
13C-2,3,7,8-TCDF	101	24.0 - 169	
13C-1,2,3,7,8-PeCDF	93.3	24.0 - 185	
13C-2,3,4,7,8-PeCDF	95.4	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	89.6	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	88.0	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	85.9	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	84.6	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	87.5	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	88.5	26.0 - 138	
13C-OCDF	79.0	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	92.8	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 5/1/2018

Reviewed By: _____
Date: 5/1/2018

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EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 11455-004-SA
Client ID: SP3-4
Matrix: Solid
Batch No: X4492

Date Extracted: 04-27-2018
Date Received: 04-12-2018
Amount: 5.02 g
% Solids: 93.88

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-30-2018
2005 WHO TEQ: 0.522
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.189		-	0.0273				
1,2,3,7,8-PeCDD	ND	0.314		-	0.0570				
1,2,3,4,7,8-HxCDD	ND	0.222		-	0.0793				
1,2,3,6,7,8-HxCDD	0.820	-	J	0.0820	0.0940	Total TCDD	ND	0.189	
1,2,3,7,8,9-HxCDD	0.707	-	J	0.0707	0.0823	Total PeCDD	ND	0.314	
1,2,3,4,6,7,8-HpCDD	13.9	-		0.139	0.0842	Total HxCDD	6.13	-	
OCDD	104	-		0.0312	0.172	Total HpCDD	26.4	-	
2,3,7,8-TCDF	0.634	-	J	0.0634	0.0269				
1,2,3,7,8-PeCDF	ND	0.230		-	0.0449				
2,3,4,7,8-PeCDF	ND	0.239		-	0.0468				
1,2,3,4,7,8-HxCDF	0.397	-	J	0.0397	0.0437				
1,2,3,6,7,8-HxCDF	0.301	-	J	0.0301	0.0417				
2,3,4,6,7,8-HxCDF	0.308	-	J	0.0308	0.0574				
1,2,3,7,8,9-HxCDF	ND	0.128		-	0.0657	Total TCDF	3.03	-	
1,2,3,4,6,7,8-HpCDF	2.93	-	J	0.0293	0.0747	Total PeCDF	1.77	-	J
1,2,3,4,7,8,9-HpCDF	0.326	-	J	0.00326	0.0883	Total HxCDF	4.20	-	J
OCDF	8.17	-	J	0.00245	0.170	Total HpCDF	8.09	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	95.0	25.0 - 164	
13C-1,2,3,7,8-PeCDD	97.7	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	99.5	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	96.3	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	91.3	23.0 - 140	
13C-OCDD	82.7	17.0 - 157	
13C-2,3,7,8-TCDF	95.9	24.0 - 169	
13C-1,2,3,7,8-PeCDF	91.4	24.0 - 185	
13C-2,3,4,7,8-PeCDF	92.5	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	88.7	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	87.4	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	86.3	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	86.7	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	88.8	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	89.7	26.0 - 138	
13C-OCDF	81.7	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	88.5	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 5/1/2018

Reviewed By: _____
Date: 5/1/2018

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EPA Method 1613
PCDD/F

FAL ID: 11455-005-SA
Client ID: SP3-5
Matrix: Solid
Batch No: X4492

Date Extracted: 04-27-2018
Date Received: 04-12-2018
Amount: 5.04 g
% Solids: 90.61

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-30-2018
2005 WHO TEQ: 2.76
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.204		-	0.0273				
1,2,3,7,8-PeCDD	0.870	-	J	0.870	0.0570				
1,2,3,4,7,8-HxCDD	0.714	-	J	0.0714	0.0793				
1,2,3,6,7,8-HxCDD	2.01	-	J	0.201	0.0940	Total TCDD	2.30	-	
1,2,3,7,8,9-HxCDD	1.56	-	J	0.156	0.0823	Total PeCDD	7.61	-	
1,2,3,4,6,7,8-HpCDD	29.9	-		0.299	0.0842	Total HxCDD	22.3	-	
OCDD	195	-		0.0585	0.172	Total HpCDD	65.0	-	
2,3,7,8-TCDF	2.41	-	F	0.241	0.0269				
1,2,3,7,8-PeCDF	0.523	-	J	0.0157	0.0449				
2,3,4,7,8-PeCDF	1.00	-	J	0.300	0.0468				
1,2,3,4,7,8-HxCDF	1.17	-	J	0.117	0.0437				
1,2,3,6,7,8-HxCDF	1.47	-	J	0.147	0.0417				
2,3,4,6,7,8-HxCDF	0.968	-	J	0.0968	0.0574				
1,2,3,7,8,9-HxCDF	0.495	-	J	0.0495	0.0657	Total TCDF	11.3	-	
1,2,3,4,6,7,8-HpCDF	11.1	-		0.111	0.0747	Total PeCDF	8.69	-	
1,2,3,4,7,8,9-HpCDF	1.63	-	J	0.0163	0.0883	Total HxCDF	12.1	-	
OCDF	16.6	-		0.00498	0.170	Total HpCDF	20.9	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	90.8	25.0 - 164	
13C-1,2,3,7,8-PeCDD	98.5	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	96.9	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	96.6	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	90.3	23.0 - 140	
13C-OCDD	80.2	17.0 - 157	
13C-2,3,7,8-TCDF	95.9	24.0 - 169	
13C-1,2,3,7,8-PeCDF	94.0	24.0 - 185	
13C-2,3,4,7,8-PeCDF	94.5	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	89.5	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	88.0	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	86.7	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	87.4	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	87.4	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	87.6	26.0 - 138	
13C-OCDF	78.4	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	88.5	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 5/1/2018

Reviewed By: _____
Date: 5/1/2018

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EPA Method 1613
PCDD/F

FAL ID: 11455-006-SA
Client ID: SP3-6
Matrix: Solid
Batch No: X4492

Date Extracted: 04-27-2018
Date Received: 04-12-2018
Amount: 5.01 g
% Solids: 94.32

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-30-2018
2005 WHO TEQ: 0.995
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.187		-	0.0273				
1,2,3,7,8-PeCDD	ND	0.334		-	0.0570				
1,2,3,4,7,8-HxCDD	ND	0.245		-	0.0793				
1,2,3,6,7,8-HxCDD	1.51	-	J	0.151	0.0940	Total TCDD	ND	0.187	
1,2,3,7,8,9-HxCDD	0.597	-	J	0.0597	0.0823	Total PeCDD	ND	0.334	
1,2,3,4,6,7,8-HpCDD	30.5	-		0.305	0.0842	Total HxCDD	11.1	-	
OCDD	265	-		0.0795	0.172	Total HpCDD	57.0	-	
2,3,7,8-TCDF	0.552	-	J	0.0552	0.0269				
1,2,3,7,8-PeCDF	ND	0.177		-	0.0449				
2,3,4,7,8-PeCDF	0.411	-	J	0.123	0.0468				
1,2,3,4,7,8-HxCDF	0.572	-	J	0.0572	0.0437				
1,2,3,6,7,8-HxCDF	0.567	-	J	0.0567	0.0417				
2,3,4,6,7,8-HxCDF	0.476	-	J	0.0476	0.0574				
1,2,3,7,8,9-HxCDF	ND	0.133		-	0.0657	Total TCDF	3.25	-	
1,2,3,4,6,7,8-HpCDF	5.04	-		0.0504	0.0747	Total PeCDF	2.10	-	J
1,2,3,4,7,8,9-HpCDF	0.646	-	J	0.00646	0.0883	Total HxCDF	5.48	-	
OCDF	11.1	-		0.00333	0.170	Total HpCDF	12.0	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	92.7	25.0 - 164	
13C-1,2,3,7,8-PeCDD	93.9	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	99.4	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	96.0	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	90.2	23.0 - 140	
13C-OCDD	79.5	17.0 - 157	
13C-2,3,7,8-TCDF	96.3	24.0 - 169	
13C-1,2,3,7,8-PeCDF	91.7	24.0 - 185	
13C-2,3,4,7,8-PeCDF	90.6	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	89.4	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	87.6	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	89.0	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	87.2	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	87.2	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	90.7	26.0 - 138	
13C-OCDF	83.1	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	89.5	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____

Date: 5/1/2018

Reviewed By: _____

Date: 5/1/2018

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EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 11455-007-SA
Client ID: SP3-7
Matrix: Solid
Batch No: X4492

Date Extracted: 04-27-2018
Date Received: 04-12-2018
Amount: 5.03 g
% Solids: 93.06

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-30-2018
2005 WHO TEQ: 0.823
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.180		-	0.0273				
1,2,3,7,8-PeCDD	ND	0.299		-	0.0570				
1,2,3,4,7,8-HxCDD	ND	0.210		-	0.0793				
1,2,3,6,7,8-HxCDD	1.64	-	J	0.164	0.0940	Total TCDD	0.811	-	J
1,2,3,7,8,9-HxCDD	0.759	-	J	0.0759	0.0823	Total PeCDD	ND	0.299	
1,2,3,4,6,7,8-HpCDD	28.8	-		0.288	0.0842	Total HxCDD	11.1	-	
OCDD	232	-		0.0696	0.172	Total HpCDD	51.5	-	
2,3,7,8-TCDF	0.428	-	J	0.0428	0.0269				
1,2,3,7,8-PeCDF	ND	0.246		-	0.0449				
2,3,4,7,8-PeCDF	ND	0.252		-	0.0468				
1,2,3,4,7,8-HxCDF	0.458	-	J	0.0458	0.0437				
1,2,3,6,7,8-HxCDF	0.541	-	J	0.0541	0.0417				
2,3,4,6,7,8-HxCDF	0.454	-	J	0.0454	0.0574				
1,2,3,7,8,9-HxCDF	ND	0.141		-	0.0657	Total TCDF	3.89	-	M
1,2,3,4,6,7,8-HpCDF	3.06	-	J	0.0306	0.0747	Total PeCDF	1.90	-	J
1,2,3,4,7,8,9-HpCDF	0.506	-	J	0.00506	0.0883	Total HxCDF	4.59	-	J
OCDF	5.74	-	J	0.00172	0.170	Total HpCDF	7.36	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	94.7	25.0 - 164	
13C-1,2,3,7,8-PeCDD	96.6	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	97.4	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	96.8	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	91.2	23.0 - 140	
13C-OCDD	82.6	17.0 - 157	
13C-2,3,7,8-TCDF	97.1	24.0 - 169	
13C-1,2,3,7,8-PeCDF	91.3	24.0 - 185	
13C-2,3,4,7,8-PeCDF	92.9	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	89.0	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	88.6	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	87.8	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	86.5	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	87.7	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	89.3	26.0 - 138	
13C-OCDF	81.9	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	88.3	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 5/1/2018

Reviewed By: _____
Date: 5/1/2018

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EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 11455-008-SA
Client ID: SP3-8
Matrix: Solid
Batch No: X4492

Date Extracted: 04-27-2018
Date Received: 04-12-2018
Amount: 5.01 g
% Solids: 93.69

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 04-30-2018
2005 WHO TEQ: 1.34
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.243		-	0.0273				
1,2,3,7,8-PeCDD	ND	0.352		-	0.0570				
1,2,3,4,7,8-HxCDD	0.422	-	J	0.0422	0.0793				
1,2,3,6,7,8-HxCDD	1.29	-	J	0.129	0.0940	Total TCDD	ND	0.243	
1,2,3,7,8,9-HxCDD	1.00	-	J	0.100	0.0823	Total PeCDD	ND	0.352	
1,2,3,4,6,7,8-HpCDD	32.3	-		0.323	0.0842	Total HxCDD	9.74	-	
OCDD	267	-		0.0801	0.172	Total HpCDD	56.5	-	
2,3,7,8-TCDF	1.04	-		0.104	0.0269				
1,2,3,7,8-PeCDF	ND	0.232		-	0.0449				
2,3,4,7,8-PeCDF	0.654	-	J	0.196	0.0468				
1,2,3,4,7,8-HxCDF	1.10	-	J	0.110	0.0437				
1,2,3,6,7,8-HxCDF	0.615	-	J	0.0615	0.0417				
2,3,4,6,7,8-HxCDF	0.724	-	J	0.0724	0.0574				
1,2,3,7,8,9-HxCDF	ND	0.154		-	0.0657	Total TCDF	5.68	-	M
1,2,3,4,6,7,8-HpCDF	10.2	-		0.102	0.0747	Total PeCDF	6.52	-	
1,2,3,4,7,8,9-HpCDF	0.794	-	J	0.00794	0.0883	Total HxCDF	11.3	-	
OCDF	32.1	-		0.00963	0.170	Total HpCDF	29.1	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	87.6	25.0 - 164	
13C-1,2,3,7,8-PeCDD	88.4	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	92.9	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	88.5	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	84.8	23.0 - 140	
13C-OCDD	74.9	17.0 - 157	
13C-2,3,7,8-TCDF	90.6	24.0 - 169	
13C-1,2,3,7,8-PeCDF	83.7	24.0 - 185	
13C-2,3,4,7,8-PeCDF	84.4	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	83.3	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	81.9	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	82.3	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	82.3	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	82.4	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	84.6	26.0 - 138	
13C-OCDF	78.1	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	84.5	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 5/1/2018

Reviewed By: _____
Date: 5/1/2018

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EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 11455-009-SA
Client ID: SP3-9
Matrix: Solid
Batch No: X4492

Date Extracted: 04-27-2018
Date Received: 04-12-2018
Amount: 5.03 g
% Solids: 92.21

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 05-01-2018
2005 WHO TEQ: 0.731
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	0.470	-	J	0.470	0.0273				
1,2,3,7,8-PeCDD	ND	0.223		-	0.0570				
1,2,3,4,7,8-HxCDD	ND	0.170		-	0.0793				
1,2,3,6,7,8-HxCDD	0.526	-	J	0.0526	0.0940	Total TCDD	0.470	-	J
1,2,3,7,8,9-HxCDD	0.354	-	J	0.0354	0.0823	Total PeCDD	1.69	-	J
1,2,3,4,6,7,8-HpCDD	8.05	-		0.0805	0.0842	Total HxCDD	3.49	-	J
OCDD	57.1	-		0.0171	0.172	Total HpCDD	14.6	-	
2,3,7,8-TCDF	0.546	-	J	0.0546	0.0269				
1,2,3,7,8-PeCDF	ND	0.179		-	0.0449				
2,3,4,7,8-PeCDF	ND	0.180		-	0.0468				
1,2,3,4,7,8-HxCDF	ND	0.203		-	0.0437				
1,2,3,6,7,8-HxCDF	ND	0.212		-	0.0417				
2,3,4,6,7,8-HxCDF	ND	0.220		-	0.0574				
1,2,3,7,8,9-HxCDF	ND	0.235		-	0.0657	Total TCDF	1.29	-	
1,2,3,4,6,7,8-HpCDF	1.82	-	J	0.0182	0.0747	Total PeCDF	1.00	-	J
1,2,3,4,7,8,9-HpCDF	ND	0.173		-	0.0883	Total HxCDF	1.77	-	J
OCDF	7.04	-	J	0.00211	0.170	Total HpCDF	5.65	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	91.9	25.0 - 164	
13C-1,2,3,7,8-PeCDD	94.3	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	97.8	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	95.7	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	91.1	23.0 - 140	
13C-OCDD	81.5	17.0 - 157	
13C-2,3,7,8-TCDF	95.6	24.0 - 169	
13C-1,2,3,7,8-PeCDF	91.5	24.0 - 185	
13C-2,3,4,7,8-PeCDF	91.8	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	88.0	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	85.7	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	87.3	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	86.4	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	88.1	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	90.2	26.0 - 138	
13C-OCDF	82.4	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	85.7	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 5/1/2018

Reviewed By: _____
Date: 5/1/2018

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EPA Method 1613
PCDD/F

FAL ID: 11455-010-SA
Client ID: SP3-10
Matrix: Solid
Batch No: X4492

Date Extracted: 04-27-2018
Date Received: 04-12-2018
Amount: 5.01 g
% Solids: 90.08

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 05-01-2018
2005 WHO TEQ: 0.492
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.159		-	0.0273				
1,2,3,7,8-PeCDD	ND	0.282		-	0.0570				
1,2,3,4,7,8-HxCDD	ND	0.237		-	0.0793				
1,2,3,6,7,8-HxCDD	0.838	-	J	0.0838	0.0940	Total TCDD	0.436	-	J
1,2,3,7,8,9-HxCDD	0.589	-	J	0.0589	0.0823	Total PeCDD	ND	0.282	
1,2,3,4,6,7,8-HpCDD	11.2	-		0.112	0.0842	Total HxCDD	6.24	-	
OCDD	72.6	-		0.0218	0.172	Total HpCDD	20.4	-	
2,3,7,8-TCDF	0.885	-	J	0.0885	0.0269				
1,2,3,7,8-PeCDF	ND	0.186		-	0.0449				
2,3,4,7,8-PeCDF	ND	0.198		-	0.0468				
1,2,3,4,7,8-HxCDF	0.366	-	J	0.0366	0.0437				
1,2,3,6,7,8-HxCDF	0.381	-	J	0.0381	0.0417				
2,3,4,6,7,8-HxCDF	0.262	-	J	0.0262	0.0574				
1,2,3,7,8,9-HxCDF	ND	0.109		-	0.0657	Total TCDF	3.32	-	
1,2,3,4,6,7,8-HpCDF	2.17	-	J	0.0217	0.0747	Total PeCDF	1.37	-	J,M
1,2,3,4,7,8,9-HpCDF	0.367	-	J	0.00367	0.0883	Total HxCDF	2.68	-	J
OCDF	3.33	-	J	0.000999	0.170	Total HpCDF	4.31	-	J

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	93.6	25.0 - 164	
13C-1,2,3,7,8-PeCDD	95.3	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	101	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	96.9	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	91.3	23.0 - 140	
13C-OCDD	81.7	17.0 - 157	
13C-2,3,7,8-TCDF	98.0	24.0 - 169	
13C-1,2,3,7,8-PeCDF	90.6	24.0 - 185	
13C-2,3,4,7,8-PeCDF	92.2	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	90.1	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	91.5	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	89.8	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	87.3	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	86.8	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	89.5	26.0 - 138	
13C-OCDF	79.8	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	91.0	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____

Date: 5/1/2018

Reviewed By: _____

Date: 5/1/2018

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EPA Method 1613
PCDD/F

FAL ID: 11455-011-SA
Client ID: SP3-11
Matrix: Solid
Batch No: X4492

Date Extracted: 04-27-2018
Date Received: 04-12-2018
Amount: 5.02 g
% Solids: 92.68

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 05-01-2018
2005 WHO TEQ: 0.616
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.221		-	0.0273				
1,2,3,7,8-PeCDD	ND	0.283		-	0.0570				
1,2,3,4,7,8-HxCDD	ND	0.254		-	0.0793				
1,2,3,6,7,8-HxCDD	0.963	-	J	0.0963	0.0940	Total TCDD	ND	0.221	
1,2,3,7,8,9-HxCDD	0.676	-	J	0.0676	0.0823	Total PeCDD	ND	0.283	
1,2,3,4,6,7,8-HpCDD	16.7	-		0.167	0.0842	Total HxCDD	5.96	-	
OCDD	139	-		0.0417	0.172	Total HpCDD	31.3	-	
2,3,7,8-TCDF	0.516	-	J	0.0516	0.0269				
1,2,3,7,8-PeCDF	ND	0.247		-	0.0449				
2,3,4,7,8-PeCDF	ND	0.264		-	0.0468				
1,2,3,4,7,8-HxCDF	0.372	-	J	0.0372	0.0437				
1,2,3,6,7,8-HxCDF	0.374	-	J	0.0374	0.0417				
2,3,4,6,7,8-HxCDF	0.374	-	J	0.0374	0.0574				
1,2,3,7,8,9-HxCDF	0.337	-	J	0.0337	0.0657	Total TCDF	1.88	-	
1,2,3,4,6,7,8-HpCDF	3.84	-	J	0.0384	0.0747	Total PeCDF	1.73	-	J
1,2,3,4,7,8,9-HpCDF	0.460	-	J	0.00460	0.0883	Total HxCDF	5.04	-	
OCDF	11.7	-		0.00351	0.170	Total HpCDF	11.1	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	90.6	25.0 - 164	
13C-1,2,3,7,8-PeCDD	96.3	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	101	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	96.8	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	92.4	23.0 - 140	
13C-OCDD	85.1	17.0 - 157	
13C-2,3,7,8-TCDF	96.9	24.0 - 169	
13C-1,2,3,7,8-PeCDF	88.6	24.0 - 185	
13C-2,3,4,7,8-PeCDF	89.6	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	90.9	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	88.4	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	89.2	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	87.7	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	88.4	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	89.8	26.0 - 138	
13C-OCDF	83.0	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	87.9	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 5/1/2018

Reviewed By: _____
Date: 5/1/2018

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EPA Method 1613
PCDD/F

FAL ID: 11455-012-SA
Client ID: SP3-12
Matrix: Solid
Batch No: X4492

Date Extracted: 04-27-2018
Date Received: 04-12-2018
Amount: 5.03 g
% Solids: 94.10

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 05-01-2018
2005 WHO TEQ: 1.79
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.229		-	0.0273				
1,2,3,7,8-PeCDD	ND	0.384		-	0.0570				
1,2,3,4,7,8-HxCDD	ND	0.267		-	0.0793				
1,2,3,6,7,8-HxCDD	2.30	-	J	0.230	0.0940	Total TCDD	0.432	-	J
1,2,3,7,8,9-HxCDD	1.11	-	J	0.111	0.0823	Total PeCDD	ND	0.384	
1,2,3,4,6,7,8-HpCDD	46.8	-		0.468	0.0842	Total HxCDD	16.3	-	
OCDD	395	-		0.119	0.172	Total HpCDD	82.1	-	
2,3,7,8-TCDF	1.12	-		0.112	0.0269				
1,2,3,7,8-PeCDF	ND	0.271		-	0.0449				
2,3,4,7,8-PeCDF	0.896	-	J	0.269	0.0468				
1,2,3,4,7,8-HxCDF	1.24	-	J	0.124	0.0437				
1,2,3,6,7,8-HxCDF	1.22	-	J	0.122	0.0417				
2,3,4,6,7,8-HxCDF	0.904	-	J	0.0904	0.0574				
1,2,3,7,8,9-HxCDF	0.422	-	J	0.0422	0.0657	Total TCDF	6.85	-	
1,2,3,4,6,7,8-HpCDF	8.09	-		0.0809	0.0747	Total PeCDF	4.91	-	J
1,2,3,4,7,8,9-HpCDF	1.54	-	J	0.0154	0.0883	Total HxCDF	9.17	-	
OCDF	14.6	-		0.00438	0.170	Total HpCDF	17.9	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	78.4	25.0 - 164	
13C-1,2,3,7,8-PeCDD	86.6	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	88.3	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	84.9	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	80.1	23.0 - 140	
13C-OCDD	73.7	17.0 - 157	
13C-2,3,7,8-TCDF	79.7	24.0 - 169	
13C-1,2,3,7,8-PeCDF	81.9	24.0 - 185	
13C-2,3,4,7,8-PeCDF	83.1	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	78.6	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	77.3	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	77.8	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	75.6	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	77.0	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	78.5	26.0 - 138	
13C-OCDF	71.7	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	74.4	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 5/1/2018

Reviewed By: _____
Date: 5/1/2018

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EPA Method 1613
PCDD/F

FAL ID: 11455-013-SA
Client ID: SP4-1
Matrix: Solid
Batch No: X4492

Date Extracted: 04-27-2018
Date Received: 04-12-2018
Amount: 5.04 g
% Solids: 96.08

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 05-01-2018
2005 WHO TEQ: 2.91
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.184		-	0.0273				
1,2,3,7,8-PeCDD	ND	0.309		-	0.0570				
1,2,3,4,7,8-HxCDD	0.471	-	J	0.0471	0.0793				
1,2,3,6,7,8-HxCDD	4.20	-	J	0.420	0.0940	Total TCDD	0.754	-	J
1,2,3,7,8,9-HxCDD	1.88	-	J	0.188	0.0823	Total PeCDD	1.40	-	J
1,2,3,4,6,7,8-HpCDD	79.8	-		0.798	0.0842	Total HxCDD	32.4	-	
OCDD	683	-		0.205	0.172	Total HpCDD	150	-	
2,3,7,8-TCDF	1.73	-		0.173	0.0269				
1,2,3,7,8-PeCDF	0.461	-	J	0.0138	0.0449				
2,3,4,7,8-PeCDF	1.02	-	J	0.306	0.0468				
1,2,3,4,7,8-HxCDF	1.81	-	J	0.181	0.0437				
1,2,3,6,7,8-HxCDF	1.98	-	J	0.198	0.0417				
2,3,4,6,7,8-HxCDF	1.53	-	J	0.153	0.0574				
1,2,3,7,8,9-HxCDF	0.615	-	J	0.0615	0.0657	Total TCDF	12.4	-	
1,2,3,4,6,7,8-HpCDF	13.8	-		0.138	0.0747	Total PeCDF	7.70	-	
1,2,3,4,7,8,9-HpCDF	2.31	-	J	0.0231	0.0883	Total HxCDF	16.5	-	
OCDF	24.5	-		0.00735	0.170	Total HpCDF	31.6	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	88.8	25.0 - 164	
13C-1,2,3,7,8-PeCDD	92.7	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	92.9	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	89.9	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	86.4	23.0 - 140	
13C-OCDD	78.9	17.0 - 157	
13C-2,3,7,8-TCDF	94.0	24.0 - 169	
13C-1,2,3,7,8-PeCDF	89.8	24.0 - 185	
13C-2,3,4,7,8-PeCDF	92.5	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	81.9	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	81.2	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	80.1	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	82.0	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	82.5	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	86.5	26.0 - 138	
13C-OCDF	78.1	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	85.3	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 5/1/2018

Reviewed By: _____
Date: 5/1/2018

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El Dorado Hills, CA 95762
Tel: 916-934-0900
Fax: 916-934-0999

FAL USE ONLY

Laboratory Project No.: 11455

Temperature: 0 °C

Chain of Custody

www.frontieranalytical.com

Please Print in Pen Page 1 of 1

CLIENT INFORMATION	INVOICE INFORMATION (if different from client info)	PROJECT INFORMATION
Company Name: Brusca Associates, Inc.	Company Name: Same	FAL Quote #: 3310
Contact Name: Joe Brusca	Contact Name:	P.O. #:
Address: PO Box 332, Roseville, CA 95661	Address:	Project #: 137-002
Phone: 916-677-1470 Fax:	Phone: Fax:	Project Name: LATHROP 48-AC PROPERTY
Email: jbrusca@bruscaassociates.com	Email:	TAT (business days): ☐ 15 ☒ 10 ☐ 5* ☐ 3* (√ one)
		* FAL must agree with price and RUSH TAT in writing.

REPORT INFORMATION	REPORT DISTRIBUTION (email only is preferred)	ADDITIONAL INSTRUCTIONS
Report Level: ☐ I/II ☐ III ☐ IV	☐ Hardcopy	Joe to Kathy 15-TAT 4/12/18
☐ EDD: ☐ FAL Basic ☐ Geotracker ☐ Other: ☐ Custom: Contact FAL	☐ CD (.pdf including EDDs if requested)	
☐ California State Drinking Water Form	☐ Email (.pdf including EDDs if requested)	
System #: Source #		
Sampler: Employer:		

	Sample ID	Date Collected	Time	Matrix	# of containers	EPA 1613**	EPA 8290**	DLM 02.0	EPA 8280**	Appendix IX	EPA TO-9/9A	EPA 23/23A	EPA 1668	FAL 15	Other	Remarks
1	SP3-1	4/12/18	10:51	Solid		X										
2	SP3-2		10:55			X										
3	SP3-3		11:00			X										
4	SP3-4		11:02			X										
5	SP3-5		11:05			X										
6	SP3-6		11:09			X										
7	SP3-7		11:14			X										
8	SP3-8		11:16			X										
9	SP3-9		11:19			X										
10	SP3-10		11:21			X										
11	SP3-11		11:23			X										
12	SP3-12		11:26			X										
13	SP4-1		11:35			X										
14																
15																

**CONGENERS	**TEQ
☐ 2,3,7,8-TCDD only	☐ 1998 WHO
☐ 2,3,7,8-TCDD/F only	☑ 2005 WHO
☑ PCDD/F (Cl_4-Cl_8)	☐ Other

Samples will be disposed of 90 days after sample receipt unless other arrangements have been made and agreed upon in writing.

Relinquished by: (Signature and Printed Name)	Date	Time	Received by: (Signature and Printed Name)	Date	Time
	4/12/18	3:03PM	Kathy Zep K. Zep	4/12/18	1503

Client understands that all terms described in the proposals, quotations, and/or the general terms provided in the current FAL price schedules will be followed.
FAL reserves the rights to terminate its service or withhold delivery of reports, if in FAL's sole discretion the terms of the project have been broken.

White Copy – Report Yellow Copy – Laboratory Pink Copy - Originator

Frontier Analytical Laboratory

Sample Login Form

FAL Project ID: **11455**

Client:	Brusca Associates, Inc.
Client Project ID:	137-002
Date Received:	04/12/2018
Time Received:	03:03 pm
Received By:	KZ
Logged In By:	KZ
# of Samples Received:	13
Duplicates:	0
Storage Location:	R-4

Method of Delivery:	Courier
Tracking Number:	NA
Shipping Container Received Intact	Yes
Custody seals(s) present?	No
Custody seals(s) intact?	No
Sample Arrival Temperature (C)	0
Cooling Method	Ice
Chain Of Custody Present?	Yes
Return Shipping Container To Client	Yes
Test aqueous sample for residual Chlorine	No
Sodium Thiosulfate Added	No
Adequate Sample Volume	Yes
Appropriate Sample Container	Yes
pH Range of Aqueous Sample	N/A
Anomalies or additional comments:	

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Lake Forest, California 92630
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949.297.5027 Fax

20 April 2018

Joe Brusca
Brusca Associates Inc.
PO Box 332
Roseville, CA 95661

RE: Lathrop 48-Ac Property

Enclosed are the results of analyses for samples received by the laboratory on 04/13/18 09:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Mike Jaroudi
Project Manager

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

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Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SP3-1	T181249-01	Soil	04/12/18 10:51	04/13/18 09:30
SP3-2	T181249-02	Soil	04/12/18 10:55	04/13/18 09:30
SP3-3	T181249-03	Soil	04/12/18 11:00	04/13/18 09:30
SP3-4	T181249-04	Soil	04/12/18 11:02	04/13/18 09:30
SP3-5	T181249-05	Soil	04/12/18 11:05	04/13/18 09:30
SP3-6	T181249-06	Soil	04/12/18 11:09	04/13/18 09:30
SP3-7	T181249-07	Soil	04/12/18 11:14	04/13/18 09:30
SP3-8	T181249-08	Soil	04/12/18 11:16	04/13/18 09:30
SP3-9	T181249-09	Soil	04/12/18 11:19	04/13/18 09:30
SP3-10	T181249-10	Soil	04/12/18 11:21	04/13/18 09:30
SP3-11	T181249-11	Soil	04/12/18 11:23	04/13/18 09:30
SP3-12	T181249-12	Soil	04/12/18 11:26	04/13/18 09:30
SP4-1	T181249-13	Soil	04/12/18 11:35	04/13/18 09:30

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

DETECTIONS SUMMARY

Sample ID: SP3-1 **Laboratory ID:** T181249-01

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**29**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**29**	10	mg/kg	EPA 8015B	
Barium	**61**	1.0	mg/kg	EPA 6010B	
Chromium	**5.8**	2.0	mg/kg	EPA 6010B	
Cobalt	**4.5**	2.0	mg/kg	EPA 6010B	
Copper	**4.5**	1.0	mg/kg	EPA 6010B	
Nickel	**6.0**	2.0	mg/kg	EPA 6010B	
Vanadium	**17**	5.0	mg/kg	EPA 6010B	
Zinc	**30**	1.0	mg/kg	EPA 6010B	
Pyrene	**650**	300	ug/kg	EPA 8270C	
Benzo (a) anthracene	**300**	300	ug/kg	EPA 8270C	
Benzo (b) fluoranthene	**300**	300	ug/kg	EPA 8270C	
Chrysene	**340**	300	ug/kg	EPA 8270C	
Fluoranthene	**730**	300	ug/kg	EPA 8270C	
Phenanthrene	**460**	300	ug/kg	EPA 8270C	

Sample ID: SP3-2 **Laboratory ID:** T181249-02

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**150**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**160**	10	mg/kg	EPA 8015B	
Barium	**72**	1.0	mg/kg	EPA 6010B	
Chromium	**5.6**	2.0	mg/kg	EPA 6010B	
Cobalt	**4.7**	2.0	mg/kg	EPA 6010B	
Copper	**8.0**	1.0	mg/kg	EPA 6010B	
Nickel	**6.6**	2.0	mg/kg	EPA 6010B	
Vanadium	**17**	5.0	mg/kg	EPA 6010B	
Zinc	**33**	1.0	mg/kg	EPA 6010B	
PCB-1254	**20**	10	ug/kg	EPA 8082	

SunStar Laboratories, Inc.

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Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

Sample ID: SP3-3 **Laboratory ID:** T181249-03

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**51**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**37**	10	mg/kg	EPA 8015B	
Barium	**41**	1.0	mg/kg	EPA 6010B	
Chromium	**4.4**	2.0	mg/kg	EPA 6010B	
Cobalt	**3.5**	2.0	mg/kg	EPA 6010B	
Copper	**5.0**	1.0	mg/kg	EPA 6010B	
Lead	**20**	3.0	mg/kg	EPA 6010B	
Nickel	**4.1**	2.0	mg/kg	EPA 6010B	
Vanadium	**10**	5.0	mg/kg	EPA 6010B	
Zinc	**24**	1.0	mg/kg	EPA 6010B	
PCB-1254	**17**	10	ug/kg	EPA 8082	

Sample ID: SP3-4 **Laboratory ID:** T181249-04

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**100**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**96**	10	mg/kg	EPA 8015B	
Barium	**53**	1.0	mg/kg	EPA 6010B	
Chromium	**5.1**	2.0	mg/kg	EPA 6010B	
Cobalt	**4.4**	2.0	mg/kg	EPA 6010B	
Copper	**4.3**	1.0	mg/kg	EPA 6010B	
Nickel	**5.7**	2.0	mg/kg	EPA 6010B	
Vanadium	**15**	5.0	mg/kg	EPA 6010B	
Zinc	**26**	1.0	mg/kg	EPA 6010B	
PCB-1254	**15**	10	ug/kg	EPA 8082	

Sample ID: SP3-5 **Laboratory ID:** T181249-05

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**32**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**15**	10	mg/kg	EPA 8015B	
Barium	**64**	1.0	mg/kg	EPA 6010B	
Chromium	**4.9**	2.0	mg/kg	EPA 6010B	
Cobalt	**4.2**	2.0	mg/kg	EPA 6010B	
Copper	**5.2**	1.0	mg/kg	EPA 6010B	

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Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

Sample ID: SP3-5 **Laboratory ID:** T181249-05

Analyte	Result	Reporting Limit	Units	Method	Notes
Nickel	**5.1**	2.0	mg/kg	EPA 6010B	
Vanadium	**15**	5.0	mg/kg	EPA 6010B	
Zinc	**29**	1.0	mg/kg	EPA 6010B	

Sample ID: SP3-6 **Laboratory ID:** T181249-06

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**56**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**32**	10	mg/kg	EPA 8015B	
Barium	**43**	1.0	mg/kg	EPA 6010B	
Chromium	**5.1**	2.0	mg/kg	EPA 6010B	
Cobalt	**3.8**	2.0	mg/kg	EPA 6010B	
Copper	**4.4**	1.0	mg/kg	EPA 6010B	
Lead	**14**	3.0	mg/kg	EPA 6010B	
Nickel	**4.5**	2.0	mg/kg	EPA 6010B	
Vanadium	**11**	5.0	mg/kg	EPA 6010B	
Zinc	**23**	1.0	mg/kg	EPA 6010B	
PCB-1254	**12**	10	ug/kg	EPA 8082	

Sample ID: SP3-7 **Laboratory ID:** T181249-07

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**39**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**19**	10	mg/kg	EPA 8015B	
Barium	**43**	1.0	mg/kg	EPA 6010B	
Chromium	**4.6**	2.0	mg/kg	EPA 6010B	
Cobalt	**3.8**	2.0	mg/kg	EPA 6010B	
Copper	**3.3**	1.0	mg/kg	EPA 6010B	
Lead	**10**	3.0	mg/kg	EPA 6010B	
Nickel	**4.1**	2.0	mg/kg	EPA 6010B	
Vanadium	**11**	5.0	mg/kg	EPA 6010B	
Zinc	**25**	1.0	mg/kg	EPA 6010B	
PCB-1254	**12**	10	ug/kg	EPA 8082	

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Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

Sample ID: SP3-8 **Laboratory ID:** T181249-08

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**29**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**17**	10	mg/kg	EPA 8015B	
Barium	**67**	1.0	mg/kg	EPA 6010B	
Chromium	**5.7**	2.0	mg/kg	EPA 6010B	
Cobalt	**4.9**	2.0	mg/kg	EPA 6010B	
Copper	**4.6**	1.0	mg/kg	EPA 6010B	
Lead	**17**	3.0	mg/kg	EPA 6010B	
Nickel	**6.6**	2.0	mg/kg	EPA 6010B	
Vanadium	**17**	5.0	mg/kg	EPA 6010B	
Zinc	**26**	1.0	mg/kg	EPA 6010B	
PCB-1254	**19**	10	ug/kg	EPA 8082	

Sample ID: SP3-9 **Laboratory ID:** T181249-09

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**85**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**82**	10	mg/kg	EPA 8015B	
Barium	**59**	1.0	mg/kg	EPA 6010B	
Chromium	**5.9**	2.0	mg/kg	EPA 6010B	
Cobalt	**5.6**	2.0	mg/kg	EPA 6010B	
Copper	**4.8**	1.0	mg/kg	EPA 6010B	
Nickel	**6.6**	2.0	mg/kg	EPA 6010B	
Vanadium	**18**	5.0	mg/kg	EPA 6010B	
Zinc	**29**	1.0	mg/kg	EPA 6010B	
PCB-1254	**16**	10	ug/kg	EPA 8082	

Sample ID: SP3-10 **Laboratory ID:** T181249-10

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**360**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**380**	10	mg/kg	EPA 8015B	
Barium	**57**	1.0	mg/kg	EPA 6010B	
Chromium	**5.7**	2.0	mg/kg	EPA 6010B	
Cobalt	**4.9**	2.0	mg/kg	EPA 6010B	
Copper	**4.6**	1.0	mg/kg	EPA 6010B	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

Sample ID: SP3-10 **Laboratory ID:** T181249-10

Analyte	Result	Reporting Limit	Units	Method	Notes
Nickel	**5.7**	2.0	mg/kg	EPA 6010B	
Vanadium	**14**	5.0	mg/kg	EPA 6010B	
Zinc	**28**	1.0	mg/kg	EPA 6010B	
PCB-1254	**18**	10	ug/kg	EPA 8082	

Sample ID: SP3-11 **Laboratory ID:** T181249-11

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**26**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**33**	10	mg/kg	EPA 8015B	
Barium	**56**	1.0	mg/kg	EPA 6010B	
Chromium	**5.0**	2.0	mg/kg	EPA 6010B	
Cobalt	**4.4**	2.0	mg/kg	EPA 6010B	
Copper	**4.0**	1.0	mg/kg	EPA 6010B	
Nickel	**5.7**	2.0	mg/kg	EPA 6010B	
Vanadium	**15**	5.0	mg/kg	EPA 6010B	
Zinc	**28**	1.0	mg/kg	EPA 6010B	

Sample ID: SP3-12 **Laboratory ID:** T181249-12

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**140**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**130**	10	mg/kg	EPA 8015B	
Barium	**38**	1.0	mg/kg	EPA 6010B	
Chromium	**3.8**	2.0	mg/kg	EPA 6010B	
Cobalt	**3.9**	2.0	mg/kg	EPA 6010B	
Copper	**7.6**	1.0	mg/kg	EPA 6010B	
Lead	**38**	3.0	mg/kg	EPA 6010B	
Nickel	**3.6**	2.0	mg/kg	EPA 6010B	
Vanadium	**8.3**	5.0	mg/kg	EPA 6010B	
Zinc	**22**	1.0	mg/kg	EPA 6010B	
PCB-1254	**34**	10	ug/kg	EPA 8082	

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PO Box 332	Project Number: 137-002	**Reported:**
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Sample ID: SP4-1 **Laboratory ID:** T181249-13

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**170**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**220**	10	mg/kg	EPA 8015B	
Barium	**31**	1.0	mg/kg	EPA 6010B	
Chromium	**3.5**	2.0	mg/kg	EPA 6010B	
Cobalt	**3.2**	2.0	mg/kg	EPA 6010B	
Copper	**7.0**	1.0	mg/kg	EPA 6010B	
Lead	**25**	3.0	mg/kg	EPA 6010B	
Nickel	**2.9**	2.0	mg/kg	EPA 6010B	
Vanadium	**7.8**	5.0	mg/kg	EPA 6010B	
Zinc	**21**	1.0	mg/kg	EPA 6010B	
PCB-1016	**170**	10	ug/kg	EPA 8082	
PCB-1254	**110**	10	ug/kg	EPA 8082	

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SP3-1

T181249-01 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8041323	04/13/18	04/14/18	EPA 8015B	
C13-C28 (DRO)	**29**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**29**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*88.9 %*	*65-135*		"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8041326	04/13/18	04/16/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**61**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**5.8**	2.0	"	"	"	"	"	"	
Cobalt	**4.5**	2.0	"	"	"	"	"	"	
Copper	**4.5**	1.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**6.0**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**17**	5.0	"	"	"	"	"	"	
Zinc	**30**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8041325	04/13/18	04/16/18	EPA 7471A Soil	

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Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP3-1

T181249-01 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8041319	04/13/18	04/17/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*78.9 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*76.1 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8041321	04/13/18	04/17/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	**650**	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	**300**	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	**300**	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	
Benzo (a) pyrene	ND	300	"	"	"	"	"	"	

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SP3-1

T181249-01 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzyl alcohol	ND	300	ug/kg	1	8041321	04/13/18	04/17/18	EPA 8270C	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	**340**	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	**730**	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	
Isophorone	ND	300	"	"	"	"	"	"	

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SP3-1

T181249-01 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
2-Methylphenol	ND	1000	ug/kg	1	8041321	04/13/18	04/17/18	EPA 8270C	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	**460**	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*44.2 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*53.9 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*54.1 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*68.9 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*88.8 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*73.1 %*	*29.1-130*		"	"	"	"	

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SP3-2

T181249-02 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8041323	04/13/18	04/14/18	EPA 8015B	
C13-C28 (DRO)	**150**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**160**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*79.5 %*		*65-135*	"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8041326	04/13/18	04/16/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**72**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**5.6**	2.0	"	"	"	"	"	"	
Cobalt	**4.7**	2.0	"	"	"	"	"	"	
Copper	**8.0**	1.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**6.6**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**17**	5.0	"	"	"	"	"	"	
Zinc	**33**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8041325	04/13/18	04/16/18	EPA 7471A Soil	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP3-2

T181249-02 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8041319	04/13/18	04/17/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	**20**	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*91.4 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*90.7 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8041321	04/13/18	04/17/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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SP3-2

T181249-02 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8041321	04/13/18	04/17/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

SunStar Laboratories, Inc.

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Mike Jaroudi, Project Manager

SunStar Laboratories, Inc.
Providing Quality Analytical Services Nationwide

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949.297.5027 Fax

Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP3-2

T181249-02 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8041321	04/13/18	04/17/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*45.7 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*58.5 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*57.5 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*69.0 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*83.8 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*75.7 %*	*29.1-130*		"	"	"	"	

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP3-3

T181249-03 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8041323	04/13/18	04/14/18	EPA 8015B	
C13-C28 (DRO)	**51**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**37**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*84.4 %*		*65-135*	"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8041326	04/13/18	04/16/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**41**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**4.4**	2.0	"	"	"	"	"	"	
Cobalt	**3.5**	2.0	"	"	"	"	"	"	
Copper	**5.0**	1.0	"	"	"	"	"	"	
Lead	**20**	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**4.1**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**10**	5.0	"	"	"	"	"	"	
Zinc	**24**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8041325	04/13/18	04/16/18	EPA 7471A Soil	

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP3-3

T181249-03 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8041319	04/13/18	04/17/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	**17**	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*96.1 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*94.5 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8041321	04/13/18	04/17/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP3-3

T181249-03 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8041321	04/13/18	04/17/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP3-3

T181249-03 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8041321	04/13/18	04/17/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*51.2 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*59.0 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*59.2 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*69.2 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*85.0 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*73.2 %*	*29.1-130*		"	"	"	"	

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP3-4

T181249-04 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8041323	04/13/18	04/14/18	EPA 8015B	
C13-C28 (DRO)	**100**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**96**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*88.1 %*		*65-135*	"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8041326	04/13/18	04/16/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**53**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**5.1**	2.0	"	"	"	"	"	"	
Cobalt	**4.4**	2.0	"	"	"	"	"	"	
Copper	**4.3**	1.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**5.7**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**15**	5.0	"	"	"	"	"	"	
Zinc	**26**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8041325	04/13/18	04/16/18	EPA 7471A Soil	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP3-4

T181249-04 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8041319	04/13/18	04/17/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	**15**	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*81.2 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*67.1 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8041321	04/13/18	04/17/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP3-4

T181249-04 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8041321	04/13/18	04/17/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP3-4

T181249-04 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8041321	04/13/18	04/17/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*38.5 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*47.3 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*44.5 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*58.9 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*81.1 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*75.8 %*	*29.1-130*		"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP3-5

T181249-05 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8041323	04/13/18	04/14/18	EPA 8015B	
C13-C28 (DRO)	**32**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**15**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*91.0 %*		*65-135*	"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8041326	04/13/18	04/16/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**64**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**4.9**	2.0	"	"	"	"	"	"	
Cobalt	**4.2**	2.0	"	"	"	"	"	"	
Copper	**5.2**	1.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**5.1**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**15**	5.0	"	"	"	"	"	"	
Zinc	**29**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8041325	04/13/18	04/16/18	EPA 7471A Soil	

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP3-5

T181249-05 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8041319	04/13/18	04/17/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*92.6 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*85.5 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8041321	04/13/18	04/17/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP3-5

T181249-05 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8041321	04/13/18	04/17/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP3-5

T181249-05 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8041321	04/13/18	04/17/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*43.6 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*51.4 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*50.5 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*57.7 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*78.7 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*64.3 %*	*29.1-130*		"	"	"	"	

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Mike Jaroudi, Project Manager

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP3-6

T181249-06 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8041323	04/13/18	04/14/18	EPA 8015B	
C13-C28 (DRO)	**56**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**32**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*84.0 %*	*65-135*		"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8041326	04/13/18	04/16/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**43**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**5.1**	2.0	"	"	"	"	"	"	
Cobalt	**3.8**	2.0	"	"	"	"	"	"	
Copper	**4.4**	1.0	"	"	"	"	"	"	
Lead	**14**	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**4.5**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**11**	5.0	"	"	"	"	"	"	
Zinc	**23**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8041325	04/13/18	04/16/18	EPA 7471A Soil	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP3-6

T181249-06 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8041319	04/13/18	04/17/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	**12**	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*81.4 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*92.4 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8041321	04/13/18	04/17/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP3-6

T181249-06 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8041321	04/13/18	04/17/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP3-6

T181249-06 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8041321	04/13/18	04/17/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*40.9 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*48.5 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*48.9 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*61.2 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*86.8 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*76.3 %*	*29.1-130*		"	"	"	"	

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP3-7

T181249-07 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8041323	04/13/18	04/14/18	EPA 8015B	
C13-C28 (DRO)	**39**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**19**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*86.0 %*	*65-135*		"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8041326	04/13/18	04/16/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**43**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**4.6**	2.0	"	"	"	"	"	"	
Cobalt	**3.8**	2.0	"	"	"	"	"	"	
Copper	**3.3**	1.0	"	"	"	"	"	"	
Lead	**10**	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**4.1**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**11**	5.0	"	"	"	"	"	"	
Zinc	**25**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8041325	04/13/18	04/16/18	EPA 7471A Soil	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP3-7

T181249-07 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8041319	04/13/18	04/17/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	**12**	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*88.8 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*91.8 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8041321	04/13/18	04/17/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP3-7

T181249-07 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8041321	04/13/18	04/17/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP3-7

T181249-07 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8041321	04/13/18	04/17/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*41.1 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*47.3 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*49.2 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*60.5 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*74.5 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*70.2 %*	*29.1-130*		"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP3-8

T181249-08 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8041323	04/13/18	04/14/18	EPA 8015B	
C13-C28 (DRO)	**29**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**17**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*88.7 %*	*65-135*		"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8041326	04/13/18	04/16/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**67**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**5.7**	2.0	"	"	"	"	"	"	
Cobalt	**4.9**	2.0	"	"	"	"	"	"	
Copper	**4.6**	1.0	"	"	"	"	"	"	
Lead	**17**	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**6.6**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**17**	5.0	"	"	"	"	"	"	
Zinc	**26**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8041325	04/13/18	04/16/18	EPA 7471A Soil	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP3-8

T181249-08 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8041319	04/13/18	04/17/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	**19**	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*84.8 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*82.3 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8041321	04/13/18	04/17/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP3-8

T181249-08 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8041321	04/13/18	04/17/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Mike Jaroudi, Project Manager

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25712 Commercentre Drive
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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP3-8

T181249-08 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8041321	04/13/18	04/17/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*47.6 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*57.6 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*58.1 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*69.6 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*91.0 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*77.5 %*	*29.1-130*		"	"	"	"	

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP3-9

T181249-09 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8041323	04/13/18	04/14/18	EPA 8015B	
C13-C28 (DRO)	**85**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**82**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*80.0 %*		*65-135*	"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8041326	04/13/18	04/16/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**59**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**5.9**	2.0	"	"	"	"	"	"	
Cobalt	**5.6**	2.0	"	"	"	"	"	"	
Copper	**4.8**	1.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**6.6**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**18**	5.0	"	"	"	"	"	"	
Zinc	**29**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8041325	04/13/18	04/16/18	EPA 7471A Soil	

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP3-9

T181249-09 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8041319	04/13/18	04/17/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	**16**	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*89.7 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*69.3 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8041321	04/13/18	04/17/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

SunStar Laboratories, Inc.

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Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP3-9

T181249-09 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8041321	04/13/18	04/17/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP3-9

T181249-09 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8041321	04/13/18	04/17/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*52.2 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*61.8 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*60.1 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*73.5 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*90.8 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*75.3 %*	*29.1-130*		"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP3-10

T181249-10 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8041323	04/13/18	04/14/18	EPA 8015B	
C13-C28 (DRO)	**360**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**380**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*80.0 %*		*65-135*	"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8041326	04/13/18	04/16/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**57**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**5.7**	2.0	"	"	"	"	"	"	
Cobalt	**4.9**	2.0	"	"	"	"	"	"	
Copper	**4.6**	1.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**5.7**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**14**	5.0	"	"	"	"	"	"	
Zinc	**28**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8041325	04/13/18	04/16/18	EPA 7471A Soil	

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP3-10

T181249-10 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8041319	04/13/18	04/17/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	**18**	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*81.2 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*61.2 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8041321	04/13/18	04/17/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP3-10

T181249-10 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8041321	04/13/18	04/17/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP3-10

T181249-10 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8041321	04/13/18	04/17/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*54.0 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*65.2 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*62.5 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*73.1 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*87.8 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*80.1 %*	*29.1-130*		"	"	"	"	

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Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP3-11

T181249-11 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8041323	04/13/18	04/14/18	EPA 8015B	
C13-C28 (DRO)	**26**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**33**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*79.6 %*		*65-135*	"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8041326	04/13/18	04/16/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**56**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**5.0**	2.0	"	"	"	"	"	"	
Cobalt	**4.4**	2.0	"	"	"	"	"	"	
Copper	**4.0**	1.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**5.7**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**15**	5.0	"	"	"	"	"	"	
Zinc	**28**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8041325	04/13/18	04/16/18	EPA 7471A Soil	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP3-11

T181249-11 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8041319	04/13/18	04/17/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*87.7 %*	*35-140*		"	"	"	"	
Surrogate: Decachlorobiphenyl		*83.4 %*	*35-140*		"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8041321	04/13/18	04/17/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP3-11

T181249-11 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8041321	04/13/18	04/17/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP3-11

T181249-11 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8041321	04/13/18	04/17/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*48.4 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*59.2 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*55.9 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*68.4 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*95.9 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*69.3 %*	*29.1-130*		"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP3-12

T181249-12 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8041323	04/13/18	04/14/18	EPA 8015B	
C13-C28 (DRO)	**140**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**130**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*84.7 %*	*65-135*		"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8041326	04/13/18	04/16/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**38**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**3.8**	2.0	"	"	"	"	"	"	
Cobalt	**3.9**	2.0	"	"	"	"	"	"	
Copper	**7.6**	1.0	"	"	"	"	"	"	
Lead	**38**	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**3.6**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**8.3**	5.0	"	"	"	"	"	"	
Zinc	**22**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8041325	04/13/18	04/16/18	EPA 7471A Soil	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP3-12

T181249-12 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8041319	04/13/18	04/17/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	**34**	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*94.7 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*74.2 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8041321	04/13/18	04/17/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP3-12

T181249-12 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8041321	04/13/18	04/17/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP3-12

T181249-12 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8041321	04/13/18	04/17/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*45.2 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*53.8 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*53.0 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*63.8 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*82.6 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*68.3 %*	*29.1-130*		"	"	"	"	

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Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP4-1

T181249-13 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8041323	04/13/18	04/14/18	EPA 8015B	
C13-C28 (DRO)	**170**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**220**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*84.7 %*		*65-135*	"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8041326	04/13/18	04/16/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**31**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**3.5**	2.0	"	"	"	"	"	"	
Cobalt	**3.2**	2.0	"	"	"	"	"	"	
Copper	**7.0**	1.0	"	"	"	"	"	"	
Lead	**25**	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**2.9**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**7.8**	5.0	"	"	"	"	"	"	
Zinc	**21**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8041325	04/13/18	04/16/18	EPA 7471A Soil	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP4-1

T181249-13 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	**170**	10	ug/kg	1	8041319	04/13/18	04/17/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	**110**	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*88.1 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*69.7 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8041321	04/13/18	04/17/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP4-1

T181249-13 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8041321	04/13/18	04/17/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

SP4-1

T181249-13 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8041321	04/13/18	04/17/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*48.0 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*56.9 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*58.0 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*71.7 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*84.5 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*76.6 %*	*29.1-130*		"	"	"	"	

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8041323 - EPA 3550B GC										
Blank (8041323-BLK1)				Prepared: 04/13/18 Analyzed: 04/14/18						
C6-C12 (GRO)	ND	10	mg/kg							
C13-C28 (DRO)	ND	10	"							
C29-C40 (MORO)	ND	10	"							
Surrogate: p-Terphenyl	*90.7*		*"*	*102*		*88.9*	*65-135*			
LCS (8041323-BS1)				Prepared: 04/13/18 Analyzed: 04/14/18						
C13-C28 (DRO)	410	10	mg/kg	490		83.7	75-125			
Surrogate: p-Terphenyl	*79.2*		*"*	*98.0*		*80.8*	*65-135*			
LCS Dup (8041323-BSD1)				Prepared: 04/13/18 Analyzed: 04/14/18						
C13-C28 (DRO)	490	10	mg/kg	510		95.4	75-125	17.0	20	
Surrogate: p-Terphenyl	*85.0*		*"*	*102*		*83.3*	*65-135*			

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

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 8041326 - EPA 3050B										
Blank (8041326-BLK1)				Prepared: 04/13/18 Analyzed: 04/16/18						
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 (8041326-BS1)				Prepared: 04/13/18 Analyzed: 04/16/18						
Arsenic	96.4	5.0	mg/kg	100		96.4	75-125			
Barium	97.6	1.0	"	100		97.6	75-125			
Cadmium	97.8	2.0	"	100		97.8	75-125			
Chromium	97.4	2.0	"	100		97.4	75-125			
Lead	105	3.0	"	100		105	75-125			
Matrix Spike (8041326-MS1)	**Source: T181248-01**			Prepared: 04/13/18 Analyzed: 04/16/18						
Arsenic	82.6	5.0	mg/kg	96.2	1.96	83.9	75-125			
Barium	195	1.0	"	96.2	125	72.2	75-125			QM-05
Cadmium	84.0	2.0	"	96.2	0.911	86.4	75-125			
Chromium	109	2.0	"	96.2	29.8	82.6	75-125			
Lead	96.6	3.0	"	96.2	ND	100	75-125			

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

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 8041326 - EPA 3050B										
Matrix Spike Dup (8041326-MSD1)	**Source: T181248-01**			Prepared: 04/13/18 Analyzed: 04/16/18						
Arsenic	86.4	5.0	mg/kg	94.3	1.96	89.6	75-125	4.51	20	
Barium	187	1.0	"	94.3	125	65.2	75-125	4.15	20	QM-05
Cadmium	82.3	2.0	"	94.3	0.911	86.3	75-125	2.00	20	
Chromium	111	2.0	"	94.3	29.8	86.3	75-125	1.80	20	
Lead	95.6	3.0	"	94.3	ND	101	75-125	1.02	20	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

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 8041325 - EPA 7471A Soil										
Blank (8041325-BLK1)				Prepared: 04/13/18 Analyzed: 04/16/18						
Mercury	ND	0.10	mg/kg							
LCS (8041325-BS1)				Prepared: 04/13/18 Analyzed: 04/16/18						
Mercury	0.413	0.10	mg/kg	0.397		104	80-120			
Matrix Spike (8041325-MS1)	**Source: T181248-01**			Prepared: 04/13/18 Analyzed: 04/16/18						
Mercury	0.460	0.10	mg/kg	0.403	0.0498	102	75-125			
Matrix Spike Dup (8041325-MSD1)	**Source: T181248-01**			Prepared: 04/13/18 Analyzed: 04/16/18						
Mercury	0.470	0.10	mg/kg	0.410	0.0498	103	75-125	2.10	20	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

Polychlorinated Biphenyls by EPA Method 8082 - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8041319 - EPA 3550 ECD/GCMS										
Blank (8041319-BLK1)				Prepared: 04/13/18 Analyzed: 04/17/18						
PCB-1016	ND	10	ug/kg							
PCB-1221	ND	10	"							
PCB-1232	ND	10	"							
PCB-1242	ND	10	"							
PCB-1248	ND	10	"							
PCB-1254	ND	10	"							
PCB-1260	ND	10	"							
Surrogate: Tetrachloro-meta-xylene	*9.06*		"	*10.2*		*88.8*	*35-140*			
Surrogate: Decachlorobiphenyl	*10.6*		"	*10.2*		*104*	*35-140*			
LCS (8041319-BS1)				Prepared: 04/13/18 Analyzed: 04/17/18						
PCB-1016	59.6	10	ug/kg	100		59.6	40-130			
PCB-1260	64.4	10	"	100		64.4	40-130			
Surrogate: Tetrachloro-meta-xylene	*9.02*		"	*10.0*		*90.2*	*35-140*			
Surrogate: Decachlorobiphenyl	*10.7*		"	*10.0*		*107*	*35-140*			
Matrix Spike (8041319-MS1)	**Source: T181249-01**			Prepared: 04/13/18 Analyzed: 04/16/18						
PCB-1016	71.5	10	ug/kg	99.0	ND	72.2	40-130			
PCB-1260	62.3	10	"	99.0	ND	62.9	40-130			
Surrogate: Tetrachloro-meta-xylene	*7.61*		"	*9.90*		*76.9*	*35-140*			
Surrogate: Decachlorobiphenyl	*8.74*		"	*9.90*		*88.2*	*35-140*			
Matrix Spike Dup (8041319-MSD1)	**Source: T181249-01**			Prepared: 04/13/18 Analyzed: 04/16/18						
PCB-1016	68.7	10	ug/kg	102	ND	67.3	40-130	4.01	30	
PCB-1260	56.7	10	"	102	ND	55.6	40-130	9.31	30	
Surrogate: Tetrachloro-meta-xylene	*7.48*		"	*10.2*		*73.3*	*35-140*			
Surrogate: Decachlorobiphenyl	*8.06*		"	*10.2*		*79.0*	*35-140*			

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Mike Jaroudi, Project Manager

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PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

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

Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8041321 - EPA 3550 ECD/GCMS										
Blank (8041321-BLK1)				Prepared: 04/13/18 Analyzed: 04/17/18						
Carbazole	ND	300	ug/kg							
Phenol	ND	1000	"							
Aniline	ND	300	"							
2-Chlorophenol	ND	1000	"							
1,4-Dichlorobenzene	ND	300	"							
N-Nitrosodi-n-propylamine	ND	300	"							
1,2,4-Trichlorobenzene	ND	300	"							
4-Chloro-3-methylphenol	ND	1000	"							
2-Methylnaphthalene	ND	300	"							
1-Methylnaphthalene	ND	300	"							
Acenaphthene	ND	300	"							
4-Nitrophenol	ND	1000	"							
2,4-Dinitrotoluene	ND	300	"							
Pentachlorophenol	ND	1000	"							
Pyrene	ND	300	"							
Acenaphthylene	ND	300	"							
Anthracene	ND	300	"							
Benzo (a) anthracene	ND	300	"							
Benzo (b) fluoranthene	ND	300	"							
Benzo (k) fluoranthene	ND	300	"							
Benzo (g,h,i) perylene	ND	1000	"							
Benzo (a) pyrene	ND	300	"							
Benzyl alcohol	ND	300	"							
Bis(2-chloroethoxy)methane	ND	300	"							
Bis(2-chloroethyl)ether	ND	300	"							
Bis(2-chloroisopropyl)ether	ND	300	"							
Bis(2-ethylhexyl)phthalate	ND	300	"							
4-Bromophenyl phenyl ether	ND	300	"							
Butyl benzyl phthalate	ND	300	"							
4-Chloroaniline	ND	300	"							
2-Chloronaphthalene	ND	300	"							
4-Chlorophenyl phenyl ether	ND	300	"							
Chrysene	ND	300	"							
Dibenz (a,h) anthracene	ND	300	"							
Dibenzofuran	ND	300	"							
Di-n-butyl phthalate	ND	300	"							

SunStar Laboratories, Inc.

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Mike Jaroudi, Project Manager

SunStar Laboratories, Inc.
Providing Quality Analytical Services Nationwide

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8041321 - EPA 3550 ECD/GCMS										
Blank (8041321-BLK1)				Prepared: 04/13/18 Analyzed: 04/17/18						
1,2-Dichlorobenzene	ND	300	ug/kg							
1,3-Dichlorobenzene	ND	300	"							
2,4-Dichlorophenol	ND	1000	"							
Diethyl phthalate	ND	300	"							
2,4-Dimethylphenol	ND	1000	"							
Dimethyl phthalate	ND	300	"							
4,6-Dinitro-2-methylphenol	ND	1000	"							
2,4-Dinitrophenol	ND	1000	"							
2,6-Dinitrotoluene	ND	1000	"							
Di-n-octyl phthalate	ND	300	"							
Fluoranthene	ND	300	"							
Fluorene	ND	300	"							
Hexachlorobenzene	ND	1500	"							
Hexachlorobutadiene	ND	300	"							
Hexachlorocyclopentadiene	ND	1000	"							
Hexachloroethane	ND	300	"							
Indeno (1,2,3-cd) pyrene	ND	300	"							
Isophorone	ND	300	"							
2-Methylphenol	ND	1000	"							
4-Methylphenol	ND	1000	"							
Naphthalene	ND	300	"							
2-Nitroaniline	ND	300	"							
3-Nitroaniline	ND	300	"							
4-Nitroaniline	ND	300	"							
Nitrobenzene	ND	1000	"							
2-Nitrophenol	ND	1000	"							
N-Nitrosodimethylamine	ND	300	"							
N-Nitrosodiphenylamine	ND	300	"							
2,3,5,6-Tetrachlorophenol	ND	300	"							
2,3,4,6-Tetrachlorophenol	ND	300	"							
Phenanthrene	ND	300	"							
Azobenzene	ND	300	"							
Pyridine	ND	300	"							
2,4,5-Trichlorophenol	ND	1000	"							
2,4,6-Trichlorophenol	ND	1000	"							

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Providing Quality Analytical Services Nationwide

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8041321 - EPA 3550 ECD/GCMS										
Blank (8041321-BLK1)				Prepared: 04/13/18 Analyzed: 04/17/18						
Surrogate: 2-Fluorophenol	*1750*		*ug/kg*	*3300*		*53.0*	*15-121*			
Surrogate: Phenol-d6	*1930*		*"*	*3300*		*58.6*	*24-113*			
Surrogate: Nitrobenzene-d5	*2070*		*"*	*3300*		*62.7*	*21.3-119*			
Surrogate: 2-Fluorobiphenyl	*2330*		*"*	*3300*		*70.5*	*32.4-102*			
Surrogate: 2,4,6-Tribromophenol	*2680*		*"*	*3300*		*81.2*	*18.1-105*			
Surrogate: Terphenyl-dl4	*2480*		*"*	*3300*		*75.1*	*29.1-130*			
LCS (8041321-BS1)				Prepared: 04/13/18 Analyzed: 04/17/18						
Phenol	1550	1000	ug/kg	3290		47.0	34-114			
2-Chlorophenol	1700	1000	"	3290		51.6	34-114			
1,4-Dichlorobenzene	1760	300	"	3290		53.5	34-114			
N-Nitrosodi-n-propylamine	1880	300	"	3290		57.2	30-110			
1,2,4-Trichlorobenzene	2080	300	"	3290		63.3	39-119			
4-Chloro-3-methylphenol	2210	1000	"	3290		67.2	50-130			
Acenaphthene	2210	300	"	3290		67.2	34-114			
Pentachlorophenol	2380	1000	"	3290		72.4	50-130			
Pyrene	1810	300	"	3290		55.0	30-110			
Surrogate: 2-Fluorophenol	*1430*		*"*	*3290*		*43.4*	*15-121*			
Surrogate: Phenol-d6	*1580*		*"*	*3290*		*48.0*	*24-113*			
Surrogate: Nitrobenzene-d5	*1720*		*"*	*3290*		*52.2*	*21.3-119*			
Surrogate: 2-Fluorobiphenyl	*2080*		*"*	*3290*		*63.4*	*32.4-102*			
Surrogate: 2,4,6-Tribromophenol	*2520*		*"*	*3290*		*76.6*	*18.1-105*			
Surrogate: Terphenyl-dl4	*2200*		*"*	*3290*		*67.0*	*29.1-130*			
Matrix Spike (8041321-MS1)	**Source: T181249-01**			Prepared: 04/13/18 Analyzed: 04/16/18						
Phenol	1770	1000	ug/kg	3300	ND	53.8	34-114			
2-Chlorophenol	1820	1000	"	3300	ND	55.2	34-114			
1,4-Dichlorobenzene	1950	300	"	3300	ND	59.0	34-114			
N-Nitrosodi-n-propylamine	1860	300	"	3300	ND	56.3	30-110			
1,2,4-Trichlorobenzene	2380	300	"	3300	ND	72.1	39-119			
4-Chloro-3-methylphenol	2700	1000	"	3300	ND	81.7	50-130			
Acenaphthene	2440	300	"	3300	ND	73.8	34-114			
Pentachlorophenol	2510	1000	"	3300	ND	76.2	50-130			
Pyrene	2420	300	"	3300	654	53.5	30-110			
Surrogate: 2-Fluorophenol	*1590*		*"*	*3300*		*48.3*	*15-121*			
Surrogate: Phenol-d6	*1870*		*"*	*3300*		*56.6*	*24-113*			

SunStar Laboratories, Inc.

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Mike Jaroudi, Project Manager

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

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

Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8041321 - EPA 3550 ECD/GCMS										
Matrix Spike (8041321-MS1)	**Source: T181249-01**			Prepared: 04/13/18 Analyzed: 04/16/18						
Surrogate: Nitrobenzene-d5	*1850*		*ug/kg*	*3300*		*56.1*	*21.3-119*			
Surrogate: 2-Fluorobiphenyl	*2380*		*"*	*3300*		*72.0*	*32.4-102*			
Surrogate: 2,4,6-Tribromophenol	*2780*		*"*	*3300*		*84.2*	*18.1-105*			
Surrogate: Terphenyl-dl4	*2330*		*"*	*3300*		*70.7*	*29.1-130*			
Matrix Spike Dup (8041321-MSD1)	**Source: T181249-01**			Prepared: 04/13/18 Analyzed: 04/16/18						
Phenol	1630	1000	ug/kg	3260	ND	49.9	34-114	8.72	42	
2-Chlorophenol	1730	1000	"	3260	ND	53.2	34-114	4.93	40	
1,4-Dichlorobenzene	1650	300	"	3260	ND	50.7	34-114	16.4	28	
N-Nitrosodi-n-propylamine	1830	300	"	3260	ND	56.3	30-110	1.26	38	
1,2,4-Trichlorobenzene	2110	300	"	3260	ND	64.8	39-119	12.0	28	
4-Chloro-3-methylphenol	2550	1000	"	3260	ND	78.2	50-130	5.71	42	
Acenaphthene	2430	300	"	3260	ND	74.7	34-114	0.100	31	
Pentachlorophenol	2500	1000	"	3260	ND	76.7	50-130	0.579	50	
Pyrene	3330	300	"	3260	654	82.1	30-110	31.7	31	QM-07
Surrogate: 2-Fluorophenol	*1310*		*"*	*3260*		*40.3*	*15-121*			
Surrogate: Phenol-d6	*1680*		*"*	*3260*		*51.7*	*24-113*			
Surrogate: Nitrobenzene-d5	*1690*		*"*	*3260*		*51.9*	*21.3-119*			
Surrogate: 2-Fluorobiphenyl	*2170*		*"*	*3260*		*66.6*	*32.4-102*			
Surrogate: 2,4,6-Tribromophenol	*2790*		*"*	*3260*		*85.5*	*18.1-105*			
Surrogate: Terphenyl-dl4	*2440*		*"*	*3260*		*74.9*	*29.1-130*			

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Mike Jaroudi, Project Manager

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PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/20/18 11:17

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.

PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

25712 Commercentre Drive, Lake Forest, CA 92630
949-297-5020

Chain of Custody Record

Client: BRUSCA ASSOCIATES, INC.
Address: PO BOX 332, ROSEVILLE, CA 95661
Phone: (916) 677-1470 Fax: (916) 677-1471
Project Manager: JOE BRUSCA

Date: 4/12/18 Page: 1 of 1
Project Name: LATHROP 43-AC PROPERTY
Collector: BRUSCA Client Project #: 137-002
Batch #: T181249 EDF #:

Sample ID	Date Sampled	Time	Sample Type	Container Type	~~8260~~ SVOCs 8270	8260 + OXY	8260 BTEX, OXY only	~~8270~~ PCBs 8082	8021 BTEX	8015M (gasoline)	8015M (diesel)	8015M Ext./Carbon Chain Silica Gel Cleanup	6010/7000 Title 22 Metals	6020 ICP-MS Metals				Laboratory ID #	Comments/Preservative	Total # of containers
SP3-1	4/12/18	10:51	SOLID	JAR	X			X				X	X					01		1
SP3-2		10:55			X			X				X	X					02		1
SP3-3		11:00			X			X				X	X					03		1
SP3-4		11:03			X			X				X	X					04		1
SP3-5		11:05			X			X				X	X					05		1
SP3-6		11:09			X			X				X	X					06		1
SP3-7		11:14			X			X				X	X					07		1
SP3-8		11:16			X			X				X	X					08		1
SP3-9		11:19			X			X				X	X					09		1
SP3-10		11:21			X			X				X	X					10		1
SP3-11		11:23			X			X				X	X					11		1
SP3-12		11:26			X			X				X	X					12		1
SP4-1		11:35			X			X				X						13		1

Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
	4/12/18 15:45		4/12/18 1545
GSO 4.12.18 9:30		4.12.18 9:30	

Total # of containers
Chain of Custody seals Y/N/NA
Seals intact? Y/N/NA
Received good condition/cold 3.6

Turn around time: NORMAL

Notes

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

COC 160914

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

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27 April 2018

Joe Brusca
Brusca Associates Inc.
PO Box 332
Roseville, CA 95661

RE: Lathrop 48-Ac Property

Enclosed are the results of analyses for samples received by the laboratory on 04/14/18 08:10. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Mike Jaroudi
Project Manager

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

25712 Commercentre Drive
Lake Forest, California 92630
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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/27/18 11:08

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SP5-1	T181265-01	Soil	04/13/18 10:00	04/14/18 08:10

SunStar Laboratories, Inc.

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Mike Jaroudi, Project Manager

SunStar Laboratories, Inc.
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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/27/18 11:08

DETECTIONS SUMMARY

Sample ID: SP5-1 **Laboratory ID:** T181265-01

Analyte	Result	Reporting Limit	Units	Method	Notes
Arsenic	**31**	1.0	ug/l	6020 ICP-MS	STLC
Barium	**400**	1.0	ug/l	6020 ICP-MS	STLC
Beryllium	**1.2**	1.0	ug/l	6020 ICP-MS	STLC
Chromium	**47**	1.0	ug/l	6020 ICP-MS	STLC
Cobalt	**32**	1.0	ug/l	6020 ICP-MS	STLC
Copper	**55**	1.0	ug/l	6020 ICP-MS	STLC
Lead	**46**	2.0	ug/l	6020 ICP-MS	STLC
Molybdenum	**7.3**	1.0	ug/l	6020 ICP-MS	STLC
Nickel	**47**	1.0	ug/l	6020 ICP-MS	STLC
Vanadium	**200**	1.0	ug/l	6020 ICP-MS	STLC
Zinc	**220**	1.0	ug/l	6020 ICP-MS	STLC

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/27/18 11:08

SP5-1

T181265-01 (Soil)

SunStar Laboratories, Inc.

Metals by EPA 6020 Method

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Antimony	ND	1.0	ug/l	1	8042318	04/23/18	04/26/18	6020 ICP-MS	STLC
Arsenic	**31**	1.0	"	"	"	"	"	"	STLC
Barium	**400**	1.0	"	"	"	"	"	"	STLC
Beryllium	**1.2**	1.0	"	"	"	"	04/27/18	"	STLC
Cadmium	ND	1.0	"	"	"	"	04/26/18	"	STLC
Chromium	**47**	1.0	"	"	"	"	"	"	STLC
Cobalt	**32**	1.0	"	"	"	"	"	"	STLC
Copper	**55**	1.0	"	"	"	"	"	"	STLC
Lead	**46**	2.0	"	"	"	"	"	"	STLC
Mercury	ND	0.10	"	"	"	"	"	"	STLC
Molybdenum	**7.3**	1.0	"	"	"	"	"	"	STLC
Nickel	**47**	1.0	"	"	"	"	"	"	STLC
Selenium	ND	5.0	"	"	"	"	"	"	STLC
Silver	ND	1.0	"	"	"	"	"	"	STLC
Thallium	ND	1.0	"	"	"	"	"	"	STLC
Vanadium	**200**	1.0	"	"	"	"	"	"	STLC
Zinc	**220**	1.0	"	"	"	"	"	"	STLC

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/27/18 11:08

Metals by EPA 6020 Method - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8042318 - STLC Metals										
Blank (8042318-BLK1)				Prepared: 04/23/18 Analyzed: 04/26/18						
Antimony	ND	1.0	ug/l							
Arsenic	ND	1.0	"							
Barium	ND	1.0	"							
Beryllium	ND	1.0	"							
Cadmium	ND	1.0	"							
Chromium	ND	1.0	"							
Cobalt	ND	1.0	"							
Copper	ND	1.0	"							
Lead	ND	2.0	"							
Mercury	ND	0.10	"							
Molybdenum	ND	1.0	"							
Nickel	ND	1.0	"							
Selenium	ND	5.0	"							
Silver	ND	1.0	"							
Thallium	ND	1.0	"							
Vanadium	ND	1.0	"							
Zinc	ND	1.0	"							
LCS (8042318-BS1)				Prepared: 04/23/18 Analyzed: 04/26/18						
Arsenic	57.4	1.0	ug/l	50.0		115	80-120			
Barium	56.4	1.0	"	50.0		113	80-120			
Cadmium	56.5	1.0	"	50.0		113	80-120			
Chromium	55.6	1.0	"	50.0		111	80-120			
Lead	56.2	2.0	"	50.0		112	80-120			
Duplicate (8042318-DUP1)	**Source: T181179-06**			Prepared: 04/23/18 Analyzed: 04/26/18						
Barium	548	5.0	ug/l		521			4.95	200	
Chromium	54.5	5.0	"		53.8			1.28	200	

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

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

Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/27/18 11:08

Metals by EPA 6020 Method - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8042318 - STLC Metals										
Matrix Spike (8042318-MS1)	**Source: T181179-06**			Prepared: 04/23/18 Analyzed: 04/26/18						
Arsenic	72.5	1.0	ug/l	50.0	27.8	89.2	75-125			
Barium	611	1.0	"	50.0	521	178	75-125			QM-PS
Cadmium	46.0	1.0	"	50.0	0.966	90.1	75-125			
Chromium	121	1.0	"	50.0	53.8	134	75-125			QM-PS
Lead	168	2.0	"	50.0	112	112	75-125			
Matrix Spike Dup (8042318-MSD1)	**Source: T181179-06**			Prepared: 04/23/18 Analyzed: 04/26/18						
Arsenic	73.4	1.0	ug/l	50.0	27.8	91.2	75-125	1.36	20	
Barium	595	1.0	"	50.0	521	147	75-125	2.61	20	QM-PS
Cadmium	47.4	1.0	"	50.0	0.966	92.9	75-125	2.97	20	
Chromium	124	1.0	"	50.0	53.8	141	75-125	2.85	20	QM-PS
Lead	164	2.0	"	50.0	112	104	75-125	2.22	20	
Post Spike (8042318-PS1)	**Source: T181179-06**			Prepared: 04/23/18 Analyzed: 04/26/18						
Barium	287		ug/l	25.0	261	104	80-120			
Chromium	56.2		"	25.0	26.9	117	80-120			

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

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Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/27/18 11:08

Notes and Definitions

STLC	Sample prepared in accordance with CCR Chapter 11, Article 5, Appendix II, Waste Extraction Test (WET).
QM-PS	The percent recovery and/or RPD are outside acceptance criteria. Results accepted based upon percent recovery results in the post spike and/or serial dilution.
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.

Mike Jaroudi, Project Manager

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949-297-5020

Chain of Custody Record

Client: BRUSCA ASSOCIATES, INC.
Address: PO BOX 332, ROSEVILLE, CA 95661
Phone: (916) 677-1470 Fax: (916) 677-1471
Project Manager: JOE BRUSCA

Date: 4/13/18 Page: 1 Of 1
Project Name: LATHROP 4B-AC PROPERTY
Collector: BRUSCA Client Project #: 137-002
Batch #: T181265 EDF #:

Sample ID	Date Sampled	Time	Sample Type	Container Type	~~8260~~ SVOCs 8270	8260 + OXY	8260 BTEX, OXY only	~~8270~~ PCBs 8082	8021 BTEX	8015M (gasoline)	8015M (diesel) silica gel cleanup	8015M Ext./Carbon Chain	6010/7000 Title 22 Metals	6020 ICP-MS Metals	LEAD ASBESTOS			Laboratory ID #	Comments/Preservative	Total # of containers
SP5-1	4/13/18	10:00	SOLID	JAR	X			X				X	X					01		1
SP5-2		10:04			X			X				X	X					02		1
SP5-3		10:06			X			X				X	X					03		1
SP5-4		10:09			X			X				X	X					04		1

Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
	4/13/18 1:30PM	ER Stevens	4/13/18 1330
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
GSO 4-14-18 8:10		4-14-18 8:10	
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time

Total # of containers
Chain of Custody seals Y/N/NA
Seals intact? Y/N/NA
Received good condition/cold 5.3

Turn around time: NORMAL

Notes

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

COC 170169

May 2, 2018

FAL Project ID: 11472

Mr. Joe Brusca
Brusca Associates
7633 Stonewood Court
Granite Bay, CA 95746

Dear Mr. Brusca,

The following results are associated with Frontier Analytical Laboratory project **11472**. This corresponds to your **Lathrop 48-Ac Property** project under project number **137-002**. Four solid samples were received on 4/13/2018 in good condition. These samples were extracted and analyzed by EPA Method 1613 for tetra through octa chlorinated dibenzo dioxins and furans. The Toxic Equivalency (TEQ) for your samples has been calculated using the 2005 World Health Organization's (WHO's) toxic equivalency factors (TEFs).The total TEQ is reported on the upper right hand corner of each sample data sheet. Brusca Associates requested a turnaround time of fifteen business days for project **11472**.

The following report consists of an Analytical Data section and a Sample Receipt section. The Analytical Data section contains our sample tracking log and the analytical results. The Sample Receipt section contains your chain of custody, our sample login form and a sample photo. The attached results are specifically for the samples referenced in this report only. These results meet all NELAC requirements and shall not be reproduced except in full. Frontier Analytical Laboratory's State of Oregon NELAP certificate number is **4041**. Our State of California ELAP certificate number is **2934**. This report has been emailed to you as a portable document format (PDF) file. A hardcopy will not be sent to you unless specifically requested.

If you have any questions regarding project **11472**, please contact me at (916) 934-0900. Thank you for choosing Frontier Analytical Laboratory for your analytical testing needs.

Sincerely,

Bradley B. Silverbush
Director of Operations

Frontier Analytical Laboratory

Sample Tracking Log

FAL Project ID: **11472**

Received on: **04/13/2018** Project Due: **05/07/2018** Storage: **R-3**

FAL Sample ID	Dup	Client Project ID	Client Sample ID	Requested Method	Matrix	Sampling Date	Sampling Time	Hold Time Due Date
11472-001-SA	0	137-002	SP5-1	EPA 1613 D/F	Solid	04/13/2018	10:00 am	04/15/2019
11472-002-SA	0	137-002	SP5-2	EPA 1613 D/F	Solid	04/13/2018	10:04 am	04/15/2019
11472-003-SA	0	137-002	SP5-3	EPA 1613 D/F	Solid	04/13/2018	10:06 am	04/15/2019
11472-004-SA	0	137-002	SP5-4	EPA 1613 D/F	Solid	04/13/2018	10:09 am	04/15/2019

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EPA Method 1613
PCDD/F

FAL ID: 11472-001-MB
Client ID: Method Blank
Matrix: Solid
Batch No: X4493

Date Extracted: 04-30-2018
Date Received: NA
Amount: 5.00 g

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 05-01-2018
2005 WHO TEQ: 0.0
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.151		-	0.0273				
1,2,3,7,8-PeCDD	ND	0.182		-	0.0570				
1,2,3,4,7,8-HxCDD	ND	0.197		-	0.0793				
1,2,3,6,7,8-HxCDD	ND	0.221		-	0.0940	Total TCDD	ND	0.151	
1,2,3,7,8,9-HxCDD	ND	0.191		-	0.0823	Total PeCDD	ND	0.182	
1,2,3,4,6,7,8-HpCDD	ND	0.180		-	0.0842	Total HxCDD	ND	0.221	
OCDD	ND	0.314		-	0.172	Total HpCDD	ND	0.180	
2,3,7,8-TCDF	ND	0.116		-	0.0269				
1,2,3,7,8-PeCDF	ND	0.140		-	0.0449				
2,3,4,7,8-PeCDF	ND	0.141		-	0.0468				
1,2,3,4,7,8-HxCDF	ND	0.126		-	0.0437				
1,2,3,6,7,8-HxCDF	ND	0.137		-	0.0417				
2,3,4,6,7,8-HxCDF	ND	0.132		-	0.0574				
1,2,3,7,8,9-HxCDF	ND	0.160		-	0.0657	Total TCDF	ND	0.116	
1,2,3,4,6,7,8-HpCDF	ND	0.122		-	0.0747	Total PeCDF	ND	0.141	
1,2,3,4,7,8,9-HpCDF	ND	0.211		-	0.0883	Total HxCDF	ND	0.160	
OCDF	ND	0.225		-	0.170	Total HpCDF	ND	0.211	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	104	25.0 - 164	
13C-1,2,3,7,8-PeCDD	107	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	110	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	107	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	105	23.0 - 140	
13C-OCDD	101	17.0 - 157	
13C-2,3,7,8-TCDF	111	24.0 - 169	
13C-1,2,3,7,8-PeCDF	104	24.0 - 185	
13C-2,3,4,7,8-PeCDF	108	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	99.4	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	98.5	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	99.1	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	97.8	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	98.8	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	75.9	26.0 - 138	
13C-OCDF	97.2	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	94.0	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____

Date: 5/2/2018

Reviewed By: DPV

Date: 5/2/2018

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EPA Method 1613
PCDD/F

FAL ID: 11472-001-OPR
Client ID: OPR
Matrix: Solid
Batch No: X4493

Date Extracted: 04-30-2018
Date Received: NA
Amount: 5.00 g

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: ng/ml

Acquired: 05-01-2018
2005 WHO TEQ: NA

Compound	Conc	QC Limits	Qual
2,3,7,8-TCDD	10.5	6.70 - 15.8	
1,2,3,7,8-PeCDD	50.2	35.0 - 71.0	
1,2,3,4,7,8-HxCDD	50.0	35.0 - 82.0	
1,2,3,6,7,8-HxCDD	49.6	38.0 - 67.0	
1,2,3,7,8,9-HxCDD	47.4	32.0 - 81.0	
1,2,3,4,6,7,8-HpCDD	51.5	35.0 - 70.0	
OCDD	99.1	78.0 - 144	
2,3,7,8-TCDF	11.3	7.50 - 15.8	
1,2,3,7,8-PeCDF	50.8	40.0 - 67.0	
2,3,4,7,8-PeCDF	50.8	34.0 - 80.0	
1,2,3,4,7,8-HxCDF	51.2	36.0 - 67.0	
1,2,3,6,7,8-HxCDF	52.2	42.0 - 65.0	
2,3,4,6,7,8-HxCDF	51.5	35.0 - 78.0	
1,2,3,7,8,9-HxCDF	51.8	39.0 - 65.0	
1,2,3,4,6,7,8-HpCDF	51.6	41.0 - 61.0	
1,2,3,4,7,8,9-HpCDF	52.6	39.0 - 69.0	
OCDF	101	63.0 - 170	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	76.9	20.0 - 175	
13C-1,2,3,7,8-PeCDD	84.4	21.0 - 227	
13C-1,2,3,4,7,8-HxCDD	97.8	21.0 - 193	
13C-1,2,3,6,7,8-HxCDD	96.9	25.0 - 163	
13C-1,2,3,4,6,7,8-HpCDD	87.3	26.0 - 166	
13C-OCDD	84.1	13.0 - 198	
13C-2,3,7,8-TCDF	80.3	22.0 - 152	
13C-1,2,3,7,8-PeCDF	88.2	21.0 - 192	
13C-2,3,4,7,8-PeCDF	90.0	13.0 - 328	
13C-1,2,3,4,7,8-HxCDF	88.7	19.0 - 202	
13C-1,2,3,6,7,8-HxCDF	86.6	21.0 - 159	
13C-2,3,4,6,7,8-HxCDF	86.1	22.0 - 176	
13C-1,2,3,7,8,9-HxCDF	74.7	17.0 - 205	
13C-1,2,3,4,6,7,8-HpCDF	81.5	21.0 - 158	
13C-1,2,3,4,7,8,9-HpCDF	78.0	20.0 - 186	
13C-OCDF	79.1	13.0 - 198	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	72.0	31.0 - 191	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____

Date: 5/2/2018

Reviewed By: DPV

Date: 5/2/2018

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EPA Method 1613
PCDD/F

FAL ID: 11472-001-SA
Client ID: SP5-1
Matrix: Solid
Batch No: X4493

Date Extracted: 04-30-2018
Date Received: 04-13-2018
Amount: 5.01 g
% Solids: 88.35

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 05-01-2018
2005 WHO TEQ: 0.759
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.226		-	0.0273				
1,2,3,7,8-PeCDD	ND	0.227		-	0.0570				
1,2,3,4,7,8-HxCDD	ND	0.213		-	0.0793				
1,2,3,6,7,8-HxCDD	0.953	-	J	0.0953	0.0940	Total TCDD	ND	0.226	
1,2,3,7,8,9-HxCDD	0.696	-	J	0.0696	0.0823	Total PeCDD	0.602	-	J
1,2,3,4,6,7,8-HpCDD	16.1	-		0.161	0.0842	Total HxCDD	7.07	-	
OCDD	104	-		0.0312	0.172	Total HpCDD	29.2	-	
2,3,7,8-TCDF	0.815	-	J	0.0815	0.0269				
1,2,3,7,8-PeCDF	ND	0.178		-	0.0449				
2,3,4,7,8-PeCDF	0.547	-	J	0.164	0.0468				
1,2,3,4,7,8-HxCDF	0.507	-	J	0.0507	0.0437				
1,2,3,6,7,8-HxCDF	0.379	-	J	0.0379	0.0417				
2,3,4,6,7,8-HxCDF	0.336	-	J	0.0336	0.0574				
1,2,3,7,8,9-HxCDF	ND	0.219		-	0.0657	Total TCDF	3.42	-	
1,2,3,4,6,7,8-HpCDF	3.24	-	J	0.0324	0.0747	Total PeCDF	3.71	-	J
1,2,3,4,7,8,9-HpCDF	ND	0.262		-	0.0883	Total HxCDF	5.28	-	
OCDF	6.45	-	J	0.00194	0.170	Total HpCDF	8.39	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	78.5	25.0 - 164	
13C-1,2,3,7,8-PeCDD	88.5	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	109	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	105	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	89.2	23.0 - 140	
13C-OCDD	90.8	17.0 - 157	
13C-2,3,7,8-TCDF	79.1	24.0 - 169	
13C-1,2,3,7,8-PeCDF	92.7	24.0 - 185	
13C-2,3,4,7,8-PeCDF	95.4	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	99.2	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	95.2	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	93.3	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	82.9	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	78.5	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	82.2	26.0 - 138	
13C-OCDF	84.2	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	72.4	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 5/2/2018

Reviewed By: DPV
Date: 5/2/2018

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EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 11472-002-SA
Client ID: SP5-2
Matrix: Solid
Batch No: X4493

Date Extracted: 04-30-2018
Date Received: 04-13-2018
Amount: 5.03 g
% Solids: 92.60

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 05-01-2018
2005 WHO TEQ: 0.670
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.189		-	0.0273				
1,2,3,7,8-PeCDD	ND	0.287		-	0.0570				
1,2,3,4,7,8-HxCDD	ND	0.213		-	0.0793				
1,2,3,6,7,8-HxCDD	0.736	-	J	0.0736	0.0940	Total TCDD	ND	0.189	
1,2,3,7,8,9-HxCDD	0.589	-	J	0.0589	0.0823	Total PeCDD	ND	0.287	
1,2,3,4,6,7,8-HpCDD	10.9	-		0.109	0.0842	Total HxCDD	5.21	-	
OCDD	73.3	-		0.0220	0.172	Total HpCDD	20.4	-	
2,3,7,8-TCDF	0.829	-	J	0.0829	0.0269				
1,2,3,7,8-PeCDF	0.269	-	J	0.00807	0.0449				
2,3,4,7,8-PeCDF	0.478	-	J	0.143	0.0468				
1,2,3,4,7,8-HxCDF	0.572	-	J	0.0572	0.0437				
1,2,3,6,7,8-HxCDF	0.459	-	J	0.0459	0.0417				
2,3,4,6,7,8-HxCDF	0.407	-	J	0.0407	0.0574				
1,2,3,7,8,9-HxCDF	ND	0.159		-	0.0657	Total TCDF	4.70	-	
1,2,3,4,6,7,8-HpCDF	2.66	-	J	0.0266	0.0747	Total PeCDF	4.34	-	J
1,2,3,4,7,8,9-HpCDF	ND	0.246		-	0.0883	Total HxCDF	4.67	-	J
OCDF	5.95	-	J	0.00179	0.170	Total HpCDF	6.39	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	85.9	25.0 - 164	
13C-1,2,3,7,8-PeCDD	93.1	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	112	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	108	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	98.8	23.0 - 140	
13C-OCDD	89.6	17.0 - 157	
13C-2,3,7,8-TCDF	82.8	24.0 - 169	
13C-1,2,3,7,8-PeCDF	94.7	24.0 - 185	
13C-2,3,4,7,8-PeCDF	94.6	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	103	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	99.3	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	98.4	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	88.7	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	80.9	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	85.6	26.0 - 138	
13C-OCDF	84.9	17.0 - 157	
Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	76.2	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____
Date: 5/2/2018

Reviewed By: DPV
Date: 5/2/2018

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EPA Method 1613
PCDD/F

FAL ID: 11472-003-SA
Client ID: SP5-3
Matrix: Solid
Batch No: X4493

Date Extracted: 04-30-2018
Date Received: 04-13-2018
Amount: 5.03 g
% Solids: 90.60

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 05-01-2018
2005 WHO TEQ: 1.24
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.204		-	0.0273				
1,2,3,7,8-PeCDD	0.340	-	J	0.340	0.0570				
1,2,3,4,7,8-HxCDD	ND	0.279		-	0.0793				
1,2,3,6,7,8-HxCDD	0.910	-	J	0.0910	0.0940	Total TCDD	0.472	-	J
1,2,3,7,8,9-HxCDD	0.499	-	J	0.0499	0.0823	Total PeCDD	2.65	-	J
1,2,3,4,6,7,8-HpCDD	12.7	-		0.127	0.0842	Total HxCDD	6.81	-	
OCDD	82.4	-		0.0247	0.172	Total HpCDD	24.6	-	
2,3,7,8-TCDF	1.04	-		0.104	0.0269				
1,2,3,7,8-PeCDF	0.272	-	J	0.00816	0.0449				
2,3,4,7,8-PeCDF	0.747	-	J	0.224	0.0468				
1,2,3,4,7,8-HxCDF	0.920	-	J	0.0920	0.0437				
1,2,3,6,7,8-HxCDF	0.565	-	J	0.0565	0.0417				
2,3,4,6,7,8-HxCDF	0.484	-	J	0.0484	0.0574				
1,2,3,7,8,9-HxCDF	0.372	-	J	0.0372	0.0657	Total TCDF	5.58	-	
1,2,3,4,6,7,8-HpCDF	2.91	-	J	0.0291	0.0747	Total PeCDF	5.24	-	M
1,2,3,4,7,8,9-HpCDF	0.556	-	J	0.00556	0.0883	Total HxCDF	6.19	-	
OCDF	5.75	-	J	0.00173	0.170	Total HpCDF	7.89	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	81.6	25.0 - 164	
13C-1,2,3,7,8-PeCDD	90.1	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	112	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	110	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	97.8	23.0 - 140	
13C-OCDD	91.7	17.0 - 157	
13C-2,3,7,8-TCDF	80.4	24.0 - 169	
13C-1,2,3,7,8-PeCDF	95.3	24.0 - 185	
13C-2,3,4,7,8-PeCDF	98.1	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	102	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	99.8	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	96.1	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	88.5	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	84.6	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	83.3	26.0 - 138	
13C-OCDF	88.4	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	73.6	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____

Date: 5/2/2018

Reviewed By: DPV

Date: 5/2/2018

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EPA Method 1613
PCDD/F

FAL ID: 11472-004-SA
Client ID: SP5-4
Matrix: Solid
Batch No: X4493

Date Extracted: 04-30-2018
Date Received: 04-13-2018
Amount: 5.01 g
% Solids: 91.50

ICal: PCDDFAL4-12-20-17
GC Column: DB5MS
Units: pg/g

Acquired: 05-02-2018
2005 WHO TEQ: 0.539
Basis: Dry Weight

Compound	Conc	DL	Qual	2005 WHO Tox	MDL	Compound	Conc	DL	Qual
2,3,7,8-TCDD	ND	0.193		-	0.0273				
1,2,3,7,8-PeCDD	ND	0.231		-	0.0570				
1,2,3,4,7,8-HxCDD	0.441	-	J	0.0441	0.0793				
1,2,3,6,7,8-HxCDD	0.971	-	J	0.0971	0.0940	Total TCDD	ND	0.193	
1,2,3,7,8,9-HxCDD	0.806	-	J	0.0806	0.0823	Total PeCDD	2.34	-	J
1,2,3,4,6,7,8-HpCDD	15.6	-		0.156	0.0842	Total HxCDD	10.1	-	
OCDD	90.0	-		0.0270	0.172	Total HpCDD	30.6	-	
2,3,7,8-TCDF	ND	0.226		-	0.0269				
1,2,3,7,8-PeCDF	ND	0.191		-	0.0449				
2,3,4,7,8-PeCDF	0.324	-	J	0.0972	0.0468				
1,2,3,4,7,8-HxCDF	ND	0.289		-	0.0437				
1,2,3,6,7,8-HxCDF	ND	0.266		-	0.0417				
2,3,4,6,7,8-HxCDF	ND	0.283		-	0.0574				
1,2,3,7,8,9-HxCDF	ND	0.344		-	0.0657	Total TCDF	0.380	-	J
1,2,3,4,6,7,8-HpCDF	3.07	-	J	0.0307	0.0747	Total PeCDF	1.62	-	J
1,2,3,4,7,8,9-HpCDF	0.399	-	J	0.00399	0.0883	Total HxCDF	3.21	-	J
OCDF	6.79	-	J	0.00204	0.170	Total HpCDF	9.66	-	

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	81.6	25.0 - 164	
13C-1,2,3,7,8-PeCDD	89.8	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	110	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	108	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	95.1	23.0 - 140	
13C-OCDD	90.6	17.0 - 157	
13C-2,3,7,8-TCDF	79.4	24.0 - 169	
13C-1,2,3,7,8-PeCDF	95.8	24.0 - 185	
13C-2,3,4,7,8-PeCDF	95.5	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	97.0	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	94.2	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	94.8	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	85.5	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	79.6	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	80.0	26.0 - 138	
13C-OCDF	87.1	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	73.4	35.0 - 197	

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
DNQ	Analyte concentration is below calibration range
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J	Analyte concentration is below calibration range
M	Maximum possible concentration
ND	Analyte Not Detected at Detection Limit Level
NP	Not Provided
P	Pre-filtered through a Whatman 0.7um GF/F filter
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection

Analyst: _____

Date: 5/2/2018

Reviewed By: DPV

Date: 5/2/2018

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El Dorado Hills, CA 95762
Tel: 916-934-0900
Fax: 916-934-0999

FAL USE ONLY
Laboratory Project No.: 11472
Temperature: 0 °C

Chain of Custody

www.frontieranalytical.com

Please Print in Pen Page 1 of 1

CLIENT INFORMATION	**INVOICE INFORMATION** (if different from client info)	**PROJECT INFORMATION**
Company Name: Brusca Associates, Inc.	Company Name: Same	FAL Quote #: 3310
Contact Name: Joe Brusca	Contact Name:	P.O. #:
Address: PO Box 332, Roseville, CA 95661	Address:	Project #: 137-002
Phone: 916-677-1470 Fax:	Phone: Fax:	Project Name: LATHROP 49-Ac PROPERTY
Email: jbrusca@bruscaassociates.com	Email:	TAT (business days): ☐ 15 ☒ 10 ☐ 5* ☐ 3* (√ one)
		* FAL must agree with price and RUSH TAT in writing.

REPORT INFORMATION	**REPORT DISTRIBUTION** (email only is preferred)	**ADDITIONAL INSTRUCTIONS**
Report Level: ☐ I/II ☐ III ☐ IV	☐ Hardcopy	Kathy to Joe - 15-TAT.
☐ EDD: ☐ FAL Basic ☐ Geotracker ☐ Other: ____ ☐ Custom: Contact FAL	☐ CD (.pdf including EDDs if requested)	
☐ California State Drinking Water Form	☐ Email (.pdf including EDDs if requested)	
System #: Source #:		
Sampler: Employer:		

	Sample ID	Date Collected	Time	Matrix	# of containers	EPA 1613**	EPA 8290**	DLM 02.0	EPA 8280**	Appendix IX	EPA TO-9/9A	EPA 23/23A	EPA 1668	FAL 15	Other	Remarks
1	SP5-1	4/13/18	10:00	SOLID		X										
2	SP5-2		10:04			X										
3	SP5-3		10:06			X										
4	SP5-4		10:09			X										
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																

**CONGENERS	**TEQ
☐ 2,3,7,8-TCDD only	☐ 1998 WHO
☐ 2,3,7,8-TCDD/F only	☑ 2005 WHO
☑ PCDD/F (Cl_4-Cl_8)	☐ Other

Samples will be disposed of 90 days after sample receipt unless other arrangements have been made and agreed upon in writing.

Relinquished by: (Signature and Printed Name)	Date	Time	**Received by:** (Signature and Printed Name)	Date	Time
	4/13/18	2:12PM	Kathy Spp K2-pp	4/13/18	1412

Client understands that all terms described in the proposals, quotations, and/or the general terms provided in the current FAL price schedules will be followed.
FAL reserves the rights to terminate its service or withhold delivery of reports, if in FAL's sole discretion the terms of the project have been broken.

White Copy – Report Yellow Copy – Laboratory Pink Copy - Originator

Frontier Analytical Laboratory

Sample Login Form

FAL Project ID: **11472**

Client:	Brusca Associates, Inc.
Client Project ID:	137-002
Date Received:	04/13/2018
Time Received:	02:12 pm
Received By:	KZ
Logged In By:	KZ
# of Samples Received:	4
Duplicates:	0
Storage Location:	R-3

Method of Delivery:	Courier
Tracking Number:	NA
Shipping Container Received Intact	Yes
Custody seals(s) present?	No
Custody seals(s) intact?	No
Sample Arrival Temperature (C)	0
Cooling Method	Ice
Chain Of Custody Present?	Yes
Return Shipping Container To Client	Yes
Test aqueous sample for residual Chlorine	No
Sodium Thiosulfate Added	No
Adequate Sample Volume	Yes
Appropriate Sample Container	Yes
pH Range of Aqueous Sample	N/A
Anomalies or additional comments:	

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Lake Forest, California 92630
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949.297.5027 Fax

23 April 2018

Joe Brusca
Brusca Associates Inc.
PO Box 332
Roseville, CA 95661

RE: Lathrop 48-Ac Property

Enclosed are the results of analyses for samples received by the laboratory on 04/14/18 08:10. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Mike Jaroudi
Project Manager

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:35

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SP5-1	T181265-01	Soil	04/13/18 10:00	04/14/18 08:10
SP5-2	T181265-02	Soil	04/13/18 10:04	04/14/18 08:10
SP5-3	T181265-03	Soil	04/13/18 10:06	04/14/18 08:10
SP5-4	T181265-04	Soil	04/13/18 10:09	04/14/18 08:10

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:35

DETECTIONS SUMMARY

Sample ID: SP5-1 **Laboratory ID:** T181265-01

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**53**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**61**	10	mg/kg	EPA 8015B	
Barium	**59**	1.0	mg/kg	EPA 6010B	
Chromium	**8.6**	2.0	mg/kg	EPA 6010B	
Cobalt	**4.3**	2.0	mg/kg	EPA 6010B	
Copper	**4.4**	1.0	mg/kg	EPA 6010B	
Nickel	**6.2**	2.0	mg/kg	EPA 6010B	
Vanadium	**20**	5.0	mg/kg	EPA 6010B	
Zinc	**33**	1.0	mg/kg	EPA 6010B	
PCB-1254	**17**	10	ug/kg	EPA 8082	

Sample ID: SP5-2 **Laboratory ID:** T181265-02

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**70**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**58**	10	mg/kg	EPA 8015B	
Barium	**63**	1.0	mg/kg	EPA 6010B	
Chromium	**6.4**	2.0	mg/kg	EPA 6010B	
Cobalt	**5.3**	2.0	mg/kg	EPA 6010B	
Copper	**4.9**	1.0	mg/kg	EPA 6010B	
Nickel	**7.2**	2.0	mg/kg	EPA 6010B	
Vanadium	**20**	5.0	mg/kg	EPA 6010B	
Zinc	**30**	1.0	mg/kg	EPA 6010B	
PCB-1254	**14**	10	ug/kg	EPA 8082	

Sample ID: SP5-3 **Laboratory ID:** T181265-03

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**35**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**50**	10	mg/kg	EPA 8015B	
Barium	**61**	1.0	mg/kg	EPA 6010B	

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:35

Sample ID: SP5-3 **Laboratory ID:** T181265-03

Analyte	Result	Reporting Limit	Units	Method	Notes
Chromium	**7.0**	2.0	mg/kg	EPA 6010B	
Cobalt	**4.5**	2.0	mg/kg	EPA 6010B	
Copper	**8.6**	1.0	mg/kg	EPA 6010B	
Nickel	**6.4**	2.0	mg/kg	EPA 6010B	
Vanadium	**18**	5.0	mg/kg	EPA 6010B	
Zinc	**30**	1.0	mg/kg	EPA 6010B	
PCB-1254	**35**	10	ug/kg	EPA 8082	

Sample ID: SP5-4 **Laboratory ID:** T181265-04

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**17**	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	**56**	10	mg/kg	EPA 8015B	
Barium	**64**	1.0	mg/kg	EPA 6010B	
Chromium	**6.7**	2.0	mg/kg	EPA 6010B	
Cobalt	**4.9**	2.0	mg/kg	EPA 6010B	
Copper	**5.2**	1.0	mg/kg	EPA 6010B	
Nickel	**7.2**	2.0	mg/kg	EPA 6010B	
Vanadium	**20**	5.0	mg/kg	EPA 6010B	
Zinc	**31**	1.0	mg/kg	EPA 6010B	

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:35

SP5-1

T181265-01 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8041214	04/18/18	04/18/18	EPA 8015B	
C13-C28 (DRO)	**53**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**61**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*107 %*	*65-135*		"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8041623	04/16/18	04/16/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**59**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**8.6**	2.0	"	"	"	"	"	"	
Cobalt	**4.3**	2.0	"	"	"	"	"	"	
Copper	**4.4**	1.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**6.2**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**20**	5.0	"	"	"	"	"	"	
Zinc	**33**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8041624	04/16/18	04/16/18	EPA 7471A Soil	

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:35

SP5-1

T181265-01 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8041633	04/16/18	04/18/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	**17**	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*84.8 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*84.4 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8041634	04/16/18	04/17/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:35

SP5-1

T181265-01 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8041634	04/16/18	04/17/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:35

SP5-1

T181265-01 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8041634	04/16/18	04/17/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*43.4 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*54.5 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*56.1 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*65.3 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*90.2 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*85.5 %*	*29.1-130*		"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:35

SP5-2

T181265-02 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8041214	04/18/18	04/18/18	EPA 8015B	
C13-C28 (DRO)	**70**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**58**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*106 %*	*65-135*		"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8041623	04/16/18	04/16/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**63**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**6.4**	2.0	"	"	"	"	"	"	
Cobalt	**5.3**	2.0	"	"	"	"	"	"	
Copper	**4.9**	1.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**7.2**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**20**	5.0	"	"	"	"	"	"	
Zinc	**30**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8041624	04/16/18	04/16/18	EPA 7471A Soil	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:35

SP5-2

T181265-02 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8041633	04/16/18	04/18/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	**14**	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*86.2 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*85.8 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8041634	04/16/18	04/17/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:35

SP5-2

T181265-02 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8041634	04/16/18	04/17/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:35

SP5-2

T181265-02 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8041634	04/16/18	04/17/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*49.5 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*60.8 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*60.2 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*71.2 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*94.0 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*84.5 %*	*29.1-130*		"	"	"	"	

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:35

SP5-3

T181265-03 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8041214	04/18/18	04/18/18	EPA 8015B	
C13-C28 (DRO)	**35**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**50**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*106 %*	*65-135*		"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8041623	04/16/18	04/16/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**61**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**7.0**	2.0	"	"	"	"	"	"	
Cobalt	**4.5**	2.0	"	"	"	"	"	"	
Copper	**8.6**	1.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**6.4**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**18**	5.0	"	"	"	"	"	"	
Zinc	**30**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8041624	04/16/18	04/16/18	EPA 7471A Soil	

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:35

SP5-3

T181265-03 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8041633	04/16/18	04/18/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	**35**	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*83.3 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*81.8 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8041634	04/16/18	04/17/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:35

SP5-3

T181265-03 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8041634	04/16/18	04/17/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:35

SP5-3

T181265-03 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8041634	04/16/18	04/17/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*56.9 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*68.6 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*68.0 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*83.3 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*99.1 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*88.9 %*	*29.1-130*		"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:35

SP5-4

T181265-04 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup									
C6-C12 (GRO)	ND	10	mg/kg	1	8041214	04/18/18	04/18/18	EPA 8015B	
C13-C28 (DRO)	**17**	10	"	"	"	"	"	"	
C29-C40 (MORO)	**56**	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*105 %*	*65-135*		"	"	"	"	
Metals by EPA 6010B									
Antimony	ND	3.0	mg/kg	1	8041623	04/16/18	04/16/18	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	**64**	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	**6.7**	2.0	"	"	"	"	"	"	
Cobalt	**4.9**	2.0	"	"	"	"	"	"	
Copper	**5.2**	1.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	**7.2**	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	**20**	5.0	"	"	"	"	"	"	
Zinc	**31**	1.0	"	"	"	"	"	"	
Cold Vapor Extraction EPA 7470/7471									
Mercury	ND	0.10	mg/kg	1	8041624	04/16/18	04/16/18	EPA 7471A Soil	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:35

SP5-4

T181265-04 (Soil)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by EPA Method 8082									
PCB-1016	ND	10	ug/kg	1	8041633	04/16/18	04/18/18	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*94.1 %*		*35-140*	"	"	"	"	
Surrogate: Decachlorobiphenyl		*95.9 %*		*35-140*	"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Carbazole	ND	300	ug/kg	1	8041634	04/16/18	04/17/18	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:35

SP5-4

T181265-04 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	8041634	04/16/18	04/17/18	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:35

SP5-4

T181265-04 (Soil)

SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Isophorone	ND	300	ug/kg	1	8041634	04/16/18	04/17/18	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*57.5 %*	*15-121*		"	"	"	"	
Surrogate: Phenol-d6		*65.7 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*65.1 %*	*21.3-119*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*75.3 %*	*32.4-102*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*95.4 %*	*18.1-105*		"	"	"	"	
Surrogate: Terphenyl-dl4		*86.6 %*	*29.1-130*		"	"	"	"	

SunStar Laboratories, Inc.

Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:35

Extractable Petroleum Hydrocarbons by 8015B with Silica Gel Cleanup - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8041214 - EPA 3550B GC										
Blank (8041214-BLK1)				Prepared: 04/12/18 Analyzed: 04/18/18						
C6-C12 (GRO)	ND	10	mg/kg							
C13-C28 (DRO)	ND	10	"							
C29-C40 (MORO)	ND	10	"							
Surrogate: p-Terphenyl	*97.8*		*"*	*99.0*		*98.8*	*65-135*			
LCS (8041214-BS1)				Prepared: 04/12/18 Analyzed: 04/18/18						
C13-C28 (DRO)	500	10	mg/kg	495		101	75-125			
Surrogate: p-Terphenyl	*101*		*"*	*99.0*		*102*	*65-135*			
Matrix Spike (8041214-MS1)	**Source: T181265-01**			Prepared: 04/12/18 Analyzed: 04/18/18						
C13-C28 (DRO)	560	10	mg/kg	505	53	100	75-125			
Surrogate: p-Terphenyl	*106*		*"*	*101*		*105*	*65-135*			
Matrix Spike Dup (8041214-MSD1)	**Source: T181265-01**			Prepared: 04/12/18 Analyzed: 04/18/18						
C13-C28 (DRO)	590	10	mg/kg	500	53	108	75-125	5.92	20	
Surrogate: p-Terphenyl	*104*		*"*	*100*		*104*	*65-135*			

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:35

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 8041623 - EPA 3050B										
Blank (8041623-BLK1)				Prepared & Analyzed: 04/16/18						
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 (8041623-BS1)				Prepared & Analyzed: 04/16/18						
Arsenic	92.9	5.0	mg/kg	100		92.9	75-125			
Barium	91.6	1.0	"	100		91.6	75-125			
Cadmium	88.7	2.0	"	100		88.7	75-125			
Chromium	90.3	2.0	"	100		90.3	75-125			
Lead	96.9	3.0	"	100		96.9	75-125			
Matrix Spike (8041623-MS1)	**Source: T181256-01**			Prepared & Analyzed: 04/16/18						
Arsenic	88.5	5.0	mg/kg	100	1.81	86.7	75-125			
Barium	119	1.0	"	100	37.7	81.1	75-125			
Cadmium	83.2	2.0	"	100	0.425	82.8	75-125			
Chromium	89.3	2.0	"	100	5.37	84.0	75-125			
Lead	93.3	3.0	"	100	ND	93.3	75-125			

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Mike Jaroudi, Project Manager

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:35

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 8041623 - EPA 3050B										
Matrix Spike Dup (8041623-MSD1)	**Source: T181256-01**			Prepared & Analyzed: 04/16/18						
Arsenic	95.2	5.0	mg/kg	100	1.81	93.4	75-125	7.37	20	
Barium	123	1.0	"	100	37.7	85.1	75-125	3.25	20	
Cadmium	85.4	2.0	"	100	0.425	85.0	75-125	2.67	20	
Chromium	91.3	2.0	"	100	5.37	86.0	75-125	2.21	20	
Lead	99.2	3.0	"	100	ND	99.2	75-125	6.14	20	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:35

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 8041624 - EPA 7471A Soil										
Blank (8041624-BLK1)				Prepared & Analyzed: 04/16/18						
Mercury	ND	0.10	mg/kg							
LCS (8041624-BS1)				Prepared & Analyzed: 04/16/18						
Mercury	0.405	0.10	mg/kg	0.417		97.2	80-120			
Matrix Spike (8041624-MS1)	**Source: T181256-01**			Prepared & Analyzed: 04/16/18						
Mercury	0.408	0.10	mg/kg	0.417	ND	98.0	75-125			
Matrix Spike Dup (8041624-MSD1)	**Source: T181256-01**			Prepared & Analyzed: 04/16/18						
Mercury	0.428	0.10	mg/kg	0.417	ND	103	75-125	4.64	20	

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:35

Polychlorinated Biphenyls by EPA Method 8082 - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8041633 - EPA 3550 ECD/GCMS										
Blank (8041633-BLK1)				Prepared: 04/16/18 Analyzed: 04/18/18						
PCB-1016	ND	10	ug/kg							
PCB-1221	ND	10	"							
PCB-1232	ND	10	"							
PCB-1242	ND	10	"							
PCB-1248	ND	10	"							
PCB-1254	ND	10	"							
PCB-1260	ND	10	"							
Surrogate: Tetrachloro-meta-xylene	*8.65*		"	*9.90*		*87.3*	*35-140*			
Surrogate: Decachlorobiphenyl	*10.1*		"	*9.90*		*102*	*35-140*			
LCS (8041633-BS1)				Prepared: 04/16/18 Analyzed: 04/18/18						
PCB-1016	70.1	10	ug/kg	99.0		70.8	40-130			
PCB-1260	66.8	10	"	99.0		67.5	40-130			
Surrogate: Tetrachloro-meta-xylene	*9.51*		"	*9.90*		*96.0*	*35-140*			
Surrogate: Decachlorobiphenyl	*11.0*		"	*9.90*		*112*	*35-140*			
Matrix Spike (8041633-MS1)	**Source: T181265-01**			Prepared: 04/16/18 Analyzed: 04/18/18						
PCB-1016	60.2	10	ug/kg	101	ND	59.6	40-130			
PCB-1260	60.1	10	"	101	ND	59.5	40-130			
Surrogate: Tetrachloro-meta-xylene	*8.99*		"	*10.1*		*89.0*	*35-140*			
Surrogate: Decachlorobiphenyl	*9.25*		"	*10.1*		*91.5*	*35-140*			
Matrix Spike Dup (8041633-MSD1)	**Source: T181265-01**			Prepared: 04/16/18 Analyzed: 04/18/18						
PCB-1016	64.2	10	ug/kg	101	ND	63.6	40-130	6.49	30	
PCB-1260	62.7	10	"	101	ND	62.1	40-130	4.28	30	
Surrogate: Tetrachloro-meta-xylene	*9.14*		"	*10.1*		*90.5*	*35-140*			
Surrogate: Decachlorobiphenyl	*9.02*		"	*10.1*		*89.3*	*35-140*			

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:35

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8041634 - EPA 3550 ECD/GCMS										
Blank (8041634-BLK1)				Prepared: 04/16/18 Analyzed: 04/17/18						
Carbazole	ND	300	ug/kg							
Phenol	ND	1000	"							
Aniline	ND	300	"							
2-Chlorophenol	ND	1000	"							
1,4-Dichlorobenzene	ND	300	"							
N-Nitrosodi-n-propylamine	ND	300	"							
1,2,4-Trichlorobenzene	ND	300	"							
4-Chloro-3-methylphenol	ND	1000	"							
1-Methylnaphthalene	ND	300	"							
2-Methylnaphthalene	ND	300	"							
Acenaphthene	ND	300	"							
4-Nitrophenol	ND	1000	"							
2,4-Dinitrotoluene	ND	300	"							
Pentachlorophenol	ND	1000	"							
Pyrene	ND	300	"							
Acenaphthylene	ND	300	"							
Anthracene	ND	300	"							
Benzo (a) anthracene	ND	300	"							
Benzo (b) fluoranthene	ND	300	"							
Benzo (k) fluoranthene	ND	300	"							
Benzo (g,h,i) perylene	ND	1000	"							
Benzo (a) pyrene	ND	300	"							
Benzyl alcohol	ND	300	"							
Bis(2-chloroethoxy)methane	ND	300	"							
Bis(2-chloroethyl)ether	ND	300	"							
Bis(2-chloroisopropyl)ether	ND	300	"							
Bis(2-ethylhexyl)phthalate	ND	300	"							
4-Bromophenyl phenyl ether	ND	300	"							
Butyl benzyl phthalate	ND	300	"							
4-Chloroaniline	ND	300	"							
2-Chloronaphthalene	ND	300	"							
4-Chlorophenyl phenyl ether	ND	300	"							
Chrysene	ND	300	"							
Dibenz (a,h) anthracene	ND	300	"							
Dibenzofuran	ND	300	"							
Di-n-butyl phthalate	ND	300	"							

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:35

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8041634 - EPA 3550 ECD/GCMS										
Blank (8041634-BLK1)				Prepared: 04/16/18 Analyzed: 04/17/18						
1,2-Dichlorobenzene	ND	300	ug/kg							
1,3-Dichlorobenzene	ND	300	"							
2,4-Dichlorophenol	ND	1000	"							
Diethyl phthalate	ND	300	"							
2,4-Dimethylphenol	ND	1000	"							
Dimethyl phthalate	ND	300	"							
4,6-Dinitro-2-methylphenol	ND	1000	"							
2,4-Dinitrophenol	ND	1000	"							
2,6-Dinitrotoluene	ND	1000	"							
Di-n-octyl phthalate	ND	300	"							
Fluoranthene	ND	300	"							
Fluorene	ND	300	"							
Hexachlorobenzene	ND	1500	"							
Hexachlorobutadiene	ND	300	"							
Hexachlorocyclopentadiene	ND	1000	"							
Hexachloroethane	ND	300	"							
Indeno (1,2,3-cd) pyrene	ND	300	"							
Isophorone	ND	300	"							
2-Methylphenol	ND	1000	"							
4-Methylphenol	ND	1000	"							
Naphthalene	ND	300	"							
2-Nitroaniline	ND	300	"							
3-Nitroaniline	ND	300	"							
4-Nitroaniline	ND	300	"							
Nitrobenzene	ND	1000	"							
2-Nitrophenol	ND	1000	"							
N-Nitrosodimethylamine	ND	300	"							
N-Nitrosodiphenylamine	ND	300	"							
2,3,5,6-Tetrachlorophenol	ND	300	"							
2,3,4,6-Tetrachlorophenol	ND	300	"							
Phenanthrene	ND	300	"							
Azobenzene	ND	300	"							
2,4,5-Trichlorophenol	ND	1000	"							
Pyridine	ND	300	"							
2,4,6-Trichlorophenol	ND	1000	"							

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PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:35

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8041634 - EPA 3550 ECD/GCMS										
Blank (8041634-BLK1)				Prepared: 04/16/18 Analyzed: 04/17/18						
Surrogate: 2-Fluorophenol	*1790*		*ug/kg*	*3380*		*53.0*	*15-121*			
Surrogate: Phenol-d6	*1920*		*"*	*3380*		*56.9*	*24-113*			
Surrogate: Nitrobenzene-d5	*2150*		*"*	*3380*		*63.5*	*21.3-119*			
Surrogate: 2-Fluorobiphenyl	*2510*		*"*	*3380*		*74.3*	*32.4-102*			
Surrogate: 2,4,6-Tribromophenol	*3160*		*"*	*3380*		*93.4*	*18.1-105*			
Surrogate: Terphenyl-dl4	*2960*		*"*	*3380*		*87.6*	*29.1-130*			
LCS (8041634-BS1)				Prepared: 04/16/18 Analyzed: 04/17/18						
Phenol	1490	1000	ug/kg	3280		45.6	34-114			
2-Chlorophenol	1620	1000	"	3280		49.4	34-114			
1,4-Dichlorobenzene	1680	300	"	3280		51.4	34-114			
N-Nitrosodi-n-propylamine	1700	300	"	3280		51.9	30-110			
1,2,4-Trichlorobenzene	1900	300	"	3280		58.0	39-119			
4-Chloro-3-methylphenol	2150	1000	"	3280		65.6	50-130			
Acenaphthene	1720	300	"	3280		52.6	34-114			
Pentachlorophenol	2280	1000	"	3280		69.7	50-130			
Pyrene	1530	300	"	3280		46.8	30-110			
Surrogate: 2-Fluorophenol	*1450*		*"*	*3280*		*44.3*	*15-121*			
Surrogate: Phenol-d6	*1650*		*"*	*3280*		*50.4*	*24-113*			
Surrogate: Nitrobenzene-d5	*1790*		*"*	*3280*		*54.7*	*21.3-119*			
Surrogate: 2-Fluorobiphenyl	*2130*		*"*	*3280*		*65.1*	*32.4-102*			
Surrogate: 2,4,6-Tribromophenol	*2810*		*"*	*3280*		*85.6*	*18.1-105*			
Surrogate: Terphenyl-dl4	*2600*		*"*	*3280*		*79.4*	*29.1-130*			
Matrix Spike (8041634-MS1)	**Source: T181265-01**			Prepared: 04/16/18 Analyzed: 04/17/18						
Phenol	1750	1000	ug/kg	3390	ND	51.7	34-114			
2-Chlorophenol	1860	1000	"	3390	ND	54.9	34-114			
1,4-Dichlorobenzene	1830	300	"	3390	ND	54.0	34-114			
N-Nitrosodi-n-propylamine	1880	300	"	3390	ND	55.4	30-110			
1,2,4-Trichlorobenzene	2190	300	"	3390	ND	64.5	39-119			
4-Chloro-3-methylphenol	2550	1000	"	3390	ND	75.3	50-130			
Acenaphthene	1960	300	"	3390	ND	57.8	34-114			
Pentachlorophenol	2620	1000	"	3390	ND	77.3	50-130			
Pyrene	1980	300	"	3390	160	53.7	30-110			
Surrogate: 2-Fluorophenol	*1600*		*"*	*3390*		*47.3*	*15-121*			
Surrogate: Phenol-d6	*1890*		*"*	*3390*		*55.8*	*24-113*			

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:35

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8041634 - EPA 3550 ECD/GCMS										
Matrix Spike (8041634-MS1)	**Source: T181265-01**			Prepared: 04/16/18 Analyzed: 04/17/18						
Surrogate: Nitrobenzene-d5	*2040*		*ug/kg*	*3390*		*60.1*	*21.3-119*			
Surrogate: 2-Fluorobiphenyl	*2310*		*"*	*3390*		*68.1*	*32.4-102*			
Surrogate: 2,4,6-Tribromophenol	*3090*		*"*	*3390*		*91.2*	*18.1-105*			
Surrogate: Terphenyl-dl4	*2670*		*"*	*3390*		*78.7*	*29.1-130*			
Matrix Spike Dup (8041634-MSD1)	**Source: T181265-01**			Prepared: 04/16/18 Analyzed: 04/17/18						
Phenol	1720	1000	ug/kg	3410	ND	50.4	34-114	2.00	42	
2-Chlorophenol	1840	1000	"	3410	ND	53.9	34-114	1.32	40	
1,4-Dichlorobenzene	1760	300	"	3410	ND	51.7	34-114	3.82	28	
N-Nitrosodi-n-propylamine	1840	300	"	3410	ND	54.0	30-110	1.82	38	
1,2,4-Trichlorobenzene	2090	300	"	3410	ND	61.4	39-119	4.29	28	
4-Chloro-3-methylphenol	2560	1000	"	3410	ND	74.9	50-130	0.108	42	
Acenaphthene	1960	300	"	3410	ND	57.3	34-114	0.119	31	
Pentachlorophenol	2860	1000	"	3410	ND	83.9	50-130	8.97	50	
Pyrene	1940	300	"	3410	160	52.1	30-110	2.05	31	
Surrogate: 2-Fluorophenol	*1630*		*"*	*3410*		*47.8*	*15-121*			
Surrogate: Phenol-d6	*1870*		*"*	*3410*		*54.8*	*24-113*			
Surrogate: Nitrobenzene-d5	*1870*		*"*	*3410*		*54.9*	*21.3-119*			
Surrogate: 2-Fluorobiphenyl	*2210*		*"*	*3410*		*64.7*	*32.4-102*			
Surrogate: 2,4,6-Tribromophenol	*3080*		*"*	*3410*		*90.1*	*18.1-105*			
Surrogate: Terphenyl-dl4	*2940*		*"*	*3410*		*86.0*	*29.1-130*			

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Brusca Associates Inc.	Project: Lathrop 48-Ac Property	
PO Box 332	Project Number: 137-002	**Reported:**
Roseville CA, 95661	Project Manager: Joe Brusca	04/23/18 10:35

Notes and Definitions

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

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Chain of Custody Record

Client: BRUSCA ASSOCIATES, INC.
Address: PO BOX 332, ROSEVILLE, CA 95661
Phone: (916) 677-1470 Fax: (916) 677-1471
Project Manager: JOE BRUSCA

Date: 4/13/18 Page: 1 Of 1
Project Name: LATHROP 4B-AC PROPERTY
Collector: BRUSCA Client Project #: 137-002
Batch #: T181265 EDF #:

Sample ID	Date Sampled	Time	Sample Type	Container Type	~~8260~~ SVOCs 8270	8260 + OXY	8260 BTEX, OXY only	~~8270~~ PCBs 8082	8021 BTEX	8015M (gasoline)	8015M (diesel) silica gel cleanup	8015M Ext./Carbon Chain	6010/7000 Title 22 Metals	6020 ICP-MS Metals	LEAD ASBESTOS			Laboratory ID #	Comments/Preservative	Total # of containers
SP5-1	4/13/18	10:00	SOLID	JAR	X			X				X	X					01		1
SP5-2		10:04			X			X				X	X					02		1
SP5-3		10:06			X			X				X	X					03		1
SP5-4		10:09			X			X				X	X					04		1

Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
	4/13/18 1:30PM	ER Stevens	4/13/18 1330
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
GSO 4-14-18 8:10		4-14-18 8:10	
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time

Total # of containers
Chain of Custody seals Y/N/NA
Seals intact? Y/N/NA
Received good condition/cold 5.3

Turn around time: NORMAL

Notes

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

COC 170169

APPENDIX B – Foundation Investigation

FOUNDATION INVESTIGATION
MURPHY PARKWAY WAREHOUSE
Murphy Parkway near D'Arcy Parkway
Lathrop, California

RANEY GEOTECHNICAL INC. JOB NO. 146-618

Raney Geotechnical Inc

Raney Geotechnical Inc

December 19, 2016

Buzz Oates Development LP
Attention: Troy Estacio
8615 Elder Creek Road
Sacramento, CA 95828

FOUNDATION INVESTIGATION
MURPHY PARKWAY WAREHOUSE
Murphy Parkway near D'Arcy Parkway
Lathrop, California
Job No. 146-618

INTRODUCTION

Our firm has completed a Foundation Investigation for a warehouse proposed for construction east of Murphy Parkway in Lathrop. This report presents the results of the investigation. The purpose of this report is to provide data pertinent to earthwork construction, foundation design, floor support, and pavement design.

Field exploration for this investigation has included the drilling of ten test borings to depths of ten to 20 feet below the existing site grade, and one boring to a depth of 50 feet. Undisturbed soil samples were obtained from the borings for classification and laboratory testing. Disturbed samples of the near surface soils also were obtained from proposed pavement areas. The test boring and sampling locations are shown on Plate 1, *Plot Plan*; logs of the test borings completed for this study are shown on Plates 2 through 16, *Log of Boring*. The nomenclature used to describe the soils on the logs is defined on Plate 17, *Unified Soil Classification System*. Moisture, density and unconfined compressive strength test data are presented on the logs at the depths of each sample tested. Two samples of the subsurface sandy soils were subjected to sieve analyses to provide information used in our liquefaction analyses; these test results are graphed on Plate 18, *Grain Size Analyses.* Near surface soil samples were subjected to direct shear tests to evaluate strength properties; these test results are tabulated on Plate 19, *Direct Shear Data.* Samples of anticipated pavement subgrade soils were subjected to resistance value tests to evaluate pavement subgrade properties; the test results are shown on Plates 20 and 21, *Resistance Value Data*. A sample of the subgrade soils was mixed with cement, remolded, and tested in unconfined compression to evaluate reactivity with the treatment chemical; these test results are tabulated on Plate 22, *Treated Soil Compressive Strength Data*. Two samples of the subsurface soils were submitted to an associate chemical laboratory for testing of corrosion properties; these test results are reproduced on Plates 23 and 24. The results of liquefaction analyses are depicted on Plates 25, *Liquefaction Analysis.*

PROPOSED CONSTRUCTION

We understand the property will be developed for a single distribution warehouse. The warehouse will have plan dimensions of about 510 feet by 1680 feet. The building construction is expected to be of concrete tilt-up-panel design with a concrete slab-on-grade floor. Depressed portland cement concrete paved loading docks would be provided along the north and south sides of the building. Asphalt concrete paved automobile parking and driveways would be placed along the west side of the building. Truck driveways would surround the building and connect the docks to Murphy Parkway.

Building foundation loads are expected to be moderate and typical to this type of construction.

For the purposes of this report we have assumed that the building pad level will be near the average existing site grade.

SITE CONDITIONS AND CONCLUSIONS

SURFACE

The subject site encompasses 48.6 acres and is situated between about 500 feet and 2800 feet east of the northerly end of Murphy Parkway. The property is bordered on the north by the shuttered Pilkington glass plant, and on the south by warehouse, trucking and distribution businesses. A pasture and lands of a Simplot fertilizer plant are to the east of the subject parcel. A shuttered cogeneration plant that apparently supplied the Pilkington plant, occupies the northerly portion of the parcel between Murphy Parkway and the subject site. An earth berm, power lines, and chain link fencing are along the northerly border at the glass plant. A drainage swale with trees is along the southerly edge of the site. Wire fencing is along the westerly border.

Most of the property is relatively flat and is currently used as sheep pasture. The easterly portion supports dry weeds and new grass growth. Patchy weeds are present on the westerly portion. An eight- to ten-foot deep depression of an apparent former pond is on the northwesterly portion of the site. It appears the pond may have been used for disposal by the adjacent glass or cogeneration plants. Aerial photos also suggest that glass had been stored or disposed of on the northwesterly corner of the property, and was later spread further to the south. We observed considerable amounts of broken glass on the surface and mixed into the surface soils of the west edge of the subject property as well as on the southerly portion of the cogeneration parcel to the west.

SUBSURFACE

Boring 2 was drilled on the northwesterly corner of the property and found about five feet of fill on the surface. The fill was observed to consist loose to medium dense silty fine sands and to contain glass fragments and shards. Boring 2 was located in an area that is shown on aerial photographs to have supported large piles of glass beads or fragments.

Except for the surface fills at Boring 2, the test borings revealed relatively uniform soil conditions across

the property. The test borings generally encountered surface soils consisting of loose to medium dense, brown silty fine sands with some fine sandy silts and extending to depths of four to six feet.

Beneath the surface sandy soils medium dense and sometimes variably cemented light brown fine sandy silts and silty fine sands often were encountered. These silty soils were observed to extend to depths varying from six to about nine feet. The silty layers often were underlain by medium dense to very dense white to light gray clean fine to medium sands. The clean sands were observed to extend to depths varying from 12 to 15 feet. Beneath these sands and extending to the 50 foot maximum depth drilled, interlayered light brown to gray stiff clayey fine sandy silts and very stiff silty fine sandy clays, as well as medium dense to very dense gray fine to medium sands were encountered.

Borings 14 and 15 were drilled within the former pond areas on the northwesterly portion of the site and were drilled at elevations that appear to be seven to eight feet below the site grades outside of the pond limits. These two borings encountered interelayered sands and silts that are consistent with the soil profile of at similar elevations of the other test borings.

BEARING CAPACITY

The soils within the upper six or nine feet include loose sand and silt layers that can be subject to some densification and settlement under heavy loads. The native undisturbed soils are considered capable of supporting the planned construction. The building may be supported on spread foundations, however foundation bearing pressures must be limited to control settlements of the loose near surface soils. With the recommended earthwork preparation procedures, new engineered fills placed and compacted in accordance with the recommendations of this report are expected to have sufficient strength for support of the planned construction.

EXPANSIVE SOILS

The near surface soils consist primarily of low plasticity sands and silt. These soils are considered to be of low expansion potential. Expansive soils are not expected to have a significant effect on the planned construction.

GROUNDWATER

Groundwater was encountered in the test borings at depths varying from 13 to 17 feet below the ground surface. After drilling, water levels in the borings appeared to stabilize at depths of about varying from about 11 to 14 feet below the site grade.

Although the groundwater level will fluctuate somewhat with rainfall and season, the level is expected to remain below final grade levels and not have a significant effect on completed surface improvements. Deep utility or other construction excavations may experience groundwater inflow. Foundation excavations at loading docks may encounter groundwater if constructed during a high groundwater period. Construction excavations extending more than about six feet below the original site grade may engage clean sands that can be subject to sloughing and caving regardless of the groundwater level. Below groundwater levels, the site silty soils also may be subject to sloughing and caving. Sloughing

and caving soils may require formwork to keep them open.

The surface soils include low permeability layers and have variable drainage characteristics. The surface soils have high silt contents that render them sensitive to moisture contents. High moisture content soils are likely to be unstable under construction equipment, and require considerable aeration in order to achieve a moisture content that will allow compaction. The surface soils are likely to have high moisture conditions during the wet season and for several weeks following rains or irrigation. Subsurface soils within a few feet of groundwater are likely to have high moisture contents year round. The potential for high soil moisture contents should be considered in construction scheduling.

SOIL LIQUEFACTION POTENTIAL

Soil liquefaction is the loss of strength of low- to no- cohesion soils (usually sands) that occurs when pore water pressure exceeds the confining stress (weight) of the soils. Liquefaction normally occurs only under saturated conditions and in soils with a low relative density. Liquefaction can occur during earthquakes as vibrations induce soils to readjust to a more compact state. Experience has shown that earthquake induced liquefaction normally occurs only within the upper 50 to 60 feet of the soil profile.

The test borings show loose to medium dense sands and sandy silts within the upper nine feet. Layers of medium dense to dense sandy soils are indicated between depths of six and 50 feet. The soils below depths of 13 to 14 feet below the building pad level are likely to be saturated year round. Slightly higher groundwater levels may be possible, but the duration of such high groundwater levels is expected to be limited.

We have used the methods of Seed and others as implemented in the LiquefyPro software by CivilTech Corporation to assess the liquefaction susceptibility of the sandy soils, as well as to evaluate potential settlements of the loose near surface soils during seismic shaking. The method correlates standard penetration resistance and liquefaction potential based on historical case studies. In determining liquefaction potential, groundwater depth, confining pressures, and, intensity and duration of potential ground shaking are considered.

Probabilistic seismic hazards mapping by the United States Geological Survey indicates that the peak ground acceleration produced by maximum credible earthquakes on nearby faults (10 percent probability of exceedance in 50 years) is likely to be on the order of 0.28 g. Interpretations according to the ASCE 7-10 standard indicates that the peak ground acceleration produced by maximum credible earthquakes with a two percent probability of exceedance in 50 years is likely to be on the order of 0.43g. The controlling earthquakes in developing these accelerations appear to mostly be events of magnitude 6.5 to 6.7 occurring within the Coast Range/Central Valley (CRCV) boundary zone about 21 kilometers to the southwest. Using these earthquake data, our analysis indicates that seismic induced liquefaction on this project is unlikely, although some sandy soils at depths of near 40 feet may approach a state of liquefaction under the highest levels of shaking. Settlements of the soils during maximum seismic shaking are estimated to be on the order of one quarter inch. The results of the analyses can be viewed on Plate 25, *Liquefaction Analysis*.

CORROSION POTENTIAL

Two samples of the native soils from anticipated pipe horizons were submitted to an associate laboratory for corrosion evaluation tests; the test data are presented on Plates 23 and 24.

We have used criteria established by the Ductile Iron Pipe Research Association to evaluate the corrosivity of the soils tested to iron pipe. The criteria assigns point values to the test results as well as a subjective evaluation of moisture conditions at pipe level; a total point value of ten or higher indicates the soils are potentially corrosive to iron pipe. Our evaluation indicates total point values of 2. We conclude that the soils are not corrosive to gray or ductile iron pipe.

Based on the Portland Cement Association (PCA) guidelines, the soluble sulfate content of the site soils indicates that the relative degree of sulfate attack on concrete is negligible, and therefore use of Type I, Type II, or Type 1-II portland cement is appropriate.

RECOMMENDATIONS

EARTHWORK

The building pad and pavement areas should be cleared of surface vegetation, trees and root systems, rubble fragments exceeding three inches in maximum dimension, rubbish, and any other debris. Any earth berms, stockpiled soils and any other existing fills should be removed. Fills were found in Boring 2 to a depth of about five feet on the northwesterly corner of the property. These fills should be overexcavated to allow replacement as engineered fill. Test excavations should be made on the northwesterly corner of the property and adjacent areas with our representative present to check for the presence of old fill materials. Unsuitable soils identified by our representative should be removed.

Any underground pipes within two feet of original or final grade (whichever is lower) should be removed. Abandoned pipes exceeding two inches in diameter should be removed from the building areas regardless of depth. Low areas should be cleaned out of any loose or saturated materials. Excavations required for the removal of the above items, as well as any other loose or unstable soil deposits identified by our representative, should be cleaned of loose, saturated or soft materials so that firm undisturbed soils are exposed. Deep excavations required for the removal of the above items should be sloped back to a dish shaped configuration allowing through passage of compaction equipment. Any deep excavations should be restored to grade with engineered fill placed and compacted in accordance with the recommendations of this report.

Areas designated to receive engineered fill as well as building pad and pavement areas left at existing grade should be scarified to a depth of eight inches, brought to a uniform moisture content of at least optimum, and compacted in place to at least 90 percent of the maximum dry density determined by ASTM D1557-02 test procedure. If recompacted subgrades are unstable or compaction cannot be achieved due to high soil moisture contents, our firm should be contacted for further recommendations.

Engineered fill should be placed in lifts not exceeding six inches in compacted thickness, brought to a

moisture content of at least optimum, and compacted. Fill placed in the building pad area at depths of more than two feet below the final soil building pad level should be compacted to at least 95 percent of the ASTM D1557 maximum dry density. All other fills should be compacted to at least 90 percent of the maximum dry density in accordance with the above standard. On-site soils are suitable for use as engineered fill provided the soils do not contain significant vegetable matter, rubble, rubbish, or other undesirable substances. Import materials, if any, should consist of sands, silts, or gravels with a plasticity index of ten or less and should be tested and approved by this firm prior to importation to the site.

To enhance slab performance and provide a more stable base for working during the rainy season, the upper portion of the building pad and any adjacent concrete flatwork areas should be treated with portland cement. The treatment should extend at least five feet outside of building wall lines, or to the outer edges of surrounding portland cement concrete walkways or aprons, whichever is greater in extent. The soils should be treated to a depth of at least 12 inches with at least five percent portland cement as measured by dry unit weight of the compacted soil. The treated soil should be brought to a uniform over optimum moisture content, thoroughly mixed with the cement, and compacted to at least 92 percent of the maximum dry density determined by the ASTM D1557-02 test procedure. Not more than three hours should elapse between the time the cement is mixed with the soil/water and final compaction is completed. The above concentration of treatment chemical are based on assumptions made regarding the soil composition of the upper 12 inches of the building pad. Some modification to this concentration may be required. The percentage and type of treatment chemical be used should be established by our engineers based on a review of the types of soils present on each area to be treated. Treatment should conform to applicable provisions of the Caltrans Standard Specifications, Sections 24 and 27. The treated pad should either be kept wet for a period of at least three days after compaction or seal coated.

Untreated pavement subgrades, if any, should be compacted to at least 90 percent of the ASTM D1557-02 maximum dry density regardless of whether the final grade is achieved by cutting, filling or left at final grade.

Permanent excavation and embankment slopes should not exceed an inclination of one vertical on two horizontal. A representative of this firm should be present during grading operations to test and observe earthwork construction.

FOUNDATIONS

The proposed building may be supported upon continuous and/or isolated spread foundations based in undisturbed or recompacted natural ground, engineered fill, or a combination of these materials. Building foundations should extend to a minimum depth of 18 inches below the building pad. Foundations in dock areas should extend at least 12 inches below the lowest surrounding soil subgrade level. Foundation excavations should be observed by an Engineer from this office to ensure that proper bearing soils are engaged. A minimum foundation width of 12 inches should be maintained. Foundations so established may be designed for maximum allowable soil bearing pressures of 2000 pounds per square foot (psf) for dead load, 2500 psf for dead plus live load, and 3300 psf for total load including the effects of wind and seismic forces.

Foundations for trash enclosure walls, signs, landscape retaining walls, and other appurtenant construction should extend a minimum of 12 inches below the building pad or lowest surrounding soil grade, and have a minimum width of 12 inches. Such foundations may be sized for allowable soil bearing pressures of 1500 psf for dead load, 2300 psf for dead plus live load, and 3000 psf for dead plus live plus seismic/wind loads.

The weight of foundation concrete below grade may be disregarded in sizing computations. Continuous foundations should be reinforced with at least four No. 4 bars--two each, top and bottom, as a minimum. The actual reinforcement should be determined by the Structural Engineer.

Foundation excavations should not be allowed to stand open for extended periods prior to concrete placement and should be clean and free of all loose and/or soft materials when concrete is placed. The bearing materials should be in a firm, moist condition. Some dock foundation excavations may engage clean or saturated sands and experience sloughing and caving; forming may be required.

Resistance to lateral forces may be computed using either friction or passive pressure, but not both, except as recommended below. A coefficient of friction of 0.30 may be utilized for design. Passive earth pressure may be considered equivalent to a fluid weighing 250 pounds per cubic foot. A combination of both friction and passive pressure may be utilized provided the larger mode of resistance is reduced by 50 percent. The recommended passive pressure and friction coefficient values have been modified by appropriate factors of safety and may be applied directly in design calculations.

SEISMIC DESIGN

In design using the lateral force provisions of the 2013 and 2016 California Building Codes, the parameters in Table 1 may be used.

TABLE 1

Period (seconds)	Mapped Spectral Response Accelerations (g)		Site Class	Site Coefficients		Maximum Considered Earthquake Spectral Response Accelerations (g)		Design Spectral Response Accelerations (g)	
0.2	S_S	1.065	D	F_a	1.074	S_{MS}	1.144	S_{DS}	0.762
1	S_1	0.372		F_v	1.655	S_{M1}	0.616	S_{D1}	0.411

LOADING DOCK WALLS

Restrained dock walls should be capable of resisting an at-rest soil pressure equivalent to that exerted by a fluid weighing 50 pounds per cubic foot. Wall design also should consider pressures associated with traffic or other adjacent surcharge. Care should be taken to avoid exertion of excessive compaction

pressures in backfilling of walls. The above loading is based on the assumption that hydrostatic pressures will not develop behind the walls.

Walls should be drained as needed to relieve potential hydrostatic pressure. Where floor slabs or pavements adjoin the tops of walls, this should suffice to exclude significant water and further drainage measures would not be required.

Only nonexpansive silts, sands or gravels should be used to backfill dock area walls. Clays should not be used in wall backfill. Use of 3/8-inch pea gravel or clean ¾-inch crushed rock for wall backfill is acceptable and can facilitate placement and compaction procedures. Backfill should be placed in level lifts not exceeding 12 inches in compacted thickness. Each lift should be compacted at a uniform near optimum moisture content to at least 90 percent of the ASTM D1557-02 maximum dry density.

SLAB-ON-GRADE

Thickness Requirements

Because of stresses induced by truck cranes during panel erection a minimum six-inch thick floor slab is suggested for all floor areas. Our calculations indicate a six-inch thick slab would be capable of supporting typical 3000- to 5000-pound capacity forklifts carrying loads of less than 3000 pounds. If the floor will support more heavily loaded forklifts, or if high racks are used, then a six-inch slab may not be sufficient and our firm should be contacted for further recommendations. A modulus of subgrade reaction of 150 pounds per cubic inch may be used for the treated building pad in determining slab thickness for forklift loads.

Due to the industrial use, we suggest the floor slab be reinforced with No. 4 bars spaced on 24-inch centers in each direction as a minimum. The reinforcement should be chaired at the middepth of the slab. The above discussion of slab thickness is based on use of quality strength concrete (4000 pounds per square inch minimum 28-day compressive strength). We suggest slab concrete be placed at a slump of three to four inches. Fibermesh® may be used in concrete to increase toughness, if desired.

The floor slab should be thickened by at least 20 percent of the above recommended thickness at any drive-through doors. In addition, edges should be thickened wherever heavy materials will be stored within five feet of a free slab edge. A free slab edge is defined as any joint or edge where load transfer to adjacent areas is not provided, such as at building wall lines or undoweled expansion joints. The transition to the thickened edge may be achieved by tapering the slab thickness over a distance of five feet. Tapering may be accomplished by reducing the underlying aggregate base thickness at the edges.

Joints

Shrinkage crack control joints should consist of sawcut grooves penetrating at least one-fourth of the slab thickness. Control joints should not be spaced farther apart than about 30 times the slab thickness. Construction cold joints and expansion joints in the warehouse slab should include dowels to provide load transfer. Dowels should be three-quarters inch in diameter, 14 inches long, and spaced on 12 inch centers for six inch thick slabs. One end of dowels at expansion and crack control joints should be

greased and wrapped in plastic to allow horizontal movement. All reinforcement and dowels should be placed at the middepth of the slab.

Underlayment and Moisture Control

The floor slab may be supported on the chemically treated building pad prepared as recommended above. In warehouse areas where minor moisture penetration through the slabs can be tolerated, the slab should be underlain by a minimum four-inch thick layer of Caltrans Class 2 aggregate base to serve as a leveling course. The aggregate base should be wetted immediately prior to placement of slab concrete. Moisture sensitive areas such as office areas receiving impervious floor coverings should be underlain by a minimum four-inch thick layer of clean three-quarter inch crushed rock graded such that 100 percent passes a one-inch sieve and none passes a No. 4 sieve, to serve as a capillary moisture break. In such areas the drainage rock should be covered with a plastic membrane at least 10-mils thick as a moisture vapor retarder. One to two inches of clean sand may be spread over the membrane for protection and to aid concrete curing, if desired. Alternatively, the membrane may be placed directly on the building pad beneath the rock.

With the use of water-based floor adhesives, impervious floor coverings are extremely sensitive to slab moisture. Under some conditions, the small amount of moisture vapor which bypasses the vapor membrane, or even the excess water remaining in the slab from placement, can be sufficient to cause debonding and discoloration problems. To minimize moisture vapor problems, the capillary break gravel must be present to the minimum recommended thickness and the membrane must be continuous throughout the slab area. Any membrane seams should overlap by at least one foot. The membrane should be cut tight to penetrations. Tears and punctures should be sealed with membrane manufacturer-approved tape, or overlain by a second patching membrane. Slab concrete should be placed at as low a water-cement ratio as practical. The under-slab gravel layer should be protected from precipitation and other moisture; wetting of the sand over the membrane prior to concrete placement should be minimized. The edges of the slab at the building perimeter should be thickened to form a cutoff between the building exterior and under-slab gravel layers. If impervious floor coverings are planned and greater assurance against moisture problems is desired, consideration should be given to waterproofing of slabs with a quality commercial concrete sealant. A sealant or other waterproofing system may be necessary for the satisfactory performance of wood laminates, sheet vinyl, and other impervious flooring.

PAVEMENTS

Resistance (R) value tests are used to evaluate pavement subgrade properties. Our investigation indicates that the pavement subgrades are likely to consist of very silty sands of fair to good pavement support qualities. R values can range from five for the poorest quality clay subgrades to 70 or higher for high quality sand and gravel subgrades. Resistance value tests performed on samples of the site surface soils resulted in design R values of 64 and 65. We consider these R values to be somewhat high for the range of soils that are likely to be present on pavement subgrades, and therefore have used an R value of 45 in our calculations. The R value of 45, together with the results of unconfined compressive strength tests on soils treated with cement, have been used in the Caltrans Design Method for Flexible Pavements and in Portland Cement Association's design method to evaluate pavement sections.

The Caltrans design method uses traffic indices to account for vehicle loads, frequency, and design life. A design life of 20 years is commonly used for commercial pavements.

Based upon these data, the standard Oates structural pavement section consisting of three inches of asphalt concrete (AC) over three inches of aggregate base (AB) over 12 inches of chemically treated soil is considered to have a traffic capacity equivalent to TI 7.0. A TI of 7.0 is considered capable of supporting up to about 60 fully loaded, five-axle semi-trucks per week. Pavement sections designed for TI 8.0 are considered capable of supporting up to about 190 fully loaded, five axle semi-trucks per week. Our calculations indicate that pavement sections for TI 8.0 may consist of four inches of AC over three inches of AB over 12 inches of chemically treated subgrade, or three and one-half inches of AC over four inches of AB over 12 inches of chemically treated subgrade. These pavement sections, together with alternative asphalt concrete pavement sections without chemically treated subgrades, are summarized in Table 2. We can provide additional pavement section alternatives upon request.

TABLE 2
ASPHALT CONCRETE PAVEMENT SECTION ALTERNATIVES

Design Traffic Index/ Use	Type B Asphalt Concrete (inches)	Class 2 Aggregate Base (inches)	Chemically Treated Soil (inches)
4.5	2.5	4	--
Auto Parking	2.5	--	10
7.0	3	8	--
Up to 60	3	3	12
Trucks per Week			
8.0	3.5	9	--
120 to 190	4	8	--
Trucks per Week	3.5	4	12
	4	3	12

Materials and construction within structural pavement sections should conform to the applicable provisions of the 2010 Caltrans Standard Specifications

We recommend chemically treated subgrades be treated with portland cement to provide reactivity with the expected sandy subgrade soils. The pavement areas should be treated after the subgrades have been cut or filled to rough final grade and utility lines have been installed. The subgrade soils should be treated with at least five percent portland cement, as measured by dry unit weight of the compacted soil. The cement and soil should be brought to a uniform over-optimum moisture content, thoroughly mixed and compacted to at least 92 percent of the maximum dry density determined by the ASTM D1557-02 test procedure. Not more than three hours should elapse between the time the cement is mixed with the soil/water and final compaction is completed. The above concentration of cement is based on assumptions made regarding the soil composition of the pavement subgrades. The actual percentage and

type of treatment chemicals to be used should be established by our engineers based on a review of the types of soils present on each area to be treated.

All treatment should conform to applicable provisions of the 2010 Caltrans Standard Specifications, Sections 24 and 27, except with regard to compaction as specified above. The treated subgrade should be either kept wet for a period of at least three days after final compaction, or seal coated as recommended in Section 24.

Treated soils tend to experience shrinkage and cracking during curing. Such cracking does not affect the strength of the treated materials, but can lead to cosmetic reflective cracking through asphalt concrete. Depending on the degree of cracking, crack sealing or similar maintenance may be required to ensure long term pavement performance. Use of the nominal layer of Caltrans Class 2 aggregate base between the treated soil layer and the asphalt concrete will decrease the incidence of the described shrinkage cracking.

Recommended portland cement concrete pavement sections for the traffic indices discussed above are presented in Table 3.

TABLE 3
PORTLAND CEMENT CONCRETE SECTION ALTERNATIVES

Design Traffic Index	Portland Cement Concrete (inches)	Class 2 Aggregate Base (inches)	Chemically Treated Soil (inches)
6.0	6	2	12
7.0	6.5	2	12
8.0	7	2	12

The aggregate base layer is considered a leveling course and its thickness may be varied in the field for leveling purposes. Chemically treated soil subgrades should be constructed as recommended in the Foundation investigation report.

Any one section of Portland cement concrete pavements at depressed loading docks would be expected to support only a few trucks per day, including parking tractor-trailers and inadvertent travel of maneuvering vehicles. Based on this, traffic index 6.0 is considered appropriate for dock pavements.

The above portland cement concrete pavement sections are based on use of concrete with a minimum modulus of rupture of 490 pounds per square inch. We anticipate this will require use of concrete with a minimum compressive strength at 28 days of 3000 pounds per square inch. Thickened slab edges should be provided at isolation joints between the concrete pavement and adjacent construction, at the transition from portland cement concrete pavement to asphalt concrete pavement, and adjacent to unpaved areas. The thickened edge should be at least one and one-half inches greater than the unreinforced thicknesses recommended above, and should be tapered back to the design slab thickness over a distance of five feet. Narrow concrete strips used for support of trailer parking dollies should have minimum thicknesses of 7.5 inches, 8 inches, and 8.5 inches in traffic index 6.0, 7.0, and 8.0 areas,

respectively.

Shrinkage crack control joints should consist of premolded inserts or sawcut grooves penetrating at least one-fourth of the slab thickness. Control joints in unreinforced pavements should not be spaced farther apart than about 25 times the pavement thickness. Construction cold joints should include dowels to provide load transfer. Table 4shows the recommended dowel bar sizes and spacings.

TABLE 4
DOWEL SIZE AND SPACING

Pavement Thickness (inches)	Dowel Diameter (inches)	Dowel Length (inches)	Dowel Spacing center to center (inches)
6.0 - 6.5	3 /4	16	12
7.0	1	18	12

Where construction cold joints also serve as shrinkage crack control joints, one end of the dowels should be greased and wrapped in plastic to allow horizontal movement. All reinforcement and dowels should be placed at the middepth of the slab.

Where the slab edges are not confined such as adjacent to lower unpaved areas, the outer slab sections of large pavement areas may tend to spread laterally towards the free edge. For unreinforced pavements we recommend non-crack control construction cold joints parallel to and within 25 feet of the free edge include tie bars to hold joints closed. Tie bars should be No. 4 bars at least 21 inches long and spaced on 20 inch centers. Any crack control joints, including sawcut types and construction joints, parallel to and within 25 feet of the free edge should include dowels across the joint. Dowel sizes and spacings should be in accordance with the above recommendations.

LIMITATIONS

This report necessarily assumes uniform variation of soils between borings. Our recommendations are based upon this assumed uniformity and the information provided regarding the proposed construction. If unusual conditions are encountered during construction, the contractor or his representative should notify this firm immediately so that alternate written recommendations can be made.

This report is applicable only to the proposed construction, as described herein, and should not be utilized for design or construction on any other site.

oOo

The following Plates are attached and complete this report:

Plate 1 - Plot Plan
Plates 2 through 16 - Log of Boring, Borings 1 through 15
Plate 17 - Unified Soil Classification System
Plate 18 - Grain Size Distribution
Plate 19 - Direct Shear Data
Plates 20 and 21 - Resistance Value Data
Plate 22 - Treated Soil Compressive Strength Data
Plates 23 and 24 - Corrosion Test Data
Plate 25 - Liquefaction Analysis

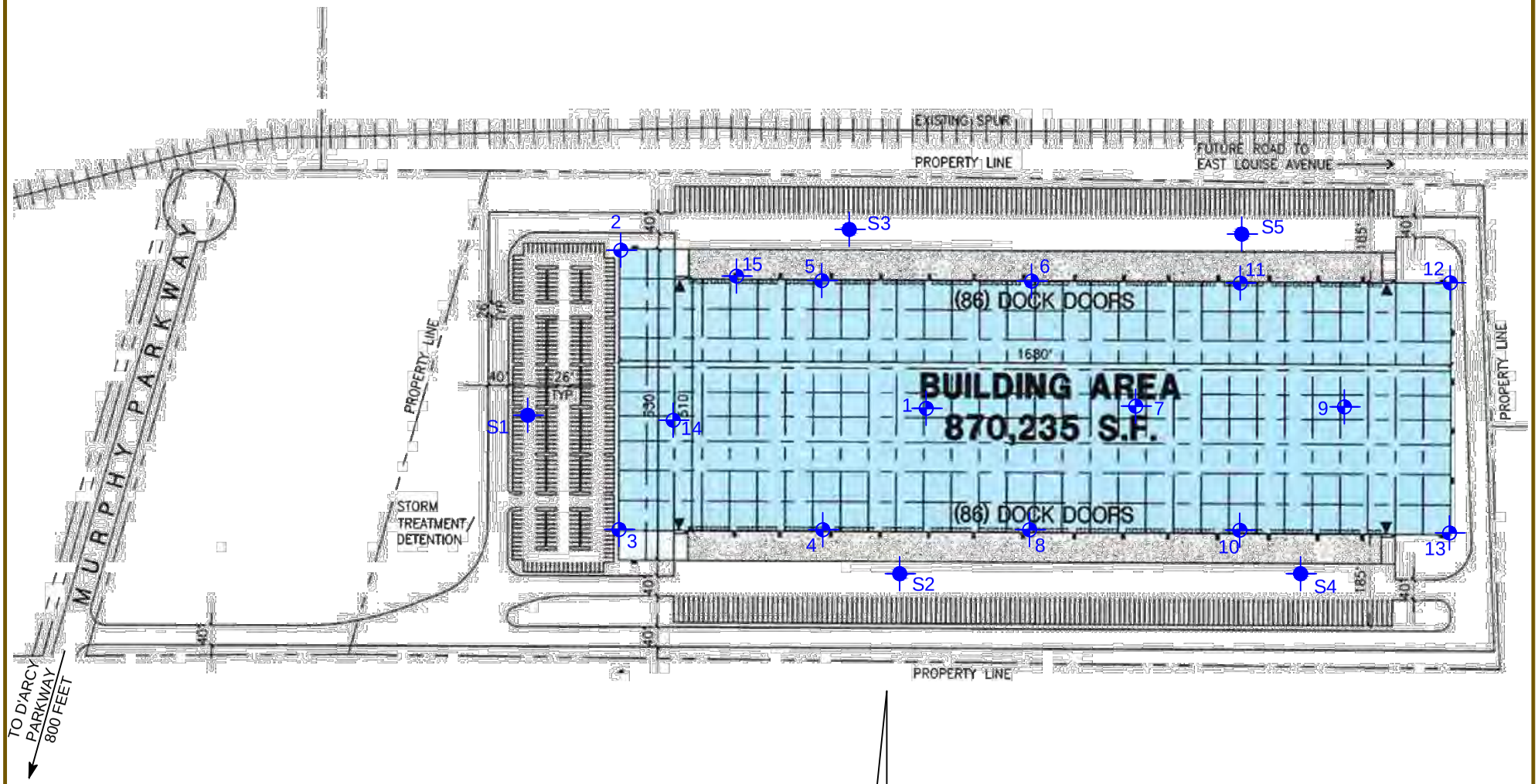
Sincerely,

RANEY GEOTECHNICAL, INC.

William C. Boli
Geotechnical Engineer No. 2004

(1) addressee

PROJECT NUMBER: 146-616 DRAWN BY: WCB
PLATE NUMBER: 1 DATE: 12/16/16



KEY:

8 TEST BORING

2 SURFACE SAMPLE LOCATION

NOTES:

1. BORING AND SAMPLING LOCATIONS SHOWN ARE APPROXIMATE ONLY.
2. PREPARED FROM A SITE PLAN BY HPA ARCHITECTURE.

SCALE
0 150 300
FEET

PLOT PLAN

Raney Geotechnical Inc

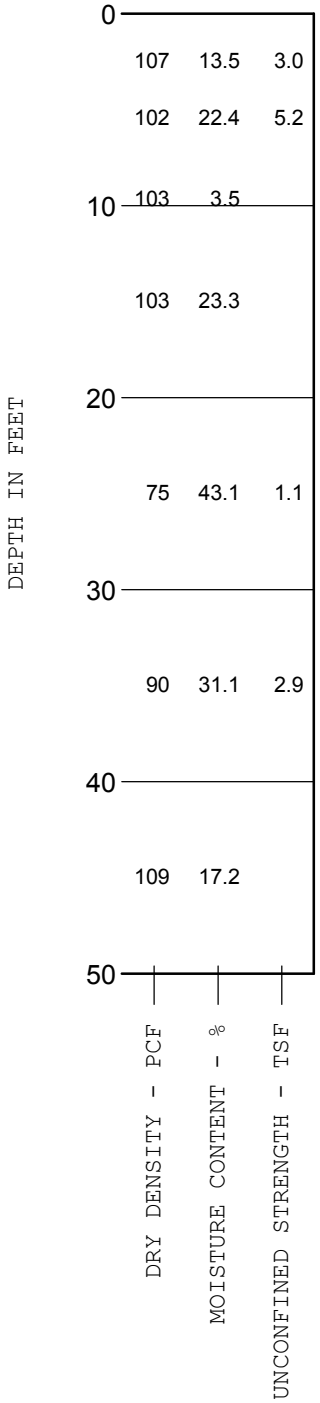
PLATE 1

PROJECT NUMBER: 146-618
PLATE NUMBER: 2

DRAWN BY: WCB
DATE: 12/8/16

BORING 1

DRILLED: 11/17/16



63/10"	SM	BROWN SILTY VERY FINE SAND--LOOSE, MOIST
		SLIGHTLY CEMENTED
90/10"	ML	GRAY-BROWN VERY FINE SANDY SILT--VERY DENSE, MOIST
		WITH RUST SPOTS
		LIGHT BROWN
43		GRADING FINE SANDY
	SP	LIGHT BROWN AND GRAY FINE TO MEDIUM SAND--DENSE, MOIST
		▼ GROUNDWATER LEVEL AFTER DRILLING 11/17/16
24	ML	LIGHT GRAY-BROWN CLAYEY FINE SANDY SILT--VERY STIFF, SATURATED
	SP	▽ GROUNDWATER FOUND DURING DRILLING 11/17/16
69		GRAY-BROWN FINE TO COARSE SAND--DENSE, SATURATED
		GRADING WITH LESS FINE SAND
13	CL	DARK GRAY SILTY CLAY--STIFF, SATURATED
		LIGHT BLUE-GRAY
	SP	BROWN FINE SAND--MEDIUM DENSE, SATURATED
26	CL	DARK GRAY SILTY CLAY--VERY STIFF, SATURATED
	ML	BROWN FINE SANDY CLAYEY SILT--VERY STIFF,
	CL	SATURATED
28		BLUE-GRAY SLIGHTLY FINE SANDY VERY SILTY CLAY WITH ORANGE-BROWN STREAKS--VERY STIFF, SATURATED
		GRADING LESS FINE SANDY
	SM	DARK GRAY SILTY M. TO C. SAND-- MED. DENSE
16		GRADING MORE SILTY AND WITH FINE SAND
	CL	DARK GRAY SLIGHTLY SILTY CLAY--VERY STIFF,
	SP	SATURATED
43		DARK GRAY FINE TO MEDIUM SAND--DENSE, SATURATED
		GRADING WITH SOME COARSE SAND
		VERY DENSE
66		

NOTES:

1. THE BORING LOG DEPICTS SUBSURFACE CONDITIONS ONLY AT THE BORING LOCATION AND TIME DESIGNATED.
2. NOMENCLATURE USED TO DESCRIBE SOILS DEFINED ON PLATE 17.
3. UNDISTURBED SAMPLE OBTAINED WITH 2" I.D. MODIFIED CALIFORNIA SAMPLER.
4. SAMPLER PENETRATION RESISTANCE IN BLOWS PER FOOT OR FRACTION THEREOF; 140-POUND HAMMER, 30" DROP.

LOG OF BORING

Raney Geotechnical Inc

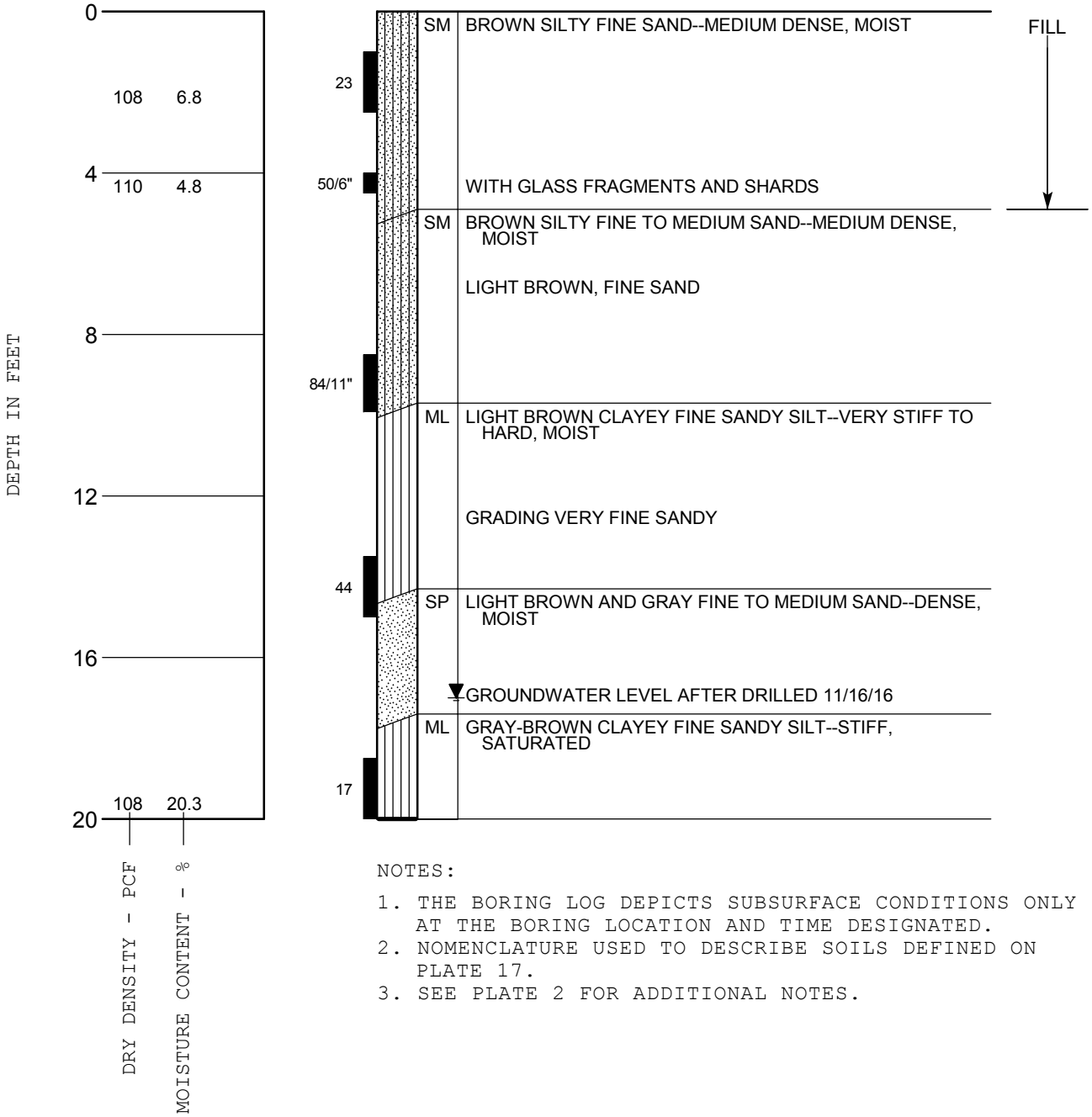
PLATE 2

PROJECT NUMBER: 146-618
PLATE NUMBER: 3

DRAWN BY: WCB
DATE: 12/8/16

BORING 2

DRILLED: 11/16/16



NOTES:

1. THE BORING LOG DEPICTS SUBSURFACE CONDITIONS ONLY AT THE BORING LOCATION AND TIME DESIGNATED.
2. NOMENCLATURE USED TO DESCRIBE SOILS DEFINED ON PLATE 17.
3. SEE PLATE 2 FOR ADDITIONAL NOTES.

LOG OF BORING

Raney Geotechnical Inc

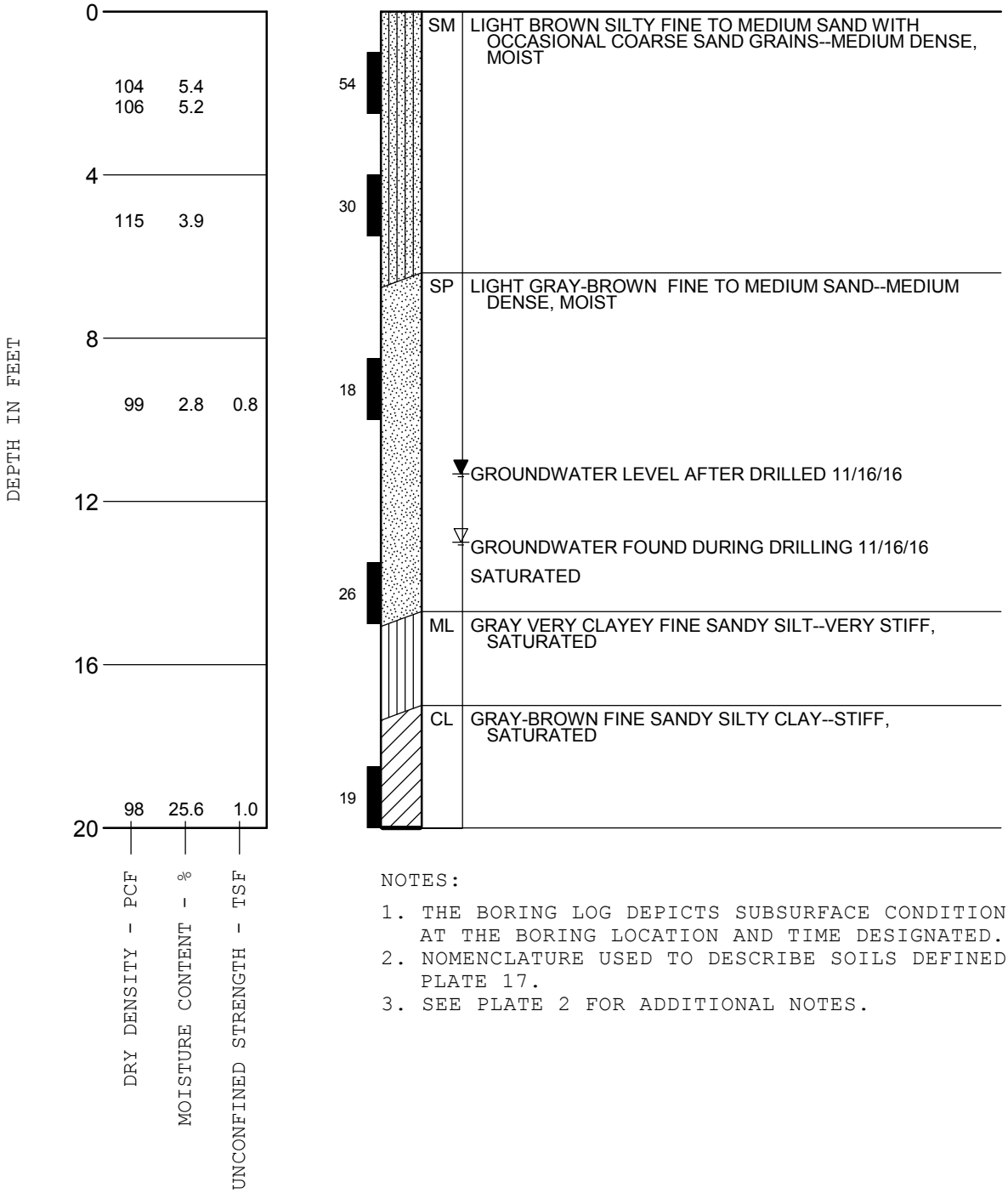
PLATE 3

PROJECT NUMBER: 146-618
PLATE NUMBER: 4

DRAWN BY: WCB
DATE: 12/8/16

BORING 3

DRILLED: 11/16/16



NOTES:

1. THE BORING LOG DEPICTS SUBSURFACE CONDITIONS ONLY AT THE BORING LOCATION AND TIME DESIGNATED.
2. NOMENCLATURE USED TO DESCRIBE SOILS DEFINED ON PLATE 17.
3. SEE PLATE 2 FOR ADDITIONAL NOTES.

LOG OF BORING

Raney Geotechnical Inc

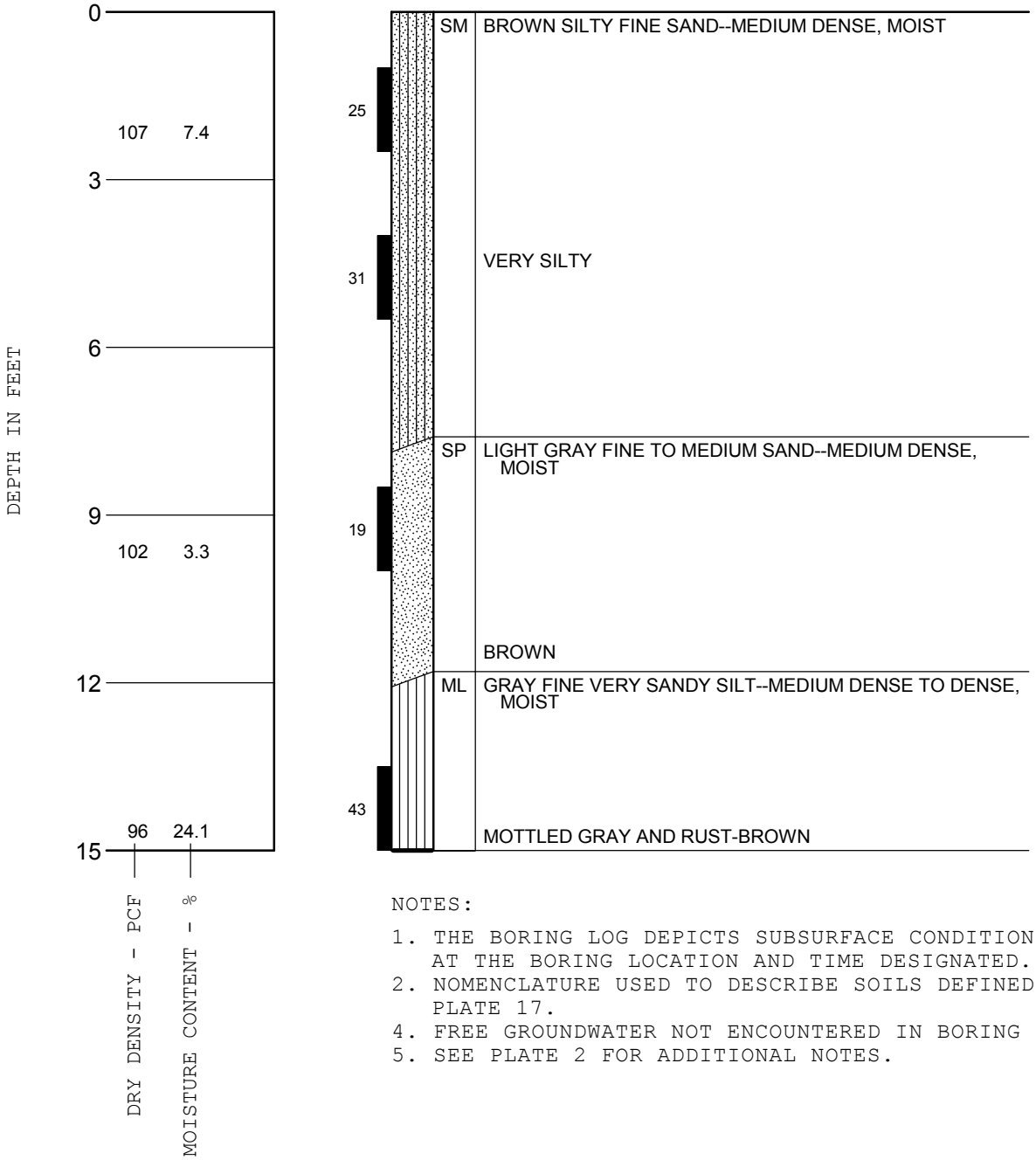
PLATE 4

PROJECT NUMBER: 146-618
PLATE NUMBER: 5

DRAWN BY: WCB
DATE: 12/8/16

BORING 4

DRILLED: 11/16/16



NOTES:

1. THE BORING LOG DEPICTS SUBSURFACE CONDITIONS ONLY AT THE BORING LOCATION AND TIME DESIGNATED.
2. NOMENCLATURE USED TO DESCRIBE SOILS DEFINED ON PLATE 17.
4. FREE GROUNDWATER NOT ENCOUNTERED IN BORING 4.
5. SEE PLATE 2 FOR ADDITIONAL NOTES.

LOG OF BORING

Raney Geotechnical Inc

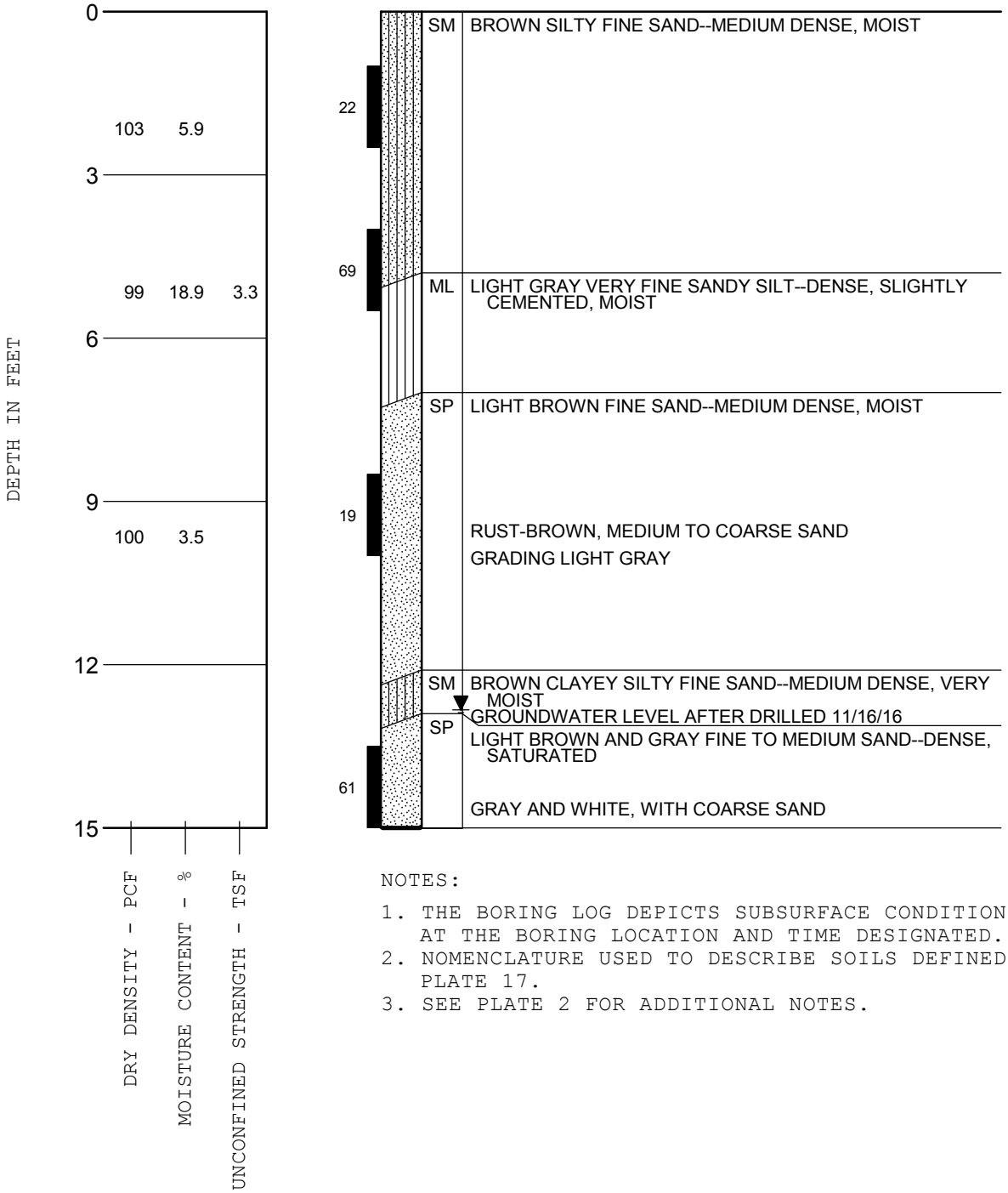
PLATE 5

PROJECT NUMBER: 146-618
PLATE NUMBER: 6

DRAWN BY: WCB
DATE: 12/8/16

BORING 5

DRILLED: 11/16/16



NOTES:

1. THE BORING LOG DEPICTS SUBSURFACE CONDITIONS ONLY AT THE BORING LOCATION AND TIME DESIGNATED.
2. NOMENCLATURE USED TO DESCRIBE SOILS DEFINED ON PLATE 17.
3. SEE PLATE 2 FOR ADDITIONAL NOTES.

LOG OF BORING

Raney Geotechnical Inc

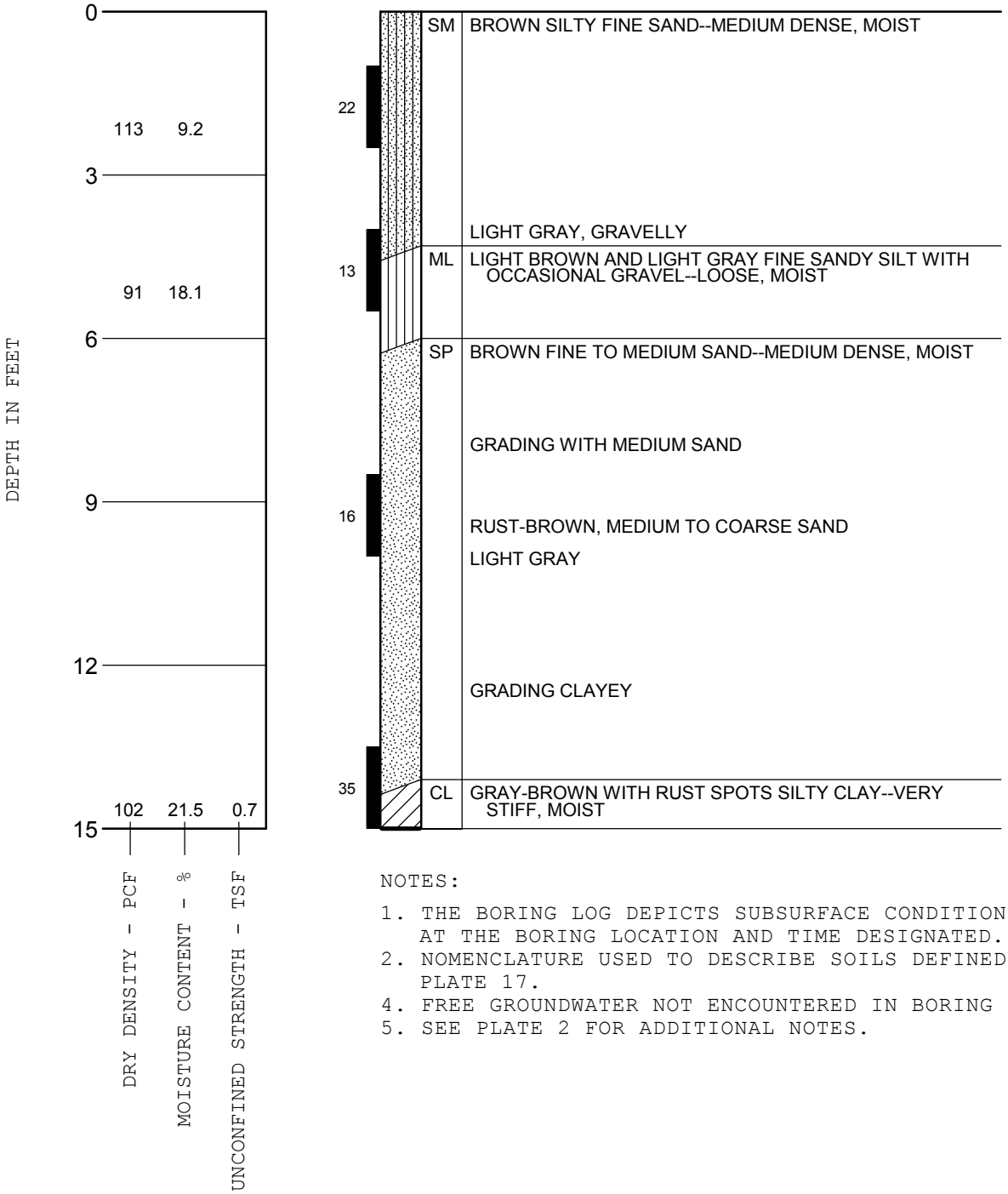
PLATE 6

PROJECT NUMBER: 146-618
PLATE NUMBER: 7

DRAWN BY: WCB
DATE: 12/8/16

BORING 6

DRILLED: 11/16/16



NOTES:

1. THE BORING LOG DEPICTS SUBSURFACE CONDITIONS ONLY AT THE BORING LOCATION AND TIME DESIGNATED.
2. NOMENCLATURE USED TO DESCRIBE SOILS DEFINED ON PLATE 17.
4. FREE GROUNDWATER NOT ENCOUNTERED IN BORING 6.
5. SEE PLATE 2 FOR ADDITIONAL NOTES.

LOG OF BORING

Raney Geotechnical Inc

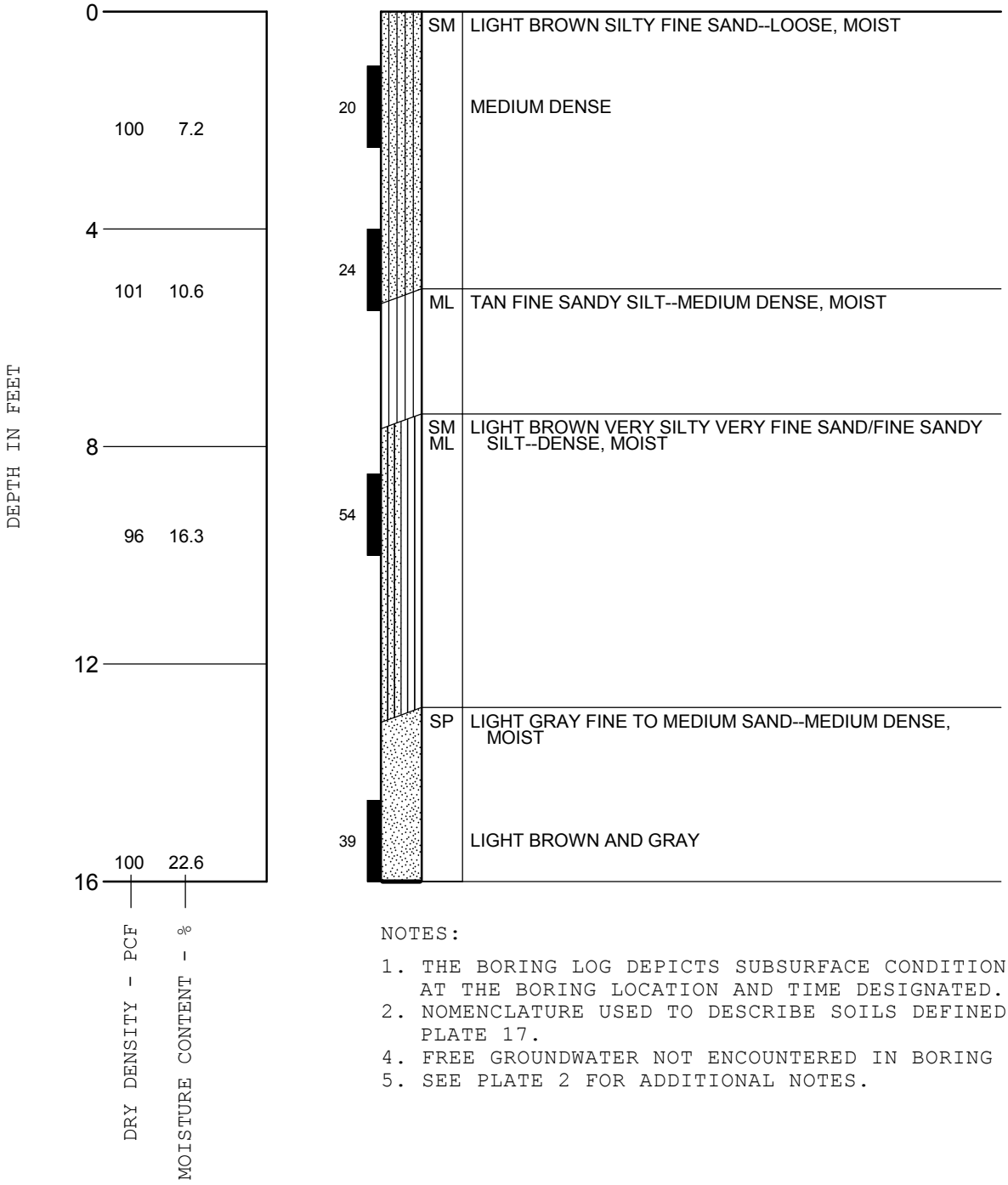
PLATE 7

PROJECT NUMBER: 146-618
PLATE NUMBER: 8

DRAWN BY: WCB
DATE: 12/8/16

BORING 7

DRILLED: 11/16/16



NOTES:

1. THE BORING LOG DEPICTS SUBSURFACE CONDITIONS ONLY AT THE BORING LOCATION AND TIME DESIGNATED.
2. NOMENCLATURE USED TO DESCRIBE SOILS DEFINED ON PLATE 17.
4. FREE GROUNDWATER NOT ENCOUNTERED IN BORING 7.
5. SEE PLATE 2 FOR ADDITIONAL NOTES.

LOG OF BORING

Raney Geotechnical Inc

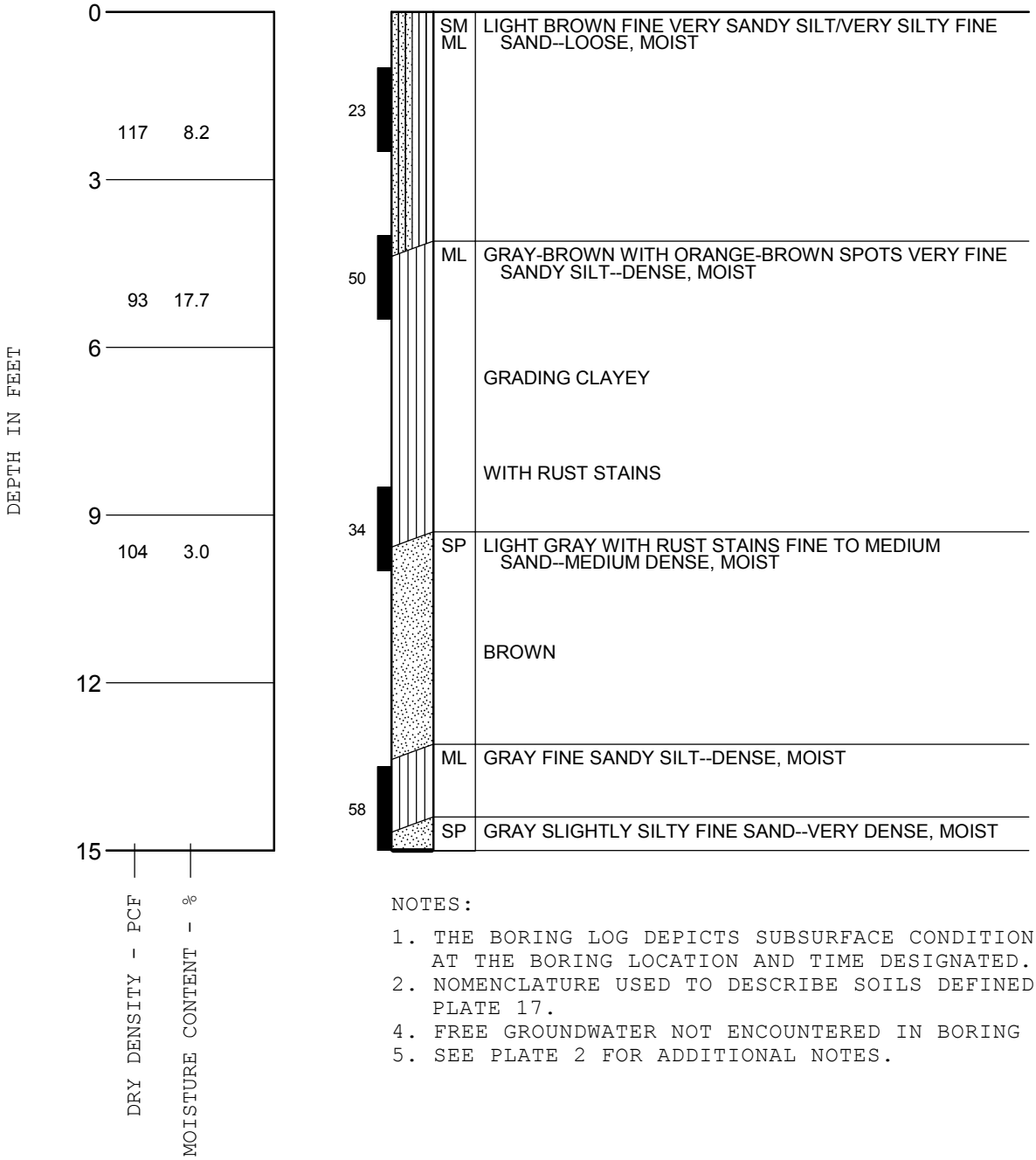
PLATE 8

PROJECT NUMBER: 146-618
PLATE NUMBER: 9

DRAWN BY: WCB
DATE: 12/8/16

BORING 8

DRILLED: 11/16/16



NOTES:

1. THE BORING LOG DEPICTS SUBSURFACE CONDITIONS ONLY AT THE BORING LOCATION AND TIME DESIGNATED.
2. NOMENCLATURE USED TO DESCRIBE SOILS DEFINED ON PLATE 17.
4. FREE GROUNDWATER NOT ENCOUNTERED IN BORING 8.
5. SEE PLATE 2 FOR ADDITIONAL NOTES.

LOG OF BORING

Raney Geotechnical Inc

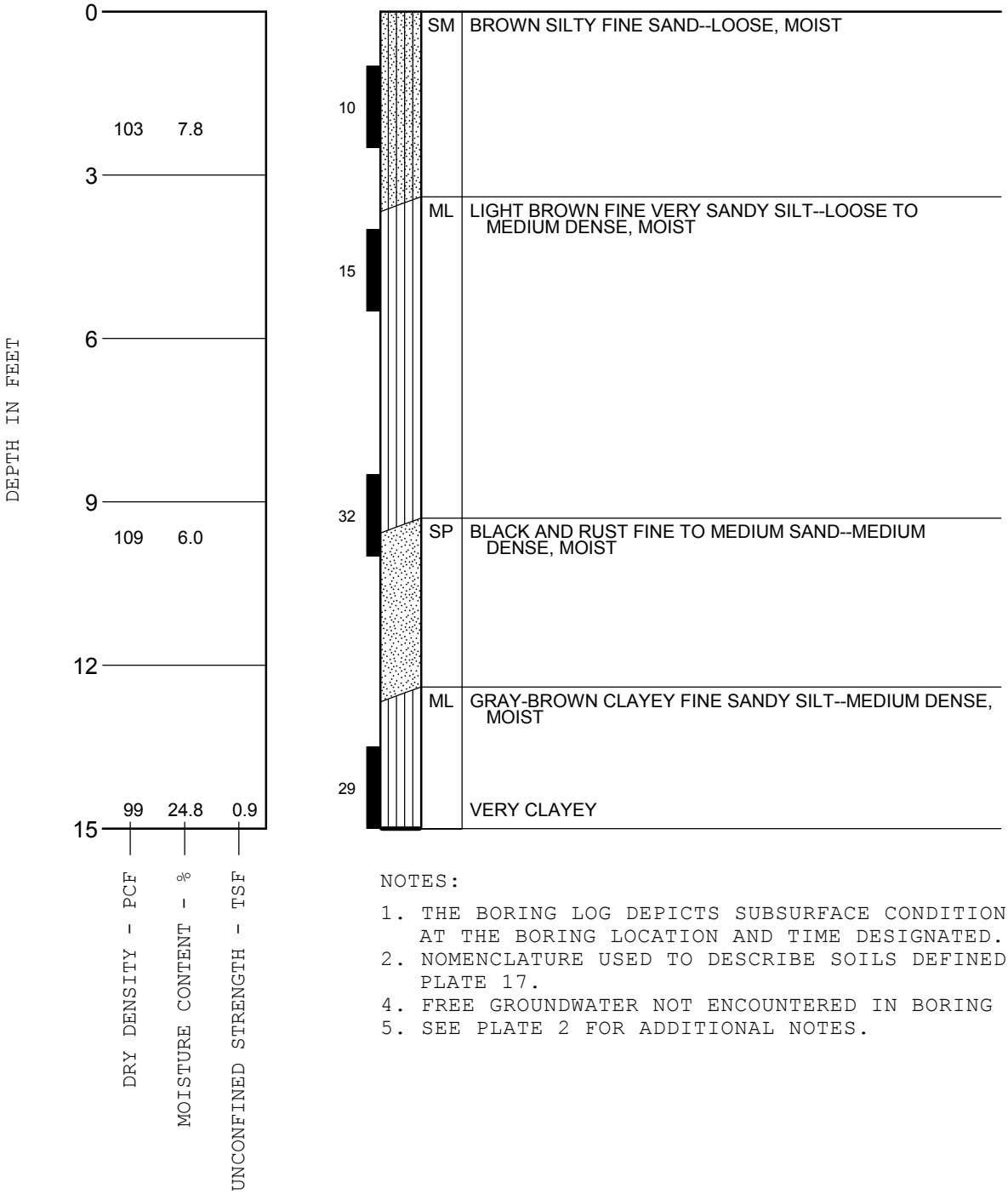
PLATE 9

PROJECT NUMBER: 146-618
PLATE NUMBER: 10

DRAWN BY: WCB
DATE: 12/8/16

BORING 9

DRILLED: 11/16/16



NOTES:

1. THE BORING LOG DEPICTS SUBSURFACE CONDITIONS ONLY AT THE BORING LOCATION AND TIME DESIGNATED.
2. NOMENCLATURE USED TO DESCRIBE SOILS DEFINED ON PLATE 17.
4. FREE GROUNDWATER NOT ENCOUNTERED IN BORING 9.
5. SEE PLATE 2 FOR ADDITIONAL NOTES.

LOG OF BORING

Raney Geotechnical Inc

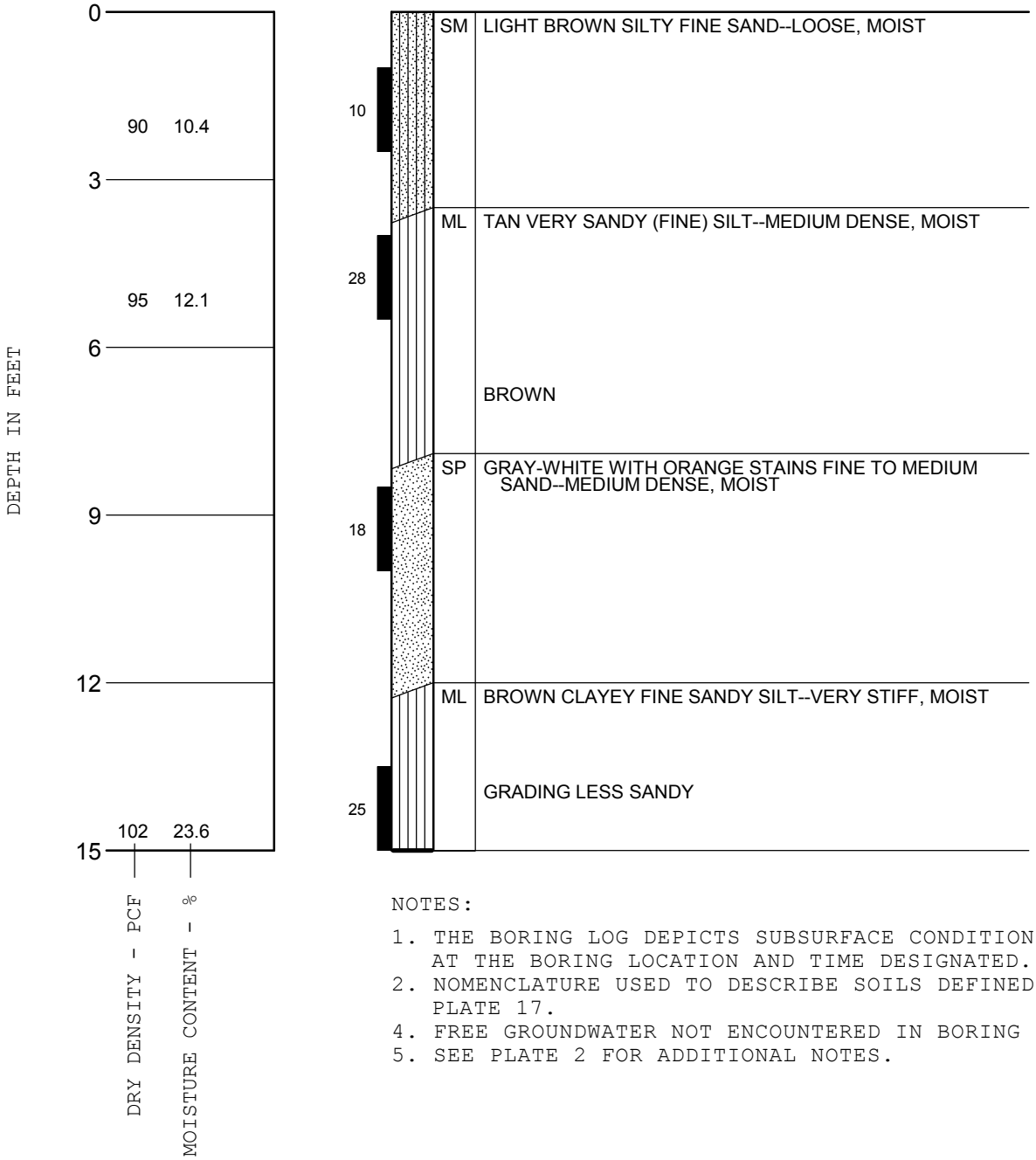
PLATE 10

PROJECT NUMBER: 146-618
PLATE NUMBER: 11

DRAWN BY: WCB
DATE: 12/8/16

BORING 10

DRILLED: 11/16/16



NOTES:

1. THE BORING LOG DEPICTS SUBSURFACE CONDITIONS ONLY AT THE BORING LOCATION AND TIME DESIGNATED.
2. NOMENCLATURE USED TO DESCRIBE SOILS DEFINED ON PLATE 17.
4. FREE GROUNDWATER NOT ENCOUNTERED IN BORING 10.
5. SEE PLATE 2 FOR ADDITIONAL NOTES.

LOG OF BORING

Raney Geotechnical Inc

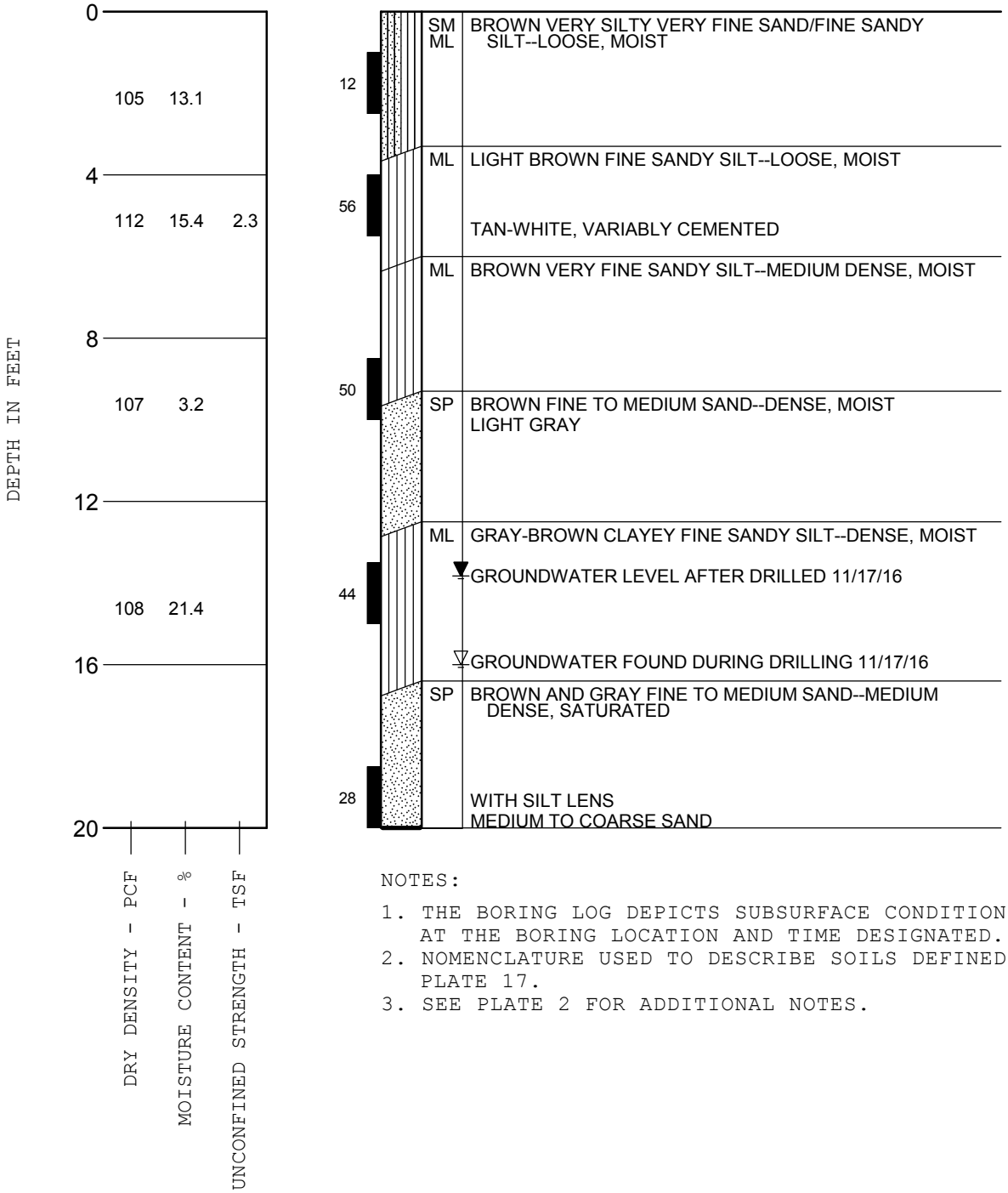
PLATE 11

PROJECT NUMBER: 146-618
PLATE NUMBER: 12

DRAWN BY: WCB
DATE: 12/8/16

BORING 11

DRILLED: 11/17/16



NOTES:

1. THE BORING LOG DEPICTS SUBSURFACE CONDITIONS ONLY AT THE BORING LOCATION AND TIME DESIGNATED.
2. NOMENCLATURE USED TO DESCRIBE SOILS DEFINED ON PLATE 17.
3. SEE PLATE 2 FOR ADDITIONAL NOTES.

LOG OF BORING

Raney Geotechnical Inc

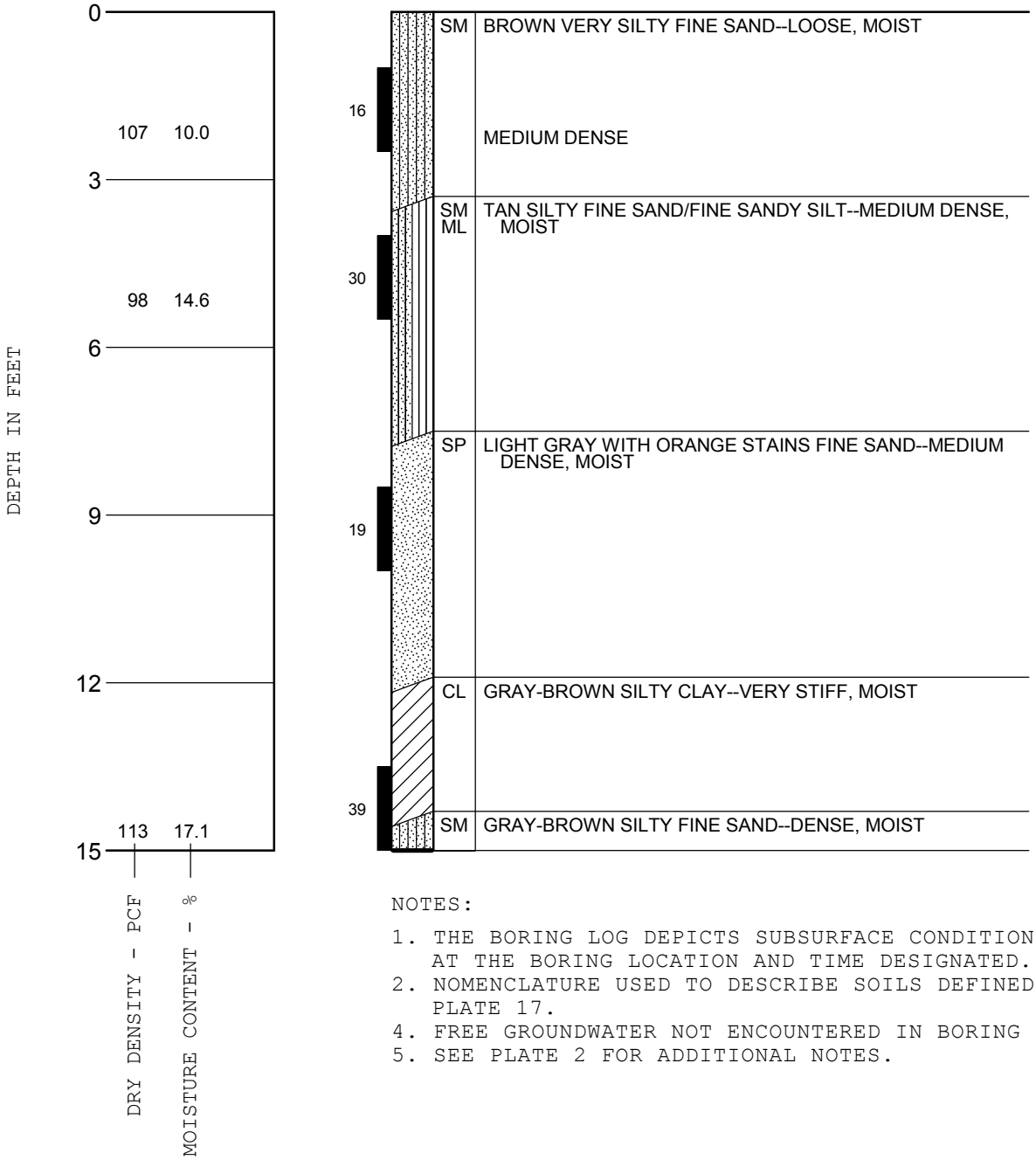
PLATE 12

PROJECT NUMBER: 146-618
PLATE NUMBER: 13

DRAWN BY: WCB
DATE: 12/8/16

BORING 12

DRILLED: 11/17/16



NOTES:

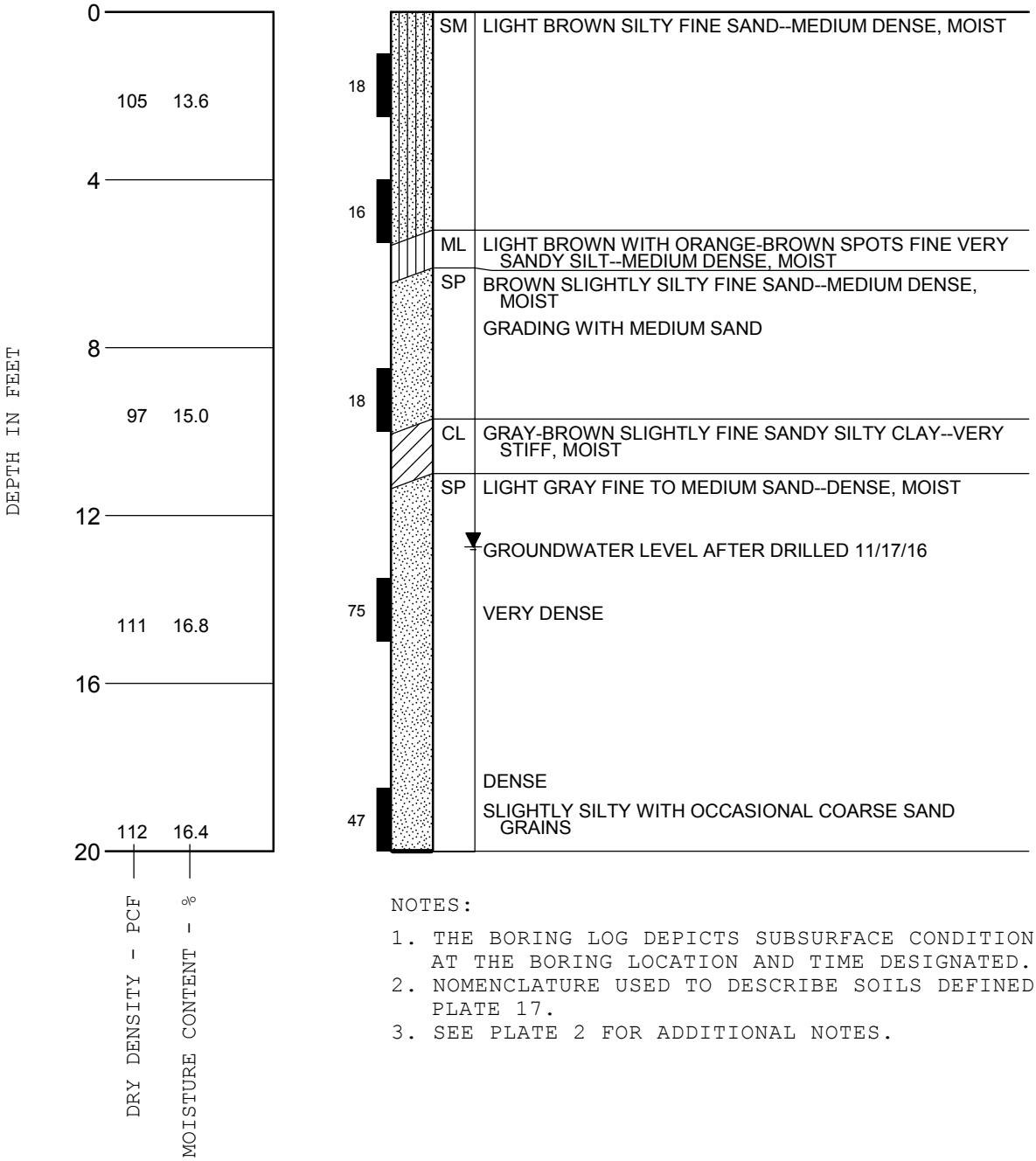
1. THE BORING LOG DEPICTS SUBSURFACE CONDITIONS ONLY AT THE BORING LOCATION AND TIME DESIGNATED.
2. NOMENCLATURE USED TO DESCRIBE SOILS DEFINED ON PLATE 17.
4. FREE GROUNDWATER NOT ENCOUNTERED IN BORING 12.
5. SEE PLATE 2 FOR ADDITIONAL NOTES.

LOG OF BORING

Raney Geotechnical Inc

BORING 13

DRILLED: 11/17/16



NOTES:

1. THE BORING LOG DEPICTS SUBSURFACE CONDITIONS ONLY AT THE BORING LOCATION AND TIME DESIGNATED.
2. NOMENCLATURE USED TO DESCRIBE SOILS DEFINED ON PLATE 17.
3. SEE PLATE 2 FOR ADDITIONAL NOTES.

PROJECT NUMBER: 146-618
PLATE NUMBER: 14

DRAWN BY: WCB
DATE: 12/8/16

LOG OF BORING

Raney Geotechnical Inc

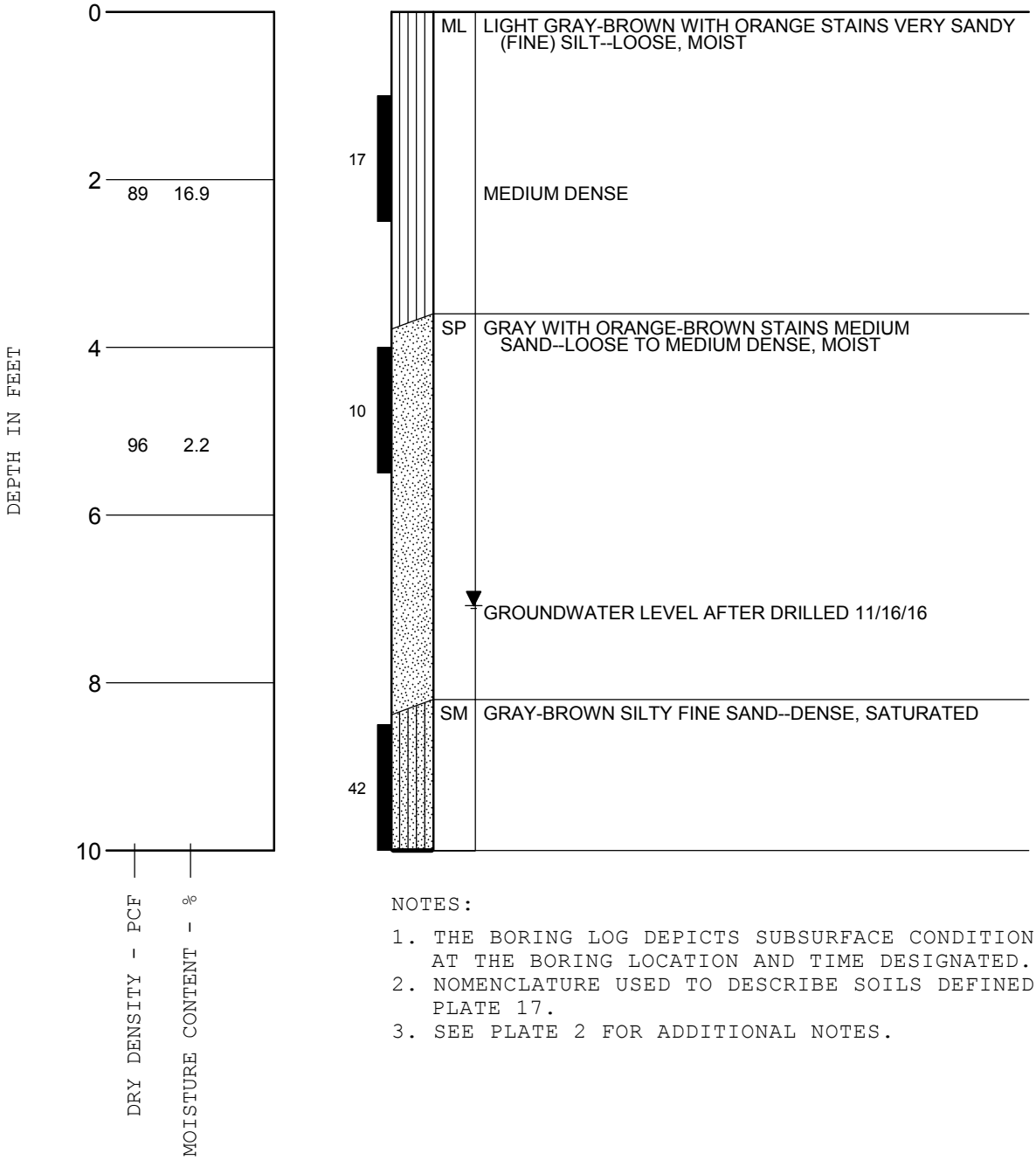
PLATE 14

PROJECT NUMBER: 146-618
PLATE NUMBER: 15

DRAWN BY: WCB
DATE: 12/8/16

BORING 14

DRILLED: 11/16/16



NOTES:

1. THE BORING LOG DEPICTS SUBSURFACE CONDITIONS ONLY AT THE BORING LOCATION AND TIME DESIGNATED.
2. NOMENCLATURE USED TO DESCRIBE SOILS DEFINED ON PLATE 17.
3. SEE PLATE 2 FOR ADDITIONAL NOTES.

LOG OF BORING

Raney Geotechnical Inc

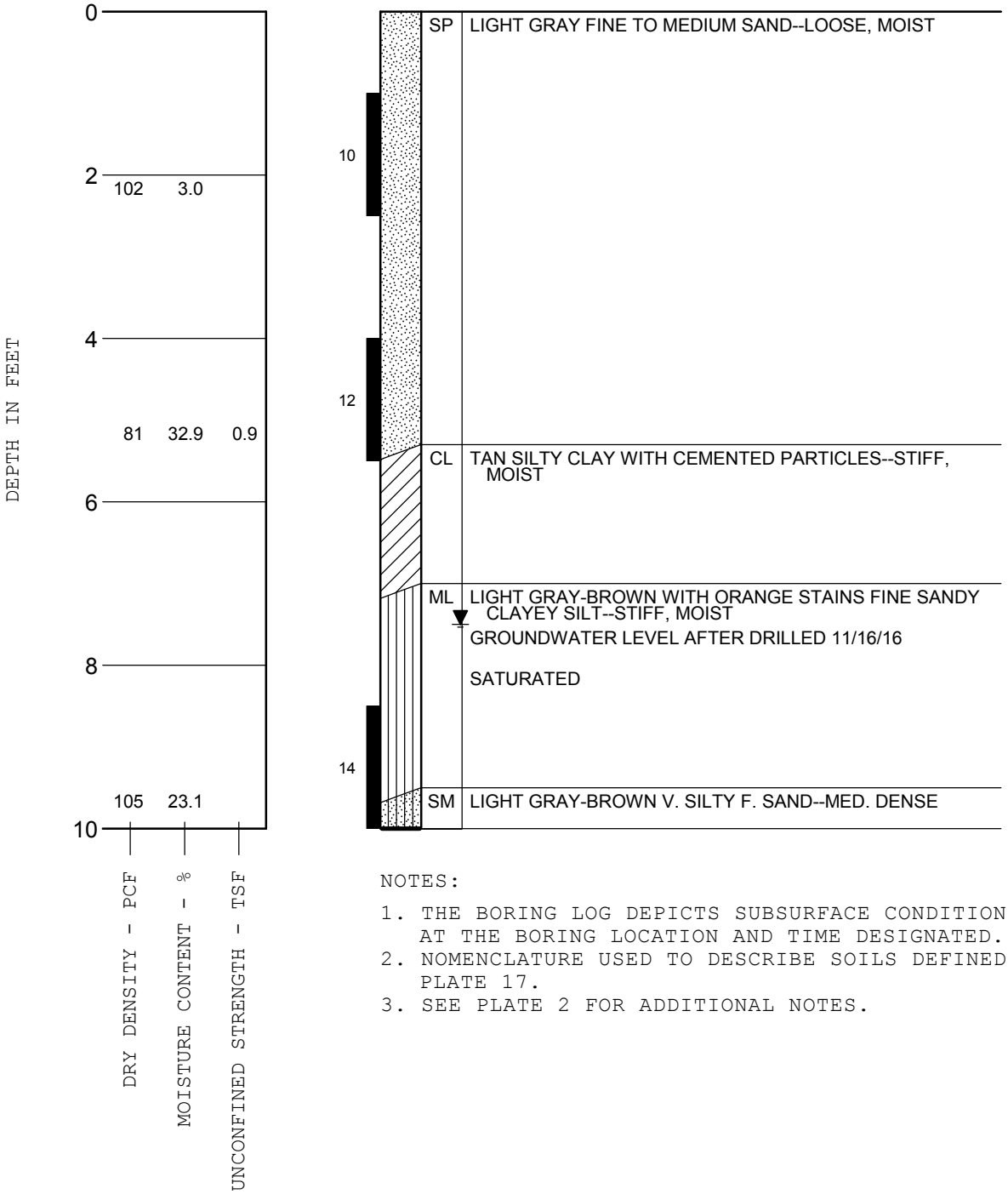
PLATE 15

PROJECT NUMBER: 146-618
PLATE NUMBER: 16

DRAWN BY: WCB
DATE: 12/8/16

BORING 15

DRILLED: 11/16/16



NOTES:

1. THE BORING LOG DEPICTS SUBSURFACE CONDITIONS ONLY AT THE BORING LOCATION AND TIME DESIGNATED.
2. NOMENCLATURE USED TO DESCRIBE SOILS DEFINED ON PLATE 17.
3. SEE PLATE 2 FOR ADDITIONAL NOTES.

LOG OF BORING

Raney Geotechnical Inc

PLATE 16

PROJECT NUMBER: 146-618
PLATE NUMBER: 17

GRAPH	SYMBOL	DESCRIPTION	MAJOR DIVISIONS		
	GW	WELL GRADED GRAVELS, GRAVEL-SAND MIXTURES	CLEAN GRAVELS WITH LESS THAN 5% FINES	GRAVEL AND GRAVELLY SOILS	COARSE GRAINED SOILS MORE THAN 50% LARGER THAN NO. 200 SIEVE
	GP	POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES			
	GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES	GRAVELS WITH MORE THAN 12% FINES	MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	
	GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES			
	SW	WELL GRADED SANDS, GRAVELLY SANDS	CLEAN SANDS WITH LESS THAN 5% FINES	SANDS AND SANDY SOILS	
	SP	POORLY GRADED SANDS, GRAVELLY SANDS			
	SM	SILTY SANDS, SAND-SILT MIXTURES	SANDS WITH MORE THAN 12% FINES	MORE THAN 50% OF COARSE FRACTION PASSING NO. 4 SIEVE	
	SC	CLAYEY SANDS, SAND-CLAY MIXTURES			
	ML	INORGANIC SILTS, ROCK FLOUR, OR CLAYEY SILTS WITH SLIGHT PLASTICITY	LIQUID LIMIT LESS THAN 50	SILTS AND CLAYS	FINE GRAINED SOILS MORE THAN 50% SMALLER THAN NO. 200 SIEVE
	CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS			
	OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY			
	MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS SILTS, ELASTIC SILTS	LIQUID LIMIT GREATER THAN 50	SILTS AND CLAYS	
	CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS			
	OH	ORGANIC CLAYS AND ORGANIC SILTS OF MEDIUM TO HIGH PLASTICITY			
	PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENT	HIGHLY ORGANIC SOILS		

UNIFIED SOIL CLASSIFICATION SYSTEM

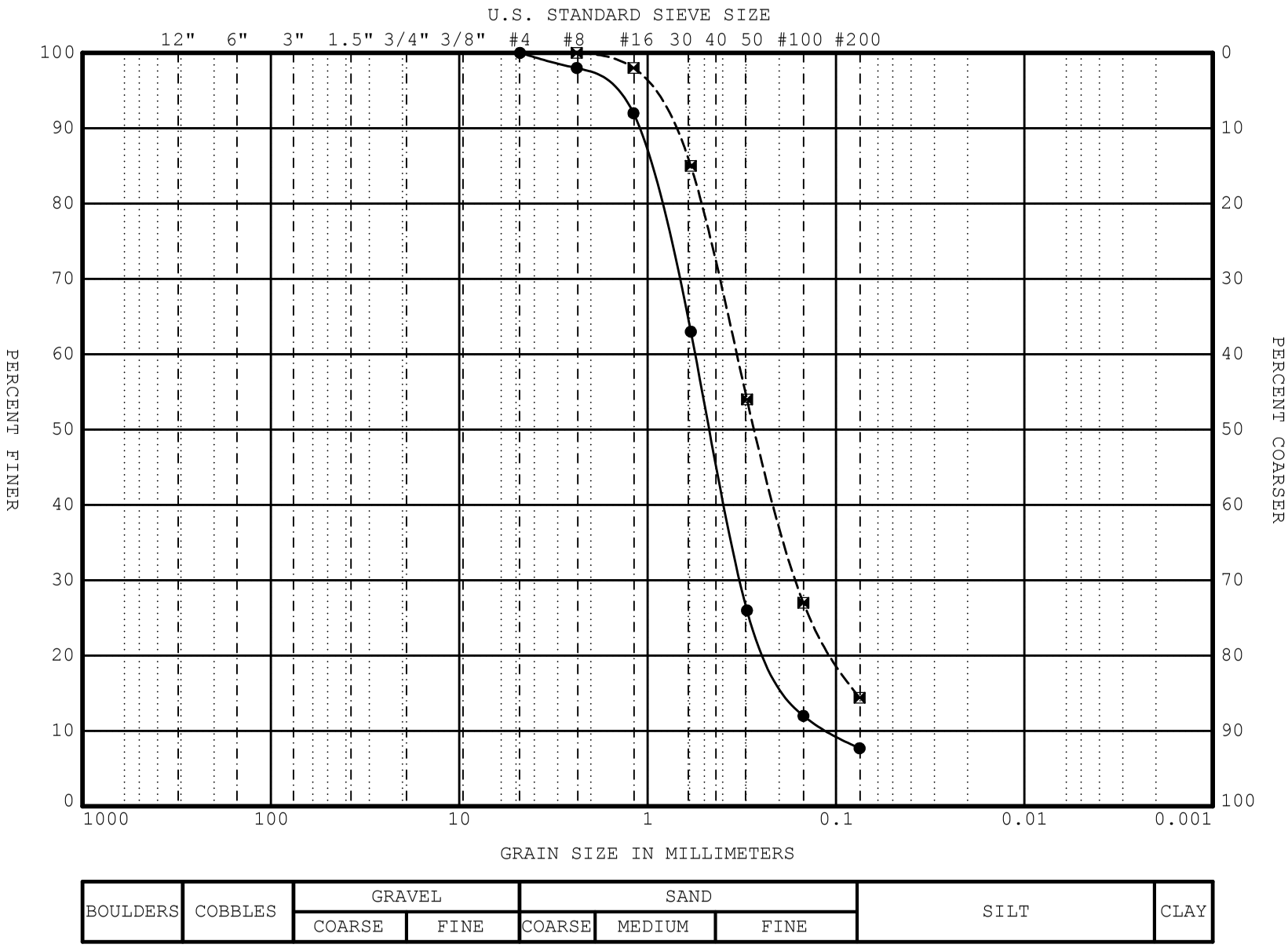
Raney Geotechnical Inc

PLATE 17

PROJECT NUMBER: 146-618

PLATE NUMBER: 18

SYMBOL	LOCATION	DEPTH	UNIFIED CLASSIFICATION	DESCRIPTION
●	BORING 1	19.5'	SP-SM	GRAY-BROWN FINE TO COARSE SAND
⊠	BORING 1	39.5'	SM	DARK GRAY SILTY FINE TO COARSE SAND



BOULDERS	COBBLES	GRAVEL		SAND			SILT	CLAY
		COARSE	FINE	COARSE	MEDIUM	FINE		

GRAIN SIZE DISTRIBUTION

Raney Geotechnical Inc

PLATE 18

DIRECT SHEAR DATA

TEST DESIGNATION: UNCONSOLIDATED, QUICK

STRAIN RATE: 0.030 inches/minute

SAMPLE CONDITION: Undisturbed

MATERIAL DESCRIPTION	SAMPLE I.D.	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	NORMAL STRESS (psf)	SHEAR STRESS (psf)	
					3% Strain	10% Strain
Light brown silty fine to medium sand	Boring 3 1.6'	7.4	100	1000	720	960
	Boring 3 1.8'	5.4	104	2000	1200	1820
	Boring 3 2.3'	5.2	106	4000	2270	2960
Light brown silty fine sand	Boring 10 1.9'	11.2	95	1000	930	1100
	Boring 10 1.5'	12.7	84	2000	1510	1820
	Boring 10 1.7'	10.4	90	4000	3780	5910

DIRECT SHEAR DATA

Raney Geotechnical Inc

RESISTANCE VALUE TEST
CALIFORNIA TEST METHOD 301G

SAMPLE LOCATION: SAMPLE S2
DEPTH: 12"-24"
MATERIAL DESCRIPTION: Dark gray finve very sandy silt

TEST NUMBER	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	EXUDATION PRESSURE (PSI)	EXPANSION PRESSURE (PSF)	RESISTANCE VALUE
1	118	11.8	104	17	60
2	118	11.3	252	26	64
3	119	10.8	427	43	66

Resistance value at 300 psi exudation pressure = 65

RESISTANCE VALUE DATA

Raney Geotechnical Inc

PLATE 20

RESISTANCE VALUE TEST
CALIFORNIA TEST METHOD 301G

SAMPLE LOCATION: SAMPLE S3
DEPTH: 6"-18"
MATERIAL DESCRIPTION: Gray-brown silty fine sand

TEST NUMBER	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	EXUDATION PRESSURE (PSI)	EXPANSION PRESSURE (PSF)	RESISTANCE VALUE
1	115	12.4	88	0	62
2	115	11.4	215	0	63
3	114	10.4	646	0	66

Resistance value at 300 psi exudation pressure = 64

RESISTANCE VALUE DATA

Raney Geotechnical Inc

PLATE 21

CALIFORNIA TEST METHOD NO. 373

Sample Location: S5
Depth: 6"-18"
Material Description: Brown silty fine sand
Additives: Portland Cement as shown

Sample No.	Additive Amounts	Dry Density (pcf)	Moisture Content (%)	Maximum Dry Density/ Optimum Moisture Content	Unconfined Compressive Strength
A	4% cement	115.0	8.3	118 pcf @ 10.4%	357 psi
B	4% cement	115.0	9.4		328 psi
C	4% cement	117.8	10.4		414 psi
D	4% cement	117.4	11.5		329 psi
E	4% cement	117.7	10.4		363 psi
F	6% cement	120.6	10.4		605 psi
G	6% cement	120.5	10.4		565 psi

TREATED SOIL COMPRESSIVE STRENGTH DATA

Raney Geotechnical Inc

PLATE 22

Sunland Analytical
11419 Sunrise Gold Circle, #10
Rancho Cordova, CA 95742
(916) 852-8557

Date Reported 12/02/2016
Date Submitted 11/28/2016

To: William Boli
Raney Geotechnical
3140 Beacon Blvd. Ste#100
West Sacramento, CA 95691

From: Gene Oliphant, Ph.D. \ Randy Horney
General Manager \ Lab Manager

The reported analysis was requested for the following location:
Location : 146-618 MURPHY PKWAY Site ID : B4 @ 4-5.5FT.
Thank you for your business.

* For future reference to this analysis please use SUN # 73282-152961.

EVALUATION FOR SOIL CORROSION

Soil pH	7.80		
Moisture	10.9 %		
Minimum Resistivity	1.53 ohm-cm (x1000)		
Chloride	47.7 ppm	00.00477	%
Sulfate	125.6 ppm	00.01256	%
Redox Potential	(+) 192 mv		
Sulfides	Presence - NEGATIVE		

METHODS
pH and Min.Resistivity CA DOT Test #643 Mod.(Sm.Cell)
Sulfate CA DOT Test #417, Chloride CA DOT Test #422
Redox Potential ASTM G-200, Sulfides AWWA C105/A25.5

PLATE 23

Sunland Analytical
11419 Sunrise Gold Circle, #10
Rancho Cordova, CA 95742
(916) 852-8557

Date Reported 12/02/2016
Date Submitted 11/28/2016

To: William Boli
Raney Geotechnical
3140 Beacon Blvd. Ste#100
West Sacramento, CA 95691

From: Gene Oliphant, Ph.D. \ Randy Horney
General Manager \ Lab Manager

The reported analysis was requested for the following location:
Location : 146-618 MURPHY PKWAY Site ID : B9 @ 4-5.5FT.
Thank you for your business.

* For future reference to this analysis please use SUN # 73282-152962.

EVALUATION FOR SOIL CORROSION

Soil pH	7.95	
Moisture	14.2 %	
Minimum Resistivity	1.66 ohm-cm (x1000)	
Chloride	29.4 ppm	00.00294 %
Sulfate	78.4 ppm	00.00784 %
Redox Potential	(+) 210 mv	
Sulfides	Presence - NEGATIVE	

METHODS
pH and Min.Resistivity CA DOT Test #643 Mod.(Sm.Cell)
Sulfate CA DOT Test #417, Chloride CA DOT Test #422
Redox Potential ASTM G-200, Sulfides AWWA C105/A25.5

PLATE 24

LIQUEFACTION ANALYSIS

Murphy Parkway Warehouse

Hole No.=B-1 Water Depth=13.8 ft

Ground Improvement of Fill=1 ft

Magnitude=6.6

Acceleration=0.43g