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## LIMITED PHASE II SUBSURFACE INVESTIGATION REPORT



1010 NORTH TWIN OAKS VALLEY ROAD, SAN MARCOS, CA

Prepared For:  
MLC Holdings, Inc.  
5 Peters Canyon Road, Suite 310  
Irvine, California 92606

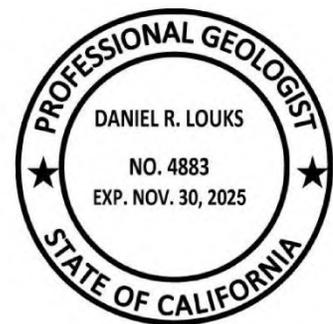
Hillmann Project Number C3-10025-1

June 28, 2024

Written By:  
Hillmann Consulting, LLC

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Dan Louks  
Professional Geologist 4883



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## **1.0 INTRODUCTION / BACKGROUND**

Hillmann Consulting, LLC (Hillmann) conducted a Limited Phase II Subsurface Investigation at the agricultural/residential property, located at 1010 North Twin Oaks Valley Road, San Marcos, CA. The property is located on the west side of North Twin Oaks Valley Road, between Legacy Drive and Deer Brook Drive in a primarily residential area of San Marcos (**Figure 1**). The property is mostly undeveloped ranch land, except for a residence located at the address indicated above. Portions of the Subject Property were utilized as orchards and citrus groves from as early as the 1930s to the 1960s. The overall property includes nine parcels that together encompass 137.2 acres that is being planned for redevelopment into housing.

In December 2020, a limited soil sampling investigation was conducted at the property by Tetra Tech, Inc. The investigation included soil sampling in targeted and randomized locations across the property for possible contaminants of concern including heavy metals, organochlorine pesticides (OCP), petroleum hydrocarbons (TPH), polycyclic aromatic hydrocarbons (PAHs), volatile organic chemicals (VOCs) and semi-volatile organic chemicals (SVOCs). The results of this work indicated mostly very low background levels of contaminants of concern with a few notable exceptions. The objective of the current work was to further investigate the areas that had levels of contamination that might affect future residential development. Accordingly, the current scope of work included revisiting only those areas where previous soil sampling provided targets for additional study. In addition, this supplemental work was complemented with soil gas sampling in target areas to provide a more sensitive indication of possible VOC contamination at the site.

The prior work by Tetra Tech revealed that of the nine parcels sampled, only Parcels 4 and 5 had heavy metals detected above residential screening levels. Cobalt and thallium were detected at max concentrations of 89 mg/kg and 7.5 mg/g, respectively, which is above their residential screening levels, while arsenic was detected above its background level with a max concentration of 15 mg/kg. Although these metals were detected above their respective screening or background levels, they were not found anywhere else on the Subject Property and were not found above screening levels in any other sampled locations on the Subject Property. Based on this, Tetra Tech resolved that these constituents were naturally occurring and not as a result of human activities, which meant that no further investigation was warranted.

Additionally, the OCP analysis of the soil samples revealed that only Parcel 1 had OCPs detected above the residential screening level. Chlordane was detected above the residential screening level in four of the samples taken from the roof driplines of the rental house on Parcel 1. Pesticides were also reported in samples from Parcels 3 and 7, however these concentrations were below residential screening levels. Tetra Tech theorized that the pesticide contamination was likely from the historical application of pesticides to the ornamental bushes and plants that surround the houses, or from historical termite treatment for the houses and not from pesticide-application to the orchards or citrus groves on the Subject Property.

Furthermore, because citrus groves are known to have historically used smudge pots during cold weather spells, surface and subsurface soils samples were collected by Tetra Tech from Parcels 1, 4, 5, and 6 and analyzed for TPH and PAH laboratory analysis. The results of the analysis revealed that TPH diesel range organic (DRO) compound was detected below screening levels

in samples from parcels 1, 4, and 5. While the PAH, naphthalene, was detected below screening levels only in Parcel 5. In addition to TPH and PAH, Methylene chloride was also detected below residential screening levels within a sample taken from the abandoned pool area on Parcel 1.

The Tetra Tech investigation was conducted under the auspices of the DTSC and revealed that only three of the nine parcels had isolated areas of concern with respect to possible subsurface contamination. All three (Parcel 1, Parcel 4, and Parcel 5) are located adjacent to North Twin Oaks Valley Road on the far east side of the property and all have a history consistent with the entire property. The layout of the site and relevant parcel designations are depicted on **Figure 2**. The full Tetra Tech investigation report is available in Appendix E of this report.

## **1.1 Scope of Work**

Parcel 1 includes the main residence on the property and occupies 5.16 acres. The results of soil sampling indicated Tetra Tech's boring P1-11 (drilled inside an abandoned swimming pool that had been partly filled with soil), had detectable concentrations of methylene chloride. In addition, borings P1-06, P1-07, P1-08, and P1-09, all drilled adjacent to the existing residence structure, had detectable concentrations of chlordane, an environmentally sensitive pesticide. To address these concerns and determine if the results indicated a significant level of subsurface contamination, Hillmann installed eight borings (P1-HB1-P1-HB8) in target and perimeter positions around these areas. Four of the locations were completed as soil gas sampling probes (SG1-SG4) to investigate the methylene chloride detection. The locations are indicated on **Figure 3A**.

Parcel 4 occupies 25.51 acres, is located immediately north of Parcel 1, and was used solely for agricultural or ranching activities. Tetra Tech obtained 55 near surface soil samples that were composited for analysis of OCP and 36 discrete surface and subsurface samples for analysis of a variety of compounds, as recommended by DTSC. The results indicated two samples of potential concern with respect to arsenic levels in soil. Samples P4-SS-03 and P4-06 had 15 and 32 mg/Kg arsenic, exceeding the DTSC-established background concentration of 12 mg/Kg. In addition, boring P4-16 had detectable concentrations of thallium. Hillmann installed three borings (P4-HB18-P4-HB26) around the perimeter of each target location within 10-20 feet of the original borings based on the locations provided in the Tetra Tech maps. The soil samples in the perimeter borings were analyzed for the target chemicals of concern to determine if the extent of contamination was significant. The locations are indicated on **Figure 3B**.

Parcel 5 occupies 6.5 acres of agricultural land, and sampling of the soil by Tetra Tech focused on OCP and heavy metal analysis, but also included testing of petroleum hydrocarbons and polynuclear aromatic hydrocarbons (PAH). Laboratory results indicated low detections of cobalt and thallium that exceeded RSL screening levels. In addition, 1.9 mg/Kg of naphthalene was detected in a soil sample from boring P5-02. Hillmann installed three soil gas sampling probes (SG5-SG7) in close perimeter positions around P5-02 to directly test the soil gas as a sensitive indication of possible VOC contamination. Nine soil borings (P5-HB9-P5-HB18) were installed in close perimeter positions around the other original borings that had subtle levels of contamination. The locations are indicated on **Figure 3C**.

The current investigation is an independent assessment of the site that was constrained by time and cost factors as part of a self-directed effort. This investigation is intended to be a supplement to the Tetra Tech work indicated above and provided in their “*Limited Soil Sampling and Analysis Report*”, dated March 19, 2021. This investigation was not intended to meet the more stringent requirements of a regulatory driven assessment. The summary tables and maps from the original investigation are provided in **Appendix E**, for reference.

## 2.0 GEOLOGY/HYDROGEOLOGY

During drilling, a California Professional Geologist described the soil using the Unified Soil Classification System. Based on the drilling logs, the sediments beneath the site consist of mixed deposits ranging from silty clay to silty sand with gravel from near surface to 5 feet below grade, the maximum depth of exploration. Groundwater was not encountered during drilling to 5 feet below grade. Based on data presented in the Tetra Tech report, the depth to groundwater is estimated to be about 75 feet below grade in this area. Descriptions of the sediments encountered are presented in the drilling logs (**Appendix C**).

The Tetra Tech report also provided a description of natural sources of arsenic and other heavy metals that might impact the results of the investigation. As indicated in their report - “*From researching historical arsenic mining operations in San Diego County, the Santiago Peak Volcanics Formation contains a formation known to contain arsenic at concentrations which make it economically viable as a mineral source. The Santiago Peak Volcanics formation, at multiple times during the past 50 to 90 years, has been economically mined for arsenopyrite and arsenic related accessory minerals (i.e., gold) (Geosyntec Consultants 2012; Weber 1963). Additionally, soil study sampling activities conducted by Tetra Tech and other environmental consultants within the City of San Marcos have confirmed the presence of naturally occurring arsenic in soil that have been detected at elevated concentrations (Geosyntec Consultants 2012; Tetra Tech 2012).*”

### **3.0 SITE INVESTIGATION**

On June 18 and 20, 2024, Hillmann installed twenty-six soil borings and Soil Gas Probes (HB1-HB26 and SG1-SG7) in target or perimeter locations as described in Section 1.1 of this report. The borings were installed to total depths ranging from 1-5 feet below grade using hand auger tools. Seven borings were completed as soil gas sampling probes (SG1-SG7) with sample tips installed at maximum depth (3-5 feet below grade). The boring and probe locations are shown on **Figure 3A**, for Parcel 1, **Figure 3B**, for Parcel 4, and **Figure 3C**, for Parcel 5.

During drilling, a California Professional Geologist described the soil using the Unified Soil Classification System. Soil samples were obtained at select depths and were preserved for analysis in laboratory glass jars that were sealed with Teflon tape and threaded caps and stored on ice pending delivery to the laboratory. The samples were analyzed for target potential contaminants based on the results of the previous work. The soil samples were analyzed by A&R Laboratories of Ontario, California.

The soil gas sampling probes consist of plastic micro-porous vapor implants that are approximately 2 inches long with a 0.5-inch outside diameter, connected to 0.25-inch outside diameter nylaflow tubing that extended above the surface. The annulus around each vapor implant was backfilled with approximately 1 foot of screen-washed #3 sand. Six inches of dry bentonite was placed immediately above the sand pack, followed by one-foot of bentonite that was hydrated during placement. The probe annuli were further sealed with hydrated bentonite to grade to provide a secure borehole seal. The probes were finished with gas-tight fittings at the surface pending vapor purging and sampling.

The probes were allowed to equilibrate for about 48 hours before purging and sampling. Prior to vapor sampling, shut-in and leak tests were conducted on the probes. Each probe head was attached to the sampling train assembly of Teflon tubing, valves, and fittings and connected to a purge pump. The pump was used to evacuate the sealed system using an applied minimum vacuum of 100 inches of water column (in. WC). The vacuum on each probe was monitored for 90 seconds with the sampling train system sealed. After the shut-in test was validated, the sampling train was leak tested. Liquid isopropyl alcohol was applied to a cloth and placed around all connections in the sampling train to evaluate whether the system was sealed from ambient air leaks. A detection of 10 times the reporting limit of this compound might suggest that ambient air leakage had occurred.

The purpose of purging is to remove stagnant air from the vapor sampling train to ensure representative samples are obtained. The probes were purged using an adjustable vacuum pump set at 200 mL/minute. During purging, the soil gas was monitored for VOC, oxygen, and carbon dioxide content using a Mini-Rae 2000 multi gas detector to ensure that non-atmospheric formation air was being sampled (**Appendix D**).

After purging three volumes through the system, vapor samples were collected from the probes on June 20, 2024. During sampling, the purge pump was operated at 200 mL/minute, and the vacuum was monitored to ensure it was below 100 in. WC. Vacuum applied below this level helps ensure chemical partitioning from pore water to soil gas and the stress on the air seals are

both minimized. The samples were containerized in Tedlar bags which were delivered to the laboratory for analysis. Fresh tubing was used on each sampling train between holes. The soil gas samples were tested for VOC using EPA Method 8260B by A&R Laboratories of Ontario, California.

### 3.1 Laboratory Results

Results from soil sampling indicated none of the samples had concentrations of the target contaminants that exceed current residential screening levels. However, the detection limits of thallium were slightly higher than the current soil screening level for residential areas. The soil sampling results are summarized in **Table 1**. The laboratory reports from soil sampling are included in **Appendix B**.

Results from soil gas sampling indicated none of the samples had detectable concentrations of VOC. However, the VOC detection limits exceeded the current soil gas screening level for residential areas. These results are summarized in **Table 2**. The laboratory report from soil gas sampling is included in **Appendix B**.

## 4.0 CONCLUSIONS AND RECOMMENDATIONS

The subject site is mostly undeveloped agricultural land with a residential structure that is planned for redevelopment into multiple single family residential use. In December 2020, a preliminary soil sampling investigation was conducted at the property under the direction of the DTSC. The overall property that was initially investigated included nine connected parcels that together occupy over 137 acres. The subsurface soil samples were analyzed for CAM 17 Metals, Organochlorine Pesticides (OCPs), and Polycyclic Aromatic Hydrocarbons (PAHs),

The results indicated mostly insignificant levels of contaminants in soil, with a few notable exceptions. The objective of the current work is to revisit these target areas (Parcels 1, 4, and 5) and determine if the contamination discovered represents a significant, widespread environmental concern, or localized, isolated contamination. The current work is intended to supplement the original larger-scale study.

In June 2024, Hillmann conducted an investigation that included the installation of 26 soil borings in target and perimeter positions to provide additional data in the near surface soil media. The investigation further included the installation of seven soil gas sampling probes to provide a more sensitive indication of possible VOC contamination in target areas that could pose a vapor intrusion threat to future residents.

The results from analysis of OCP and select heavy metals indicated detectable concentrations of analytes, but no reported results exceeded current residential levels for any contaminants. During this phase of work on Parcel 1, methylene chloride was not detected in the abandoned swimming pool on the Subject Property. The results from soil gas sampling indicated no detectable concentrations of VOC within any of the parcels; however, the laboratory did not meet current stringent detection limits, which means that this may not be true. Based on these results, Hillmann concludes that low levels of OCP discovered near the residential structure in 2020 are isolated to an immediate zone associated with the existing house drainage system (as initially

reported by Tetra Tech). The concentrations of arsenic, cobalt, and thallium are probably best explained by the native geology of the local area, with multiple rock outcrops of minerals that likely contain these chemicals of concern. They do not appear to be indicative of anthropogenic sources.

No additional sampling is recommended.

## **5.0 LIMITATIONS**

This Subsurface Investigation was performed in accordance with generally and currently accepted engineering practices and principles; however, the procedures and methodologies used in this investigation are not intended to meet all specific regulatory guidelines as this work was completed as a self-directed effort. Although the data in this report is indicative of subsurface conditions in areas investigated, no further conclusions regarding the absence or presence of subsurface contamination in other areas of the site should be construed or inferred other than those expressly stated in this report. The conclusions made are based on information obtained from field observations, independent laboratory analytical results, and from current and relevant Federal, State, regional, and local agencies.

**TABLE 1**  
**Summary of Soil Sampling Results (mg/Kg)**

Original Boring	Detection of Concern	Hillmann Boring	Hillmann Sample ID	OCP	Cobalt	Thallium	Arsenic
Parcel 1							
P1-11	Methylene Chloride/ OCP	HB4/SG4*	P1-HB4-surf	0.0073 DDE <sup>1</sup>	--	--	--
P1-06-09	Chlordane	HB5	P1-HB5-surf	ND	--	--	--
"	"	HB6	P1-HB6-surf	ND	--	--	--
"	"		P1-HB6-2'	ND	--	--	--
"	"	HB7	P1-HB7-surf	ND	--	--	--
"	"	HB8	P1-HB8-surf	ND	--	--	--
"	"		P1-HB8-1.5'	ND	--	--	--
Parcel 4							
P4-16	Thallium	HB18	P4-HB18-surf	--	--	ND<1.0	--
"	"		P4-HB18-2'	--	--	ND<1.0	--
"	"	HB19	P4-HB19-surf	--	--	ND<1.0	--
"	"		P4-HB19-2'	--	--	ND<1.0	--
"	"	HB20	P4-HB20-surf	--	--	ND<1.0	--
"	"		P4-HB20-2'	--	--	ND<1.0	--
P4-06	Arsenic	HB21	P4-HB21-surf	--	--	--	3.58
"	"		P4-HB21-2'	--	--	--	4.05
"	"	HB22	P4-HB22-surf	--	--	--	5.28
"	"		P4-HB22-1.5'	--	--	--	2.92
"	"	HB23	P4-HB23-surf	--	--	--	6.68
"	"		P4-HB23-1.5'	--	--	--	7.78
P4-SS-03	Arsenic	HB24	P4-HB24-surf	--	--	--	ND<1.0
"	"		P4-HB24-1'	--	--	--	ND<1.0
"	"	HB25	P4-HB25-surf	--	--	--	ND<1.0
"	"		P4-HB25-2'	--	--	--	1.60
"	"	HB26	P4-HB26-surf	--	--	--	1.69
"	"		P4-HB26-1.5'	--	--	--	1.70
<b>Residential RSL</b>	--	--	--	--	<b>23</b>	<b>0.78</b>	<b>0.11</b>
<b>Commercial RSL</b>	--	--	--	--	<b>350</b>	<b>12</b>	<b>0.36</b>
<b>DTSC Bkgrnd</b>	--	--	--	--	--	--	<b>12</b>

Notes: \* Testing for methylene chloride done via soil gas sampling in probes SG2, SG3, and SG4; refer to Table 2. 1-4-4 DDE Residential RSL= 2.0 mg/Kg; Commercial RSL= 9.3 mg/Kg. ND - Not Detected. EPA Regional Screening Levels (RSLs) are human health risk-based screening levels used by EPA and DTSC in residential and commercial settings. DTSC Background Concentration is based on statistical study of sites throughout southern California. This concentration may be used as a screening level for anthropogenic and naturally occurring levels of arsenic in soil in southern California.\* - Values modified by DTSC HERO Note 3. Please refer to lab report for complete results.

**TABLE 1-Contd.**  
**Summary of Soil Sampling Results (mg/Kg)**

Original Boring	Detection of Concern	Hillmann Boring	Hillmann Sample ID	OCP	Cobalt	Thallium	Arsenic
Parcel 5							
P5-14	Thallium	HB9	P5-HB9-3'	--	--	ND<1.0	--
"	"		P5-HB9-4.5'	--	--	ND<1.0	--
"	"	HB10	P5-HB10-3'	--	--	ND<1.0	--
"	"		P5-HB10-4'	--	--	ND<1.0	--
"	"	HB11	P5-HB11-3'	--	--	ND<1.0	--
"	"		P5-HB11-4.5'	--	--	ND<1.0	--
P5-10	Cobalt	HB12	P5-HB12-surf	--	5.74	--	--
"	"		P5-HB12-2'	--	3.65	--	--
"	"	HB13	P5-HB13-surf	--	6.54	--	--
"	"		P5-HB13-2'	--	3.90	--	--
"	"	HB14	P5-HB14-surf	--	6.54	--	--
"	"		P5-HB14-2'	--	7.00	--	--
P5-07	Thallium	HB15	P5-HB15-surf	--	--	ND<1.0	--
"	"		P5-HB15-1.5'	--	--	ND<1.0	--
"	"	HB16	P5-HB16-surf	--	--	ND<1.0	--
"	"		P5-HB16-2'	--	--	ND<1.0	--
"	"	HB17	P5-HB17-surf	--	--	ND<1.0	--
			P5-HB17-2'	--	--	ND<1.0	--
<b>Residential RSL</b>	--	--	--	--	<b>23</b>	<b>0.78</b>	<b>0.11</b>
<b>Commercial RSL</b>	--	--	--	--	<b>350</b>	<b>12</b>	<b>0.36</b>
<b>DTSC Bkgrnd</b>	--	--	--	--	--	--	<b>12</b>

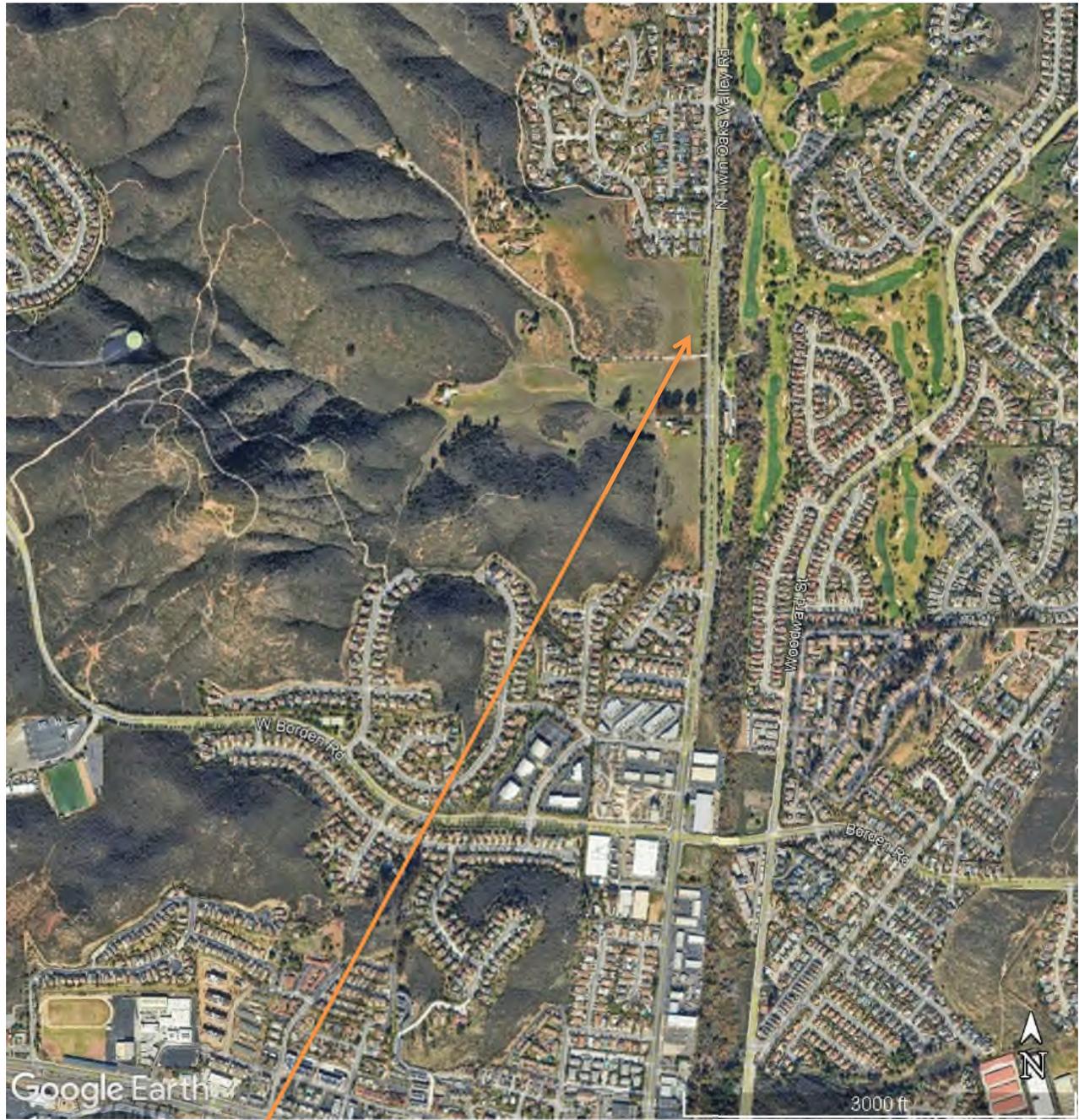
Notes: \* Testing for methylene chloride done via soil gas sampling in probes SG2, SG3, and SG4; refer to Table 2. 1-4-4 DDE Residential RSL= 2.0 mg/Kg; Commercial RSL= 9.3 mg/Kg. ND - Not Detected. EPA Regional Screening Levels (RSLs) are human health risk based screening levels used by EPA and DTSC in residential and commercial settings. DTSC Background Concentration is based on statistical study of sites throughout southern California. This concentration may be used as a screening level for anthropogenic and naturally occurring levels of arsenic in soil in southern California.\* - Values modified by DTSC HERO Note 3. Please refer to lab report for complete results.

**TABLE 2**  
**Summary of Soil Gas Sampling Results (ug/L)**

Sample ID	Benzene	Toluene	Ethylbenzene	Naphthalene	Methylene Chloride	TCE	PCE	Other VOC
SG1-3	ND<0.023	ND<0.050	ND<0.050	ND<0.025	ND<0.050	ND<0.050	ND<0.050	ND
SG2-5	ND<0.023	ND<0.050	ND<0.050	ND<0.025	ND<0.050	ND<0.050	ND<0.050	ND
SG3-3.5	ND<0.023	ND<0.050	ND<0.050	ND<0.025	ND<0.050	ND<0.050	ND<0.050	ND
SG4-5	ND<0.023	ND<0.050	ND<0.050	ND<0.025	ND<0.050	ND<0.050	ND<0.050	ND
SG5-4	ND<0.023	ND<0.050	ND<0.050	ND<0.025	ND<0.050	ND<0.050	ND<0.050	ND
SG6-4	ND<0.023	ND<0.050	ND<0.050	ND<0.025	ND<0.050	ND<0.050	ND<0.050	ND
SG7-4	ND<0.023	ND<0.050	ND<0.050	ND<0.025	ND<0.050	ND<0.050	ND<0.050	ND
<b>Residential RSL AF=0.03</b>	<b>0.003*</b>	<b>10.33*</b>	<b>0.037</b>	<b>0.003</b>	<b>0.033*</b>	<b>0.016</b>	<b>0.015*</b>	<b>--</b>
<b>Commercial RSL AF=0.03</b>	<b>0.014*</b>	<b>43.3*</b>	<b>0.163</b>	<b>0.012</b>	<b>0.4*</b>	<b>0.100</b>	<b>0.067*</b>	<b>--</b>

*Notes: ND - Not Detected. EPA Regional Screening Levels (RSLs) are human health risk based screening levels used by EPA and DTSC to determine Health Risk in residential and commercial settings. \*-Values modified for California by DTSC HERO Note 3. Screening levels for soil gas calculated using indoor air values and attenuation factor provided by EPA and DTSC (0.03). Please refer to lab report for complete results.*

## FIGURES



SITE

**FIGURE 1**

SITE VICINITY MAP  
PROPOSED RESIDENTIAL DEVELOPMENT  
1010 North Twin Oaks Valley Road  
San Marcos, California



**FIGURE 2**

PARCEL MAP

PROPOSED RESIDENTIAL DEVELOPMENT  
1010 North Twin Oaks Valley Road  
San Marcos, California



Google Earth

300 ft S12

- ▲ Tetra Tech Borings
- ⬠ Hillmann Borings
- ⬠ Soil Gas Probes



**FIGURE 3A**  
**PARCEL 1 MAP**  
 PROPOSED RESIDENTIAL DEVELOPMENT  
 1010 North Twin Oaks Valley Road  
 San Marcos, California



-  Tetra Tech Borings
-  Hillmann Borings
-  Soil Gas Probes



**FIGURE 3B**  
 PARCEL 4 MAP  
 PROPOSED RESIDENTIAL DEVELOPMENT  
 1010 North Twin Oaks Valley Road  
 San Marcos, California



- ▲ Tetra Tech Borings
- Hillmann Borings
- Soil Gas Probes



**FIGURE 3C**  
**PARCEL 5 MAP**  
 PROPOSED RESIDENTIAL DEVELOPMENT  
 1010 North Twin Oaks Valley Road  
 San Marcos, California

# APPENDIX A

## Site Photos



SG1



SG2



SG3



SG4



SG5



SG6



SG7

# APPENDIX B

## Laboratory Reports



# A & R Laboratories, Inc.

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FOOD · COSMETICS · WATER · SOIL · SOIL VAPOR · WASTES

## CASE NARRATIVE

Authorized Signature Name / Title (print)

Ken Zheng, President

Signature / Date

Ken Zheng, President  
06/24/2024 10:11:15

Laboratory Job No. (Certificate of Analysis No.)

2406-00174

Project Name / No.

AG. LAND / 1010 N. TWIN OAKS VALLEY RD., SAN  
MARCOS

Dates Sampled (from/to)

06/18/24 To 06/18/24

Dates Received (from/to)

06/19/24 To 06/19/24

Dates Reported (from/to)

06/24/24 To 6/24/2024

Chains of Custody Received

Yes

Comments:

### Subcontracting

Organic Analyses

No analyses sub-contracted

Inorganic Analyses

No analyses sub-contracted

### Sample Condition(s)

All samples intact

### Positive Results (Organic Compounds)

Sample	Analyte	Result	Qual Units	RL	Result	Qual Units	RL
P1-HB4-SURFACE	4,4'-DDE	0.0073	mg/Kg	0.0050			



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## CERTIFICATE OF ANALYSIS

2406-00174

HILLMANN CONSULTING  
DAN LOUKS  
1745 ORANGEWOOD AVE.  
STE 201  
ORANGE, CA 92868

Date Reported 06/24/24  
Date Received 06/19/24  
Invoice No. 1843  
Cust # G073  
Permit Number  
Customer P.O.

Project: AG. LAND / 1010 N. TWIN OAKS VALLEY RD., SAN MARCO

Analysis	Result	Qual	Units	Method	DF	RL	Date	Tech
Sample: 001 <b>P1-HB4-SURFACE</b>							Date & Time Sampled: 06/18/24 @ 10:45	
Sample Matrix: <b>Soil</b>								
[Pesticides]								
Ultrasonic Extraction	Complete			EPA 3550	1.0		06/20/24	IG
Aldrin	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
alpha-BHC	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
beta-BHC	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
delta-BHC	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
gamma-BHC	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Technical Chlordane	<0.10		mg/Kg	EPA 8081A	1.0	0.10	06/20/24	IG
4,4'-DDD	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
4,4'-DDE	<b>0.0073</b>		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
4,4'-DDT	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Dieldrin	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Endosulfan I	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Endosulfan II	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Endosulfan Sulfate	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Endrin	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Endrin Aldehyde	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Endrin ketone	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Heptachlor	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Heptachlor Epoxide	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Methoxychlor	<0.010		mg/Kg	EPA 8081A	1.0	0.010	06/20/24	IG
Toxaphene	<0.050		mg/Kg	EPA 8081A	1.0	0.050	06/20/24	IG
[Surrogates]								
Tetrachloro-m-xylene	98		%REC	EPA 8081A/8082		50-150	06/20/24	IG
Decachlorobiphenyl	120		%REC	EPA 8081A/8082		50-150	06/20/24	IG
Sample: 002 <b>P1-HB5-SURFACE</b>							Date & Time Sampled: 06/18/24 @ 11:10	
Sample Matrix: <b>Soil</b>								
[Pesticides]								
Ultrasonic Extraction	Complete			EPA 3550	1.0		06/20/24	IG
Aldrin	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
alpha-BHC	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG

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## CERTIFICATE OF ANALYSIS

2406-00174

HILLMANN CONSULTING  
DAN LOUKS  
1745 ORANGEWOOD AVE.  
STE 201  
ORANGE, CA 92868

Date Reported 06/24/24  
Date Received 06/19/24  
Invoice No. 1843  
Cust # G073  
Permit Number  
Customer P.O.

Project: AG. LAND / 1010 N. TWIN OAKS VALLEY RD., SAN MARCO

Analysis	Result	Qual	Units	Method	DF	RL	Date	Tech
Sample: 002 <b>P1-HB5-SURFACE</b>							Date & Time Sampled: 06/18/24 @ 11:10	
Sample Matrix: <b>Soil</b>								
.....continued								
beta-BHC	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
delta-BHC	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
gamma-BHC	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Technical Chlordane	<0.10		mg/Kg	EPA 8081A	1.0	0.10	06/20/24	IG
4,4'-DDD	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
4,4'-DDE	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
4,4'-DDT	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Dieldrin	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Endosulfan I	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Endosulfan II	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Endosulfan Sulfate	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Endrin	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Endrin Aldehyde	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Endrin ketone	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Heptachlor	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Heptachlor Epoxide	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Methoxychlor	<0.010		mg/Kg	EPA 8081A	1.0	0.010	06/20/24	IG
Toxaphene	<0.050		mg/Kg	EPA 8081A	1.0	0.050	06/20/24	IG
[Surrogates]								
Tetrachloro-m-xylene	98		%REC	EPA 8081A/8082		50-150	06/20/24	IG
Decachlorobiphenyl	110		%REC	EPA 8081A/8082		50-150	06/20/24	IG
Sample: 003 <b>P1-HB6-SURFACE</b>							Date & Time Sampled: 06/18/24 @ 11:40	
Sample Matrix: <b>Soil</b>								
[Pesticides]								
Ultrasonic Extraction	Complete			EPA 3550	1.0		06/20/24	IG
Aldrin	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
alpha-BHC	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
beta-BHC	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
delta-BHC	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
gamma-BHC	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG

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## CERTIFICATE OF ANALYSIS

2406-00174

HILLMANN CONSULTING  
DAN LOUKS

1745 ORANGEWOOD AVE.

STE 201

ORANGE, CA 92868

Project: AG. LAND / 1010 N. TWIN OAKS VALLEY RD., SAN MARCO

Date Reported 06/24/24

Date Received 06/19/24

Invoice No. 1843

Cust # G073

Permit Number

Customer P.O.

Analysis	Result	Qual	Units	Method	DF	RL	Date	Tech
Sample: 003 <b>P1-HB6-SURFACE</b>							Date & Time Sampled: 06/18/24 @ 11:40	
Sample Matrix: <b>Soil</b>								
.....continued								
Technical Chlordane	<0.10		mg/Kg	EPA 8081A	1.0	0.10	06/20/24	IG
4,4'-DDD	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
4,4'-DDE	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
4,4'-DDT	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Dieldrin	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Endosulfan I	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Endosulfan II	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Endosulfan Sulfate	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Endrin	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Endrin Aldehyde	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Endrin ketone	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Heptachlor	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Heptachlor Epoxide	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Methoxychlor	<0.010		mg/Kg	EPA 8081A	1.0	0.010	06/20/24	IG
Toxaphene	<0.050		mg/Kg	EPA 8081A	1.0	0.050	06/20/24	IG
[Surrogates]								
Tetrachloro-m-xylene	71		%REC	EPA 8081A/8082		50-150	06/20/24	IG
Decachlorobiphenyl	74		%REC	EPA 8081A/8082		50-150	06/20/24	IG
Sample: 004 <b>P1-HB6-2'</b>							Date & Time Sampled: 06/18/24 @ 11:55	
Sample Matrix: <b>Soil</b>								
[Pesticides]								
Ultrasonic Extraction	Complete			EPA 3550	1.0		06/20/24	IG
Aldrin	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
alpha-BHC	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
beta-BHC	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
delta-BHC	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
gamma-BHC	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Technical Chlordane	<0.10		mg/Kg	EPA 8081A	1.0	0.10	06/20/24	IG
4,4'-DDD	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
4,4'-DDE	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG

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2406-00174

HILLMANN CONSULTING  
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1745 ORANGEWOOD AVE.  
STE 201  
ORANGE, CA 92868

Date Reported 06/24/24  
Date Received 06/19/24  
Invoice No. 1843  
Cust # G073  
Permit Number  
Customer P.O.

Project: AG. LAND / 1010 N. TWIN OAKS VALLEY RD., SAN MARCO

Analysis	Result	Qual	Units	Method	DF	RL	Date	Tech
Sample: 004 <b>P1-HB6-2'</b>							Date & Time Sampled: 06/18/24 @ 11:55	
Sample Matrix: <b>Soil</b>								
.....continued								
4,4'-DDT	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Dieldrin	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Endosulfan I	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Endosulfan II	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Endosulfan Sulfate	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Endrin	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Endrin Aldehyde	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Endrin ketone	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Heptachlor	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Heptachlor Epoxide	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Methoxychlor	<0.010		mg/Kg	EPA 8081A	1.0	0.010	06/20/24	IG
Toxaphene	<0.050		mg/Kg	EPA 8081A	1.0	0.050	06/20/24	IG
[Surrogates]								
Tetrachloro-m-xylene	100		%REC	EPA 8081A/8082		50-150	06/20/24	IG
Decachlorobiphenyl	110		%REC	EPA 8081A/8082		50-150	06/20/24	IG
Sample: 005 <b>P1-HB7-SURFACE</b>							Date & Time Sampled: 06/18/24 @ 12:10	
Sample Matrix: <b>Soil</b>								
[Pesticides]								
Ultrasonic Extraction	Complete			EPA 3550	1.0		06/20/24	IG
Aldrin	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
alpha-BHC	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
beta-BHC	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
delta-BHC	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
gamma-BHC	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Technical Chlordane	<0.10		mg/Kg	EPA 8081A	1.0	0.10	06/20/24	IG
4,4'-DDD	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
4,4'-DDE	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
4,4'-DDT	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Dieldrin	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Endosulfan I	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG

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## CERTIFICATE OF ANALYSIS

2406-00174

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DAN LOUKS  
1745 ORANGEWOOD AVE.  
STE 201  
ORANGE, CA 92868

Date Reported 06/24/24  
Date Received 06/19/24  
Invoice No. 1843  
Cust # G073  
Permit Number  
Customer P.O.

Project: AG. LAND / 1010 N. TWIN OAKS VALLEY RD., SAN MARCO

Analysis	Result	Qual	Units	Method	DF	RL	Date	Tech
Sample: 005 <b>P1-HB7-SURFACE</b>							Date & Time Sampled: 06/18/24 @ 12:10	
Sample Matrix: <b>Soil</b>								
.....continued								
Endosulfan II	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Endosulfan Sulfate	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Endrin	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Endrin Aldehyde	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Endrin ketone	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Heptachlor	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Heptachlor Epoxide	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Methoxychlor	<0.010		mg/Kg	EPA 8081A	1.0	0.010	06/20/24	IG
Toxaphene	<0.050		mg/Kg	EPA 8081A	1.0	0.050	06/20/24	IG
[Surrogates]								
Tetrachloro-m-xylene	110		%REC	EPA 8081A/8082		50-150	06/20/24	IG
Decachlorobiphenyl	120		%REC	EPA 8081A/8082		50-150	06/20/24	IG
Sample: 006 <b>P1-HB8-SURFACE</b>							Date & Time Sampled: 06/18/24 @ 12:50	
Sample Matrix: <b>Soil</b>								
[Pesticides]								
Ultrasonic Extraction	Complete			EPA 3550	1.0		06/20/24	IG
Aldrin	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
alpha-BHC	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
beta-BHC	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
delta-BHC	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
gamma-BHC	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Technical Chlordane	<0.10		mg/Kg	EPA 8081A	1.0	0.10	06/20/24	IG
4,4'-DDD	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
4,4'-DDE	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
4,4'-DDT	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Dieldrin	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Endosulfan I	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Endosulfan II	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Endosulfan Sulfate	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Endrin	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG

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Date Reported 06/24/24  
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Invoice No. 1843  
Cust # G073  
Permit Number  
Customer P.O.

Project: AG. LAND / 1010 N. TWIN OAKS VALLEY RD., SAN MARCO

Analysis	Result	Qual	Units	Method	DF	RL	Date	Tech
Sample: 006 <b>P1-HB8-SURFACE</b>							Date & Time Sampled: 06/18/24 @ 12:50	
Sample Matrix: <b>Soil</b>								
.....continued								
Endrin Aldehyde	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Endrin ketone	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Heptachlor	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Heptachlor Epoxide	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Methoxychlor	<0.010		mg/Kg	EPA 8081A	1.0	0.010	06/20/24	IG
Toxaphene	<0.050		mg/Kg	EPA 8081A	1.0	0.050	06/20/24	IG
[Surrogates]								
Tetrachloro-m-xylene	86		%REC	EPA 8081A/8082		50-150	06/20/24	IG
Decachlorobiphenyl	91		%REC	EPA 8081A/8082		50-150	06/20/24	IG
Sample: 007 <b>P1-HB8-1.5'</b>							Date & Time Sampled: 06/18/24 @ 13:10	
Sample Matrix: <b>Soil</b>								
[Pesticides]								
Ultrasonic Extraction	Complete			EPA 3550	1.0		06/20/24	IG
Aldrin	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
alpha-BHC	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
beta-BHC	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
delta-BHC	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
gamma-BHC	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Technical Chlordane	<0.10		mg/Kg	EPA 8081A	1.0	0.10	06/20/24	IG
4,4'-DDD	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
4,4'-DDE	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
4,4'-DDT	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Dieldrin	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Endosulfan I	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Endosulfan II	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Endosulfan Sulfate	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Endrin	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Endrin Aldehyde	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Endrin ketone	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Heptachlor	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG

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## CERTIFICATE OF ANALYSIS

2406-00174

HILLMANN CONSULTING  
DAN LOUKS  
1745 ORANGEWOOD AVE.  
STE 201  
ORANGE, CA 92868

Date Reported 06/24/24  
Date Received 06/19/24  
Invoice No. 1843  
Cust # G073  
Permit Number  
Customer P.O.

Project: AG. LAND / 1010 N. TWIN OAKS VALLEY RD., SAN MARCO

Analysis	Result	Qual	Units	Method	DF	RL	Date	Tech
Sample: 007 <b>P1-HB8-1.5'</b> Sample Matrix: <b>Soil</b> .....continued					Date & Time Sampled:		06/18/24 @	13:10
Heptachlor Epoxide	<0.0050		mg/Kg	EPA 8081A	1.0	0.0050	06/20/24	IG
Methoxychlor	<0.010		mg/Kg	EPA 8081A	1.0	0.010	06/20/24	IG
Toxaphene	<0.050		mg/Kg	EPA 8081A	1.0	0.050	06/20/24	IG
[Surrogates]								
Tetrachloro-m-xylene	90		%REC	EPA 8081A/8082		50-150	06/20/24	IG
Decachlorobiphenyl	120		%REC	EPA 8081A/8082		50-150	06/20/24	IG
Sample: 008 <b>P5-HB9-3</b> Sample Matrix: <b>Soil</b>					Date & Time Sampled:		06/18/24 @	16:30
[Metals]								
Metals Acid Digestion	Complete			EPA 3050B	1.0		06/23/24	TLB
Thallium	<1.0		mg/Kg	EPA 6010B	1.0	1.0	06/23/24	TLB
Sample: 009 <b>P5-HB9-4.5</b> Sample Matrix: <b>Soil</b>					Date & Time Sampled:		06/18/24 @	16:50
[Metals]								
Metals Acid Digestion	Complete			EPA 3050B	1.0		06/23/24	TLB
Thallium	<1.0		mg/Kg	EPA 6010B	1.0	1.0	06/23/24	TLB
Sample: 010 <b>P5-HB10-3</b> Sample Matrix: <b>Soil</b>					Date & Time Sampled:		06/18/24 @	17:30
[Metals]								
Metals Acid Digestion	Complete			EPA 3050B	1.0		06/23/24	TLB
Thallium	<1.0		mg/Kg	EPA 6010B	1.0	1.0	06/23/24	TLB
Sample: 011 <b>P5-HB10-4</b> Sample Matrix: <b>Soil</b>					Date & Time Sampled:		06/18/24 @	17:50
[Metals]								
Metals Acid Digestion	Complete			EPA 3050B	1.0		06/23/24	TLB
Thallium	<1.0		mg/Kg	EPA 6010B	1.0	1.0	06/23/24	TLB
Sample: 012 <b>P5-HB11-3</b> Sample Matrix: <b>Soil</b>					Date & Time Sampled:		06/18/24 @	18:30

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Date Reported 06/24/24

Date Received 06/19/24

Invoice No. 1843

Cust # G073

Permit Number

Customer P.O.

Analysis	Result	Qual	Units	Method	DF	RL	Date	Tech
Sample: 012 <b>P5-HB11-3</b>							Date & Time Sampled: 06/18/24 @ 18:30	
Sample Matrix: <b>Soil</b>								
[Metals]								
Metals Acid Digestion	Complete			EPA 3050B	1.0		06/23/24	TLB
Thallium	<1.0		mg/Kg	EPA 6010B	1.0	1.0	06/23/24	TLB
Sample: 013 <b>P5-HB11-4.5</b>							Date & Time Sampled: 06/18/24 @ 18:55	
Sample Matrix: <b>Soil</b>								
[Metals]								
Metals Acid Digestion	Complete			EPA 3050B	1.0		06/23/24	TLB
Thallium	<1.0		mg/Kg	EPA 6010B	1.0	1.0	06/23/24	TLB

Respectfully Submitted:

Ken Zheng - Lab Director

### QUALIFIERS

B = Detected in the associated Method Blank at a concentration above the routine RL.  
 B1 = BOD dilution water is over specifications . The reported result may be biased high.  
 D = Surrogate recoveries are not calculated due to sample dilution.  
 E = Estimated value; Value exceeds calibration level of instrument.  
 H = Analyte was prepared and/or analyzed outside of the analytical method holding time  
 I = Matrix Interference.  
 J = Analyte concentration detected between RL and MDL.  
 Q = One or more quality control criteria did not meet specifications. See Comments for further explanation.  
 S = Customer provided specification limit exceeded.

### ABBREVIATIONS

DF = Dilution Factor  
 RL = Reporting Limit, Adjusted by DF  
 MDL = Method Detection Limit, Adjusted by DF  
 Qual = Qualifier  
 Tech = Technician



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## QUALITY CONTROL DATA REPORT

HILLMANN CONSULTING  
 ORANGE, CA 92868

2406-00174

Date Reported 06/24/2024  
 Date Received 06/19/2024  
 Date Sampled 06/18/2024  
 Invoice No. 1843  
 Customer # G073  
 Customer P.O.

Project: AG. LAND / 1010 N. TWIN OAKS VALLEY RD.,  
 SAN MARCOS

Method #	EPA 6010B					
QC Reference #	116605	Date Analyzed: 6/23/2024			Technician: TLB	
Samples	008	009	010	011	012	013
Results	LCS %REC	LCS %DUP	LCS %RPD	SPIKE %REC	SPIKE %DUP	SPIKE %RPD
Cobalt	91	92	0.7	76	74	3.2
Thallium	102	103	1.2	61	61	0.9
Control Ranges						
	LCS %REC	LCS %RPD	SPIKE %RPD			
	75 - 125	0 - 20	0 - 20			
	75 - 125	0 - 20	0 - 20			

Method #	EPA 8081A					
QC Reference #	116583	Date Analyzed: 6/20/2024			Technician: IG	
Samples	001	002	003	004	005	006
Results	LCS %REC	SPIKE %REC	SPIKE %DUP	SPIKE %RPD		
4,4'-DDT	88	82	88	6		
Aldrin	92	93	100	7		
Dieldrin	94	97	100	3		
Endrin	120	110	120	10		
gamma-BHC	100	110	120	10		
Heptachlor	120	120	120	0		
Control Ranges						
	LCS %REC	SPIKE %RPD				
	30 - 130	0 - 30				
	50 - 140	0 - 30				
	70 - 130	0 - 30				
	70 - 150	0 - 30				
	50 - 150	0 - 30				
	50 - 150	0 - 30				

Method #	EPA 8081A/8082					
QC Reference #	116583	Date Analyzed: 6/20/2024			Technician: IG	
Samples	001	002	003	004	005	006
Results	BLKSRR%R EC	BLKSRR%REC				
Decachlorobiphenyl	90	50 - 150				
Tetrachloro-m-xylene	88	50 - 150				

No method blank results were above reporting limit

Respectfully Submitted:

*Ken Zheng*

Ken Zheng - President









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## CASE NARRATIVE

Authorized Signature Name / Title (print)

Ken Zheng, President

Signature / Date

*Ken Zheng*

Ken Zheng, President  
06/24/2024 10:58:37

Laboratory Job No. (Certificate of Analysis No.)

2406-00206

Project Name / No.

AG. LAND / 1010 N. TWIN OAKS VALLEY RD., SAN  
MARCOS

Dates Sampled (from/to)

06/20/24 To 06/20/24

Dates Received (from/to)

06/21/24 To 06/21/24

Dates Reported (from/to)

06/24/24 To 6/24/2024

Chains of Custody Received

Yes

Comments:

### Subcontracting

Inorganic Analyses

No analyses sub-contracted

### Sample Condition(s)

All samples intact

### Positive Results (Organic Compounds)

None



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Date Reported 06/24/24  
Date Received 06/21/24  
Invoice No. 1846  
Cust # G073  
Permit Number  
Customer P.O.

Project: AG. LAND / 1010 N. TWIN OAKS VALLEY RD., SAN MARCO

Analysis	Result	Qual	Units	Method	DF	RL	Date	Tech
Sample: 001 <b>P5-HB12-SURFACE</b>					Date & Time Sampled:		06/20/24 @	10:30
Sample Matrix: <b>Soil</b>								
[Metals]								
Metals Acid Digestion	Complete			EPA 3050B	1.0		06/23/24	TLB
Cobalt	<b>5.74</b>		mg/Kg	EPA 6010B	1.0	0.50	06/23/24	TLB
Sample: 002 <b>P5-HB12-2'</b>					Date & Time Sampled:		06/20/24 @	10:40
Sample Matrix: <b>Soil</b>								
[Metals]								
Metals Acid Digestion	Complete			EPA 3050B	1.0		06/23/24	TLB
Cobalt	<b>3.65</b>		mg/Kg	EPA 6010B	1.0	0.50	06/23/24	TLB
Sample: 003 <b>P5-HB13-SURFACE</b>					Date & Time Sampled:		06/20/24 @	10:45
Sample Matrix: <b>Soil</b>								
[Metals]								
Metals Acid Digestion	Complete			EPA 3050B	1.0		06/23/24	TLB
Cobalt	<b>6.54</b>		mg/Kg	EPA 6010B	1.0	0.50	06/23/24	TLB
Sample: 004 <b>P5-HB13-2'</b>					Date & Time Sampled:		06/20/24 @	10:50
Sample Matrix: <b>Soil</b>								
[Metals]								
Metals Acid Digestion	Complete			EPA 3050B	1.0		06/23/24	TLB
Cobalt	<b>3.90</b>		mg/Kg	EPA 6010B	1.0	0.50	06/23/24	TLB
Sample: 005 <b>P5-HB14-SURFACE</b>					Date & Time Sampled:		06/20/24 @	10:55
Sample Matrix: <b>Soil</b>								
[Metals]								
Metals Acid Digestion	Complete			EPA 3050B	1.0		06/23/24	TLB
Cobalt	<b>6.54</b>		mg/Kg	EPA 6010B	1.0	0.50	06/23/24	TLB
Sample: 006 <b>P5-HB14-2'</b>					Date & Time Sampled:		06/20/24 @	11:00
Sample Matrix: <b>Soil</b>								
[Metals]								
Metals Acid Digestion	Complete			EPA 3050B	1.0		06/23/24	TLB
Cobalt	<b>7.00</b>		mg/Kg	EPA 6010B	1.0	0.50	06/23/24	TLB

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Permit Number  
Customer P.O.

Project: AG. LAND / 1010 N. TWIN OAKS VALLEY RD., SAN MARCO

Analysis	Result	Qual	Units	Method	DF	RL	Date	Tech
Sample: 007 <b>P5-HB15-SURFACE</b>					Date & Time Sampled:		06/20/24 @	11:30
Sample Matrix: <b>Soil</b>								
[Metals]								
Metals Acid Digestion	Complete			EPA 3050B	1.0		06/23/24	TLB
Thallium	<1.0		mg/Kg	EPA 6010B	1.0	1.0	06/23/24	TLB
Sample: 008 <b>P5-HB15-1.5'</b>					Date & Time Sampled:		06/20/24 @	11:40
Sample Matrix: <b>Soil</b>								
[Metals]								
Metals Acid Digestion	Complete			EPA 3050B	1.0		06/23/24	TLB
Thallium	<1.0		mg/Kg	EPA 6010B	1.0	1.0	06/23/24	TLB
Sample: 009 <b>P5-HB16-SURFACE</b>					Date & Time Sampled:		06/20/24 @	11:45
Sample Matrix: <b>Soil</b>								
[Metals]								
Metals Acid Digestion	Complete			EPA 3050B	1.0		06/23/24	TLB
Thallium	<1.0		mg/Kg	EPA 6010B	1.0	1.0	06/23/24	TLB
Sample: 010 <b>P5-HB16-2'</b>					Date & Time Sampled:		06/20/24 @	11:55
Sample Matrix: <b>Soil</b>								
[Metals]								
Metals Acid Digestion	Complete			EPA 3050B	1.0		06/23/24	TLB
Thallium	<1.0		mg/Kg	EPA 6010B	1.0	1.0	06/23/24	TLB
Sample: 011 <b>P5-HB17-SURFACE</b>					Date & Time Sampled:		06/20/24 @	12:10
Sample Matrix: <b>Soil</b>								
[Metals]								
Metals Acid Digestion	Complete			EPA 3050B	1.0		06/23/24	TLB
Thallium	<1.0		mg/Kg	EPA 6010B	1.0	1.0	06/23/24	TLB
Sample: 012 <b>P5-HB17-2'</b>					Date & Time Sampled:		06/20/24 @	12:20
Sample Matrix: <b>Soil</b>								
[Metals]								
Metals Acid Digestion	Complete			EPA 3050B	1.0		06/23/24	TLB
Thallium	<1.0		mg/Kg	EPA 6010B	1.0	1.0	06/23/24	TLB

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Project: AG. LAND / 1010 N. TWIN OAKS VALLEY RD., SAN MARCO

Analysis	Result	Qual	Units	Method	DF	RL	Date	Tech
Sample: 013 <b>P4-HB18-SURFACE</b>					Date & Time Sampled:		06/20/24 @	12:45
Sample Matrix: <b>Soil</b>								
[Metals]								
Metals Acid Digestion	Complete			EPA 3050B	1.0		06/23/24	TLB
Thallium	<1.0		mg/Kg	EPA 6010B	1.0	1.0	06/23/24	TLB
Sample: 014 <b>P4-HB18-2'</b>					Date & Time Sampled:		06/20/24 @	12:55
Sample Matrix: <b>Soil</b>								
[Metals]								
Metals Acid Digestion	Complete			EPA 3050B	1.0		06/23/24	TLB
Thallium	<1.0		mg/Kg	EPA 6010B	1.0	1.0	06/23/24	TLB
Sample: 015 <b>P4-HB19-SURFACE</b>					Date & Time Sampled:		06/20/24 @	13:10
Sample Matrix: <b>Soil</b>								
[Metals]								
Metals Acid Digestion	Complete			EPA 3050B	1.0		06/23/24	TLB
Thallium	<1.0		mg/Kg	EPA 6010B	1.0	1.0	06/23/24	TLB
Sample: 016 <b>P4-HB19-2'</b>					Date & Time Sampled:		06/20/24 @	13:20
Sample Matrix: <b>Soil</b>								
[Metals]								
Metals Acid Digestion	Complete			EPA 3050B	1.0		06/23/24	TLB
Thallium	<1.0		mg/Kg	EPA 6010B	1.0	1.0	06/23/24	TLB
Sample: 017 <b>P4-HB20-SURFACE</b>					Date & Time Sampled:		06/20/24 @	13:30
Sample Matrix: <b>Soil</b>								
[Metals]								
Metals Acid Digestion	Complete			EPA 3050B	1.0		06/23/24	TLB
Thallium	<1.0		mg/Kg	EPA 6010B	1.0	1.0	06/23/24	TLB
Sample: 018 <b>P4-HB20-2'</b>					Date & Time Sampled:		06/20/24 @	13:40
Sample Matrix: <b>Soil</b>								
[Metals]								
Metals Acid Digestion	Complete			EPA 3050B	1.0		06/23/24	TLB
Thallium	<1.0		mg/Kg	EPA 6010B	1.0	1.0	06/23/24	TLB

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Project: AG. LAND / 1010 N. TWIN OAKS VALLEY RD., SAN MARCO

Analysis	Result	Qual	Units	Method	DF	RL	Date	Tech
Sample: 019 <b>P4-HB21-SURFACE</b>					Date & Time Sampled:		06/20/24 @	14:10
Sample Matrix: <b>Soil</b>								
[Metals]								
Metals Acid Digestion	Complete			EPA 3050B	1.0		06/23/24	TLB
Arsenic	<b>3.58</b>		mg/Kg	EPA 6010B	1.0	1.0	06/23/24	TLB
Sample: 020 <b>P4-HB21-2'</b>					Date & Time Sampled:		06/20/24 @	14:20
Sample Matrix: <b>Soil</b>								
[Metals]								
Metals Acid Digestion	Complete			EPA 3050B	1.0		06/23/24	TLB
Arsenic	<b>4.05</b>		mg/Kg	EPA 6010B	1.0	1.0	06/23/24	TLB
Sample: 021 <b>P4-HB22-SURFACE</b>					Date & Time Sampled:		06/20/24 @	14:30
Sample Matrix: <b>Soil</b>								
[Metals]								
Metals Acid Digestion	Complete			EPA 3050B	1.0		06/23/24	TLB
Arsenic	<b>5.28</b>		mg/Kg	EPA 6010B	1.0	1.0	06/23/24	TLB
Sample: 022 <b>P4-HB22-1.5'</b>					Date & Time Sampled:		06/20/24 @	14:40
Sample Matrix: <b>Soil</b>								
[Metals]								
Metals Acid Digestion	Complete			EPA 3050B	1.0		06/23/24	TLB
Arsenic	<b>2.92</b>		mg/Kg	EPA 6010B	1.0	1.0	06/23/24	TLB
Sample: 023 <b>P4-HB23-SURFACE</b>					Date & Time Sampled:		06/20/24 @	15:00
Sample Matrix: <b>Soil</b>								
[Metals]								
Metals Acid Digestion	Complete			EPA 3050B	1.0		06/23/24	TLB
Arsenic	<b>6.68</b>		mg/Kg	EPA 6010B	1.0	1.0	06/23/24	TLB
Sample: 024 <b>P4-HB23-1.5'</b>					Date & Time Sampled:		06/20/24 @	15:10
Sample Matrix: <b>Soil</b>								
[Metals]								
Metals Acid Digestion	Complete			EPA 3050B	1.0		06/23/24	TLB
Arsenic	<b>7.78</b>		mg/Kg	EPA 6010B	1.0	1.0	06/23/24	TLB

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Date Received 06/21/24  
Invoice No. 1846  
Cust # G073  
Permit Number  
Customer P.O.

Project: AG. LAND / 1010 N. TWIN OAKS VALLEY RD., SAN MARCO

Analysis	Result	Qual	Units	Method	DF	RL	Date	Tech
Sample: 025 <b>P4-HB24-SURFACE</b>					Date & Time Sampled:		06/20/24 @	15:45
Sample Matrix: <b>Soil</b>								
[Metals]								
Metals Acid Digestion	Complete			EPA 3050B	1.0		06/23/24	TLB
Arsenic	<1.0		mg/Kg	EPA 6010B	1.0	1.0	06/23/24	TLB
Sample: 026 <b>P4-HB24-1'</b>					Date & Time Sampled:		06/20/24 @	15:55
Sample Matrix: <b>Soil</b>								
[Metals]								
Metals Acid Digestion	Complete			EPA 3050B	1.0		06/23/24	TLB
Arsenic	<1.0		mg/Kg	EPA 6010B	1.0	1.0	06/23/24	TLB
Sample: 027 <b>P4-HB25-SURFACE</b>					Date & Time Sampled:		06/20/24 @	16:10
Sample Matrix: <b>Soil</b>								
[Metals]								
Metals Acid Digestion	Complete			EPA 3050B	1.0		06/23/24	TLB
Arsenic	<1.0		mg/Kg	EPA 6010B	1.0	1.0	06/23/24	TLB
Sample: 028 <b>P4-HB25-2'</b>					Date & Time Sampled:		06/20/24 @	16:20
Sample Matrix: <b>Soil</b>								
[Metals]								
Metals Acid Digestion	Complete			EPA 3050B	1.0		06/23/24	TLB
Arsenic	<b>1.60</b>		mg/Kg	EPA 6010B	1.0	1.0	06/23/24	TLB
Sample: 029 <b>P4-HB26-SURFACE</b>					Date & Time Sampled:		06/20/24 @	16:35
Sample Matrix: <b>Soil</b>								
[Metals]								
Metals Acid Digestion	Complete			EPA 3050B	1.0		06/23/24	TLB
Arsenic	<b>1.69</b>		mg/Kg	EPA 6010B	1.0	1.0	06/23/24	TLB
Sample: 030 <b>P4-HB26-1.5'</b>					Date & Time Sampled:		06/20/24 @	16:50
Sample Matrix: <b>Soil</b>								
[Metals]								
Metals Acid Digestion	Complete			EPA 3050B	1.0		06/23/24	TLB
Arsenic	<b>1.70</b>		mg/Kg	EPA 6010B	1.0	1.0	06/23/24	TLB

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**Respectfully Submitted:**

*Ken Zheng*

Ken Zheng - Lab Director

### QUALIFIERS

B = Detected in the associated Method Blank at a concentration above the routine RL.

B1 = BOD dilution water is over specifications . The reported result may be biased high.

D = Surrogate recoveries are not calculated due to sample dilution.

E = Estimated value; Value exceeds calibration level of instrument.

H = Analyte was prepared and/or analyzed outside of the analytical method holding time

I = Matrix Interference.

J = Analyte concentration detected between RL and MDL.

Q = One or more quality control criteria did not meet specifications. See Comments for further explanation.

S = Customer provided specification limit exceeded.

### ABBREVIATIONS

DF = Dilution Factor

RL = Reporting Limit, Adjusted by DF

MDL = Method Detection Limit, Adjusted by DF

Qual = Qualifier

Tech = Technician



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## QUALITY CONTROL DATA REPORT

HILLMANN CONSULTING  
 ORANGE, CA 92868

2406-00206

Date Reported 06/24/2024  
 Date Received 06/21/2024  
 Date Sampled 06/20/2024  
 Invoice No. 1846  
 Customer # G073  
 Customer P.O.

Project: AG. LAND / 1010 N. TWIN OAKS VALLEY RD.,  
 SAN MARCOS

Method #	EPA 6010B																	
QC Reference #	116605			Date Analyzed: 6/23/2024				Technician: TLB										
Samples	001	002	003	004	005	006	007	008	009	010	011	012						
<b>Results</b>	LCS %REC			LCS %DUP			LCS %RPD			SPIKE %REC			SPIKE %DUP			SPIKE %RPD		
Cobalt	91			92			0.7			76			74			3.2		
Thallium	102			103			1.2			61			61			0.9		
Control Ranges	LCS %REC			LCS %RPD			SPIKE %RPD			LCS %REC			LCS %RPD			SPIKE %RPD		
	75 - 125			0 - 20			0 - 20			75 - 125			0 - 20			0 - 20		
	75 - 125			0 - 20			0 - 20			75 - 125			0 - 20			0 - 20		
QC Reference #	116606			Date Analyzed: 6/23/2024				Technician: TLB										
Samples	013	014	015	016	017	018	019	020	021	022	023	024	025	026	027	028	029	030
<b>Results</b>	LCS %REC			LCS %DUP			LCS %RPD			SPIKE %REC			SPIKE %DUP			SPIKE %RPD		
Arsenic	99			98			0.7			96			95			1.5		
Thallium	102			101			1.2			69			69			0.1		
Control Ranges	LCS %REC			LCS %RPD			SPIKE %RPD			LCS %REC			LCS %RPD			SPIKE %RPD		
	75 - 125			0 - 20			0 - 20			75 - 125			0 - 20			0 - 20		
	75 - 125			0 - 20			0 - 20			75 - 125			0 - 20			0 - 20		

No method blank results were above reporting limit

Respectfully Submitted:

Ken Zheng - President









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### CASE NARRATIVE

Authorized Signature Name / Title (print)	Ken Zheng, President
Signature / Date	 Ken Zheng, President 06/21/2024 11:52:20
Laboratory Job No. (Certificate of Analysis No.)	2406-00184
Project Name / No.	1010 NORTH TWIN OAKS VALLEY ROAD, SAN MARCOS
Dates Sampled (from/to)	06/20/24 To 06/20/24
Dates Received (from/to)	06/20/24 To 06/20/24
Dates Reported (from/to)	06/21/24 To 6/21/2024
Chains of Custody Received	Yes

Comments:

#### Subcontracting

Organic Analyses

No analyses sub-contracted

#### Sample Condition(s)

All samples intact

#### Positive Results (Organic Compounds)

None



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## CERTIFICATE OF ANALYSIS

**2406-00184**

**HILLMANN CONSULTING**

**DAN LOUKS**

**1745 ORANGEWOOD AVE.**

**#201**

**ORANGE, CA 92868**

**Project: 1010 NORTH TWIN OAKS VALLEY ROAD, SAN MARCOS**

Date Reported 06/21/24

Date Received 06/20/24

Invoice No. 1835

Cust # G073

Permit Number

Customer P.O.

Analysis	Result	Qual	Units	Method	DF	MDL	RL	Date	Time	Tech
Sample: 001 <b>SG1-3</b>								Date & Time Sampled: 06/20/24 @ 11:30		
Sample Matrix: <b>Air</b>										
[VOCs by GCMS]										
Acetone	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
t-Amyl Methyl Ether (TAME)	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Benzene	<0.023		µg/L	EPA 8260B	1.0	0.0230	0.10	06/20/24	4:00	IG
Bromobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Bromochloromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Bromodichloromethane	<0.040		µg/L	EPA 8260B	1.0	0.0400	0.080	06/20/24	4:00	IG
Bromoform	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Bromomethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
t-Butanol (TBA)	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
2-Butanone (MEK)	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
n-Butylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
sec-Butylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
tert-Butylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Carbon Disulfide	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
Carbon Tetrachloride	<0.025		µg/L	EPA 8260B	1.0	0.0250	0.050	06/20/24	4:00	IG
Chlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Chloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Chloroform	<0.020		µg/L	EPA 8260B	1.0	0.0200	0.040	06/20/24	4:00	IG
Chloromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
2-Chlorotoluene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
4-Chlorotoluene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Dibromochloromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2-Dibromoethane (EDB)	<0.0125		µg/L	EPA 8260B	1.0	0.0125	0.10	06/20/24	4:00	IG
1,2-Dibromo-3-Chloropropane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Dibromomethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2-Dichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,3-Dichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,4-Dichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Dichlorodifluoromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1-Dichloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2-Dichloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG

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## CERTIFICATE OF ANALYSIS

2406-00184

Date Reported 06/21/24  
Date Received 06/20/24  
Invoice No. 1835  
Cust # G073  
Permit Number  
Customer P.O.

HILLMANN CONSULTING  
DAN LOUKS  
1745 ORANGEWOOD AVE.  
#201  
ORANGE, CA 92868

Project: 1010 NORTH TWIN OAKS VALLEY ROAD, SAN MARCOS

Analysis	Result	Qual	Units	Method	DF	MDL	RL	Date	Time	Tech
Sample: 001 <b>SG1-3</b>								Date & Time Sampled: 06/20/24	@ 11:30	
Sample Matrix: Air										
.....continued										
1,1-Dichloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
cis-1,2-Dichloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
trans-1,2-Dichloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2-Dichloropropane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,3-Dichloropropane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
2,2-Dichloropropane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1-Dichloropropene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
cis-1,3-Dichloropropene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
trans-1,3-Dichloropropene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Diisopropyl Ether (DiPE)	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Ethylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Ethyl-t-Butyl Ether (EtBE)	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Hexachlorobutadiene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
2-Hexanone	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
Isopropylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
4-Isopropyltoluene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Methylene Chloride	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.1	06/20/24	4:00	IG
4-Methyl-2-Pentanone (MIBK)	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
Methyl-t-butyl Ether (MtBE)	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Naphthalene	<0.025		µg/L	EPA 8260B	1.0	0.0250	0.050	06/20/24	4:00	IG
n-Propylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Styrene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1,1,2-Tetrachloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1,2,2-Tetrachloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Tetrachloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Toluene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2,3-Trichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2,4-Trichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1,1-Trichloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1,2-Trichloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Trichloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG

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## CERTIFICATE OF ANALYSIS

2406-00184

HILLMANN CONSULTING

DAN LOUKS

1745 ORANGEWOOD AVE.

#201

ORANGE, CA 92868

Project: 1010 NORTH TWIN OAKS VALLEY ROAD, SAN MARCOS

Date Reported 06/21/24

Date Received 06/20/24

Invoice No. 1835

Cust # G073

Permit Number

Customer P.O.

Analysis	Result	Qual	Units	Method	DF	MDL	RL	Date	Time	Tech
Sample: 001 <b>SG1-3</b>								Date & Time Sampled: 06/20/24	@ 11:30	
Sample Matrix: Air										
.....continued										
1,2,3-Trichloropropane	<0.020		µg/L	EPA 8260B	1.0	0.0200	0.10	06/20/24	4:00	IG
Trichlorofluoromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Trichlorotrifluoroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2,4-Trimethylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,3,5-Trimethylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Vinyl Chloride	<0.0024		µg/L	EPA 8260B	1.0	0.0024	0.050	06/20/24	4:00	IG
m,p-Xylenes	<0.10		µg/L	EPA 8260B	1.0	0.1000	0.20	06/20/24	4:00	IG
o-Xylene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
[VOC Vapor Sampling Tracer]										
Isopropanol (IPA)	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
[VOC Surrogates]										
Dibromofluoromethane	108		%REC	EPA 8260B			70-130	06/20/24	4:00	IG
Toluene-D8	100		%REC	EPA 8260B			70-130	06/20/24	4:00	IG
Bromofluorobenzene	98		%REC	EPA 8260B			70-130	06/20/24	4:00	IG
Sample: 002 <b>SG2-5</b>								Date & Time Sampled: 06/20/24	@ 11:45	
Sample Matrix: Air										
[VOCs by GCMS]										
Acetone	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
t-Amyl Methyl Ether (TAME)	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Benzene	<0.023		µg/L	EPA 8260B	1.0	0.0230	0.10	06/20/24	4:00	IG
Bromobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Bromochloromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Bromodichloromethane	<0.040		µg/L	EPA 8260B	1.0	0.0400	0.080	06/20/24	4:00	IG
Bromoform	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Bromomethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
t-Butanol (TBA)	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
2-Butanone (MEK)	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
n-Butylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
sec-Butylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
tert-Butylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG

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## CERTIFICATE OF ANALYSIS

2406-00184

HILLMANN CONSULTING

DAN LOUKS

1745 ORANGEWOOD AVE.

#201

ORANGE, CA 92868

Project: 1010 NORTH TWIN OAKS VALLEY ROAD, SAN MARCOS

Date Reported 06/21/24

Date Received 06/20/24

Invoice No. 1835

Cust # G073

Permit Number

Customer P.O.

Analysis	Result	Qual	Units	Method	DF	MDL	RL	Date	Time	Tech
Sample: 002 <b>SG2-5</b>								Date & Time Sampled: 06/20/24 @ 11:45		
Sample Matrix: Air										
.....continued										
Carbon Disulfide	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
Carbon Tetrachloride	<0.025		µg/L	EPA 8260B	1.0	0.0250	0.050	06/20/24	4:00	IG
Chlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Chloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Chloroform	<0.020		µg/L	EPA 8260B	1.0	0.0200	0.040	06/20/24	4:00	IG
Chloromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
2-Chlorotoluene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
4-Chlorotoluene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Dibromochloromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2-Dibromoethane (EDB)	<0.0125		µg/L	EPA 8260B	1.0	0.0125	0.10	06/20/24	4:00	IG
1,2-Dibromo-3-Chloropropane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Dibromomethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2-Dichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,3-Dichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,4-Dichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Dichlorodifluoromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1-Dichloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2-Dichloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1-Dichloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
cis-1,2-Dichloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
trans-1,2-Dichloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2-Dichloropropane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,3-Dichloropropane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
2,2-Dichloropropane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1-Dichloropropene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
cis-1,3-Dichloropropene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
trans-1,3-Dichloropropene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Diisopropyl Ether (DiPE)	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Ethylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Ethyl-t-Butyl Ether (EtBE)	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Hexachlorobutadiene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG

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Date Received 06/20/24

Invoice No. 1835

Cust # G073

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ORANGE, CA 92868

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Analysis	Result	Qual	Units	Method	DF	MDL	RL	Date	Time	Tech
Sample: 002 <b>SG2-5</b>								Date & Time Sampled: 06/20/24	@ 11:45	
Sample Matrix: Air										
.....continued										
2-Hexanone	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
Isopropylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
4-Isopropyltoluene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Methylene Chloride	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.1	06/20/24	4:00	IG
4-Methyl-2-Pentanone (MIBK)	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
Methyl-t-butyl Ether (MtBE)	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Naphthalene	<0.025		µg/L	EPA 8260B	1.0	0.0250	0.050	06/20/24	4:00	IG
n-Propylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Styrene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1,1,2-Tetrachloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1,2,2-Tetrachloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Tetrachloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Toluene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2,3-Trichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2,4-Trichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1,1-Trichloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1,2-Trichloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Trichloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2,3-Trichloropropane	<0.020		µg/L	EPA 8260B	1.0	0.0200	0.10	06/20/24	4:00	IG
Trichlorofluoromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Trichlorotrifluoroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2,4-Trimethylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,3,5-Trimethylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Vinyl Chloride	<0.0024		µg/L	EPA 8260B	1.0	0.0024	0.050	06/20/24	4:00	IG
m,p-Xylenes	<0.10		µg/L	EPA 8260B	1.0	0.1000	0.20	06/20/24	4:00	IG
o-Xylene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
[VOC Vapor Sampling Tracer]										
Isopropanol (IPA)	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
[VOC Surrogates]										
Dibromofluoromethane	109		%REC	EPA 8260B			70-130	06/20/24	4:00	IG
Toluene-D8	99		%REC	EPA 8260B			70-130	06/20/24	4:00	IG

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## CERTIFICATE OF ANALYSIS

### 2406-00184

HILLMANN CONSULTING

DAN LOUKS

1745 ORANGEWOOD AVE.

#201

ORANGE, CA 92868

**Project: 1010 NORTH TWIN OAKS VALLEY ROAD, SAN MARCOS**

Date Reported 06/21/24

Date Received 06/20/24

Invoice No. 1835

Cust # G073

Permit Number

Customer P.O.

Analysis	Result	Qual	Units	Method	DF	MDL	RL	Date	Time	Tech
Sample: 002 <b>SG2-5</b>								Date & Time Sampled: 06/20/24	@ 11:45	
Sample Matrix: Air										
.....continued										
Bromofluorobenzene	98		%REC	EPA 8260B			70-130	06/20/24	4:00	IG
Sample: 003 <b>SG3-3.5</b>								Date & Time Sampled: 06/20/24	@ 12:00	
Sample Matrix: Air										
[VOCs by GCMS]										
Acetone	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
t-Amyl Methyl Ether (TAME)	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Benzene	<0.023		µg/L	EPA 8260B	1.0	0.0230	0.10	06/20/24	4:00	IG
Bromobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Bromochloromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Bromodichloromethane	<0.040		µg/L	EPA 8260B	1.0	0.0400	0.080	06/20/24	4:00	IG
Bromoform	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Bromomethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
t-Butanol (TBA)	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
2-Butanone (MEK)	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
n-Butylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
sec-Butylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
tert-Butylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Carbon Disulfide	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
Carbon Tetrachloride	<0.025		µg/L	EPA 8260B	1.0	0.0250	0.050	06/20/24	4:00	IG
Chlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Chloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Chloroform	<0.020		µg/L	EPA 8260B	1.0	0.0200	0.040	06/20/24	4:00	IG
Chloromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
2-Chlorotoluene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
4-Chlorotoluene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Dibromochloromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2-Dibromoethane (EDB)	<0.0125		µg/L	EPA 8260B	1.0	0.0125	0.10	06/20/24	4:00	IG
1,2-Dibromo-3-Chloropropane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Dibromomethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2-Dichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG

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Date Reported 06/21/24

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Invoice No. 1835

Cust # G073

Permit Number

Customer P.O.

Analysis	Result	Qual	Units	Method	DF	MDL	RL	Date	Time	Tech
Sample: 003 <b>SG3-3.5</b>								Date & Time Sampled: 06/20/24	@ 12:00	
Sample Matrix: Air										
.....continued										
1,3-Dichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,4-Dichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Dichlorodifluoromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1-Dichloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2-Dichloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1-Dichloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
cis-1,2-Dichloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
trans-1,2-Dichloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2-Dichloropropane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,3-Dichloropropane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
2,2-Dichloropropane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1-Dichloropropene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
cis-1,3-Dichloropropene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
trans-1,3-Dichloropropene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Diisopropyl Ether (DiPE)	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Ethylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Ethyl-t-Butyl Ether (EtBE)	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Hexachlorobutadiene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
2-Hexanone	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
Isopropylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
4-Isopropyltoluene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Methylene Chloride	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.1	06/20/24	4:00	IG
4-Methyl-2-Pentanone (MIBK)	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
Methyl-t-butyl Ether (MtBE)	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Naphthalene	<0.025		µg/L	EPA 8260B	1.0	0.0250	0.050	06/20/24	4:00	IG
n-Propylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Styrene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1,1,2-Tetrachloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1,1,2,2-Tetrachloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Tetrachloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Toluene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG

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Permit Number

Customer P.O.

Analysis	Result	Qual	Units	Method	DF	MDL	RL	Date	Time	Tech
Sample: 003 <b>SG3-3.5</b>								Date & Time Sampled: 06/20/24	@ 12:00	
Sample Matrix: Air										
.....continued										
1,2,3-Trichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2,4-Trichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1,1-Trichloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1,2-Trichloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Trichloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2,3-Trichloropropane	<0.020		µg/L	EPA 8260B	1.0	0.0200	0.10	06/20/24	4:00	IG
Trichlorofluoromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Trichlorotrifluoroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2,4-Trimethylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,3,5-Trimethylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Vinyl Chloride	<0.0024		µg/L	EPA 8260B	1.0	0.0024	0.050	06/20/24	4:00	IG
m,p-Xylenes	<0.10		µg/L	EPA 8260B	1.0	0.1000	0.20	06/20/24	4:00	IG
o-Xylene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
[VOC Vapor Sampling Tracer]										
Isopropanol (IPA)	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
[VOC Surrogates]										
Dibromofluoromethane	101		%REC	EPA 8260B			70-130	06/20/24	4:00	IG
Toluene-D8	98		%REC	EPA 8260B			70-130	06/20/24	4:00	IG
Bromofluorobenzene	89		%REC	EPA 8260B			70-130	06/20/24	4:00	IG
Sample: 004 <b>SG4-5</b>								Date & Time Sampled: 06/20/24	@ 12:15	
Sample Matrix: Air										
[VOCs by GCMS]										
Acetone	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
t-Amyl Methyl Ether (TAME)	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Benzene	<0.023		µg/L	EPA 8260B	1.0	0.0230	0.10	06/20/24	4:00	IG
Bromobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Bromochloromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Bromodichloromethane	<0.040		µg/L	EPA 8260B	1.0	0.0400	0.080	06/20/24	4:00	IG
Bromoform	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Bromomethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG

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## CERTIFICATE OF ANALYSIS

2406-00184

HILLMANN CONSULTING

DAN LOUKS

1745 ORANGEWOOD AVE.

#201

ORANGE, CA 92868

Project: 1010 NORTH TWIN OAKS VALLEY ROAD, SAN MARCOS

Date Reported 06/21/24

Date Received 06/20/24

Invoice No. 1835

Cust # G073

Permit Number

Customer P.O.

Analysis	Result	Qual	Units	Method	DF	MDL	RL	Date	Time	Tech
Sample: 004 <b>SG4-5</b>								Date & Time Sampled: 06/20/24 @ 12:15		
Sample Matrix: Air										
.....continued										
t-Butanol (TBA)	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
2-Butanone (MEK)	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
n-Butylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
sec-Butylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
tert-Butylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Carbon Disulfide	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
Carbon Tetrachloride	<0.025		µg/L	EPA 8260B	1.0	0.0250	0.050	06/20/24	4:00	IG
Chlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Chloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Chloroform	<0.020		µg/L	EPA 8260B	1.0	0.0200	0.040	06/20/24	4:00	IG
Chloromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
2-Chlorotoluene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
4-Chlorotoluene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Dibromochloromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2-Dibromoethane (EDB)	<0.0125		µg/L	EPA 8260B	1.0	0.0125	0.10	06/20/24	4:00	IG
1,2-Dibromo-3-Chloropropane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Dibromomethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2-Dichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,3-Dichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,4-Dichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Dichlorodifluoromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1-Dichloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2-Dichloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1-Dichloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
cis-1,2-Dichloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
trans-1,2-Dichloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2-Dichloropropane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,3-Dichloropropane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
2,2-Dichloropropane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1-Dichloropropene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
cis-1,3-Dichloropropene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG

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## CERTIFICATE OF ANALYSIS

2406-00184

Date Reported 06/21/24

Date Received 06/20/24

Invoice No. 1835

Cust # G073

Permit Number

Customer P.O.

HILLMANN CONSULTING

DAN LOUKS

1745 ORANGEWOOD AVE.

#201

ORANGE, CA 92868

Project: 1010 NORTH TWIN OAKS VALLEY ROAD, SAN MARCOS

Analysis	Result	Qual	Units	Method	DF	MDL	RL	Date	Time	Tech
Sample: 004 <b>SG4-5</b>								Date & Time Sampled: 06/20/24 @ 12:15		
Sample Matrix: Air										
.....continued										
trans-1,3-Dichloropropene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Diisopropyl Ether (DiPE)	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Ethylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Ethyl-t-Butyl Ether (EtBE)	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Hexachlorobutadiene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
2-Hexanone	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
Isopropylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
4-Isopropyltoluene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Methylene Chloride	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.1	06/20/24	4:00	IG
4-Methyl-2-Pentanone (MIBK)	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
Methyl-t-butyl Ether (MtBE)	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Naphthalene	<0.025		µg/L	EPA 8260B	1.0	0.0250	0.050	06/20/24	4:00	IG
n-Propylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Styrene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1,1,2-Tetrachloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1,1,2,2-Tetrachloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Tetrachloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Toluene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2,3-Trichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2,4-Trichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1,1-Trichloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1,2-Trichloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Trichloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2,3-Trichloropropane	<0.020		µg/L	EPA 8260B	1.0	0.0200	0.10	06/20/24	4:00	IG
Trichlorofluoromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Trichlorotrifluoroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2,4-Trimethylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,3,5-Trimethylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Vinyl Chloride	<0.0024		µg/L	EPA 8260B	1.0	0.0024	0.050	06/20/24	4:00	IG
m,p-Xylenes	<0.10		µg/L	EPA 8260B	1.0	0.1000	0.20	06/20/24	4:00	IG
o-Xylene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG

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## CERTIFICATE OF ANALYSIS

**2406-00184**

**HILLMANN CONSULTING  
DAN LOUKS  
1745 ORANGEWOOD AVE.  
#201  
ORANGE, CA 92868**

Date Reported 06/21/24  
Date Received 06/20/24  
Invoice No. 1835  
Cust # G073  
Permit Number  
Customer P.O.

**Project: 1010 NORTH TWIN OAKS VALLEY ROAD, SAN MARCOS**

Analysis	Result	Qual	Units	Method	DF	MDL	RL	Date	Time	Tech
Sample: 004 <b>SG4-5</b>					Date & Time Sampled:		06/20/24	@	12:15	
Sample Matrix: <b>Air</b>										
.....continued										
[VOC Vapor Sampling Tracer]										
Isopropanol (IPA)	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
[VOC Surrogates]										
Dibromofluoromethane	102		%REC	EPA 8260B			70-130	06/20/24	4:00	IG
Toluene-D8	92		%REC	EPA 8260B			70-130	06/20/24	4:00	IG
Bromofluorobenzene	89		%REC	EPA 8260B			70-130	06/20/24	4:00	IG
Sample: 005 <b>SG5-4</b>					Date & Time Sampled:		06/20/24	@	12:30	
Sample Matrix: <b>Air</b>										
[VOCs by GCMS]										
Acetone	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
t-Amyl Methyl Ether (TAME)	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Benzene	<0.023		µg/L	EPA 8260B	1.0	0.0230	0.10	06/20/24	4:00	IG
Bromobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Bromochloromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Bromodichloromethane	<0.040		µg/L	EPA 8260B	1.0	0.0400	0.080	06/20/24	4:00	IG
Bromoform	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Bromomethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
t-Butanol (TBA)	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
2-Butanone (MEK)	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
n-Butylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
sec-Butylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
tert-Butylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Carbon Disulfide	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
Carbon Tetrachloride	<0.025		µg/L	EPA 8260B	1.0	0.0250	0.050	06/20/24	4:00	IG
Chlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Chloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Chloroform	<0.020		µg/L	EPA 8260B	1.0	0.0200	0.040	06/20/24	4:00	IG
Chloromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
2-Chlorotoluene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
4-Chlorotoluene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG

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## CERTIFICATE OF ANALYSIS

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Invoice No. 1835

Cust # G073

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Customer P.O.

HILLMANN CONSULTING

DAN LOUKS

1745 ORANGEWOOD AVE.

#201

ORANGE, CA 92868

Project: 1010 NORTH TWIN OAKS VALLEY ROAD, SAN MARCOS

Analysis	Result	Qual	Units	Method	DF	MDL	RL	Date	Time	Tech
Sample: 005 <b>SG5-4</b>								Date & Time Sampled: 06/20/24	@ 12:30	
Sample Matrix: Air										
.....continued										
Dibromochloromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2-Dibromoethane (EDB)	<0.0125		µg/L	EPA 8260B	1.0	0.0125	0.10	06/20/24	4:00	IG
1,2-Dibromo-3-Chloropropane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Dibromomethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2-Dichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,3-Dichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,4-Dichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Dichlorodifluoromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1-Dichloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2-Dichloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1-Dichloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
cis-1,2-Dichloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
trans-1,2-Dichloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2-Dichloropropane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,3-Dichloropropane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
2,2-Dichloropropane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1-Dichloropropene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
cis-1,3-Dichloropropene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
trans-1,3-Dichloropropene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Diisopropyl Ether (DiPE)	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Ethylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Ethyl-t-Butyl Ether (EtBE)	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Hexachlorobutadiene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
2-Hexanone	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
Isopropylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
4-Isopropyltoluene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Methylene Chloride	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.1	06/20/24	4:00	IG
4-Methyl-2-Pentanone (MIBK)	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
Methyl-t-butyl Ether (MtBE)	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Naphthalene	<0.025		µg/L	EPA 8260B	1.0	0.0250	0.050	06/20/24	4:00	IG
n-Propylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG

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## CERTIFICATE OF ANALYSIS

2406-00184

Date Reported 06/21/24

Date Received 06/20/24

Invoice No. 1835

Cust # G073

Permit Number

Customer P.O.

HILLMANN CONSULTING

DAN LOUKS

1745 ORANGEWOOD AVE.

#201

ORANGE, CA 92868

Project: 1010 NORTH TWIN OAKS VALLEY ROAD, SAN MARCOS

Analysis	Result	Qual	Units	Method	DF	MDL	RL	Date	Time	Tech
Sample: 005 <b>SG5-4</b>								Date & Time Sampled: 06/20/24	@ 12:30	
Sample Matrix: Air										
.....continued										
Styrene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1,1,2-Tetrachloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1,2,2-Tetrachloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Tetrachloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Toluene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2,3-Trichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2,4-Trichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1,1-Trichloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1,2-Trichloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Trichloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2,3-Trichloropropane	<0.020		µg/L	EPA 8260B	1.0	0.0200	0.10	06/20/24	4:00	IG
Trichlorofluoromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Trichlorotrifluoroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2,4-Trimethylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,3,5-Trimethylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Vinyl Chloride	<0.0024		µg/L	EPA 8260B	1.0	0.0024	0.050	06/20/24	4:00	IG
m,p-Xylenes	<0.10		µg/L	EPA 8260B	1.0	0.1000	0.20	06/20/24	4:00	IG
o-Xylene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
[VOC Vapor Sampling Tracer]										
Isopropanol (IPA)	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
[VOC Surrogates]										
Dibromofluoromethane	93		%REC	EPA 8260B			70-130	06/20/24	4:00	IG
Toluene-D8	96		%REC	EPA 8260B			70-130	06/20/24	4:00	IG
Bromofluorobenzene	89		%REC	EPA 8260B			70-130	06/20/24	4:00	IG
Sample: 006 <b>SG6-4</b>								Date & Time Sampled: 06/20/24	@ 12:45	
Sample Matrix: Air										
[VOCs by GCMS]										
Acetone	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
t-Amyl Methyl Ether (TAME)	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Benzene	<0.023		µg/L	EPA 8260B	1.0	0.0230	0.10	06/20/24	4:00	IG

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2406-00184

HILLMANN CONSULTING

DAN LOUKS

1745 ORANGEWOOD AVE.

#201

ORANGE, CA 92868

Project: 1010 NORTH TWIN OAKS VALLEY ROAD, SAN MARCOS

Date Reported 06/21/24

Date Received 06/20/24

Invoice No. 1835

Cust # G073

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Customer P.O.

Analysis	Result	Qual	Units	Method	DF	MDL	RL	Date	Time	Tech
Sample: 006 <b>SG6-4</b>								Date & Time Sampled: 06/20/24	@ 12:45	
Sample Matrix: Air										
.....continued										
Bromobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Bromochloromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Bromodichloromethane	<0.040		µg/L	EPA 8260B	1.0	0.0400	0.080	06/20/24	4:00	IG
Bromoform	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Bromomethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
t-Butanol (TBA)	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
2-Butanone (MEK)	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
n-Butylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
sec-Butylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
tert-Butylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Carbon Disulfide	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
Carbon Tetrachloride	<0.025		µg/L	EPA 8260B	1.0	0.0250	0.050	06/20/24	4:00	IG
Chlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Chloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Chloroform	<0.020		µg/L	EPA 8260B	1.0	0.0200	0.040	06/20/24	4:00	IG
Chloromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
2-Chlorotoluene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
4-Chlorotoluene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Dibromochloromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2-Dibromoethane (EDB)	<0.0125		µg/L	EPA 8260B	1.0	0.0125	0.10	06/20/24	4:00	IG
1,2-Dibromo-3-Chloropropane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Dibromomethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2-Dichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,3-Dichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,4-Dichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Dichlorodifluoromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1-Dichloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2-Dichloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1-Dichloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
cis-1,2-Dichloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
trans-1,2-Dichloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG

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Invoice No. 1835

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Customer P.O.

HILLMANN CONSULTING

DAN LOUKS

1745 ORANGEWOOD AVE.

#201

ORANGE, CA 92868

Project: 1010 NORTH TWIN OAKS VALLEY ROAD, SAN MARCOS

Analysis	Result	Qual	Units	Method	DF	MDL	RL	Date	Time	Tech
Sample: 006 <b>SG6-4</b>								Date & Time Sampled: 06/20/24	@ 12:45	
Sample Matrix: Air										
.....continued										
1,2-Dichloropropane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,3-Dichloropropane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
2,2-Dichloropropane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1-Dichloropropene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
cis-1,3-Dichloropropene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
trans-1,3-Dichloropropene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Diisopropyl Ether (DIPE)	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Ethylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Ethyl-t-Butyl Ether (EtBE)	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Hexachlorobutadiene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
2-Hexanone	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
Isopropylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
4-Isopropyltoluene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Methylene Chloride	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.1	06/20/24	4:00	IG
4-Methyl-2-Pentanone (MIBK)	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
Methyl-t-butyl Ether (MtBE)	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Naphthalene	<0.025		µg/L	EPA 8260B	1.0	0.0250	0.050	06/20/24	4:00	IG
n-Propylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Styrene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1,1,2-Tetrachloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1,2,2-Tetrachloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Tetrachloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Toluene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2,3-Trichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2,4-Trichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1,1-Trichloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1,2-Trichloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Trichloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2,3-Trichloropropane	<0.020		µg/L	EPA 8260B	1.0	0.0200	0.10	06/20/24	4:00	IG
Trichlorofluoromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Trichlorotrifluoroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG

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DAN LOUKS

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ORANGE, CA 92868

Project: 1010 NORTH TWIN OAKS VALLEY ROAD, SAN MARCOS

Date Reported 06/21/24

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Customer P.O.

Analysis	Result	Qual	Units	Method	DF	MDL	RL	Date	Time	Tech
Sample: 006 <b>SG6-4</b>								Date & Time Sampled: 06/20/24	@ 12:45	
Sample Matrix: Air										
.....continued										
1,2,4-Trimethylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,3,5-Trimethylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Vinyl Chloride	<0.0024		µg/L	EPA 8260B	1.0	0.0024	0.050	06/20/24	4:00	IG
m,p-Xylenes	<0.10		µg/L	EPA 8260B	1.0	0.1000	0.20	06/20/24	4:00	IG
o-Xylene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
[VOC Vapor Sampling Tracer]										
Isopropanol (IPA)	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
[VOC Surrogates]										
Dibromofluoromethane	97		%REC	EPA 8260B			70-130	06/20/24	4:00	IG
Toluene-D8	96		%REC	EPA 8260B			70-130	06/20/24	4:00	IG
Bromofluorobenzene	92		%REC	EPA 8260B			70-130	06/20/24	4:00	IG
Sample: 007 <b>SG7-4</b>								Date & Time Sampled: 06/20/24	@ 13:00	
Sample Matrix: Air										
[VOCs by GCMS]										
Acetone	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
t-Amyl Methyl Ether (TAME)	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Benzene	<0.023		µg/L	EPA 8260B	1.0	0.0230	0.10	06/20/24	4:00	IG
Bromobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Bromochloromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Bromodichloromethane	<0.040		µg/L	EPA 8260B	1.0	0.0400	0.080	06/20/24	4:00	IG
Bromoform	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Bromomethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
t-Butanol (TBA)	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
2-Butanone (MEK)	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
n-Butylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
sec-Butylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
tert-Butylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Carbon Disulfide	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
Carbon Tetrachloride	<0.025		µg/L	EPA 8260B	1.0	0.0250	0.050	06/20/24	4:00	IG
Chlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG

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Date Received 06/20/24

Invoice No. 1835

Cust # G073

Permit Number

Customer P.O.

Analysis	Result	Qual	Units	Method	DF	MDL	RL	Date	Time	Tech
Sample: 007 <b>SG7-4</b>								Date & Time Sampled: 06/20/24 @ 13:00		
Sample Matrix: Air										
.....continued										
Chloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Chloroform	<0.020		µg/L	EPA 8260B	1.0	0.0200	0.040	06/20/24	4:00	IG
Chloromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
2-Chlorotoluene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
4-Chlorotoluene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Dibromochloromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2-Dibromoethane (EDB)	<0.0125		µg/L	EPA 8260B	1.0	0.0125	0.10	06/20/24	4:00	IG
1,2-Dibromo-3-Chloropropane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Dibromomethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2-Dichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,3-Dichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,4-Dichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Dichlorodifluoromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1-Dichloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2-Dichloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1-Dichloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
cis-1,2-Dichloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
trans-1,2-Dichloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2-Dichloropropane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,3-Dichloropropane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
2,2-Dichloropropane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1-Dichloropropene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
cis-1,3-Dichloropropene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
trans-1,3-Dichloropropene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Diisopropyl Ether (DIPE)	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Ethylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Ethyl-t-Butyl Ether (EtBE)	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Hexachlorobutadiene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
2-Hexanone	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
Isopropylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
4-Isopropyltoluene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG

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## CERTIFICATE OF ANALYSIS

**2406-00184**

**HILLMANN CONSULTING  
DAN LOUKS  
1745 ORANGEWOOD AVE.  
#201  
ORANGE, CA 92868**

Date Reported 06/21/24  
Date Received 06/20/24  
Invoice No. 1835  
Cust # G073  
Permit Number  
Customer P.O.

**Project: 1010 NORTH TWIN OAKS VALLEY ROAD, SAN MARCOS**

Analysis	Result	Qual	Units	Method	DF	MDL	RL	Date	Time	Tech
Sample: 007 <b>SG7-4</b>								Date & Time Sampled: 06/20/24	@ 13:00	
Sample Matrix: Air										
.....continued										
Methylene Chloride	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.1	06/20/24	4:00	IG
4-Methyl-2-Pentanone (MIBK)	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
Methyl-t-butyl Ether (MtBE)	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Naphthalene	<0.025		µg/L	EPA 8260B	1.0	0.0250	0.050	06/20/24	4:00	IG
n-Propylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Styrene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1,1,2-Tetrachloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1,2,2-Tetrachloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Tetrachloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Toluene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2,3-Trichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2,4-Trichlorobenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1,1-Trichloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,1,2-Trichloroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Trichloroethene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2,3-Trichloropropane	<0.020		µg/L	EPA 8260B	1.0	0.0200	0.10	06/20/24	4:00	IG
Trichlorofluoromethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Trichlorotrifluoroethane	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,2,4-Trimethylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
1,3,5-Trimethylbenzene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
Vinyl Chloride	<0.0024		µg/L	EPA 8260B	1.0	0.0024	0.050	06/20/24	4:00	IG
m,p-Xylenes	<0.10		µg/L	EPA 8260B	1.0	0.1000	0.20	06/20/24	4:00	IG
o-Xylene	<0.050		µg/L	EPA 8260B	1.0	0.0500	0.10	06/20/24	4:00	IG
[VOC Vapor Sampling Tracer]										
Isopropanol (IPA)	<0.50		µg/L	EPA 8260B	1.0	0.5000	1.0	06/20/24	4:00	IG
[VOC Surrogates]										
Dibromofluoromethane	97		%REC	EPA 8260B			70-130	06/20/24	4:00	IG
Toluene-D8	96		%REC	EPA 8260B			70-130	06/20/24	4:00	IG
Bromofluorobenzene	91		%REC	EPA 8260B			70-130	06/20/24	4:00	IG

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*Respectfully Submitted:*

\_\_\_\_\_  
Ken Zheng - President

### QUALIFIERS

B = Detected in the associated Method Blank at a concentration above the routine RL.

B1 = BOD dilution water is over specifications . The reported result may be biased high.

D = Surrogate recoveries are not calculated due to sample dilution.

E = Estimated value; Value exceeds calibration level of instrument.

H = Analyte was prepared and/or analyzed outside of the analytical method holding time

I = Matrix Interference.

J = Analyte concentration detected between RL and MDL.

Q = One or more quality control criteria did not meet specifications. See Comments for further explanation.

S = Customer provided specification limit exceeded.

### ABBREVIATIONS

DF = Dilution Factor

RL = Reporting Limit, Adjusted by DF

MDL = Method Detection Limit, Adjusted by DF

Qual = Qualifier

Tech = Technician



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## QUALITY CONTROL DATA REPORT

HILLMANN CONSULTING  
 ORANGE, CA 92868

**2406-00184**

**Date Reported**      06/21/2024  
**Date Received**     06/20/2024  
**Date Sampled**      06/20/2024  
**Invoice No.**         1835  
**Customer #**          G073  
**Customer P.O.**

**Project: 1010 NORTH TWIN OAKS VALLEY ROAD, SAN  
 MARCOS**

Method #		EPA 8260B					
QC Reference #	116576	Date Analyzed:	6/20/2024	Technician:	IG		
Samples	001	002	003	004	005	006	007
<b>Results</b>				<b>Control Ranges</b>			
	LCS %REC	LCS %DUP	LCS %RPD		LCS %REC	LCS %RPD	
1,1-Dichloroethene	78	70	8		70 - 130	0 - 25	
Benzene	108	90	18		70 - 130	0 - 25	
Chlorobenzene	119	100	19		70 - 130	0 - 25	
Toluene	118	99	19		70 - 130	0 - 25	
Trichloroethene	120	104	16		70 - 130	0 - 25	



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## QUALITY CONTROL DATA REPORT

HILLMANN CONSULTING

2406-00184

Date Reported

06/21/2024

Date Received

06/20/2024

Date Sampled

06/20/2024

**Project: 1010 NORTH TWIN OAKS VALLEY ROAD, SAN  
MARCOS**

### Method blank results

Ref	Test Name	Result	Qualif	Units	MDL	Ref	Test Name	Result	Qualif	Units	MDL
116576	Acetone	<0.50		µg/L	0.50		2-Hexanone	<0.50		µg/L	0.50
	t-Amyl Methyl Ether (TAME)	<0.050		µg/L	0.050		Isopropylbenzene	<0.050		µg/L	0.050
	Benzene	<0.023		µg/L	0.023		4-Isopropyltoluene	<0.050		µg/L	0.050
	Bromobenzene	<0.050		µg/L	0.050		Methylene Chloride	<0.050		µg/L	0.050
	Bromochloromethane	<0.050		µg/L	0.050		4-Methyl-2-Pentanone (MIBK)	<0.50		µg/L	0.50
	Bromodichloromethane	<0.040		µg/L	0.040		Methyl-t-butyl Ether (MtBE)	<0.050		µg/L	0.050
	Bromoform	<0.050		µg/L	0.050		Naphthalene	<0.025		µg/L	0.025
	Bromomethane	<0.050		µg/L	0.050		n-Propylbenzene	<0.050		µg/L	0.050
	t-Butanol (TBA)	<0.50		µg/L	0.50		Styrene	<0.050		µg/L	0.050
	2-Butanone (MEK)	<0.50		µg/L	0.50		1,1,1,2-Tetrachloroethane	<0.050		µg/L	0.050
	n-Butylbenzene	<0.050		µg/L	0.050		1,1,2,2-Tetrachloroethane	<0.050		µg/L	0.050
	sec-Butylbenzene	<0.050		µg/L	0.050		Tetrachloroethene	<0.050		µg/L	0.050
	tert-Butylbenzene	<0.050		µg/L	0.050		Toluene	<0.050		µg/L	0.050
	Carbon Disulfide	<0.50		µg/L	0.50		1,2,3-Trichlorobenzene	<0.050		µg/L	0.050
	Carbon Tetrachloride	<0.025		µg/L	0.025		1,2,4-Trichlorobenzene	<0.050		µg/L	0.050
	Chlorobenzene	<0.050		µg/L	0.050		1,1,1-Trichloroethane	<0.050		µg/L	0.050
	Chloroethane	<0.050		µg/L	0.050		1,1,2-Trichloroethane	<0.050		µg/L	0.050
	Chloroform	<0.020		µg/L	0.020		Trichloroethene	<0.050		µg/L	0.050
	Chloromethane	<0.050		µg/L	0.050		1,2,3-Trichloropropane	<0.020		µg/L	0.020
	2-Chlorotoluene	<0.050		µg/L	0.050		Trichlorofluoromethane	<0.050		µg/L	0.050
	4-Chlorotoluene	<0.050		µg/L	0.050		Trichlorotrifluoroethane	<0.050		µg/L	0.050
	Dibromochloromethane	<0.050		µg/L	0.050		1,2,4-Trimethylbenzene	<0.050		µg/L	0.050
	1,2-Dibromoethane (EDB)	<0.0125		µg/L	0.0125		1,3,5-Trimethylbenzene	<0.050		µg/L	0.050
	1,2-Dibromo-3-Chloropropane	<0.050		µg/L	0.050		Vinyl Chloride	<0.0024		µg/L	0.0024
	Dibromomethane	<0.050		µg/L	0.050		m,p-Xylenes	<0.10		µg/L	0.10
	1,2-Dichlorobenzene	<0.050		µg/L	0.050		o-Xylene	<0.050		µg/L	0.050
	1,3-Dichlorobenzene	<0.050		µg/L	0.050		Isopropanol (IPA)	<0.50		µg/L	0.50
	1,4-Dichlorobenzene	<0.050		µg/L	0.050						
	Dichlorodifluoromethane	<0.050		µg/L	0.050						
	1,1-Dichloroethane	<0.050		µg/L	0.050						
	1,2-Dichloroethane	<0.050		µg/L	0.050						
	1,1-Dichloroethene	<0.050		µg/L	0.050						
	cis-1,2-Dichloroethene	<0.050		µg/L	0.050						
	trans-1,2-Dichloroethene	<0.050		µg/L	0.050						
	1,2-Dichloropropane	<0.050		µg/L	0.050						
	1,3-Dichloropropane	<0.050		µg/L	0.050						
	2,2-Dichloropropane	<0.050		µg/L	0.050						
	1,1-Dichloropropene	<0.050		µg/L	0.050						
	cis-1,3-Dichloropropene	<0.050		µg/L	0.050						
	trans-1,3-Dichloropropene	<0.050		µg/L	0.050						
	Diisopropyl Ether (DIPE)	<0.050		µg/L	0.050						
	Ethylbenzene	<0.050		µg/L	0.050						
	Ethyl-t-Butyl Ether (EtBE)	<0.050		µg/L	0.050						
	Hexachlorobutadiene	<0.050		µg/L	0.050						



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## QUALITY CONTROL DATA REPORT

HILLMANN CONSULTING

**2406-00184**

**Date Reported 06/21/2024**

**Date Received 06/20/2024**

**Date Sampled 06/20/2024**

**Project: 1010 NORTH TWIN OAKS VALLEY ROAD, SAN  
MARCOS**

*Respectfully Submitted:*

\_\_\_\_\_  
Ken Zheng - President



# APPENDIX C

## Drilling Logs

## DRILL/LITHOLOGIC LOG

**BORING/WELL NUMBER** P1-HB1  
**PROJECT** Proposed Residential Development **OWNER** \_\_\_\_\_  
**LOCATION** North Twin Oaks Valley Road, San Marcos, CA **PROJECT NUMBER** \_\_\_\_\_  
**DATE DRILLED** June 18, 2024 **TOTAL DEPTH OF HOLE** 3 Feet  
**SURFACE ELEVATION** \_\_\_\_\_ **DEPTH TO WATER** \_\_\_\_\_  
**SCREEN: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **SLOT SIZE** \_\_\_\_\_  
**CASING: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **TYPE** \_\_\_\_\_  
**DRILLING COMPANY** Hillmann **DRILL METHOD** Hand Auger  
**DRILLER** Dan/Chris **LOG BY** Dan Louks

DEPTH (FEET)	WELL CONST		PID (PPM)	SAMPLES		SOIL CLASS (USCS)	DESCRIPTION/SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
	PIPE	FILL		NUMBER	BLOW		
0-3			<1			GW/SW	<p>Gravel and Gravelly SAND; brown, fine to coarse grained sand, poorly sorted, fine to coarse gravel, dry, no odor. Too much gravel for soil sampling.</p> <p>Install Probe SG1 with tip set at 3 feet below grade. Install filter pack. Seal with bentonite and neat cement to surface.</p>

## DRILL/LITHOLOGIC LOG

**BORING/WELL NUMBER** P1-HB2  
**PROJECT** Proposed Residential Development **OWNER** \_\_\_\_\_  
**LOCATION** North Twin Oaks Valley Road, San Marcos, CA **PROJECT NUMBER** \_\_\_\_\_  
**DATE DRILLED** June 18, 2024 **TOTAL DEPTH OF HOLE** 5 Feet  
**SURFACE ELEVATION** \_\_\_\_\_ **DEPTH TO WATER** \_\_\_\_\_  
**SCREEN: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **SLOT SIZE** \_\_\_\_\_  
**CASING: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **TYPE** \_\_\_\_\_  
**DRILLING COMPANY** Hillmann **DRILL METHOD** Hand Auger  
**DRILLER** Dan/Chris **LOG BY** Dan Louks

DEPTH (FEET)	WELL CONST		PID (PPM)	SAMPLES		SOIL CLASS (USCS)	DESCRIPTION/SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
	PIPE	FILL		NUMBER	BLOW		
0-5			<1			SM	Gravelly, Silty SAND; reddish brown, very fine sand, 25-30% fine to coarse gravel, dry, no odor.  Install Probe SG2 with tip set at 5 feet below grade. Install filter pack. Seal with bentonite and neat cement to surface.

## DRILL/LITHOLOGIC LOG

**BORING/WELL NUMBER** P1-HB3  
**PROJECT** Proposed Residential Development **OWNER** \_\_\_\_\_  
**LOCATION** North Twin Oaks Valley Road, San Marcos, CA **PROJECT NUMBER** \_\_\_\_\_  
**DATE DRILLED** June 18, 2024 **TOTAL DEPTH OF HOLE** 3.5 Feet  
**SURFACE ELEVATION** \_\_\_\_\_ **DEPTH TO WATER** \_\_\_\_\_  
**SCREEN: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **SLOT SIZE** \_\_\_\_\_  
**CASING: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **TYPE** \_\_\_\_\_  
**DRILLING COMPANY** Hillmann **DRILL METHOD** Hand Auger  
**DRILLER** Dan/Chris **LOG BY** Dan Louks

DEPTH (FEET)	WELL CONST		PID (PPM)	SAMPLES		SOIL CLASS (USCS)	DESCRIPTION/SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
	PIPE	FILL		NUMBER	BLOW		
0-3.5			<1			CL	<p>Silty CLAY; brown, low plasticity, 10% fine gravel, no odor.</p> <p>Install Probe SG3 with tip set at 3.5 feet below grade. Install filter pack. Seal with bentonite and neat cement to surface.</p>



## DRILL/LITHOLOGIC LOG

**BORING/WELL NUMBER** P1-HB5  
**PROJECT** Proposed Residential Development **OWNER** \_\_\_\_\_  
**LOCATION** North Twin Oaks Valley Road, San Marcos, CA **PROJECT NUMBER** \_\_\_\_\_  
**DATE DRILLED** June 18, 2024 **TOTAL DEPTH OF HOLE** 2 Feet  
**SURFACE ELEVATION** \_\_\_\_\_ **DEPTH TO WATER** \_\_\_\_\_  
**SCREEN: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **SLOT SIZE** \_\_\_\_\_  
**CASING: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **TYPE** \_\_\_\_\_  
**DRILLING COMPANY** Hillmann **DRILL METHOD** Hand Auger  
**DRILLER** Dan/Chris **LOG BY** Dan Louks

DEPTH (FEET)	WELL CONST		PID (PPM)	SAMPLES		SOIL CLASS (USCS)	DESCRIPTION/SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
	PIPE	FILL		NUMBER	BLOW		
0			<1	P1-HB5-surf		ML	Clayey Sandy SILT; brown, low plasticity, 10% fine to coarse gravel, no odor.
2			<1	P1-HB5-2		ML	Clayey Sandy SILT; brown, low plasticity, 10% fine to coarse gravel, no odor.  No Soil Gas Probe Installed.







## DRILL/LITHOLOGIC LOG

**BORING/WELL NUMBER** SG5  
**PROJECT** Proposed Residential Development **OWNER** \_\_\_\_\_  
**LOCATION** North Twin Oaks Valley Road, San Marcos, CA **PROJECT NUMBER** \_\_\_\_\_  
**DATE DRILLED** June 18, 2024 **TOTAL DEPTH OF HOLE** 4 Feet  
**SURFACE ELEVATION** \_\_\_\_\_ **DEPTH TO WATER** \_\_\_\_\_  
**SCREEN: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **SLOT SIZE** \_\_\_\_\_  
**CASING: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **TYPE** \_\_\_\_\_  
**DRILLING COMPANY** Hillmann **DRILL METHOD** Hand Auger  
**DRILLER** Dan/Chris **LOG BY** Dan Louks

DEPTH (FEET)	WELL CONST		PID (PPM)	SAMPLES		SOIL CLASS (USCS)	DESCRIPTION/SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
	PIPE	FILL		NUMBER	BLOW		
0-4			<1			ML	Parcel 5  Sandy SILT, brown, very fine sand some clay, low plasticity, 5% fine to coarse gravel, dry, no odor.  Install Probe SG5 with tip set at 4 feet below grade. Install filter pack. Seal with bentonite and neat cement to surface.

## DRILL/LITHOLOGIC LOG

**BORING/WELL NUMBER** SG6  
**PROJECT** Proposed Residential Development **OWNER** \_\_\_\_\_  
**LOCATION** North Twin Oaks Valley Road, San Marcos, CA **PROJECT NUMBER** \_\_\_\_\_  
**DATE DRILLED** June 18, 2024 **TOTAL DEPTH OF HOLE** 4 Feet  
**SURFACE ELEVATION** \_\_\_\_\_ **DEPTH TO WATER** \_\_\_\_\_  
**SCREEN: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **SLOT SIZE** \_\_\_\_\_  
**CASING: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **TYPE** \_\_\_\_\_  
**DRILLING COMPANY** Hillmann **DRILL METHOD** Hand Auger  
**DRILLER** Dan/Chris **LOG BY** Dan Louks

DEPTH (FEET)	WELL CONST		PID (PPM)	SAMPLES		SOIL CLASS (USCS)	DESCRIPTION/SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
	PIPE	FILL		NUMBER	BLOW		
0-4			<1			ML	Parcel 5  Sandy SILT, brown, very fine sand some clay, low plasticity, 5% fine to coarse gravel, dry, no odor.  Install Probe SG6 with tip set at 4 feet below grade. Install filter pack. Seal with bentonite and neat cement to surface.

## DRILL/LITHOLOGIC LOG

**BORING/WELL NUMBER** SG7  
**PROJECT** Proposed Residential Development **OWNER** \_\_\_\_\_  
**LOCATION** North Twin Oaks Valley Road, San Marcos, CA **PROJECT NUMBER** \_\_\_\_\_  
**DATE DRILLED** June 18, 2024 **TOTAL DEPTH OF HOLE** 4 Feet  
**SURFACE ELEVATION** \_\_\_\_\_ **DEPTH TO WATER** \_\_\_\_\_  
**SCREEN: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **SLOT SIZE** \_\_\_\_\_  
**CASING: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **TYPE** \_\_\_\_\_  
**DRILLING COMPANY** Hillmann **DRILL METHOD** Hand Auger  
**DRILLER** Dan/Chris **LOG BY** Dan Louks

DEPTH (FEET)	WELL CONST		PID (PPM)	SAMPLES		SOIL CLASS (USCS)	DESCRIPTION/SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
	PIPE	FILL		NUMBER	BLOW		
0-4			<1			ML	Parcel 5  Sandy SILT, brown, very fine sand some clay, low plasticity, 5% fine to coarse gravel, dry, no odor.  Install Probe SG7 with tip set at 4 feet below grade. Install filter pack. Seal with bentonite and neat cement to surface.

## DRILL/LITHOLOGIC LOG

**BORING/WELL NUMBER** P5-HB9  
**PROJECT** Proposed Residential Development **OWNER** \_\_\_\_\_  
**LOCATION** North Twin Oaks Valley Road, San Marcos, CA **PROJECT NUMBER** \_\_\_\_\_  
**DATE DRILLED** June 18, 2024 **TOTAL DEPTH OF HOLE** 4.5 Feet  
**SURFACE ELEVATION** \_\_\_\_\_ **DEPTH TO WATER** \_\_\_\_\_  
**SCREEN: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **SLOT SIZE** \_\_\_\_\_  
**CASING: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **TYPE** \_\_\_\_\_  
**DRILLING COMPANY** Hillmann **DRILL METHOD** Hand Auger  
**DRILLER** Dan/Chris **LOG BY** Dan Louks

DEPTH (FEET)	WELL CONST		PID (PPM)	SAMPLES		SOIL CLASS (USCS)	DESCRIPTION/SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
	PIPE	FILL		NUMBER	BLOW		
2			<1	P5-HB9-2		ML	Sandy SILT; brown, low plasticity, very fine sand, no odor.
3			<1	P5-HB9-3		CL	Silty CLAY; brown, medium plasticity, no odor.
4.5			<1	P5-HB9-4.5		ML	Sandy SILT; brown, low plasticity, very fine sand, no odor.
							No Soil Gas Probe Installed.

## DRILL/LITHOLOGIC LOG

**BORING/WELL NUMBER** P5-HB10  
**PROJECT** Proposed Residential Development **OWNER** \_\_\_\_\_  
**LOCATION** North Twin Oaks Valley Road, San Marcos, CA **PROJECT NUMBER** \_\_\_\_\_  
**DATE DRILLED** June 18, 2024 **TOTAL DEPTH OF HOLE** 4 Feet  
**SURFACE ELEVATION** \_\_\_\_\_ **DEPTH TO WATER** \_\_\_\_\_  
**SCREEN: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **SLOT SIZE** \_\_\_\_\_  
**CASING: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **TYPE** \_\_\_\_\_  
**DRILLING COMPANY** Hillmann **DRILL METHOD** Hand Auger  
**DRILLER** Dan/Chris **LOG BY** Dan Louks

DEPTH (FEET)	WELL CONST		PID (PPM)	SAMPLES		SOIL CLASS (USCS)	DESCRIPTION/SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
	PIPE	FILL		NUMBER	BLOW		
2			<1	P5-HB10-2		ML	Sandy SILT; brown, low plasticity, very fine sand, no odor.
3			<1	P5-HB10-3		CL	Silty CLAY; brown, medium plasticity, no odor.
4			<1	P5-HB10-4		ML	Sandy SILT; brown, low plasticity, very fine sand, no odor.
							No Soil Gas Probe Installed.

## DRILL/LITHOLOGIC LOG

**BORING/WELL NUMBER** P5-HB11  
**PROJECT** Proposed Residential Development **OWNER** \_\_\_\_\_  
**LOCATION** North Twin Oaks Valley Road, San Marcos, CA **PROJECT NUMBER** \_\_\_\_\_  
**DATE DRILLED** June 18, 2024 **TOTAL DEPTH OF HOLE** 4 Feet  
**SURFACE ELEVATION** \_\_\_\_\_ **DEPTH TO WATER** \_\_\_\_\_  
**SCREEN: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **SLOT SIZE** \_\_\_\_\_  
**CASING: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **TYPE** \_\_\_\_\_  
**DRILLING COMPANY** Hillmann **DRILL METHOD** Hand Auger  
**DRILLER** Dan/Chris **LOG BY** Dan Louks

DEPTH (FEET)	WELL CONST		PID (PPM)	SAMPLES		SOIL CLASS (USCS)	DESCRIPTION/SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
	PIPE	FILL		NUMBER	BLOW		
2			<1	P5-HB11-2		ML	Sandy SILT; brown, low plasticity, very fine sand, no odor.
3			<1	P5-HB11-3		CL	Silty CLAY; brown, medium plasticity, no odor.
4			<1	P5-HB11-4		ML	Sandy SILT; brown, low plasticity, very fine sand, no odor.
							No Soil Gas Probe Installed.

## DRILL/LITHOLOGIC LOG

**BORING/WELL NUMBER** P5-HB12  
**PROJECT** Proposed Residential Development **OWNER** \_\_\_\_\_  
**LOCATION** North Twin Oaks Valley Road, San Marcos, CA **PROJECT NUMBER** \_\_\_\_\_  
**DATE DRILLED** June 18, 2024 **TOTAL DEPTH OF HOLE** 2 Feet  
**SURFACE ELEVATION** \_\_\_\_\_ **DEPTH TO WATER** \_\_\_\_\_  
**SCREEN: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **SLOT SIZE** \_\_\_\_\_  
**CASING: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **TYPE** \_\_\_\_\_  
**DRILLING COMPANY** Hillmann **DRILL METHOD** Hand Auger  
**DRILLER** Dan/Chris **LOG BY** Dan Louks

DEPTH (FEET)	WELL CONST		PID (PPM)	SAMPLES		SOIL CLASS (USCS)	DESCRIPTION/SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
	PIPE	FILL		NUMBER	BLOW		
0			<1	P5-HB12-surf		ML	Clayey Sandy SILT; brown, low plasticity, very fine sand, no odor.
2			<1	P5-HB12-2		ML	Clayey Sandy SILT; brown, low plasticity, very fine sand, no odor.  No Soil Gas Probe Installed.

## DRILL/LITHOLOGIC LOG

**BORING/WELL NUMBER** P5-HB13  
**PROJECT** Proposed Residential Development **OWNER** \_\_\_\_\_  
**LOCATION** North Twin Oaks Valley Road, San Marcos, CA **PROJECT NUMBER** \_\_\_\_\_  
**DATE DRILLED** June 18, 2024 **TOTAL DEPTH OF HOLE** 2 Feet  
**SURFACE ELEVATION** \_\_\_\_\_ **DEPTH TO WATER** \_\_\_\_\_  
**SCREEN: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **SLOT SIZE** \_\_\_\_\_  
**CASING: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **TYPE** \_\_\_\_\_  
**DRILLING COMPANY** Hillmann **DRILL METHOD** Hand Auger  
**DRILLER** Dan/Chris **LOG BY** Dan Louks

DEPTH (FEET)	WELL CONST		PID (PPM)	SAMPLES		SOIL CLASS (USCS)	DESCRIPTION/SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
	PIPE	FILL		NUMBER	BLOW		
0			<1	P5-HB13-surf		ML	Clayey Sandy SILT; brown, low plasticity, very fine sand, no odor.
2			<1	P5-HB13-2		ML	Clayey Sandy SILT; brown, low plasticity, very fine sand, no odor.  No Soil Gas Probe Installed.

## DRILL/LITHOLOGIC LOG

**BORING/WELL NUMBER** P5-HB14  
**PROJECT** Proposed Residential Development **OWNER** \_\_\_\_\_  
**LOCATION** North Twin Oaks Valley Road, San Marcos, CA **PROJECT NUMBER** \_\_\_\_\_  
**DATE DRILLED** June 18, 2024 **TOTAL DEPTH OF HOLE** 2 Feet  
**SURFACE ELEVATION** \_\_\_\_\_ **DEPTH TO WATER** \_\_\_\_\_  
**SCREEN: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **SLOT SIZE** \_\_\_\_\_  
**CASING: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **TYPE** \_\_\_\_\_  
**DRILLING COMPANY** Hillmann **DRILL METHOD** Hand Auger  
**DRILLER** Dan/Chris **LOG BY** Dan Louks

DEPTH (FEET)	WELL CONST		PID (PPM)	SAMPLES		SOIL CLASS (USCS)	DESCRIPTION/SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
	PIPE	FILL		NUMBER	BLOW		
0			<1	P5-HB14-surf		ML	Clayey Sandy SILT; brown, low plasticity, very fine sand, no odor.
2			<1	P5-HB14-2		ML	Clayey Sandy SILT; brown, low plasticity, very fine sand, no odor.  No Soil Gas Probe Installed.

## DRILL/LITHOLOGIC LOG

**BORING/WELL NUMBER** P5-HB15  
**PROJECT** Proposed Residential Development **OWNER** \_\_\_\_\_  
**LOCATION** North Twin Oaks Valley Road, San Marcos, CA **PROJECT NUMBER** \_\_\_\_\_  
**DATE DRILLED** June 18, 2024 **TOTAL DEPTH OF HOLE** 1.5 Feet  
**SURFACE ELEVATION** \_\_\_\_\_ **DEPTH TO WATER** \_\_\_\_\_  
**SCREEN: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **SLOT SIZE** \_\_\_\_\_  
**CASING: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **TYPE** \_\_\_\_\_  
**DRILLING COMPANY** Hillmann **DRILL METHOD** Hand Auger  
**DRILLER** Dan/Chris **LOG BY** Dan Louks

DEPTH (FEET)	WELL CONST		PID (PPM)	SAMPLES		SOIL CLASS (USCS)	DESCRIPTION/SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
	PIPE	FILL		NUMBER	BLOW		
0			<1	P5-HB14-surf		ML	Clayey Sandy SILT; brown, low plasticity, very fine sand, no odor.
1.5			<1	P5-HB14-1.5		ML	Clayey Sandy SILT; brown, low plasticity, very fine sand, no odor.  No Soil Gas Probe Installed.

## DRILL/LITHOLOGIC LOG

**BORING/WELL NUMBER** P5-HB16  
**PROJECT** Proposed Residential Development **OWNER** \_\_\_\_\_  
**LOCATION** North Twin Oaks Valley Road, San Marcos, CA **PROJECT NUMBER** \_\_\_\_\_  
**DATE DRILLED** June 18, 2024 **TOTAL DEPTH OF HOLE** 2 Feet  
**SURFACE ELEVATION** \_\_\_\_\_ **DEPTH TO WATER** \_\_\_\_\_  
**SCREEN: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **SLOT SIZE** \_\_\_\_\_  
**CASING: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **TYPE** \_\_\_\_\_  
**DRILLING COMPANY** Hillmann **DRILL METHOD** Hand Auger  
**DRILLER** Dan/Chris **LOG BY** Dan Louks

DEPTH (FEET)	WELL CONST		PID (PPM)	SAMPLES		SOIL CLASS (USCS)	DESCRIPTION/SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
	PIPE	FILL		NUMBER	BLOW		
0			<1	P5-HB16-surf		ML	Clayey Sandy SILT; brown, low plasticity, very fine sand, no odor.
2			<1	P5-HB16-2		ML	Clayey Sandy SILT; brown, low plasticity, very fine sand, no odor.  No Soil Gas Probe Installed.

## DRILL/LITHOLOGIC LOG

**BORING/WELL NUMBER** P5-HB17  
**PROJECT** Proposed Residential Development **OWNER** \_\_\_\_\_  
**LOCATION** North Twin Oaks Valley Road, San Marcos, CA **PROJECT NUMBER** \_\_\_\_\_  
**DATE DRILLED** June 18, 2024 **TOTAL DEPTH OF HOLE** 2 Feet  
**SURFACE ELEVATION** \_\_\_\_\_ **DEPTH TO WATER** \_\_\_\_\_  
**SCREEN: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **SLOT SIZE** \_\_\_\_\_  
**CASING: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **TYPE** \_\_\_\_\_  
**DRILLING COMPANY** Hillmann **DRILL METHOD** Hand Auger  
**DRILLER** Dan/Chris **LOG BY** Dan Louks

DEPTH (FEET)	WELL CONST		PID (PPM)	SAMPLES		SOIL CLASS (USCS)	DESCRIPTION/SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
	PIPE	FILL		NUMBER	BLOW		
0			<1	P5-HB17-surf		ML	Clayey Sandy SILT; brown, low plasticity, very fine sand, no odor.
2			<1	P5-HB17-2		ML	Clayey Sandy SILT; brown, low plasticity, very fine sand, no odor.  No Soil Gas Probe Installed.



## DRILL/LITHOLOGIC LOG

**BORING/WELL NUMBER** P5-HB19  
**PROJECT** Proposed Residential Development **OWNER** \_\_\_\_\_  
**LOCATION** North Twin Oaks Valley Road, San Marcos, CA **PROJECT NUMBER** \_\_\_\_\_  
**DATE DRILLED** June 18, 2024 **TOTAL DEPTH OF HOLE** 2 Feet  
**SURFACE ELEVATION** \_\_\_\_\_ **DEPTH TO WATER** \_\_\_\_\_  
**SCREEN: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **SLOT SIZE** \_\_\_\_\_  
**CASING: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **TYPE** \_\_\_\_\_  
**DRILLING COMPANY** Hillmann **DRILL METHOD** Hand Auger  
**DRILLER** Dan/Chris **LOG BY** Dan Louks

DEPTH (FEET)	WELL CONST		PID (PPM)	SAMPLES		SOIL CLASS (USCS)	DESCRIPTION/SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
	PIPE	FILL		NUMBER	BLOW		
0			<1	P5-HB19-surf		ML	Clayey Sandy SILT; reddish brown, low plasticity, very fine sand, hard, 10% fine gravel, no odor.
2			<1	P5-HB19-2		ML	Clayey Sandy SILT; reddish brown, low plasticity, very fine sand, hard, 10% fine gravel, no odor.  No Soil Gas Probe Installed.

## DRILL/LITHOLOGIC LOG

**BORING/WELL NUMBER** P5-HB20  
**PROJECT** Proposed Residential Development **OWNER** \_\_\_\_\_  
**LOCATION** North Twin Oaks Valley Road, San Marcos, CA **PROJECT NUMBER** \_\_\_\_\_  
**DATE DRILLED** June 18, 2024 **TOTAL DEPTH OF HOLE** 2 Feet  
**SURFACE ELEVATION** \_\_\_\_\_ **DEPTH TO WATER** \_\_\_\_\_  
**SCREEN: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **SLOT SIZE** \_\_\_\_\_  
**CASING: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **TYPE** \_\_\_\_\_  
**DRILLING COMPANY** Hillmann **DRILL METHOD** Hand Auger  
**DRILLER** Dan/Chris **LOG BY** Dan Louks

DEPTH (FEET)	WELL CONST		PID (PPM)	SAMPLES		SOIL CLASS (USCS)	DESCRIPTION/SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
	PIPE	FILL		NUMBER	BLOW		
0			<1	P5-HB20-surf		ML	Clayey Sandy SILT; reddish brown, low plasticity, very fine sand, hard, 10% fine gravel, no odor.
2			<1	P5-HB20-2		ML	Clayey Sandy SILT; reddish brown, low plasticity, very fine sand, hard, 10% fine gravel, no odor.  No Soil Gas Probe Installed.

## DRILL/LITHOLOGIC LOG

**BORING/WELL NUMBER** P5-HB21  
**PROJECT** Proposed Residential Development **OWNER** \_\_\_\_\_  
**LOCATION** North Twin Oaks Valley Road, San Marcos, CA **PROJECT NUMBER** \_\_\_\_\_  
**DATE DRILLED** June 18, 2024 **TOTAL DEPTH OF HOLE** 2 Feet  
**SURFACE ELEVATION** \_\_\_\_\_ **DEPTH TO WATER** \_\_\_\_\_  
**SCREEN: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **SLOT SIZE** \_\_\_\_\_  
**CASING: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **TYPE** \_\_\_\_\_  
**DRILLING COMPANY** Hillmann **DRILL METHOD** Hand Auger  
**DRILLER** Dan/Chris **LOG BY** Dan Louks

DEPTH (FEET)	WELL CONST		PID (PPM)	SAMPLES		SOIL CLASS (USCS)	DESCRIPTION/SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
	PIPE	FILL		NUMBER	BLOW		
0			<1	P5-HB21-surf		ML	Sandy SILT; brown, low plasticity, very fine sand, hard, no odor.
2			<1	P5-HB21-2		ML	Sandy SILT; brown, low plasticity, very fine sand, hard, no odor.  No Soil Gas Probe Installed.

## DRILL/LITHOLOGIC LOG

**BORING/WELL NUMBER** P5-HB22  
**PROJECT** Proposed Residential Development **OWNER** \_\_\_\_\_  
**LOCATION** North Twin Oaks Valley Road, San Marcos, CA **PROJECT NUMBER** \_\_\_\_\_  
**DATE DRILLED** June 18, 2024 **TOTAL DEPTH OF HOLE** 1.5 Feet  
**SURFACE ELEVATION** \_\_\_\_\_ **DEPTH TO WATER** \_\_\_\_\_  
**SCREEN: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **SLOT SIZE** \_\_\_\_\_  
**CASING: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **TYPE** \_\_\_\_\_  
**DRILLING COMPANY** Hillmann **DRILL METHOD** Hand Auger  
**DRILLER** Dan/Chris **LOG BY** Dan Louks

DEPTH (FEET)	WELL CONST		PID (PPM)	SAMPLES		SOIL CLASS (USCS)	DESCRIPTION/SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
	PIPE	FILL		NUMBER	BLOW		
0			<1	P5-HB22-surf		ML	Sandy SILT; brown, low plasticity, very fine sand, hard, no odor.
1.5			<1	P5-HB22-1.5		ML	Sandy SILT; brown, low plasticity, very fine sand, hard, no odor.  No Soil Gas Probe Installed.

## DRILL/LITHOLOGIC LOG

**BORING/WELL NUMBER** P5-HB23  
**PROJECT** Proposed Residential Development **OWNER** \_\_\_\_\_  
**LOCATION** North Twin Oaks Valley Road, San Marcos, CA **PROJECT NUMBER** \_\_\_\_\_  
**DATE DRILLED** June 18, 2024 **TOTAL DEPTH OF HOLE** 1.5 Feet  
**SURFACE ELEVATION** \_\_\_\_\_ **DEPTH TO WATER** \_\_\_\_\_  
**SCREEN: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **SLOT SIZE** \_\_\_\_\_  
**CASING: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **TYPE** \_\_\_\_\_  
**DRILLING COMPANY** Hillmann **DRILL METHOD** Hand Auger  
**DRILLER** Dan/Chris **LOG BY** Dan Louks

DEPTH (FEET)	WELL CONST		PID (PPM)	SAMPLES		SOIL CLASS (USCS)	DESCRIPTION/SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
	PIPE	FILL		NUMBER	BLOW		
0			<1	P5-HB23-surf		ML	Sandy SILT; brown, low plasticity, very fine sand, hard, no odor.
1.5			<1	P5-HB23-1.5		ML	Sandy SILT; brown, low plasticity, very fine sand, hard, no odor.  No Soil Gas Probe Installed.

## DRILL/LITHOLOGIC LOG

**BORING/WELL NUMBER** P5-HB24  
**PROJECT** Proposed Residential Development **OWNER** \_\_\_\_\_  
**LOCATION** North Twin Oaks Valley Road, San Marcos, CA **PROJECT NUMBER** \_\_\_\_\_  
**DATE DRILLED** June 18, 2024 **TOTAL DEPTH OF HOLE** 1 Foot  
**SURFACE ELEVATION** \_\_\_\_\_ **DEPTH TO WATER** \_\_\_\_\_  
**SCREEN: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **SLOT SIZE** \_\_\_\_\_  
**CASING: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **TYPE** \_\_\_\_\_  
**DRILLING COMPANY** Hillmann **DRILL METHOD** Hand Auger  
**DRILLER** Dan/Chris **LOG BY** Dan Louks

DEPTH (FEET)	WELL CONST		PID (PPM)	SAMPLES		SOIL CLASS (USCS)	DESCRIPTION/SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
	PIPE	FILL		NUMBER	BLOW		
0			<1	P5-HB24-surf		ML	Gravelly Sandy SILT; brown, very fine sand, hard, 25-35% fine to coarse gravel, no odor.
1			<1	P5-HB24-1		ML	Gravelly Sandy SILT; brown, very fine sand, hard, 25-35% fine to coarse gravel, no odor.
							No Soil Gas Probe Installed.

## DRILL/LITHOLOGIC LOG

**BORING/WELL NUMBER** P5-HB25  
**PROJECT** Proposed Residential Development **OWNER** \_\_\_\_\_  
**LOCATION** North Twin Oaks Valley Road, San Marcos, CA **PROJECT NUMBER** \_\_\_\_\_  
**DATE DRILLED** June 18, 2024 **TOTAL DEPTH OF HOLE** 2 Feet  
**SURFACE ELEVATION** \_\_\_\_\_ **DEPTH TO WATER** \_\_\_\_\_  
**SCREEN: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **SLOT SIZE** \_\_\_\_\_  
**CASING: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **TYPE** \_\_\_\_\_  
**DRILLING COMPANY** Hillmann **DRILL METHOD** Hand Auger  
**DRILLER** Dan/Chris **LOG BY** Dan Louks

DEPTH (FEET)	WELL CONST		PID (PPM)	SAMPLES		SOIL CLASS (USCS)	DESCRIPTION/SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
	PIPE	FILL		NUMBER	BLOW		
0			<1	P5-HB25-surf		ML	Gravelly Sandy SILT; brown, very fine sand, hard, 25-35% fine to coarse gravel, no odor.
2			<1	P5-HB25-2		ML	Gravelly Sandy SILT; brown, very fine sand, hard, 25-35% fine to coarse gravel, no odor.  No Soil Gas Probe Installed.

## DRILL/LITHOLOGIC LOG

**BORING/WELL NUMBER** P5-HB26  
**PROJECT** Proposed Residential Development **OWNER** \_\_\_\_\_  
**LOCATION** North Twin Oaks Valley Road, San Marcos, CA **PROJECT NUMBER** \_\_\_\_\_  
**DATE DRILLED** June 18, 2024 **TOTAL DEPTH OF HOLE** 1.5 Feet  
**SURFACE ELEVATION** \_\_\_\_\_ **DEPTH TO WATER** \_\_\_\_\_  
**SCREEN: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **SLOT SIZE** \_\_\_\_\_  
**CASING: DIA.** \_\_\_\_\_ **LENGTH** \_\_\_\_\_ **TYPE** \_\_\_\_\_  
**DRILLING COMPANY** Hillmann **DRILL METHOD** Hand Auger  
**DRILLER** Dan/Chris **LOG BY** Dan Louks

DEPTH (FEET)	WELL CONST		PID (PPM)	SAMPLES		SOIL CLASS (USCS)	DESCRIPTION/SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
	PIPE	FILL		NUMBER	BLOW		
0			<1	P5-HB26-surf		ML	Gravelly Sandy SILT; brown, very fine sand, hard, 25-35% fine to coarse gravel, no odor.
1.5			<1	P5-HB26-1.5		ML	Gravelly Sandy SILT; brown, very fine sand, hard, 25-35% fine to coarse gravel, no odor.  No Soil Gas Probe Installed.

APPENDIX D  
Soil Gas Monitoring Data

# SOIL GAS MONITORING DATA FORM

**PROJECT:** Agricultural Land  
**LOCATION:** 1010 North Twin Oaks Valley Road, San Marcos, CA  
**DATE:** June 20, 2024

	VAPOR PROBE INFO							
<b>PROBE ID</b>	<b>SG1</b>	<b>SG2</b>	<b>SG3</b>	<b>SG4</b>	<b>SG5</b>	<b>SG6</b>	<b>SG7</b>	
<b>PROBE DEPTH (ft)</b>	3	5	3.5	5	4	4	4	
	EXTRACTION DATA							
<b>Applied Vacuum (in. WC)</b>	<5	<5	<5	<5	<5	<5	<5	
<b>FLOW (L/min)</b>	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
<b>Pore Volumes (borehole - sand pack)</b>	3	3	3	3	3	3	3	
	MONITORING DATA							
<b>OXYGEN (%)</b>	18.5	16.0	12.5	16.1	19.9	19.9	19.0	
<b>CARBON DIOXIDE (%)</b>	1.08	3.0	>5	2.2	0.78	0.71	1.25	
<b>VOC by PID (ppm)</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
<b>Methane (% LEL)</b>	0	0	0	0	0	0	0	

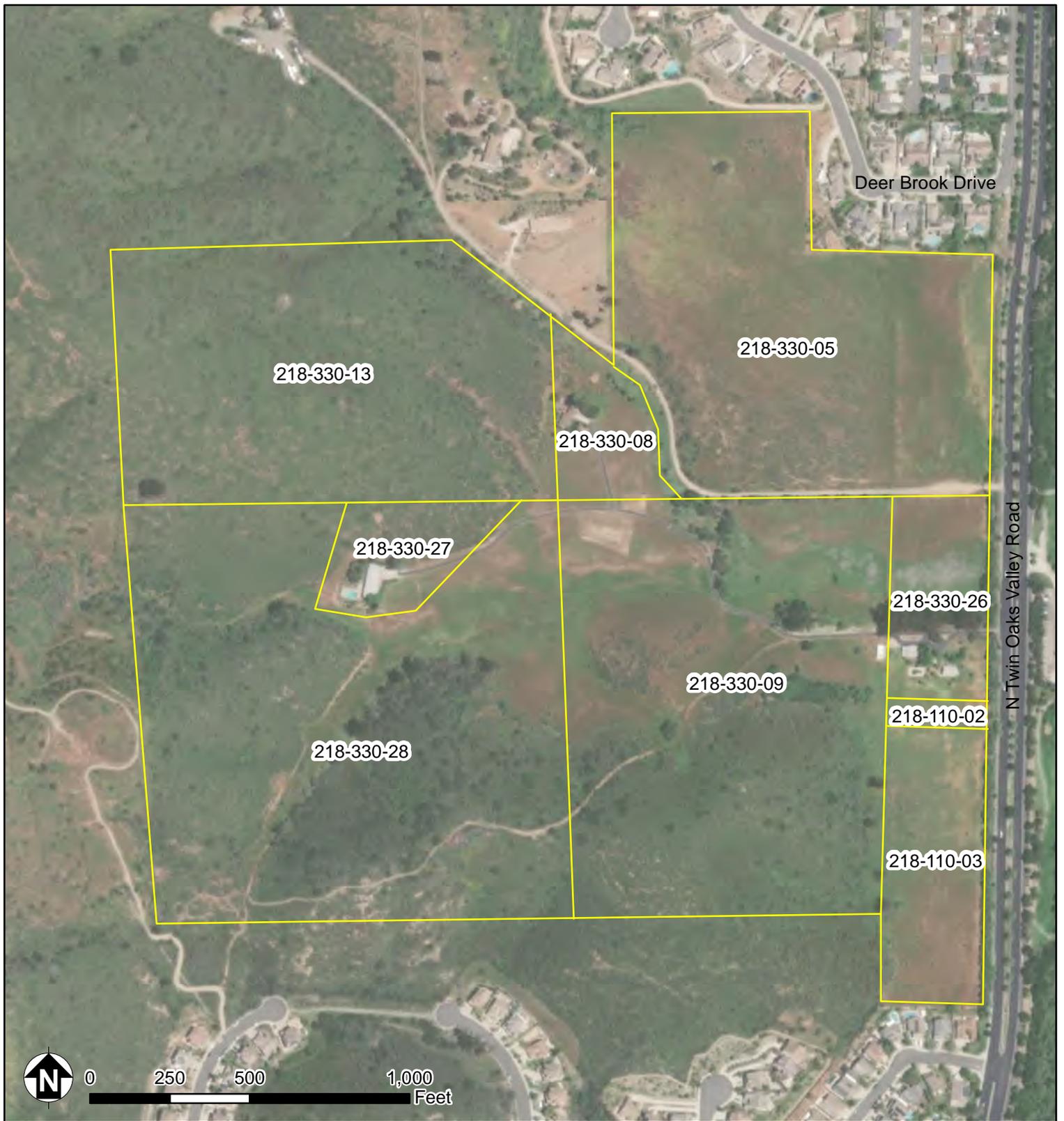
	VAPOR PROBE INFO							
<b>PROBE ID</b>								
<b>PROBE DEPTH (ft)</b>								
	EXTRACTION DATA							
<b>Applied Vacuum (in. WC)</b>								
<b>FLOW (L/min)</b>								
<b>Pore Volumes (borehole - sand pack)</b>								
	MONITORING DATA							
<b>OXYGEN (%)</b>								
<b>CARBON DIOXIDE (%)</b>								
<b>VOC by PID (ppm)</b>								
<b>Methane (% LEL)</b>								

**REMARKS:** \_\_\_\_\_

**SAMPLED BY:** NH

# APPENDIX E

## Previous Assessment Results



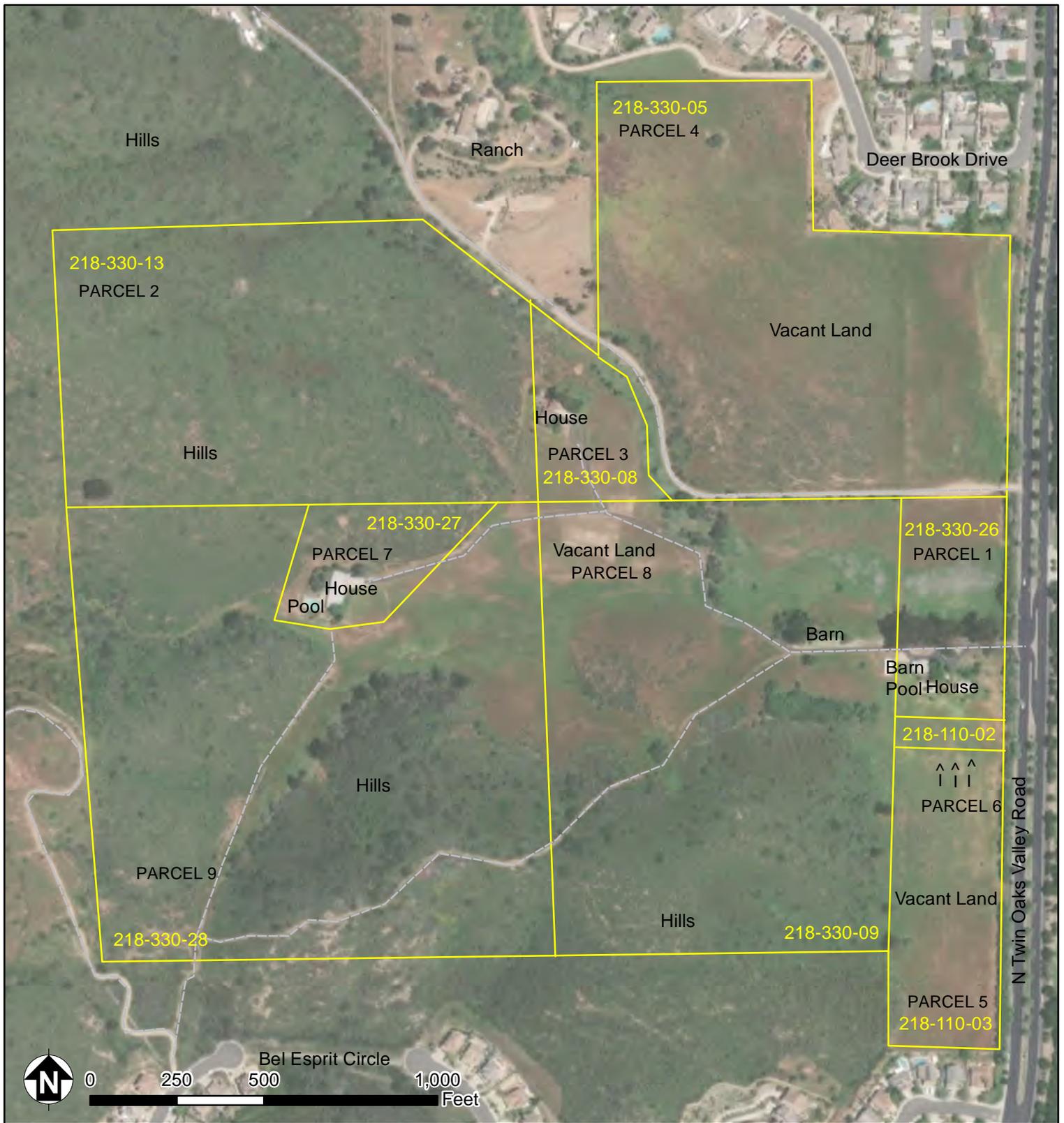
— Parcel Boundaries



Groth Family Properties  
 San Marcos Unified School District  
 San Marcos, California 92069

**Figure 2**  
**Parcel Location Map**

Note:  
 Aerial Imagery: ESRI World Imagery 2018  
 Inset: ESRI Street Map 2018



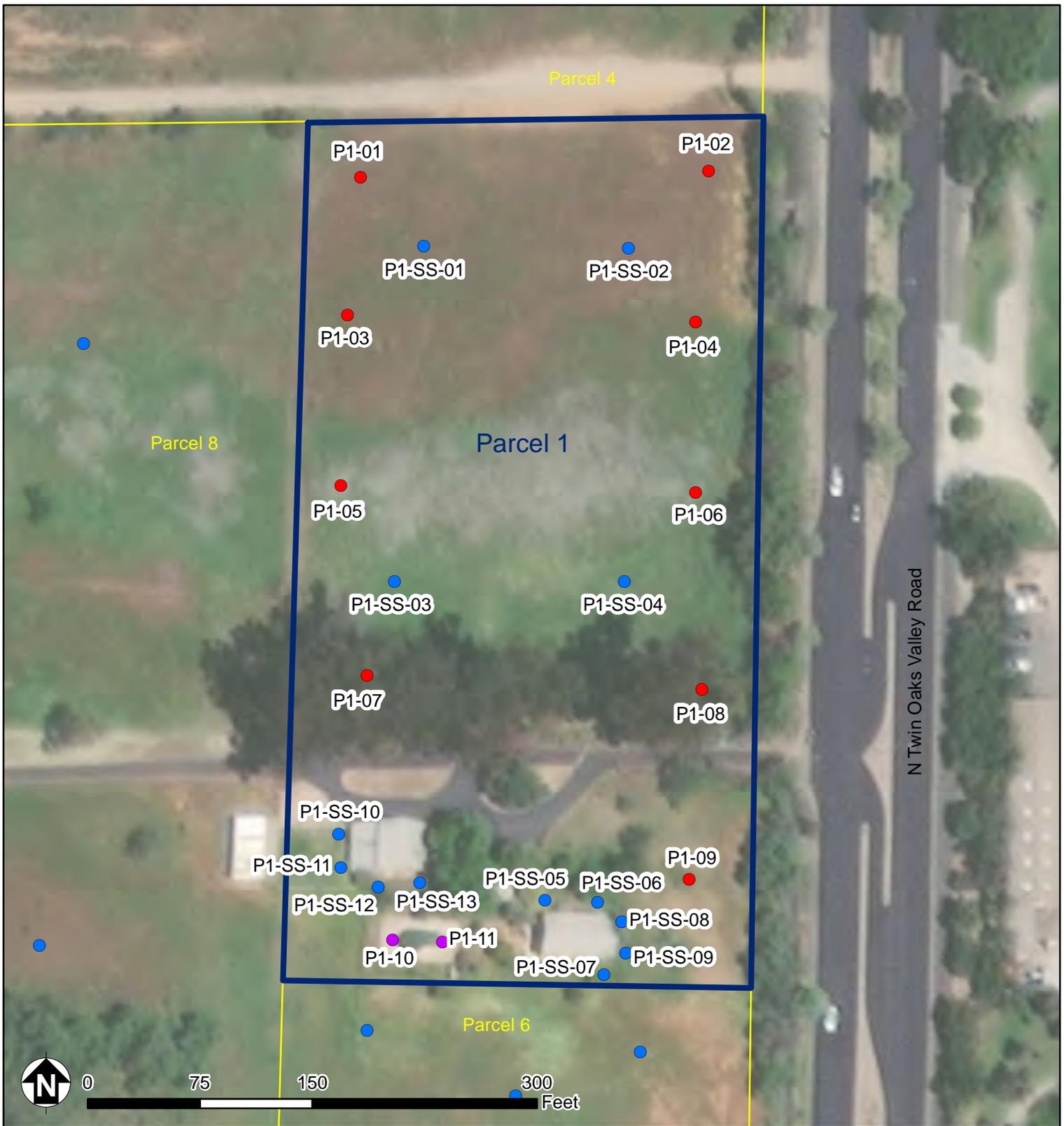
- Parcel Boundaries
- - - Roads



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San Marcos, California 92069

**Figure 3**  
**Site Layout Map**

Note:  
Aerial Imagery: ESRI World Imagery 2018  
Inset: ESRI Street Map 2018



N Twin Oaks Valley Road

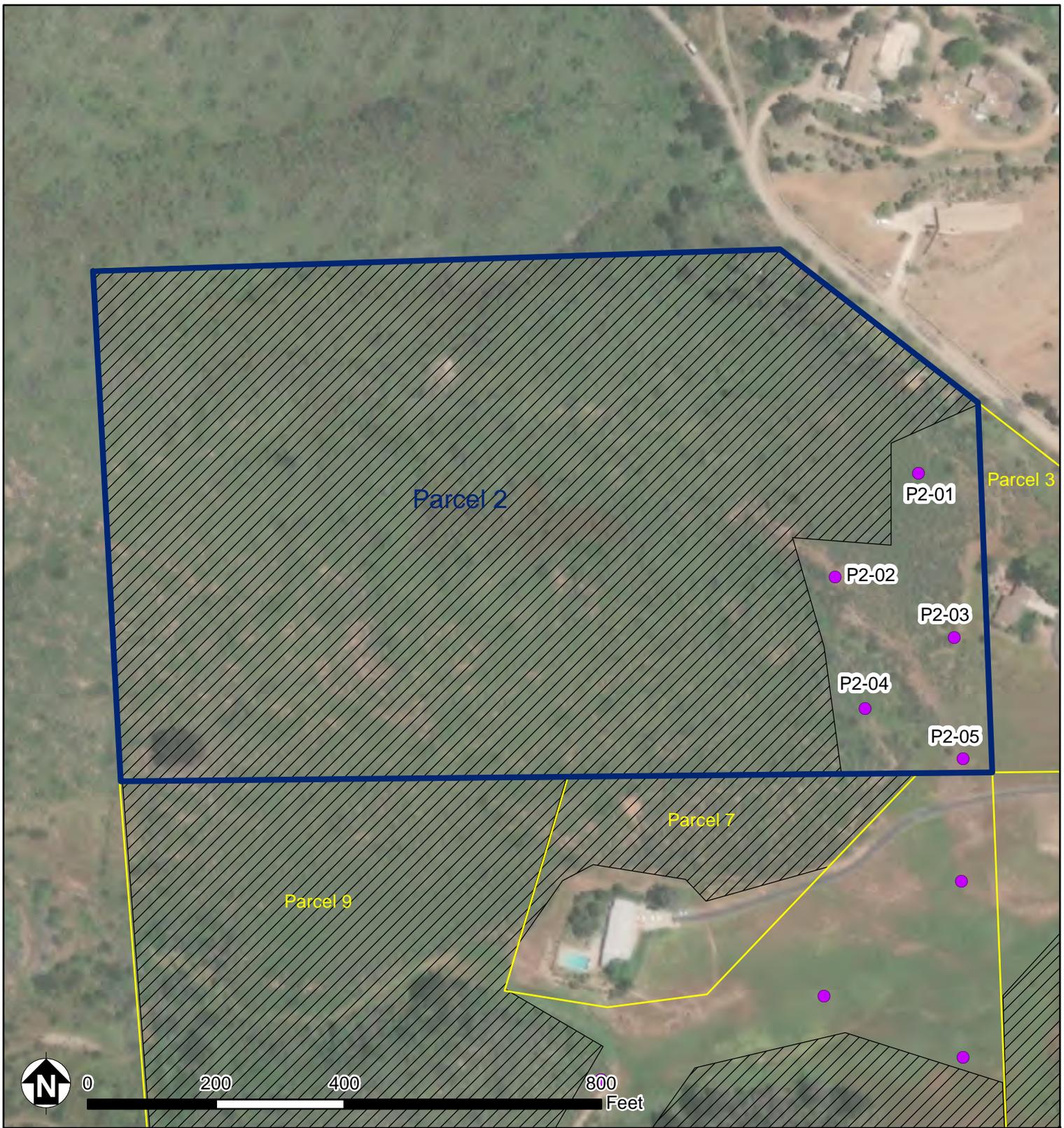


- Hand Auger Sampling Location
  - Direct Push Drilling Sampling Location
  - Surface Soil Sampling Location
  - Parcel 1 Boundary
  - Adjacent Parcel Boundaries
- Note:  
 Aerial Imagery: ESRI World Imagery 2018  
 Inset: ESRI Street Map 2018



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 San Marcos, California 92069

**Figure 4**  
**Parcel 1 Sampling Location Map**



- Hand Auger Sampling Location
- Parcel 2 Boundary
- Adjacent Parcel Boundaries
- Inaccessible Areas

Note:  
 Aerial Imagery: ESRI World Imagery 2018  
 Inset: ESRI Street Map 2018



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**Figure 5**  
**Parcel 2 Sampling Location Map**



- Boring Samples
- Parcel 3
- Parcel Boundaries



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**Figure 6**  
**Parcel 3 Sample Location Map**

Note:  
 Aerial Imagery: ESRI World Imagery 2018  
 Inset: ESRI Street Map 2018



- Surface Soil Sampling Location
- Direct Push Drilling Sampling Location
- Parcel 4 Boundary
- Adjacent Parcel Boundaries
- Inaccessible Areas

Note:  
 Aerial Imagery: ESRI World Imagery 2018  
 Inset: ESRI Street Map 2018



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**Figure 7**  
**Parcel 4 Sampling Location Map**



- Surface Soil Sampling Location
- Direct Push Drilling Sampling Location
- Parcel 5 Boundary
- Adjacent Parcel Boundaries

Note:  
 Aerial Imagery: ESRI World Imagery 2018  
 Inset: ESRI Street Map 2018



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 San Marcos Unified School District  
 San Marcos, California 92069

**Figure 8**  
**Parcel 5 Sampling Location Map**



- Surface Soil Sampling Location
- Direct Push Drilling Sampling Location
- Parcel 6 Boundary
- Adjacent Parcel Boundaries

Note:  
 Aerial Imagery: ESRI World Imagery 2018  
 Inset: ESRI Street Map 2018



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 San Marcos Unified School District  
 San Marcos, California 92069

**Figure 9**  
**Parcel 6 Sampling Location Map**

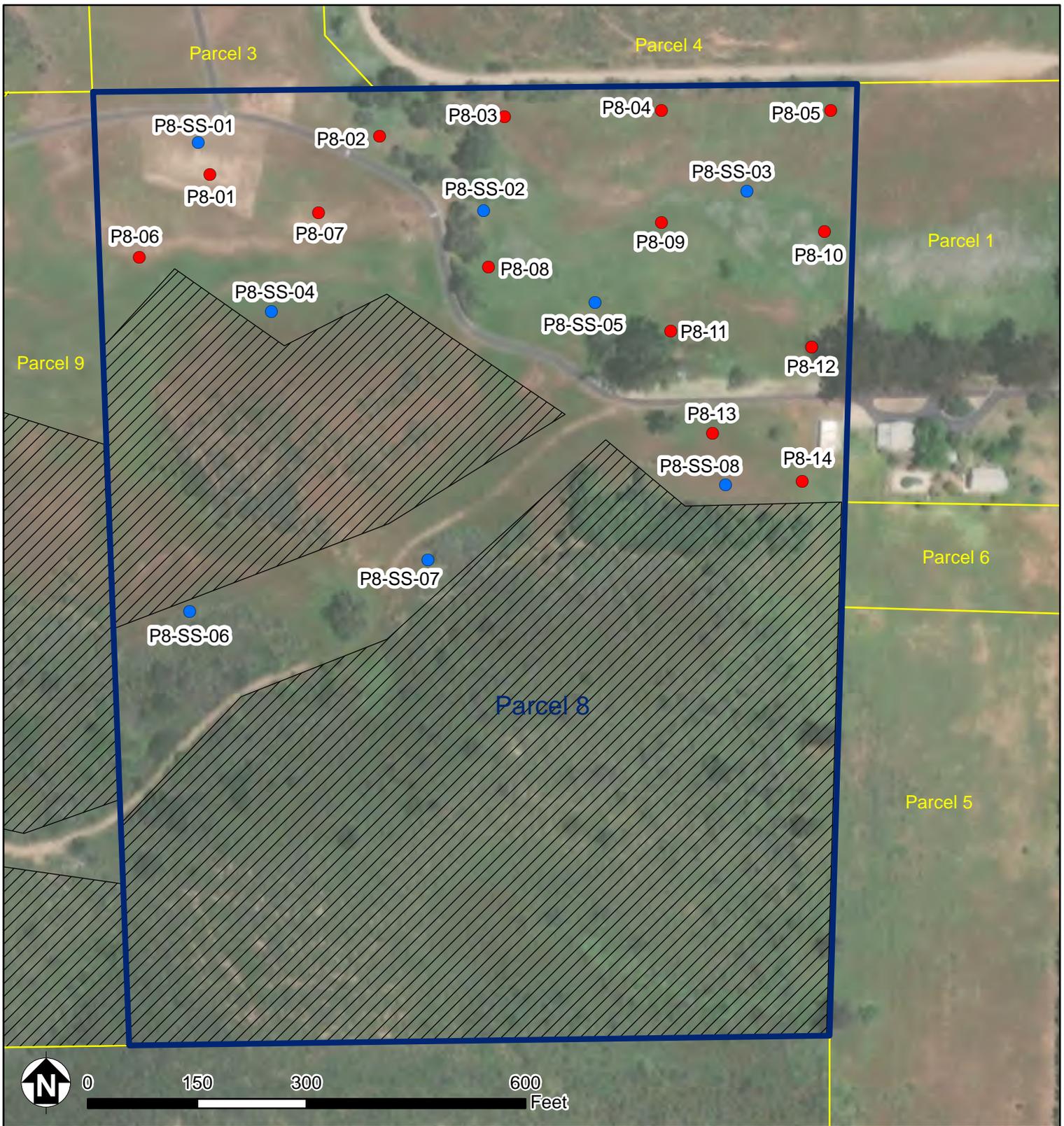


- Surface Soil Sampling Location
  - Direct Push Drilling Sampling Location
  - Parcel 7 Boundary
  - Adjacent Parcel Boundaries
  - Inaccessible Areas
- Note:  
 Aerial Imagery: ESRI World Imagery 2018  
 Inset: ESRI Street Map 2018



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**Figure 10**  
**Parcel 7 Sampling Location Map**

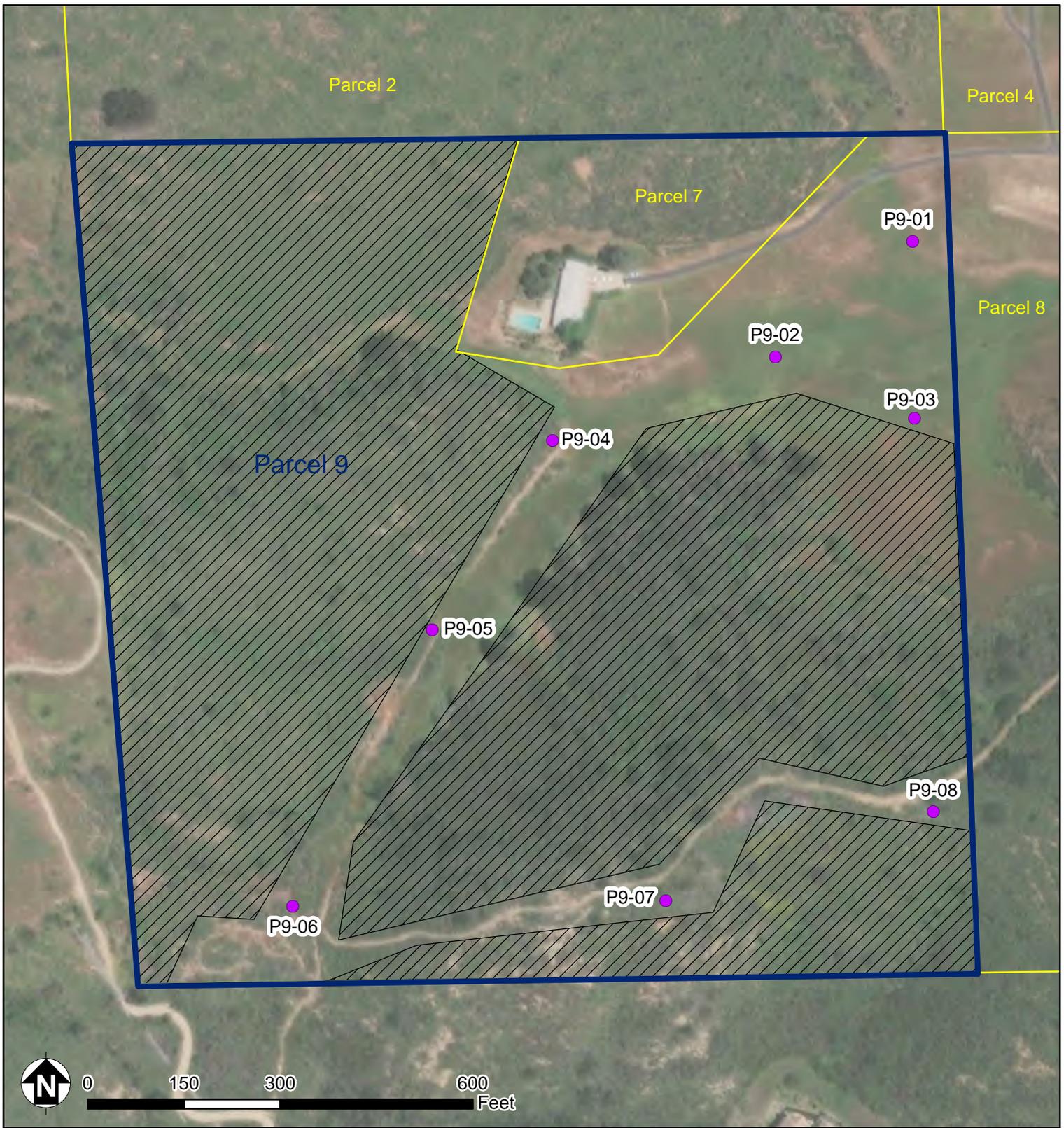


- Surface Soil Sampling Location
  - Direct Push Drilling Sampling Location
  - Parcel 8 Boundary
  - Adjacent Parcel Boundaries
  - Inaccessible Areas
- Note:  
 Aerial Imagery: ESRI World Imagery 2018  
 Inset: ESRI Street Map 2018



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**Figure 11**  
**Parcel 8 Sampling Location Map**



- Hand Auger Sampling Location
- Parcel 9 Boundary
- Adjacent Parcel Boundaries
- Inaccessible Areas

Note:  
 Aerial Imagery: ESRI World Imagery 2018  
 Inset: ESRI Street Map 2018



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**Figure 12**  
**Parcel 9 Sampling Location Map**

**TABLE 1 - PARCEL 1 (APN 218-330-26)**SOIL SAMPLING AND ANALYSIS PROGRAM  
SMUSD PROPOSED SCHOOL SITE  
GROTH FAMILY PROPERTIES  
SAN MARCOS, CALIFORNIA 92069

Sample ID	Location	Depth	Matrix	Analyte	Type
P1-SS01	One 5-point composite for OCP and one discrete for arsenic throughout the parcel	Surface	Soil	OCP; Arsenic	Composite; Discrete
P1-SS02	One 5-point composite for OCP and one discrete for arsenic throughout the parcel	Surface	Soil	OCP; Arsenic	Composite; Discrete
P1-SS03	One 5-point composite for OCP and one discrete for arsenic throughout the parcel	Surface	Soil	OCP; Arsenic	Composite; Discrete
P1-SS04	One 5-point composite for OCP and one discrete for arsenic throughout the parcel	Surface	Soil	OCP; Arsenic	Composite; Discrete
P1-SS04-DUP	One 5-point composite for OCP and one discrete for arsenic throughout the parcel	Surface	Soil	OCP; Arsenic	Composite; Discrete
P1-SS-05; P1-SS-06	Two roof dripline from north side of house	Surface	Soil	Pesticides	Discrete
P1-SS-07	One roof dripline from south side of house	Surface	Soil	Pesticides	Discrete
P1-SS-08; P1-SS-09	Two roof dripline from east side of house	Surface	Soil	Pesticides	Discrete
P1-SS-10; P1-SS-11	Two roof dripline from west side of barn	Surface	Soil	Pesticides	Discrete

**TABLE 1 - PARCEL 1 (APN 218-330-26)**

SOIL SAMPLING AND ANALYSIS PROGRAM  
 SMUSD PROPOSED SCHOOL SITE  
 GROTH FAMILY PROPERTIES  
 SAN MARCOS, CALIFORNIA 92069

Sample ID	Location	Depth	Matrix	Analyte	Type
P1-SS-12; P1-SS-13	Two roof dripline from south side of barn	Surface	Soil	Pesticides	Discrete
P1-TS-01 through P1-TS-09	Surface soil and DPT subsurface soils collected from grid from northern and southern portions of the parcel	Surface	Soil	CAM17 Metals;TPH; PAH	Discrete
P1-SB-01 through P1-SB-09		Maximum of 5 ft bgs	Soil	CAM17 Metals; TPH; PAH	Discrete
P1-TS-10; P1-TS-11; P1-TS-11-DUP	West and east side of abandoned swimming pool	Surface	Soil	CAM17 Metals; VOC; SVOC; Pesticides; PCBs	Discrete
P1-SB-10; P1-SB-11; P1-SB-11-DUP	West and east side of abandoned swimming pool	Subsurface	Soil	CAM17 Metals; VOC; SVOC; Pesticides; PCBs	Discrete

**Notes:**

APN - Assessor's Parcel Number  
 bgs - Below ground surface  
 CAM - California Assessment Manual  
 DPT - Direct-push technology  
 DUP - Duplicate sample  
 ft - Foot  
 ID - Identification  
 OCP - Organochlorine pesticides  
 P1 - Parcel 1  
 PAHs - Polyaromatic hydrocarbons

PCBs - Polychlorinated biphenyls  
 SB- Subsurface soil  
 SMUSD - San Marcos Unified School District  
 SS - Surface soil  
 SVOCs- Semivolatile organic compounds  
 TPH - Total petroleum hydrocarbons  
 TS- Topsoil (surface soil)  
 VOC- Volatile organic compounds

**TABLE 2 - PARCEL 2 (APN 218-330-13)**

SOIL SAMPLING AND ANALYSIS PROGRAM  
SMUSD PROPOSED SCHOOL SITE  
GROTH FAMILY PROPERTIES  
SAN MARCOS, CALIFORNIA 92069

Sample ID	Location	Depth	Matrix	Analyte	Type
P2-TS-01 through P2-TS-05	Surface soil (scoops) and subsurface soils (hand auger) collected from the eastern portions of the parcel that were accessible.	Surface	Soil	CAM17 Metals	Discrete
P2-TS-05-DUP		Surface	Soil	CAM17 Metals	Discrete
P2-SB-01 through P2-SB-05		3 ft bgs	Soil	CAM 17 Metals	Discrete
P2-SB-05-DUP		3 ft bgs	Soil	CAM17 Metals	Discrete

**Notes:**

APN - Assessor's Parcel Number

bgs - Below ground surface

CAM - California Assessment Manual

DUP - Duplicate sample

ft - Foot

TS- Topsoil (surface soil)

SB- Subsurface soil

SMUSD - San Marcos Unified School District

**TABLE 3 - PARCEL 3 (APN 218-330-08)**SOIL SAMPLING AND ANALYSIS PROGRAM  
SMUSD PROPOSED SCHOOL SITE  
GROTH FAMILY PROPERTIES  
SAN MARCOS, CALIFORNIA 92069

Sample ID	Location	Depth	Matrix	Analyte	Type
P3-SS01	One 5-point composite for OCP and one discrete for arsenic throughout the Parcel	Surface	Soil	OCP; Arsenic	Composite; Discrete
P3-SS02	One 5-point composite for OCP and one discrete for arsenic throughout the Parcel	Surface	Soil	OCP; Arsenic	Composite; Discrete
P3-SS03	One 5-point composite for OCP and one discrete for arsenic throughout the Parcel	Surface	Soil	OCP; Arsenic	Composite; Discrete
P3-SS04	One 5-point composite for OCP and one discrete for arsenic throughout the Parcel	Surface	Soil	OCP1; Arsenic	Composite; Discrete
P3-SS04-DUP	One 5-point composite for OCP and one discrete for arsenic throughout the Parcel	Surface	Soil	OCP1; Arsenic	Composite; Discrete
P3-SS-05; P3-SS-06	Two Roof Dripline from north side of House	Surface	Soil	Pesticides	Discrete
P3-SS-07; P3-SS-08	Two Roof Dripline from west side of House	Surface	Soil	Pesticides	Discrete
P3-SS-09; P3-SS-10	Two Roof Dripline from south side of House	Surface	Soil	Pesticides	Discrete
P3-SS-11; PS-SS-11-DUP	Two Roof Dripline from east side of House	Surface	Soil	Pesticides	Discrete

**TABLE 3 - PARCEL 3 (APN 218-330-08)**

SOIL SAMPLING AND ANALYSIS PROGRAM  
SMUSD PROPOSED SCHOOL SITE  
GROTH FAMILY PROPERTIES  
SAN MARCOS, CALIFORNIA 92069

Sample ID	Location	Depth	Matrix	Analyte	Type
P3-TS-01 through P3-TS-03	Surface soil and DPT subsurface soil collected from throughout the parcel	Surface	Soil	CAM17 Metals;TPH; PAH	Discrete
P3-SB-01 through P3-SB-03		Maximum of 5 ft bgs	Soil	CAM17 Metals; TPH; PAH	Discrete

**Notes:**

APN - Assessor's Parcel Number

bgs - Below ground surface

CAM - California Assessment Manual

DPT - Direct-push technology

PAH - Petroleum aromatic hydrocarbons

P3 - Parcel 3

SB- Subsurface soil

SMUSD - San Marcos Unified School District

TPH - Total petroleum hydrocarbons

TS- Topsoil (surface soil)

**TABLE 4 - PARCEL 4 (APN 218-330-05)**SOIL SAMPLING AND ANALYSIS PROGRAM  
SMUSD PROPOSED SCHOOL SITE  
GROTH FAMILY PROPERTIES  
SAN MARCOS, CALIFORNIA 92069

<b>Sample ID</b>	<b>Location</b>	<b>Depth</b>	<b>Matrix</b>	<b>Analyte</b>	<b>Type</b>
P4-SS01	One 5-point composite for OCP and one discrete for arsenic throughout the parcel	Surface	Soil	OCP; Arsenic	Composite; Discrete
P4-SS02	One 5-point composite for OCP and one discrete for arsenic throughout the parcel	Surface	Soil	OCP; Arsenic	Composite; Discrete
P4-SS03	One 5-point composite for OCP and one discrete for arsenic throughout the parcel	Surface	Soil	OCP; Arsenic	Composite; Discrete
P4-SS04	One 5-point composite for OCP and one discrete for arsenic throughout the parcel	Surface	Soil	OCP; Arsenic	Composite; Discrete
P4-SS05	One 5-point composite for OCP and one discrete for arsenic throughout the parcel	Surface	Soil	OCP; Arsenic	Composite; Discrete
P4-SS06	One 5-point composite for OCP and one discrete for arsenic throughout the parcel	Surface	Soil	OCP; Arsenic	Composite; Discrete
P4-SS07	One 5-point composite for OCP and one discrete for arsenic throughout the parcel	Surface	Soil	OCP; Arsenic	Composite; Discrete

**TABLE 4 - PARCEL 4 (APN 218-330-05)**

SOIL SAMPLING AND ANALYSIS PROGRAM  
 SMUSD PROPOSED SCHOOL SITE  
 GROTH FAMILY PROPERTIES  
 SAN MARCOS, CALIFORNIA 92069

Sample ID	Location	Depth	Matrix	Analyte	Type
P4-SS08	One 5-point composite for OCP and one discrete for arsenic throughout the parcel	Surface	Soil	OCP; Arsenic	Composite; Discrete
P4-SS09	One 5-point composite for OCP and one discrete for arsenic throughout the parcel	Surface	Soil	OCP; Arsenic	Composite; Discrete
P1-SS09-DUP	One 5-point composite for OCP and one discrete for arsenic throughout the parcel	Surface	Soil	OCP; Arsenic	Composite; Discrete
P4-TS-01 through P4-TS-36	Surface soil and DPT subsurface soils collected from throughout the parcel	Surface	Soil	CAM17 Metals; TPH; PAH	Discrete
P4-SB-01 through P4-SB-36		Maximum of 5 ft bgs	Soil	CAM17 Metals; TPH; PAH	Discrete

**Notes:**

APN - Assessor's Parcel Number

bgs - Below ground surface

CAM - California Assessment Manual

DPT - Direct-push technology

DUP- Duplicate sample

ft - Foot

ID - Identification

OCP - Organochlorine pesticides

P4 - Parcel 4

PAH - Petroleum aromatic hydrocarbons

SB- Subsurface soil

SMUSD - San Marcos Unified School District

SS - Surface soil

TPH - Total petroleum hydrocarbons

TS- Topsoil (surface soil)

**TABLE 5 - PARCEL 5 (APN 218-110-03)**

SOIL SAMPLING AND ANALYSIS PROGRAM  
 SMUSD PROPOSED SCHOOL SITE  
 GROTH FAMILY PROPERTIES  
 SAN MARCOS, CALIFORNIA 92069

Sample ID	Location	Depth	Matrix	Analyte	Type
P5-SS01	One 5-point composite for OCP and one discrete for arsenic throughout the parcel	Surface	Soil	OCP; Arsenic	Composite; Discrete
P5-SS02	One 5-point composite for OCP and one discrete for arsenic throughout the parcel	Surface	Soil	OCP; Arsenic	Composite; Discrete
P5-SS03	One 5-point composite for OCP and one discrete for arsenic throughout the parcel	Surface	Soil	OCP; Arsenic	Composite; Discrete
P5-SS04	One 5-point composite for OCP and one discrete for arsenic throughout the parcel	Surface	Soil	OCP; Arsenic	Composite; Discrete
P5-SS04-DUP	One 5-point composite for OCP and one discrete for arsenic throughout the parcel	Surface	Soil	OCP; Arsenic	Composite; Discrete
P5-TS-01 through P5-TS-14	Surface soil and DPT subsurface soils collected from throughout the parcel	Surface	Soil	CAM17 Metals;TPH; PAH	Discrete
P5-SB-01 through P5-SB-14		Subsurface Soil (5 ft bgs)	Soil	CAM17 Metals; TPH; PAH	Discrete

**Notes:**

APN - Assessor's Parcel Number

bgs - Below ground surface

CAM - California Assessment Manual

DPT - Direct-push technology

DUP - Duplicate sample

ft - Foot

ID - Identification

OCP - Organochlorine pesticides

P5 - Parcel 5

PAH - Petroleum aromatic hydrocarbons

SB- Subsurface soil

SMUSD - San Marcos Unified School District

SS - Surface soil

TPH - Total petroleum hydrocarbons

TS- Topsoil (surface soil)

**TABLE 6 - PARCEL 6 (APN 218-110-02)**

SOIL SAMPLING AND ANALYSIS PROGRAM  
 SMUSD PROPOSED SCHOOL SITE  
 GROTH FAMILY PROPERTIES  
 SAN MARCOS, CALIFORNIA 92069

Sample ID	Location	Depth	Matrix	Analyte	Type
P6-SS01	One discrete surface soil for OCP and arsenic	Surface	Soil	OCP; Arsenic	Discrete
P6-SS02	One discrete surface soil for OCP and arsenic	Surface	Soil	OCP; Arsenic	Discrete
P6-SS03	One discrete surface soil for OCP and arsenic	Surface	Soil	OCP; Arsenic	Discrete
P6-SS04	One discrete surface soil for OCP and arsenic	Surface	Soil	OCP; Arsenic	Discrete
P6-SS05	One discrete surface soil for OCP and arsenic	Surface	Soil	OCP; Arsenic	Discrete
P6-SS05-DUP	One discrete surface soil for OCP and arsenic	Surface	Soil	OCP; Arsenic	Discrete
P6-TS-01 through P6-TS-04-DUP	Surface soil and DPT subsurface soils collected from accessible portions of the parcel.	Surface	Soil	CAM17 Metals; TPH; PAH	Discrete
P6-SB-01 through P6-SB-04-DUP		Subsurface Soil (5 ft bgs)	Soil	CAM17 Metals; TPH; PAH	Discrete

**Notes:**

APN - Assessor's Parcel Number  
 bgs - Below ground surface  
 CAM - California Assessment Manual  
 DPT - Direct-push technology  
 DUP - Duplicate sample  
 ft - Foot  
 ID - Identification

OCP - Organochlorine pesticides  
 P6 - Parcel 6  
 PAH - Petroleum aromatic hydrocarbons  
 SB- Subsurface soil  
 SMUSD - San Marcos Unified School District  
 SS - Surface soil  
 TPH - Total petroleum hydrocarbons  
 TS- Topsoil (surface soil)

**TABLE 7 - PARCEL 7 (APN 218-330-27)**SOIL SAMPLING AND ANALYSIS PROGRAM  
SMUSD PROPOSED SCHOOL SITE  
GROTH FAMILY PROPERTIES  
SAN MARCOS, CALIFORNIA 92069

Sample ID	Location	Depth	Matrix	Analyte	Type
P7-SS-01	One 5-point composite for OCP and one discrete for arsenic throughout the parcel	Surface	Soil	OCP; Arsenic	Composite; Discrete
P7-SS-02	One 5-point composite for OCP and one discrete for arsenic throughout the parcel	Surface	Soil	OCP; Arsenic	Composite; Discrete
P7-SS-03	One 5-point composite for OCP and one discrete for arsenic throughout the parcel	Surface	Soil	OCP; Arsenic	Composite; Discrete
P7-SS-04	One 5-point composite for OCP and one discrete for arsenic throughout the parcel	Surface	Soil	OCP; Arsenic	Composite; Discrete
P7-SS-04-DUP	One 5-point composite for OCP and one discrete for arsenic throughout the parcel	Surface	Soil	OCP; Arsenic	Composite; Discrete
P7-SS-05	One roof dripline from north side of house	Surface	Soil	Pesticides	Discrete
P7-SS-06	One roof dripline from west side of house	Surface	Soil	Pesticides	Discrete
P7-SS-07; P7-SS-08	Two roof dripline from south side of house	Surface	Soil	Pesticides	Discrete
P7-SS-09; P7-SS-10; P7-SS-10-DUP	Two roof dripline from east side of house	Surface	Soil	Pesticides	Discrete

**TABLE 7 - PARCEL 7 (APN 218-330-27)**

SOIL SAMPLING AND ANALYSIS PROGRAM  
SMUSD PROPOSED SCHOOL SITE  
GROTH FAMILY PROPERTIES  
SAN MARCOS, CALIFORNIA 92069

Sample ID	Location	Depth	Matrix	Analyte	Type
P7-TS-01 and P7-SB-01	Surface soil and DPT subsurface soils collected from central portion of the parcel	Surface	Soil	CAM17 Metals; TPH; PAH	Discrete

**Notes:**

APN - Assessor's Parcel Number

bgs - Below ground surface

CAM - California Assessment Manual

DPT - Direct-push technology

DUP - Duplicate sample

ft - Foot

ID - Identification

OCP - Organochlorine pesticides

P7 - Parcel 7

PAH - Petroleum Aromatic Hydrocarbons

SB- Subsurface soil

SMUSD - San Marcos Unified School District

SS - Surface soil

**PARCEL 8 (APN 218-330-09)**  
 SOIL SAMPLING AND ANALYSIS PROGRAM  
 SMUSD PROPOSED SCHOOL SITE  
 GROTH FAMILY PROPERTIES  
 SAN MARCOS, CALIFORNIA 92069

Sample ID	Location	Depth	Matrix	Analyte	Type
P8-SS-01	One 5-point composite for OCP and one discrete for arsenic throughout the parcel	Surface	Soil	OCP; Arsenic	Composite; Discrete
P8-SS-02	One 5-point composite for OCP and one discrete for arsenic throughout the parcel	Surface	Soil	OCP; Arsenic	Composite; Discrete
P8-SS-03	One 5-point composite for OCP and one discrete for arsenic throughout the parcel	Surface	Soil	OCP; Arsenic	Composite; Discrete
P8-SS-04	One 5-point composite for OCP and one discrete for arsenic throughout the parcel	Surface	Soil	OCP; Arsenic	Composite; Discrete
P8-SS-05	One 5-point composite for OCP and one discrete for arsenic throughout the parcel	Surface	Soil	OCP; Arsenic	Composite; Discrete
P8-SS-06	One 5-point composite for OCP and one discrete for arsenic throughout the parcel	Surface	Soil	OCP; Arsenic	Composite; Discrete
P8-SS-07	One 5-point composite for OCP and one discrete for arsenic throughout the parcel	Surface	Soil	OCP; Arsenic	Composite; Discrete

**PARCEL 8 (APN 218-330-09)**  
 SOIL SAMPLING AND ANALYSIS PROGRAM  
 SMUSD PROPOSED SCHOOL SITE  
 GROTH FAMILY PROPERTIES  
 SAN MARCOS, CALIFORNIA 92069

Sample ID	Location	Depth	Matrix	Analyte	Type
P8-SS-08	One 5-point composite for OCP and one discrete for arsenic throughout the parcel	Surface	Soil	OCP; Arsenic	Composite; Discrete
P8-SS-08-DUP	One 5-point composite for OCP and one discrete for arsenic throughout the parcel	Surface	Soil	OCP; Arsenic	Composite; Discrete
P8-TS-01 through P8-TS-14	Surface soil and DPT subsurface soils collected from throughout the parcel	Surface	Soil	CAM17 Metals; TPH; PAH	Discrete
P8-SB-01 through P8-SB-14		Maximum of 5 ft bgs	Soil	CAM17 Metals; TPH; PAH	Discrete

**Notes:**

APN - Assessor's Parcel Number  
 bgs - Below ground surface  
 CAM - California Assessment Manual  
 DPT - Direct-push technology  
 DUP - Duplicate sample  
 OCP - Organochlorine pesticides  
 P8 - Parcel 8

PAH - Petroleum aromatic hydrocarbons  
 SB- Subsurface soil  
 SMUSD - San Marcos Unified School District  
 SS - Surface soil  
 TPH - Total petroleum hydrocarbons  
 TS- Topsoil (surface soil)

**TABLE 9 - PARCEL 9 (APN 218-330-28)**

SOIL SAMPLING AND ANALYSIS PROGRAM  
SMUSD PROPOSED SCHOOL SITE  
GROTH FAMILY PROPERTIES  
SAN MARCOS, CALIFORNIA 92069

Sample ID	Location	Depth	Matrix	Analyte	Type
P9-TS-01 through P9-TS-08	Surface soil (scoops) and subsurface soils (hand auger) collected from throughout accessible areas of the parcel.	Surface	Soil	CAM17 Metals	Discrete
P9-TS-08-DUP		Surface	Soil	CAM17 Metals	Discrete
P9-SB-01 through P9-SB-08		3 ft bgs	Soil	CAM 17 Metals	Discrete
P9-SB-08-DUP		3 ft bgs	Soil	CAM17 Metals	Discrete

**Notes:**

APN - Assessor's Parcel Number

bgs - Below ground surface

CAM - California Assessment Manual

DUP- Duplicate sample

ft- Foot

ID- Identification

OCP - Organochlorine pesticides

SB- Subsurface soil

SMUSD - San Marcos Unified School District

**Table P1-1**  
**Summary of Soil Analytical Results - Metals by USEPA Method 6010B**  
**(mg/kg)**

Sample Date	Sample ID	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury <sup>1</sup>	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
12/30/2020	P1-SS-01	NA	1.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/30/2020	P1-SS-02	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/30/2020	P1-SS-03	NA	1.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/30/2020	P1-SS-04	NA	1.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/30/2020	P1-SS-04-DUP	NA	1.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/30/2020	P1-TS-01	3.5	ND	50	0.66	0.63	18	12.0	13	5.7	ND	ND	6.9	ND	ND	ND	52	39
12/30/2020	P1-SB-01	ND	1.1	41	ND	ND	9.2	4.8	7.6	3.2	ND	ND	2.9	ND	ND	ND	24	22
12/30/2020	P1-TS-02	3.3	ND	86	0.5	0.59	17	15	13	4.9	ND	ND	7.1	ND	ND	ND	59	40
12/30/2020	P1-SB-02	ND	2.5	110	0.67	0.69	21	11	14	6.5	ND	ND	9.2	ND	ND	ND	69	38
12/30/2020	P1-TS-03	ND	2.2	53	0.57	0.54	17	5.9	8.5	4.8	ND	ND	4.6	3.7	ND	ND	64	25
12/30/2020	P1-SB-03	3.0	2.6	110	0.65	0.61	18	10	13	7.7	ND	ND	6.8	ND	ND	ND	71	34
12/30/2020	P1-TS-04	3.3	1.2	110	ND	ND	14	7.7	14	4.4	ND	ND	5.4	ND	ND	ND	55	47
12/30/2020	P1-SB-04	ND	1.7	78	ND	ND	10	6.1	13	5.9	ND	ND	3.7	ND	ND	ND	41	37
12/30/2020	P1-TS-05	ND	ND	120	0.62	0.62	17	9.7	14	6.4	ND	ND	6.7	ND	ND	ND	66	40
12/30/2020	P1-SB-05	ND	ND	36	ND	ND	6.5	3.2	6	3.7	ND	ND	2.2	ND	ND	ND	46	29
12/30/2020	P1-TS-06	3.0	2.4	110	ND	0.58	14	7.8	14	9.0	ND	ND	5.2	ND	ND	ND	59	49
12/30/2020	P1-SB-06	ND	ND	120	ND	0.62	15	8.1	14	7.6	ND	ND	6.3	ND	ND	ND	62	54
12/30/2020	P1-TS-07	ND	2.7	130	0.76	ND	16	11	15	9.8	ND	ND	8.1	ND	ND	ND	75	49
12/30/2020	P1-SB-07	3.6	2.5	120	0.88	ND	17	11	12	8.6	ND	ND	7.9	ND	ND	ND	79	38
12/30/2020	P1-TS-08	3.5	2	70	0.67	ND	14	4.8	6.9	6.5	ND	ND	6	ND	ND	ND	75	33
12/30/2020	P1-SB-08	3	1.6	200	0.79	ND	15	13	12	5.3	ND	ND	9.9	ND	ND	ND	55	43
12/30/2020	P1-TS-09	3.8	1.5	110	0.67	ND	20	6.5	9.5	6.1	ND	ND	7.1	ND	ND	ND	71	36
12/30/2020	P1-TS--09-DUP	3.9	1.8	120	0.68	ND	19	7.3	9.3	6.5	ND	ND	7.4	ND	ND	ND	69	36
12/30/2020	P1-SB-09	ND	1.6	64	ND	ND	12	6.4	7.5	4	ND	ND	4.6	ND	ND	ND	45	33
12/30/2020	P1-SB-09-DUP	3.4	1.9	62	ND	ND	12	6.2	8.3	5.6	ND	ND	4.3	ND	ND	ND	51	30
12/30/2020	P1-TS-10	ND	1.9	130	0.62	0.74	14	10	13	14	ND	ND	6.7	ND	ND	ND	66	55
12/30/2020	P1-SB-10	ND	2.1	130	0.55	0.85	11	9.1	14	18	ND	ND	5.7	ND	ND	ND	61	150
12/30/2020	P1-TS-11	ND	1.7	100	0.52	0.66	12	8.7	11	11	ND	ND	5.3	ND	ND	ND	60	42
12/30/2020	P1-TS-11-DUP	ND	1.8	130	0.63	0.69	13	10	13	12	ND	ND	6.1	ND	ND	ND	70	50
12/30/2020	P1-SB-11	ND	1.6	130	0.63	0.82	13	10	13	13	ND	ND	6.3	ND	ND	ND	73	54
12/30/2020	P1-SB-11-DUP	ND	1.5	130	0.62	0.77	12	11	13	12	ND	ND	6	ND	ND	ND	69	53
<i>DTSC Residential Soil Values<sup>2</sup></i>		NE	0.11	NE	15	5.2 <sup>6</sup>	36,000 <sup>7</sup>	NE	NE	80	1	NE	490	NE	390	NE	390	NE
<i>USEPA Residential Soil RSL<sup>3</sup></i>		31	0.68	15,000	160	71 <sup>6</sup>	120,000 <sup>7</sup>	23	3,100	400	11	390	1,500	390	390	0.78	390	23,000
<i>Residential Shallow Soil ESL<sup>4</sup></i>		31	0.067	15,000	150	39	120,000 <sup>7</sup>	23	3,100	80	13	390	820	390	390	0.78	390	23,000
<i>CAO Background Value<sup>8</sup></i>		8	12 <sup>5</sup>	152	0.50	5.0	38	47	20	15	0.25	3	83	8	10	2	74	38

**Notes:**

<sup>1</sup> = Mercury analyzed by USEPA 7471A

<sup>2</sup> = DTSC Residential Soil Values obtained from the California Department of Toxic Substances Control (DTSC) Human and Ecological Risk Office (HERO) Human Health Risk Assessment (HHRA) Note 3, DTSC-modified Screening Levels (DTSC-SLs), June 2018 (<https://www.dtsc.ca.gov/AssessingRisk/upload/HHRA-Note-3-June-2018.pdf>)

<sup>3</sup> = USEPA Residential Soil Regional Screening Level (RSL) values obtained from the USEPA RSL Summary Table (TR=1E-06, THQ=1) November 2018 (<https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables>)

<sup>4</sup> = Residential Shallow Soil Exposure (Direct Exposure Human Health Risk Levels) Environmental Screening Levels (ESLs) obtained from the San Francisco Bay Regional Water Quality Control Board (SFRWQCB) Environmental Screening Levels, February 2016 Revision 3

<sup>5</sup> = Arsenic background value obtained from the DTSC Determination of a Southern California Regional Background Arsenic Concentration in Soil, March 2008 (<https://www.dtsc.ca.gov/upload/Background-Arsenic.pdf>)

<sup>6</sup> = USEPA Cadmium diet RSL value used

<sup>7</sup> = Chromium (III) value used

<sup>8</sup> = Cleanup and Abatement Order (CAO) Background Values obtained from California Regional Water Quality Control Board (RWQCB), San Diego Region, CAO No. R9-2014-0019, Former South Campus Site, Chula Vista, CA (Site ID# 2092900), June 24, 2014

B = Analyte was present in the associate method blank

BG = Background

DUP = Duplicate

mg/kg = Milligrams per kilogram

ND = Not Detected

NE = Not Established

**Table P1- 2**  
**Summary of Soil Analytical Results - OCPs by USEPA Method 8081A**  
**(µg/kg)**

Sample Date	Sample ID	Chlordane	4,4'-DDD	4,4'-DDE	4,4'-DDT	Endosulfan II	Heptachlor Epoxide
12/28/2020	P1-SS-05	1,600	ND	110	ND	ND	ND
12/28/2020	P1-SS-06	4,500	ND	ND	40 C	26 C	11 C
12/28/2020	P1-SS-07	3,600	ND	40 C	77 C	ND	ND
12/28/2020	P1-SS-08	7,300	ND	41	ND	ND	12 C
12/28/2020	P1-SS-09	3,100	ND	70	95	ND	ND
12/28/2020	P1-SS-10	53	ND	19	10 C	ND	ND
12/28/2020	P1-SS-11	ND	10 C	5.8 C	ND	ND	ND
12/28/2020	P1-SS-12	170	ND	17	23	ND	ND
12/28/2020	P1-SS-13	ND	ND	62	17	ND	ND
<i>USEPA Residential Soil RSL<sup>1</sup></i>		1,700	1,900	2,000	1,900	470,000	700

**Notes:**

Only analytes detected in samples are presented in this table. For a complete list of constituents analyzed, refer to the laboratory data package.

<sup>1</sup> = USEPA Residential Soil Regional Screening Level (RSL) values obtained from the USEPA RSL Summary Table (TR=1E-06, THQ=1) November 2018 (<https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables>)

Exceeds Screening Value

µg/kg = Micrograms per kilogram

C = Co-eluting congener

DDE = Dichlorodiphenyldichloroethene

ND = Not Detected

OCP = Organochlorine pesticides

P1 = Parcel 1

SS = Soil Sample

USEPA = United States Environmental Protection Agency

**Table P1- 3**  
**Summary of Soil Analytical Results - Total Petroleum Hydrocarbons (TPH) by USEPA Method 8015B**  
**(mg/kg)**

Sample Date	Sample ID	DRO (C10-C28)
12/30/2020	P1-TS-07	25
<i>DTSC Residential Soil Values<sup>1</sup></i>		NE
<i>USEPA Residential Soil RSL<sup>2</sup></i>		96

**Notes:**

Only analytes detected in samples are presented in this table. For a complete list of constituents analyzed, refer to the laboratory data package.

<sup>1</sup> = DTSC Residential and Industrial Soil Values obtained from the California Department of Toxic Substances Control (DTSC) Human and Ecological Risk Office (HERO) Human Health Risk Assessment (HHRA) Note 3, DTSC-modified Screening Levels (DTSC-SLs), June 2018 (<https://www.dtsc.ca.gov/AssessingRisk/upload/HHRA-Note-3-June-2018.pdf>)

<sup>2</sup> = EPA Residential Soil Regional Screening Level (RSL) values obtained from the EPA RSL Summary Table (TR=1E-06, THQ=1) November 2018 (<https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables>)

D = Duplicate

DRO = Diesel Range Organics

mg/kg = Milligrams per kilogram

NE = Not Established

P1 = Parcel 1

TS = Top Soil Sample

USEPA = United States Environmental Protection Agency

**Table P1 - 4**  
**Summary of Soil Analytical Results - Volatile Organic Compounds (VOCs) by USEPA Method 8260B**  
**(µg/kg)**

Sample Date	Sample ID	Methylene Chloride
12/30/2020	P1-TS-11	5.1
12/30/2020	P1-SB-11-DUP	5.4
<i>DTSC Residential Soil Values<sup>1</sup></i>		NE
<i>USEPA Residential Soil RSL<sup>2</sup></i>		57,000

**Notes:**

Only analytes detected in samples are presented in this table. For a complete list of constituents analyzed, refer to the laboratory data package.

<sup>1</sup> = DTSC Residential and Industrial Soil Values obtained from the California Department of Toxic Substances Control (DTSC) Human and Ecological Risk Office (HERO) Human Health Risk Assessment (HHRA) Note 3, DTSC-modified Screening Levels (DTSC-SLs), June 2018 (<https://www.dtsc.ca.gov/AssessingRisk/upload/HHRA-Note-3-June-2018.pdf>)

<sup>2</sup> = USEPA Residential Soil Regional Screening Level (RSL) values obtained from the USEPA RSL Summary Table (TR=1E-06, THQ=1) November 2018 (<https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables>)

<sup>3</sup> = Residential Shallow Soil Exposure (Non-Drinking Water Source) Environmental Screening Levels (ESLs) obtained from the San Francisco Bay Regional Water Quality Control Board (SFRWQCB) Environmental Screening Levels, February 2016 Revision 3 ([http://www.waterboards.ca.gov/sanfranciscobay/water\\_issues/programs/esl.shtml](http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/esl.shtml))

µg/kg = Micrograms per kilogram

DUP = Duplicate

ID = Identification

NE = Not Established

P1 = Parcel 1

RSL = Regional Screening Level

SB = Soil Boring

TS = Top Soil Sample

USEPA = United States Environmental Protection Agency

**Table P2-1**  
**Summary of Soil Analytical Results - Metals by USEPA Method 6010B**  
(mg/kg)

Sample Date	Sample ID	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury <sup>1</sup>	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
12/29/2020	P2-TS-01	ND	1.5	110	0.65	0.80	17	10	13	13	ND	ND	8	ND	ND	ND	70	36
12/29/2020	P2-TS-01-DUP	ND	1.6	92	0.56	0.60	16	8.7	12	11	ND	ND	6.5	ND	ND	ND	60	32
12/29/2020	P2-SB-01	ND	2.6	130	0.8	0.83	22	13	15	9.5	ND	ND	9.7	ND	ND	ND	87	42
12/29/2020	P2-SB-01-DUP	ND	2.7	140	0.86	0.87	23	13	16	9.2	ND	ND	10	ND	ND	ND	90	43
12/29/2020	P2-TS-02	ND	ND	79	ND	ND	10	7.3	10	12	ND	ND	4.8	ND	ND	ND	49	48
12/29/2020	P2-SB-02	ND	ND	95	0.56	0.56	14	12	14	6.6	ND	ND	5.8	ND	ND	ND	71	47
12/29/2020	P2-TS-03	ND	ND	130	ND	0.54	22	9.3	16	11	ND	ND	7.8	ND	ND	ND	71	49
12/29/2020	P2-SB-03	ND	3	130	ND	0.54	13	7.7	11	5.6	ND	ND	4.7	ND	ND	ND	56	58
12/29/2020	P2-TS-04	ND	ND	88	ND	ND	8.2	6.3	12	11	ND	ND	3.5	ND	ND	ND	59	48
12/29/2020	P2-SB-04	ND	ND	120	ND	0.60	12	8.9	13	8.2	ND	ND	5.2	ND	ND	ND	62	54
12/29/2020	P2-TS-05	ND	ND	92	0.61	0.53	18	9.4	11	9	ND	ND	6.5	ND	ND	ND	78	36
12/29/2020	P2-SB-05	ND	ND	93	0.72	0.69	18	9.7	13	8.1	ND	ND	7.3	ND	ND	ND	92	38
<i>DTSC Residential Soil Values</i> <sup>2</sup>		NE	0.11	NE	15	5.2 <sup>6</sup>	36,000 <sup>7</sup>	NE	NE	80	1	NE	490	NE	390	NE	390	NE
<i>USEPA Residential Soil RSL</i> <sup>3</sup>		31	0.68	15,000	160	71 <sup>6</sup>	120,000 <sup>7</sup>	23	3,100	400	11	390	1,500	390	390	0.78	390	23,000
<i>Residential Shallow Soil ESL</i> <sup>4</sup>		31	0.067	15,000	150	39	120,000 <sup>7</sup>	23	3,100	80	13	390	820	390	390	0.78	390	23,000
<i>CAO Background Value</i> <sup>8</sup>		8	12 <sup>5</sup>	152	0.50	5.0	38	47	20	15	0.25	3	83	8	10	2	74	38

**Notes:**

<sup>1</sup> = Mercury analyzed by USEPA 7471A

<sup>2</sup> = DTSC Residential Soil Values obtained from the California Department of Toxic Substances Control (DTSC) Human and Ecological Risk Office (HERO) Human Health Risk Assessment (HHRA) Note 3, DTSC-modified Screening Levels (DTSC-SLs), June 2018 (<https://www.dtsc.ca.gov/AssessingRisk/upload/HHRA-Note-3-June-2018.pdf>)

<sup>3</sup> = USEPA Residential Soil Regional Screening Level (RSL) values obtained from the USEPA RSL Summary Table (TR=1E-06, THQ=1) November 2018 (<https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables>)

<sup>4</sup> = Residential Shallow Soil Exposure (Direct Exposure Human Health Risk Levels) Environmental Screening Levels (ESLs) obtained from the San Francisco Bay Regional Water Quality Control Board (SFRWQCB) Environmental Screening Levels, February 2016 Revision 3

<sup>5</sup> = Arsenic background value obtained from the DTSC Determination of a Southern California Regional Background Arsenic Concentration in Soil, March 2008 (<https://www.dtsc.ca.gov/upload/Background-Arsenic.pdf>)

<sup>6</sup> = USEPA Cadmium diet RSL value used

<sup>7</sup> = Chromium (III) value used

<sup>8</sup> = Cleanup and Abatement Order (CAO) Background Values obtained from California Regional Water Quality Control Board (RWQCB), San Diego Region, CAO No. R9-2014-0019, Former South Campus Site, Chula Vista, CA (Site ID# 2092900), June 24, 2014 ([http://www.waterboards.ca.gov/rwqcb9/board\\_decisions/adopted\\_orders/2014/R9-2014-0019.pdf](http://www.waterboards.ca.gov/rwqcb9/board_decisions/adopted_orders/2014/R9-2014-0019.pdf))

☐ = Concentrations equal or exceed the CAO Background Value for arsenic of 12 mg/kg.

DUP = Duplicate

mg/kg = Milligrams per kilogram

ND = Not Detected

NE = Not Established

**Table P3-1  
Summary of Soil Analytical Results - Metals by USEPA Method 6010B**

(mg/kg)

Sample Date	Sample ID	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury <sup>1</sup>	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
12/30/2020	P3-SS-01	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/30/2020	P3-SS-02	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/30/2020	P3-SS-03	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/30/2020	P3-SS-04	NA	1.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/30/2020	P3-SS-04-DUP	NA	1.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/31/2020	P3-TS-01	4	1.8	140	0.67	ND	19	11	16	8.1	ND	ND	8	ND	ND	ND	77	33
12/31/2020	P3-SB-01	ND	ND	83	ND	ND	14	10	11	2.8	ND	ND	6.6	ND	ND	ND	39	21
12/31/2020	P3-TS-02	4.1	3.2	140	0.95	ND	20	13	15	9.8	ND	ND	8.9	ND	ND	ND	84	36
12/31/2020	P3-SB-02	3.3	ND	83	0.61	ND	10	5.8	6.3	3.4	ND	ND	4.1	ND	ND	ND	63	34
12/31/2020	P3-TS-03	4.2	2.9	120	0.83	ND	19	13	12	9.1	ND	ND	8.7	ND	ND	ND	92	31
12/31/2020	P3-TS-03-DUP	2.8	1	62	ND	ND	3.6	4	4.1	4.5	ND	ND	2.3	ND	ND	ND	27	30
12/31/2020	P3-SB-03	3.2	1.2	73	ND	ND	11	5.7	6.6	3.3	ND	ND	3.3	ND	ND	ND	63	32
12/31/2020	P3-SB-03-DUP	4.8	1.3	72	0.76	ND	13	11	9.2	5.1	ND	ND	5.1	ND	ND	ND	86	35
<i>DTSC Residential Soil Values</i> <sup>2</sup>		NE	0.11	NE	15	5.2 <sup>6</sup>	36,000 <sup>7</sup>	NE	NE	80	1	NE	490	NE	390	NE	390	NE
<i>USEPA Residential Soil RSL</i> <sup>3</sup>		31	0.68	15,000	160	71 <sup>6</sup>	120,000 <sup>7</sup>	23	3,100	400	11	390	1,500	390	390	0.78	390	23,000
<i>Residential Shallow Soil ESL</i> <sup>4</sup>		31	0.067	15,000	150	39	120,000 <sup>7</sup>	23	3,100	80	13	390	820	390	390	0.78	390	23,000
<i>CAO Background Value</i> <sup>8</sup>		8	12 <sup>5</sup>	152	0.50	5.0	38	47	20	15	0.25	3	83	8	10	2	74	38

**Notes:**

<sup>1</sup> = Mercury analyzed by USEPA 7471A

<sup>2</sup> = DTSC Residential Soil Values obtained from the California Department of Toxic Substances Control (DTSC) Human and Ecological Risk Office (HERO) Human Health Risk Assessment (HHRA) Note 3, DTSC-modified Screening Levels (DTSC-SLs), June 2018 (<https://www.dtsc.ca.gov/AssessingRisk/upload/HHRA-Note-3-June-2018.pdf>)

<sup>3</sup> = USEPA Residential Soil Regional Screening Level (RSL) values obtained from the USEPA RSL Summary Table (TR=1E-06, THQ=1) November 2018 (<https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables>)

<sup>4</sup> = Residential Shallow Soil Exposure (Direct Exposure Human Health Risk Levels) Environmental Screening Levels (ESLs) obtained from the San Francisco Bay Regional Water Quality Control Board (SFRWQCB) Environmental Screening Levels, February 2016 Revision 3

<sup>5</sup> = Arsenic background value obtained from the DTSC Determination of a Southern California Regional Background Arsenic Concentration in Soil, March 2008 (<https://www.dtsc.ca.gov/upload/Background-Arsenic.pdf>)

<sup>6</sup> = USEPA Cadmium diet RSL value used

<sup>7</sup> = Chromium (III) value used

<sup>8</sup> = Cleanup and Abatement Order (CAO) Background Values obtained from California Regional Water Quality Control Board (RWQCB), San Diego Region, CAO No. R9-2014-0019, Former South Campus Site, Chula Vista, CA (Site ID# 2092900), June 24, 2014

☐ = Concentrations equal or exceed the CAO Background Value for arsenic of 12 mg/kg.

DUP = Duplicate

mg/kg = Milligrams per kilogram

ND = Not Detected

NE = Not Established

**Table P3-2**  
**Summary of Soil Analytical Results - OCPs by USEPA Method 8081A**  
**(µg/kg)**

Sample Date	Sample ID	Chlordane	4,4'-DDD	4,4'-DDE	4,4'-DDT	Endrin	Endrin Aldehyde	Endosulfan II	Heptachlor Epoxide
12/28/2020	P3-SS-06	ND	ND	ND	18 C	ND	ND	75 C	ND
12/28/2020	P3-SS-07	ND	ND	ND	ND	19	9.6	ND	ND
<i>USEPA Residential Soil RSL<sup>1</sup></i>		1,700	1,900	2,000	1,900	19,000	NE	470,000	700

**Notes:**

Only analytes detected in samples are presented in this table. For a complete list of constituents analyzed, refer to the laboratory data package.

<sup>1</sup> = USEPA Residential Soil Regional Screening Level (RSL) values obtained from the USEPA RSL Summary Table (TR=1E-06, THQ=1) November 2018 (<https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables>)

C = Co-eluting congener

µg/kg = Micrograms per kilogram

ND = Not Detected

NE = Not Established

OCP = Organochlorine pesticides

P3 = Parcel 3

SS = Soil Sample

USEPA = United States Environmental Protection Agency

Table P4-1  
Summary of Soil Analytical Results - Metals by USEPA Method 6010B  
(mg/kg)

Sample Date	Sample ID	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury <sup>1</sup>	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
12/31/2020	P4-SS-01	NA	1.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/31/2020	P4-SS-02	NA	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/31/2020	P4-SS-03	NA	15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/31/2020	P4-SS-04	NA	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/31/2020	P4-SS-05	NA	1.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/31/2020	P4-SS-06	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/31/2020	P4-SS-07	NA	1.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/31/2020	P4-SS-08	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/29/2020	P4-TS-01	ND	1.7	150	0.53	0.78	18	11	23	6.6	ND	7.3	ND	ND	ND	110	51	
12/29/2020	P4-TS-02	ND	2	120	ND	0.61	12	8.7	20	11	ND	ND	5.2	ND	ND	ND	91	53
12/29/2020	P4-SB-02	ND	ND	160	ND	0.55	2.8	8.6	11	2.6	ND	ND	1.1	ND	ND	ND	130	68
12/29/2020	P4-TS-03	ND	1.9	120	ND	0.56	10	8.3	17	9.3	ND	ND	4.8	ND	ND	ND	83	61
12/29/2020	P4-SB-03	ND	ND	13	ND	ND	10.7	13	5	ND	ND	ND	13	ND	ND	ND	6	41
12/29/2020	P4-TS-04	ND	ND	88	ND	ND	12	6.4	15	5.9	ND	ND	5.3	ND	ND	ND	49	38
12/29/2020	P4-SB-04	ND	ND	87	ND	0.44	28	6.4	13	3.3	ND	ND	11	ND	ND	ND	55	28
12/29/2020	P4-TS-05	ND	1.1	110	0.48	0.59	8.9	8.5	14	6.1	ND	ND	4.6	ND	ND	ND	76	50
12/29/2020	P4-SB-05	ND	ND	36	ND	ND	3	4	6.9	5.5	ND	ND	ND	ND	ND	ND	29	38
12/29/2020	P4-TS-06	ND	7.3	90	ND	0.53	7.5	5.4	10	11	ND	ND	3.4	ND	0.60	ND	55	54
12/29/2020	P4-SB-06	ND	32	47	ND	ND	2.7	1.9	12	3.6	ND	ND	ND	ND	ND	ND	19	35
12/29/2020	P4-TS-07	ND	1.9	130	0.61	0.61	8.9	8.3	12	8.3	ND	ND	3.9	ND	ND	ND	64	46
12/29/2020	P4-SB-07	ND	2.5	56	ND	0.68	2.2	3.3	55	5.5	ND	ND	ND	ND	ND	ND	27	36
12/29/2020	P4-TS-08	ND	2.5	110	0.55	0.54	12	6.7	11	14	ND	ND	6.3	ND	ND	ND	54	51
12/29/2020	P4-SB-08	ND	1	36	0.43	ND	9.3	3.8	4.7	5.3	ND	ND	3	ND	ND	ND	43	18
12/29/2020	P4-TS-09	ND	1.7	110	ND	0.55	23	9	22	11	ND	ND	10	ND	ND	ND	77	56
12/29/2020	P4-SB-09	3.2	ND	100	ND	ND	ND	4.5	16	2.1	ND	ND	ND	ND	ND	ND	32	66
12/29/2020	P4-TS-10	ND	2.2	100	ND	0.63	19	9.6	20	10	ND	ND	8.1	ND	ND	ND	79	57
12/29/2020	P4-SB-10	ND	ND	38	ND	ND	15	4.2	30	1.3	ND	ND	3.5	ND	ND	ND	52	20
12/29/2020	P4-TS-11	2	1.9	110	ND	ND	16	8.4	7	12	ND	ND	6.2	ND	ND	ND	66	56
12/29/2020	P4-SB-11	ND	1.7	93	ND	ND	50	12	2	6.2	ND	ND	14	ND	ND	ND	86	68
12/29/2020	P4-TS-12	ND	1.40	130	ND	ND	11	7.7	16	11	ND	ND	4.5	ND	ND	ND	65	62
12/29/2020	P4-SB-12	ND	ND	65	ND	ND	2.2	9	14	2.7	ND	ND	ND	ND	ND	ND	87	54
12/29/2020	P4-TS-13	ND	1.8	120	0.59	ND	8.1	7	12	11	ND	ND	3.8	ND	ND	ND	53	56
12/29/2020	P4-SB-13	ND	ND	19	ND	ND	0.90	4.8	6.5	ND	ND	ND	ND	ND	ND	ND	57	38
12/29/2020	P4-TS-14	3.1	2.8	140	0.62	ND	4.3	4.9	8.5	9.7	ND	ND	2.5	ND	ND	ND	33	59
12/29/2020	P4-SB-14	ND	ND	290	ND	ND	2.3	4.8	0.95	3.3	ND	2.9	ND	ND	ND	ND	11	57
12/29/2020	P4-TS-15	3.1	1.6	150	0.59	ND	4.6	6	7.5	8.3	ND	ND	2.7	ND	ND	ND	42	50
12/29/2020	P4-SB-15	ND	ND	140	ND	ND	11	9	11	2	ND	ND	7.4	ND	ND	ND	62	34
12/29/2020	P4-TS-16	3.9	2.2	160	0.79	ND	11	9.2	12	7.2	ND	ND	5.8	ND	ND	3.1	60	45
12/29/2020	P4-SB-16	ND	ND	56	ND	ND	9	5.1	5.4	2.8	ND	ND	2.7	ND	ND	ND	38	24
12/29/2020	P4-TS-17	ND	1.2	120	0.47	ND	30	12	21	5.9	ND	ND	11	ND	ND	ND	84	39
12/29/2020	P4-SB-17	ND	1.5	80	ND	ND	12	6.2	19	3.5	ND	ND	2.6	ND	ND	ND	88	23
12/29/2020	P4-TS-18	ND	1.2	110	ND	ND	13	7.6	14	11	ND	ND	5	ND	ND	ND	54	49
12/29/2020	P4-SB-18	ND	1.3	140	ND	ND	12	4	63	2.6	ND	ND	ND	ND	ND	ND	15	47
12/29/2020	P4-TS-19	ND	1.3	120	ND	ND	12	9.1	13	7.9	ND	ND	5	ND	ND	ND	59	47
12/29/2020	P4-SB-19	ND	ND	110	ND	ND	ND	4.7	7.3	3.4	ND	ND	ND	ND	ND	ND	11	69
12/30/2020	P4-TS-20	ND	1.7	110	0.52	0.56	17	13	12	7.8	ND	ND	7.3	ND	ND	ND	67	29
12/30/2020	P4-SB-20	ND	1.9	93	0.46	0.45	20	7	12	3.6	ND	ND	7.4	ND	ND	ND	58	30
12/30/2020	P4-TS-21	ND	1.5	110	ND	0.45	12	8.9	14	10	ND	ND	5.3	ND	ND	ND	72	34
12/30/2020	P4-SB-21	ND	1.3	110	0.50	0.51	18	6.3	11	5.3	ND	ND	6.7	ND	ND	ND	68	38
12/30/2020	P4-TS-22	ND	1.6	100	ND	0.56	14	8.5	14	14	ND	ND	5	ND	ND	ND	80	35
12/30/2020	P4-SB-22	ND	1.2	99	ND	0.56	13	6.8	14	18	ND	ND	4.5	ND	ND	ND	77	34
12/30/2020	P4-TS-23	ND	1.7	100	ND	0.62	12	9.8	14	6.4	ND	ND	5.6	ND	ND	ND	63	40
12/30/2020	P4-SB-23	ND	ND	150	ND	0.62	2.3	10	20	4.6	ND	ND	2.2	ND	ND	ND	87	57
12/30/2020	P4-TS-24	ND	1.4	130	0.55	0.64	24	11	15	7.3	ND	ND	10	ND	ND	ND	67	48
12/30/2020	P4-SB-24	ND	1.1	44	ND	ND	12	3.4	8.4	4.8	ND	ND	3.3	ND	ND	ND	54	19
12/30/2020	P4-TS-25	ND	1.7	45	ND	ND	8.4	3.8	8.9	3.8	ND	ND	3.4	ND	ND	ND	28	22
12/30/2020	P4-SB-25	ND	1.7	67	ND	ND	14	5.8	8.9	3.3	ND	ND	6.8	ND	ND	ND	35	22
12/30/2020	P4-TS-26	3.5	2.7	130	ND	0.69	23	10	23	22	ND	ND	11	ND	ND	ND	72	57
12/30/2020	P4-SB-26	ND	ND	28	ND	ND	13	3.1	5.3	2.6	ND	ND	4.6	ND	ND	ND	20	18
12/30/2020	P4-TS-27	3.3	3.4	120	0.53	0.71	31	13	28	7.4	ND	ND	12	ND	ND	ND	80	47
12/30/2020	P4-SB-27	ND	1.3	96	0.62	0.54	32	10	22	4.8	ND	ND	13	ND	ND	ND	52	46
12/30/2020	P4-TS-28	ND	1.4	84	ND	ND	15	6.3	10	4.5	ND	ND	5.8	ND	ND	ND	36	23
12/30/2020	P4-SB-28	2.8	2.7	130	0.47	ND	18	9.3	11	5.3	ND	ND	6.4	ND	ND	ND	78	26
12/30/2020	P4-TS-29	ND	2.1	83	ND	ND	18	9.3	11	6.3	ND	ND	6.5	ND	ND	ND	52	27
12/30/2020	P4-SB-29	ND	ND	82	ND	0.56	16	5.6	14	3.3	ND	ND	5.9	ND	ND	ND	49	43
12/30/2020	P4-TS-29	NE	0.11	NE	15	5.2 <sup>2</sup>	36,000 <sup>3</sup>	NE	NE	80	11	NE	490	NE	390	NE	390	NE
12/30/2020	P4-SB-29	31	0.68	15,000	160	71 <sup>4</sup>	120,000 <sup>5</sup>	23	3,100	400	11	390	1,500	390	390	0.78	390	23,000
12/30/2020	P4-TS-29	31	0.067	15,000	150	39	120,000 <sup>5</sup>	23	3,100	80	13	390	820	390	390	0.78	390	23,000
12/30/2020	P4-SB-29	8	12 <sup>6</sup>	152	0.50	5.0	38	47	20	15	0.25	3	83	8	10	2	74	38

Notes:

- Mercury analyzed by USEPA 7471A
- DTSC Residential Soil Values obtained from the California Department of Toxic Substances Control (DTSC) Human and Ecological Risk Office (HERO) Human Health Risk Assessment (HHRA) Note 3, DTSC-modified Screening Levels (DTSC-SLs), June 2018 (<https://www.dtsc.ca.gov/AssessingRisk/upload/HHRA-Note-3-June-2018.pdf>)
- USEPA Residential Soil Regional Screening Level (RSL) values obtained from the USEPA RSL Summary Table (TR-1E-06, THQ=1) November 2018 (<https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables>)
- Residential Shallow Soil Exposure (Direct Exposure Human Health Risk Levels) Environmental Screening Levels (ESLs) obtained from the San Francisco Bay Regional Water Quality Control Board (SFRWQCB) Environmental Screening Levels, February 2016 Revision 3<sup>5</sup> = Arsenic background value obtained from the DTSC Determination of a Southern California Regional Background Arsenic Concentration in Soil, March 2008 (<https://www.dtsc.ca.gov/upload/Background-Arsenic.pdf>)
- USEPA Cadmium diet RSL value used
- Chromium (III) value used
- Cleanup and Abatement Order (CAO) Background Values obtained from California Regional Water Quality Control Board (RWQCB), San Diego Region, CAO No. R9-2014-0019, Former South Campus Site, Chula Vista, CA (Site ID# 2092900), June 24, 2014 = Concentrations equal or exceed the CAO Background Value for arsenic of 12 mg/kg.

DUP = Duplicate  
mg/kg = Milligrams per kilogram  
ND = Not Detected  
NE = Not Established

**Table P4-2**  
**Summary of Soil Analytical Results - Total Petroleum Hydrocarbons (TPH) by USEPA Method 8015B**  
**(mg/kg)**

Sample Date	Sample ID	DRO (C10-C28)
12/29/2020	P4-SB-10	38
12/29/2020	P4-TS-16	15
12/30/2020	P4-TS-27	16
<i>DTSC Residential Soil Values<sup>1</sup></i>		NE
<i>USEPA Residential Soil RSL<sup>2</sup></i>		96

**Notes:**

Only analytes detected in samples are presented in this table. For a complete list of constituents analyzed, refer to the laboratory data package.

<sup>1</sup> = DTSC Residential and Industrial Soil Values obtained from the California Department of Toxic Substances Control (DTSC) Human and Ecological Risk Office (HERO) Human Health Risk Assessment (HHRA) Note 3, DTSC-modified Screening Levels (DTSC-SLs), June 2018 (<https://www.dtsc.ca.gov/AssessingRisk/upload/HHRA-Note-3-June-2018.pdf>)

<sup>2</sup> = EPA Residential Soil Regional Screening Level (RSL) values obtained from the EPA RSL Summary Table (TR=1E-06, THQ=1) November 2018 (<https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables>)

DRO = Diesel Range Organics

mmg/kg = Milligrams per kilogram

NE = Not Established

P4 = Parcel 4

SB = Soil Boring

TS = Top Soil Sample

USEPA = United States Environmental Protection Agency

**Table P5-1**  
**Summary of Soil Analytical Results - Metals by USEPA Method 6010B**  
**(mg/kg)**

Sample Date	Sample ID	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury <sup>1</sup>	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
12/31/2020	P5-SS-01	NA	1.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/31/2020	P5-SS-02	NA	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/31/2020	P5-SS-03	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/31/2020	P5-SS-04	NA	2.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/31/2020	P5-SS-04-DUP	NA	2.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/31/2020	P5-TS-01	3.3	1.2	150	0.71	ND	12	13	15	15	ND	ND	6.4	ND	0.89	ND	89	60
12/31/2020	P5-SB-01	3.9	1.2	81	0.54	ND	11	27	11	15	ND	ND	5.4	ND	ND	ND	82	44
12/31/2020	P5-TS-02	ND	3.1	160	0.76	ND	16	10	8.8	6.4	ND	ND	9.9	ND	0.94	ND	65	33
12/31/2020	P5-SB-02	3	2.7	65	0.63	ND	13	11	12	6.3	ND	ND	5.3	ND	0.72	ND	72	31
12/31/2020	P5-TS-03	3.2	ND	92	0.57	ND	9.5	11	10	7.1	ND	ND	4.6	ND	0.96	ND	73	46
12/31/2020	P5-SB-03	3.1	1	58	ND	ND	6.9	19	9.3	7	ND	ND	3.4	ND	0.88	ND	63	44
12/31/2020	P5-TS-04	3.1	2.2	81	0.61	ND	20	10	9.4	8.4	ND	ND	5.8	ND	0.75	ND	73	29
12/31/2020	P5-SB-04	3.3	2.2	120	0.62	ND	14	14	8.8	7.4	ND	ND	6.7	ND	0.73	ND	63	34
12/31/2020	P5-TS-05	3.9	1.4	120	0.75	ND	12	13	12	9.3	ND	ND	6.3	ND	0.96	ND	79	46
12/31/2020	P5-SB-05	4	1.5	83	0.71	ND	11	12.0	11	7.3	ND	ND	6.3	ND	0.86	ND	75	38
12/31/2020	P5-TS-06	3.1	2.1	100	0.53	ND	15	8.9	12	7.3	ND	ND	6.4	ND	ND	ND	71	35
12/31/2020	P5-TS-06-DUP	3.1	1.7	190	0.65	ND	20	7.7	13	6.1	ND	ND	9	ND	0.99	ND	62	39
12/31/2020	P5-SB-06	ND	1.2	42	ND	ND	9	6.4	4.8	2.8	ND	ND	3.5	ND	0.70	ND	22	10
12/31/2020	P5-SB-06-DUP	ND	1.9	150	0.63	ND	25	33	12	4.9	ND	ND	8.8	ND	ND	ND	47	32
12/31/2020	P5-TS-07	4.8	1.2	99	0.71	ND	8.2	9.8	13	7.2	ND	ND	4.7	ND	ND	3.1	53	55
12/31/2020	P5-SB-07	4	1.1	39	0.66	ND	5.7	12	9.7	9.3	ND	ND	3.3	ND	ND	ND	41	33
12/31/2020	P5-TS-08	3.1	1.6	110	0.63	ND	23	15	9.2	4.2	ND	ND	10	ND	ND	ND	49	30
12/31/2020	P5-SB-08	3.5	2.6	150	0.69	ND	16	13	11	5.7	ND	ND	13	ND	ND	ND	64	44
12/31/2020	P5-TS-09	4.1	1.6	110	0.63	ND	8.7	8.7	12	9.5	ND	ND	4.4	ND	ND	ND	54	54
12/31/2020	P5-SB-09	3.8	1.1	86	0.64	ND	6.8	12	8.4	5.8	ND	ND	3.9	ND	ND	ND	48	46
12/31/2020	P5-TS-10	4.2	1.8	260	0.70	ND	23	89	15	5	ND	ND	15	ND	ND	ND	49	32
12/31/2020	P5-SB-10	4	2.6	170	0.73	ND	13	14	13	6.9	ND	ND	7.4	ND	ND	ND	65	49
12/31/2020	P5-TS-11	3.3	1.2	110	0.64	ND	9.4	9.9	10	6.2	ND	ND	5.1	ND	ND	ND	54	40
12/31/2020	P5-SB-11	3.5	1.4	62	0.64	ND	7.3	11	7.1	5.6	ND	ND	3.5	ND	ND	ND	57	33
12/31/2020	P5-TS-12	ND	1.6	82	0.53	ND	13	12	11	5.3	ND	ND	5.7	ND	ND	ND	51	34
12/31/2020	P5-SB-12	3.7	ND	120	0.80	ND	31	8.1	23	4.3	ND	ND	14	ND	ND	ND	44	49
12/31/2020	P5-TS-13	3.2	1.8	110	0.55	ND	12	13	13	6.2	ND	ND	5.7	ND	ND	ND	61	47
12/31/2020	P5-TS-13-DUP	ND	1.3	89	0.51	ND	9.3	9.5	11	6.4	ND	ND	6.3	ND	ND	ND	50	44
12/31/2020	P5-SB-13	4.3	1.4	94	ND	ND	4	3.6	6.2	4	ND	1.9	1.8	ND	ND	ND	43	59
12/31/2020	P5-SB-13-DUP	ND	1.1	100	ND	ND	1.7	2.8	4.7	3.4	ND	3.2	1.1	ND	ND	ND	22	61
12/31/2020	P5-TS-14	ND	2.1	90	ND	ND	13	9.4	8.5	4.8	ND	ND	5.8	ND	ND	ND	38	28
12/31/2020	P5-SB-14	ND	2.9	690	ND	0.94	9.5	33	21	9.5	ND	6.3	30	5.6	ND	7.5	43	18
<i>DTSC Residential Soil Values</i> <sup>2</sup>		NE	0.11	NE	15	5.2 <sup>6</sup>	36,000 <sup>7</sup>	NE	NE	80	1	NE	490	NE	390	NE	390	NE
<i>USEPA Residential Soil RSL</i> <sup>3</sup>		31	0.68	15,000	160	71 <sup>6</sup>	120,000 <sup>7</sup>	23	3,100	400	11	390	1,500	390	390	0.78	390	23,000
<i>Residential Shallow Soil ESL</i> <sup>4</sup>		31	0.067	15,000	150	39	120,000 <sup>7</sup>	23	3,100	80	13	390	820	390	390	0.78	390	23,000
<i>CAO Background Value</i> <sup>8</sup>		8	12 <sup>5</sup>	152	0.50	5.0	38	47	20	15	0.25	3	83	8	10	2	74	38

**Notes:**

<sup>1</sup> = Mercury analyzed by USEPA 7471A

<sup>2</sup> = DTSC Residential Soil Values obtained from the California Department of Toxic Substances Control (DTSC) Human and Ecological Risk Office (HERO) Human Health Risk Assessment (HHRA) Note 3, DTSC-modified Screening Levels (DTSC-SLs), June 2018 (<https://www.dtsc.ca.gov/AssessingRisk/upload/HHRA-Note-3-June-2018.pdf>)

<sup>3</sup> = USEPA Residential Soil Regional Screening Level (RSL) values obtained from the USEPA RSL Summary Table (TR=1E-06, THQ=1) November 2018 (<https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables>)

<sup>4</sup> = Residential Shallow Soil Exposure (Direct Exposure Human Health Risk Levels) Environmental Screening Levels (ESLs) obtained from the San Francisco Bay Regional Water Quality Control Board (SFRWQCB) Environmental Screening Levels, February 2016 Revision 3

<sup>5</sup> = Arsenic background value obtained from the DTSC Determination of a Southern California Regional Background Arsenic Concentration in Soil, March 2008 (<https://www.dtsc.ca.gov/upload/Background-Arsenic.pdf>)

<sup>6</sup> = USEPA Cadmium diet RSL value used

<sup>7</sup> = Chromium (III) value used

<sup>8</sup> = Cleanup and Abatement Order (CAO) Background Values obtained from California Regional Water Quality Control Board (RWQCB), San Diego Region, CAO No. R9-2014-0019, Former South Campus Site, Chula Vista, CA (Site ID# 2092900), June 24, 2014

■ = Concentrations exceed established screening levels.

DUP = Duplicate

mg/kg = Milligrams per kilogram

ND = Not Detected

NE = Not Established

**Table P5-2**  
**Summary of Soil Analytical Results - Total Petroleum Hydrocarbons (TPH) by USEPA Method 8015B**  
**(mg/kg)**

Sample Date	Sample ID	DRO (C10-C28)
12/31/2020	P5-TS-09	19
12/31/2020	P5-SB-13-DUP	12
<i>DTSC Residential Soil Values<sup>1</sup></i>		NE
<i>USEPA Residential Soil RSL<sup>2</sup></i>		96

**Notes:**

Only analytes detected in samples are presented in this table. For a complete list of constituents analyzed, refer to the laboratory data package.

<sup>1</sup> = DTSC Residential and Industrial Soil Values obtained from the California Department of Toxic Substances Control (DTSC) Human and Ecological Risk Office (HERO) Human Health Risk Assessment (HHRA) Note 3, DTSC-modified Screening Levels (DTSC-SLs), June 2018 (<https://www.dtsc.ca.gov/AssessingRisk/upload/HHRA-Note-3-June-2018.pdf>)

<sup>2</sup> = USEPA Residential Soil Regional Screening Level (RSL) values obtained from the USEPA RSL Summary Table (TR=1E-06, THQ=1) November 2018 (<https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables>)

DRO = Deisel Range Organics

DUP = Duplicate

mg/kg = Milligrams per kilogram

NE = Not Established

P5 = Parcel 5

SB = Soil Boring

TS = Top Soil Sample

USEPA = United States Environmental Protection Agency

**Table P5-3**  
**Summary of Soil Analytical Results - Polyaromatic Hydrocarbons (PAH) by USEPA Method 8270C-SIM**  
**(µg/kg)**

<b>Sample Date</b>	<b>Sample ID</b>	<b>Naphthalene</b>
12/31/2020	P5-SB-02	1,900
<i>DTSC Residential Soil Values<sup>1</sup></i>		NE
<i>USEPA Residential Soil RSL<sup>2</sup></i>		NE

**Notes:**

Only analytes detected in samples are presented in this table. For a complete list of constituents analyzed, refer to the laboratory data package.

<sup>1</sup> = DTSC Residential and Industrial Soil Values obtained from the California Department of Toxic Substances Control (DTSC) Human and Ecological Risk Office (HERO) Human Health Risk Assessment (HHRA) Note 3, DTSC-modified Screening Levels (DTSC-SLs), June 2018 (<https://www.dtsc.ca.gov/AssessingRisk/upload/HHRA-Note-3-June-2018.pdf>)

<sup>2</sup> = USEPA Residential Soil Regional Screening Level (RSL) values obtained from the USEPA RSL Summary Table (TR=1E-06, THQ=1) November 2018 (<https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables>)

D = Duplicate

USEPA = United States Environmental Protection Agency

µg/kg = Micrograms per kilogram

NE = Not Established

P5 = Parcel 5

SB = Soil Boring

**Table P6-1**  
**Summary of Soil Analytical Results - Metals by USEPA Method 6010B**  
(mg/kg)

Sample Date	Sample ID	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury <sup>1</sup>	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
12/30/2020	P6-SS-01	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/30/2020	P6-SS-02	NA	2.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/30/2020	P6-SS-03	NA	1.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/30/2020	P6-SS-04	NA	1.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/30/2020	P6-SS-05	NA	2.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/30/2020	P6-SS-05-DUP	NA	2.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/30/2020	P6-TS-01	4.4	1.7	160	0.82	ND	14	12	15	9.7	ND	ND	7.6	ND	ND	ND	74	47
12/30/2020	P6-SB-01	3.9	1.6	65	0.53	ND	14	7.4	11	7.9	ND	ND	5	ND	ND	ND	71	34
12/30/2020	P6-TS-02	3.2	1.6	88	0.64	ND	16	10	9.4	6.5	ND	ND	6.7	ND	ND	ND	64	31
12/30/2020	P6-SB-02	3.7	1.4	69	0.63	ND	18	17	9.2	3.1	ND	ND	5.7	ND	ND	ND	66	55
12/30/2020	P6-TS-03	3.7	1.4	140	0.75	ND	13	12	14	12	ND	ND	6.7	ND	ND	ND	84	51
12/30/2020	P6-TS-03-DUP	3.5	1.7	160	0.72	ND	11	12	14	13	ND	ND	6.1	ND	ND	ND	89	55
12/30/2020	P6-SB-03	3.4	1.7	130	0.94	ND	13	12	12	11	ND	ND	6.7	ND	ND	ND	84	44
12/30/2020	P6-SB-03-DUP	3.5	1	86	0.79	ND	11	11	12	9.1	ND	ND	5.4	ND	ND	ND	75	38
12/31/2020	P6-TS-04	ND	2.3	92	0.63	ND	17	10	9.9	6.7	ND	ND	7	ND	ND	ND	66	36
12/31/2020	P6-SB-04	ND	1.7	63	0.68	ND	11	7.3	8.9	5.1	ND	ND	4.7	ND	ND	ND	56	38
<i>DTSC Residential Soil Values<sup>2</sup></i>		NE	0.11	NE	15	5.2 <sup>6</sup>	36,000 <sup>7</sup>	NE	NE	80	1	NE	490	NE	390	NE	390	NE
<i>USEPA Residential Soil RSL<sup>3</sup></i>		31	0.68	15,000	160	71 <sup>6</sup>	120,000 <sup>7</sup>	23	3,100	400	11	390	1,500	390	390	0.78	390	23,000
<i>Residential Shallow Soil ESL<sup>4</sup></i>		31	0.067	15,000	150	39	120,000 <sup>7</sup>	23	3,100	80	13	390	820	390	390	0.78	390	23,000
<i>CAO Background Value<sup>8</sup></i>		8	12 <sup>5</sup>	152	0.50	5.0	38	47	20	15	0.25	3	83	8	10	2	74	38

**Notes:**

<sup>1</sup> = Mercury analyzed by USEPA 7471A

<sup>2</sup> = DTSC Residential Soil Values obtained from the California Department of Toxic Substances Control (DTSC) Human and Ecological Risk Office (HERO) Human Health Risk Assessment (HHRA) Note 3, DTSC-modified Screening Levels (DTSC-SLs), June 2018 (<https://www.dtsc.ca.gov/AssessingRisk/upload/HHRA-Note-3-June-2018.pdf>)

<sup>3</sup> = USEPA Residential Soil Regional Screening Level (RSL) values obtained from the USEPA RSL Summary Table (TR=1E-06, THQ=1) November 2018 (<https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables>)

<sup>4</sup> = Residential Shallow Soil Exposure (Direct Exposure Human Health Risk Levels) Environmental Screening Levels (ESLs) obtained from the San Francisco Bay Regional Water Quality Control Board (SFRWQCB) Environmental Screening Levels, February 2016 Revision 3 ([http://www.waterboards.ca.gov/sanfranciscobay/water\\_issues/programs/esl.shtml](http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/esl.shtml))

<sup>5</sup> = Arsenic background value obtained from the DTSC Determination of a Southern California Regional Background Arsenic Concentration in Soil, March 2008 (<https://www.dtsc.ca.gov/upload/Background-Arsenic.pdf>)

<sup>6</sup> = Cadmium diet RSL value used

<sup>7</sup> = Chromium (III) value used

<sup>8</sup> = Cleanup and Abatement Order (CAO) Background Values obtained from California Regional Water Quality Control Board (RWQCB), San Diego Region, CAO No. R9-2014-0019, Former South Campus Site, Chula Vista, CA (Site ID# 2092900), June 24, 2014 ([http://www.waterboards.ca.gov/rwqcb9/board\\_decisions/adopted\\_orders/2014/R9-2014-0019.pdf](http://www.waterboards.ca.gov/rwqcb9/board_decisions/adopted_orders/2014/R9-2014-0019.pdf))

DUP = Duplicate

mg/kg = Milligrams per kilogram

ND = Not Detected

NE = Not Established

P6= Parcel 6

**Table P7-1  
Summary of Soil Analytical Results - Metals by USEPA Method 6010B**

Sample Date	Sample ID	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper (mg/kg)	Lead	Mercury <sup>1</sup>	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
12/30/2020	P7-SS-01	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/30/2020	P7-SS-02	NA	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/30/2020	P7-SS-03	NA	1.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/30/2020	P7-SS-04	NA	2.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/30/2020	P7-SS-04-DUP	NA	3.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/31/2020	P7-TS-01	4.5	1.7	75	0.71	ND	19	18	11	5.7	ND	ND	6.6	ND	ND	ND	98	29
12/31/2020	P7-SB-01	ND	1.3	76	ND	ND	11	7.2	8.5	3.7	ND	ND	3.4	ND	ND	ND	65	35
<i>DTSC Residential Soil Values</i> <sup>2</sup>		NE	0.11	NE	15	5.2 <sup>6</sup>	36,000 <sup>7</sup>	NE	NE	80	1	NE	490	NE	390	NE	390	NE
<i>USEPA Residential Soil RSL</i> <sup>3</sup>		31	0.68	15,000	160	71 <sup>6</sup>	120,000 <sup>7</sup>	23	3,100	400	11	390	1,500	390	390	0.78	390	23,000
<i>Residential Shallow Soil ESL</i> <sup>4</sup>		31	0.067	15,000	150	39	120,000 <sup>7</sup>	23	3,100	80	13	390	820	390	390	0.78	390	23,000
<i>CAO Background Value</i> <sup>8</sup>		8	12 <sup>5</sup>	152	0.50	5.0	38	47	20	15	0.25	3	83	8	10	2	74	38

**Notes:**

<sup>1</sup> = Mercury analyzed by USEPA 7471A

<sup>2</sup> = DTSC Residential Soil Values obtained from the California Department of Toxic Substances Control (DTSC) Human and Ecological Risk Office (HERO) Human Health Risk Assessment (HHRA) Note 3, DTSC-modified Screening Levels (DTSC-SLs), June 2018 (<https://www.dtsc.ca.gov/AssessingRisk/upload/HHRA-Note-3-June-2018.pdf>)

<sup>3</sup> = USEPA Residential Soil Regional Screening Level (RSL) values obtained from the USEPA RSL Summary Table (TR=1E-06, THQ=1) November 2018 (<https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables>)

<sup>4</sup> = Residential Shallow Soil Exposure (Direct Exposure Human Health Risk Levels) Environmental Screening Levels (ESLs) obtained from the San Francisco Bay Regional Water Quality Control Board (SFRWQCB) Environmental Screening Levels, February 2016 Revision 3

<sup>5</sup> = Arsenic background value obtained from the DTSC Determination of a Southern California Regional Background Arsenic Concentration in Soil, March 2008 (<https://www.dtsc.ca.gov/upload/Background-Arsenic.pdf>)

<sup>6</sup> = USEPA Cadmium diet RSL value used

<sup>7</sup> = Chromium (III) value used

<sup>8</sup> = Cleanup and Abatement Order (CAO) Background Values obtained from California Regional Water Quality Control Board (RWQCB), San Diego Region, CAO No. R9-2014-0019, Former South Campus Site, Chula Vista, CA (Site ID# 2092900), June 24, 2014

DUP = Duplicate

mg/kg = Milligrams per kilogram

ND = Not Detected

NE = Not Established

**Table P7-2**  
**Summary of Soil Analytical Results - OCPs by USEPA Method 8081A**  
**(µg/kg)**

Sample Date	Sample ID	Chlordane	4,4'-DDD	4,4'-DDE	4,4'-DDT	Endosulfan Sulfate	Heptachlor Epoxide
12/28/2020	P7-SS-06	ND	ND	ND	ND	6.5 C	ND
12/28/2020	P7-SS-08	50	ND	45 C	32 C	ND	ND
12/28/2020	P7-SS-09	210	ND	ND	ND	ND	ND
	<i>USEPA Residential Soil RSL<sup>1</sup></i>	1,700	1,900	2,000	1,900	470,000	700

**Notes:**

Only analytes detected in samples are presented in this table. For a complete list of constituents analyzed, refer to the laboratory data package.

<sup>1</sup> = USEPA Residential Soil Regional Screening Level (RSL) values obtained from the USEPA RSL Summary Table (TR=1E-06, THQ=1) November 2018 (<https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables>)

µg/kg = Micrograms per kilogram

C = Co-Eluting Congener

ND = Not Detected

OCP = Organochlorine pesticides

P7 = Parcel 7

SS = Soil Sample

USEPA = United States Environmental Protection Agency

**Table P8-1**  
**Summary of Soil Analytical Results - Metals by USEPA Method 6010B**

(mg/kg)

Sample Date	Sample ID	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury <sup>1</sup>	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
12/31/2020	P8-SS-01	NA	2.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/31/2020	P8-SS-02	NA	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/31/2020	P8-SS-03	NA	1.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/31/2020	P8-SS-04	NA	1.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/31/2020	P8-SS-05	NA	1.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/31/2020	P8-SS-06	NA	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/31/2020	P8-SS-07	NA	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/31/2020	P8-SS-08	NA	1.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/31/2020	P8-SS-08-DUP	NA	1.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/31/2020	P8-TS-01	3.8	2.7	120	0.71	ND	24	11	12	6.1	ND	2.3	8.3	ND	ND	ND	78	35
12/31/2020	P8-SB-01	3.2	1.5	74	ND	ND	9.2	5.1	8.1	3.4	ND	ND	3.3	ND	1.1	ND	60	31
12/31/2020	P8-TS-02	3.6	2.2	79	0.59	ND	35	12	10	7.2	ND	2.2	18	ND	1	ND	66	30
12/31/2020	P8-SB-02	3.3	ND	110	0.64	ND	18	8.3	15	6	ND	ND	7.4	ND	ND	ND	70	48
12/31/2020	P8-TS-03	3.8	3.2	190	1	ND	20	13	15	8.4	ND	ND	9.8	ND	ND	ND	86	44
12/31/2020	P8-SB-03	3.5	2.8	59	0.67	ND	12	5.3	15	5.8	ND	ND	3.6	ND	ND	ND	67	31
12/31/2020	P8-TS-04	3.9	2.4	140	0.76	ND	9.6	8.8	11	8.0	ND	ND	5.2	ND	ND	ND	54	47
12/31/2020	P8-SB-04	3	2	76	0.55	ND	15	4.3	6.6	6	ND	ND	4.5	ND	ND	ND	62	29
12/31/2020	P8-TS-05	3.2	2.1	98	0.69	ND	14	9	10	7.2	ND	ND	5.6	ND	ND	ND	62	29
12/31/2020	P8-SB-05	ND	2.6	100	0.63	ND	14	14	13	5.7	ND	ND	6.9	ND	ND	ND	56	36
12/31/2020	P8-TS-06	ND	ND	110	ND	ND	11	7.2	11	5.8	ND	ND	4.5	ND	ND	ND	53	52
12/31/2020	P8-TS-06-DUP	ND	ND	110	ND	ND	13	7.4	11	5.5	ND	ND	5.2	ND	ND	ND	55	53
12/31/2020	P8-SB-06	4.5	ND	110	ND	ND	11	6.9	11	5.1	ND	ND	4.6	ND	ND	ND	55	51
12/31/2020	P8-SB-06-DUP	ND	ND	110	ND	ND	12	7.1	11	5.6	ND	ND	5.1	ND	ND	ND	56	49
12/31/2020	P8-TS-07	ND	ND	51	ND	ND	5.7	4.8	7.1	5.1	ND	ND	1.8	ND	ND	ND	38	38
12/31/2020	P8-SB-07	3.3	ND	100	ND	ND	13	7.5	11	5.5	ND	ND	5.2	ND	ND	ND	55	52
12/31/2020	P8-TS-08	ND	1.8	100	ND	ND	13	7	14	7.4	ND	ND	5.4	ND	ND	ND	61	43
12/31/2020	P8-TS-08-DUP	ND	1.7	120	ND	ND	15	7.9	15	4.8	ND	ND	6.2	ND	ND	ND	68	45
12/31/2020	P8-SB-08	ND	2	110	0.57	ND	14	7.9	15	6.8	ND	ND	5.5	ND	ND	ND	73	43
12/31/2020	P8-SB-08-DUP	ND	1.6	130	ND	ND	12	7.4	13	7.1	ND	ND	4.7	ND	ND	ND	59	56
12/31/2020	PS-TS-09	3.7	1.9	110	ND	ND	15	9.4	17	5	ND	ND	6.1	ND	ND	ND	68	45
12/31/2020	PS-SB-09	ND	1.4	110	ND	ND	14	7	14	4.4	ND	ND	5.5	ND	ND	ND	63	39
12/31/2020	P8-TS-10	3.5	1.8	100	ND	ND	12	8.1	13	7.5	ND	ND	5	ND	ND	ND	62	57
12/31/2020	P8-SB-10	3.2	1	110	ND	ND	13	6.9	11	6.1	ND	ND	5.1	ND	ND	ND	57	50
12/31/2020	P8-TS-11	ND	ND	150	ND	ND	17	8.4	15	9.4	ND	ND	6.8	ND	ND	ND	76	59
12/31/2020	P8-TS-11-DUP	ND	ND	170	ND	ND	15	7.5	24	28	ND	ND	6.2	ND	ND	ND	64	110
12/31/2020	P8-SB-11	ND	1.8	91	0.55	ND	22	10	15	9.5	ND	ND	6.4	ND	ND	ND	81	63
12/31/2020	P8-SB-11-DUP	ND	2.3	120	0.53	ND	2.6	10	17	3.7	ND	ND	ND	ND	ND	ND	80	47
12/31/2020	P8-TS-12	4.1	2.3	160	0.93	ND	19	12	12	9.6	ND	ND	9.7	ND	ND	ND	77	38
12/31/2020	P8-SB-12	3.1	1.5	59	0.65	ND	13	5.9	7.9	6.5	ND	ND	5.2	ND	ND	ND	58	30
12/31/2020	P8-TS-13	ND	1.7	120	0.70	ND	12	10	13	8.8	ND	ND	6.3	ND	ND	ND	68	42
12/31/2020	P8-SB-13	ND	ND	51	ND	ND	26	4.2	19	6.7	ND	ND	5	ND	ND	ND	71	24
12/31/2020	P8-TS-14	3.8	1.3	120	0.58	ND	12	7.9	13	9.3	ND	ND	5.3	ND	ND	ND	67	47
12/31/2020	P8-SB-14	ND	3.2	73	ND	ND	6.2	3.7	7.3	2.4	ND	ND	2.2	ND	ND	ND	29	30
<i>DTSC Residential Soil Values</i> <sup>2</sup>		NE	0.11	NE	15	5.2 <sup>6</sup>	36,000 <sup>7</sup>	NE	NE	80	1	NE	490	NE	390	NE	390	NE
<i>USEPA Residential Soil RSL</i> <sup>3</sup>		31	0.68	15,000	160	71 <sup>6</sup>	120,000 <sup>7</sup>	23	3,100	400	11	390	1,500	390	390	0.78	390	23,000
<i>Residential Shallow Soil ESL</i> <sup>4</sup>		31	0.067	15,000	150	39	120,000 <sup>7</sup>	23	3,100	80	13	390	820	390	390	0.78	390	23,000
<i>CAO Background Value</i> <sup>8</sup>		8	12 <sup>5</sup>	152	0.50	5.0	38	47	20	15	0.25	3	83	8	10	2	74	38

**Notes:**

<sup>1</sup> = Mercury analyzed by USEPA 7471A

<sup>2</sup> = DTSC Residential Soil Values obtained from the California Department of Toxic Substances Control (DTSC) Human and Ecological Risk Office (HERO) Human Health Risk Assessment (HHRA) Note 3, DTSC-modified Screening Levels (DTSC-SLs), June 2018 (<https://www.dtsc.ca.gov/AssessingRisk/upload/HHRA-Note-3-June-2018.pdf>)

<sup>3</sup> = USEPA Residential Soil Regional Screening Level (RSL) values obtained from the USEPA RSL Summary Table (TR=1E-06, THQ=1) November 2018 (<https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables>)

<sup>4</sup> = Residential Shallow Soil Exposure (Direct Exposure Human Health Risk Levels) Environmental Screening Levels (ESLs) obtained from the San Francisco Bay Regional Water Quality Control Board (SFRWQCB) Environmental Screening Levels, February 2016 Revision 3

<sup>5</sup> = Arsenic background value obtained from the DTSC Determination of a Southern California Regional Background Arsenic Concentration in Soil, March 2008 (<https://www.dtsc.ca.gov/upload/Background-Arsenic.pdf>)

<sup>6</sup> = USEPA Cadmium diet RSL value used

<sup>7</sup> = Chromium (III) value used

<sup>8</sup> = Cleanup and Abatement Order (CAO) Background Values obtained from California Regional Water Quality Control Board (RWQCB), San Diego Region, CAO No. R9-2014-0019, Former South Campus Site, Chula Vista, CA (Site ID# 2092900), June 24, 2014

DUP = Duplicate

mg/kg = Milligrams per kilogram

ND = Not Detected

NE = Not Established

**Table P8-2**  
**Summary of Soil Analytical Results - Total Petroleum Hydrocarbons (TPH) by USEPA Method 8015B**  
**(mg/kg)**

Sample Date	Sample ID	DRO (C10-C28)
12/31/2020	P8-TS-11-DUP	12
<i>DTSC Residential Soil Values<sup>1</sup></i>		NE
<i>USEPA Residential Soil RSL<sup>2</sup></i>		96

**Notes:**

Only analytes detected in samples are presented in this table. For a complete list of constituents analyzed, refer to the laboratory data package.

<sup>1</sup> = DTSC Residential and Industrial Soil Values obtained from the California Department of Toxic Substances Control (DTSC) Human and Ecological Risk Office (HERO) Human Health Risk Assessment (HHRA) Note 3, DTSC-modified Screening Levels (DTSC-SLs), June 2018 (<https://www.dtsc.ca.gov/AssessingRisk/upload/HHRA-Note-3-June-2018.pdf>)

<sup>2</sup> = USEPA Residential Soil Regional Screening Level (RSL) values obtained from the USEPA RSL Summary Table (TR=1E-06, THQ=1) November 2018 (<https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables>)

DRO = Deisel Range Organics

DUP = Duplicate

mg/kg = Milligrams per kilogram

ND = Not detected

NE = Not Established

SB = Soil Boring

TS = Top Soil Sample

USEPA = United States Environmental Protection Agency

**Table P9-1**  
**Summary of Soil Analytical Results - Metals by USEPA Method 6010B (mg/kg)**

Sample Date	Sample ID	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury <sup>1</sup>	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
12/29/2020	P9-TS-01	ND	ND	79	ND	ND	16	8.4	9.9	11	ND	ND	6.2	ND	ND	ND	70	33
12/29/2020	P9-SB-01	ND	ND	98	0.63	0.59	18	11	12	8.1	ND	ND	7.2	ND	ND	ND	76	37
12/29/2020	P9-TS-02	ND	ND	73	ND	ND	10	5.3	9.5	9.2	ND	ND	3.9	ND	ND	ND	42	60
12/29/2020	P9-SB-02	ND	ND	70	ND	ND	14.0	6	12	9.8	ND	ND	5.7	ND	ND	ND	40	49
12/29/2020	P9-TS-03	ND	1.2	94	ND	ND	12	5.8	10	6.6	ND	ND	5.3	ND	ND	ND	45	42
12/29/2020	P9-SB-03	ND	ND	99	ND	0.48	9.7	6.4	10	7.7	ND	ND	5	ND	ND	ND	53	48
12/29/2020	P9-TS-04	ND	ND	75	ND	ND	5.8	7.5	12	8	ND	ND	3.1	ND	ND	ND	63	68
12/29/2020	P9-TS-04-DUP	ND	ND	97	ND	0.64	7.8	9.5	15	9.7	ND	ND	4.3	ND	ND	ND	82	85
12/29/2020	P9-SB-04	ND	ND	110	0.56	0.72	9.5	11	19	6.6	ND	ND	5	ND	ND	ND	89	87
12/29/2020	P9-SB-04-DUP	ND	ND	98	ND	0.64	7.7	9.3	15	41	ND	ND	4.3	ND	ND	ND	79	81
12/29/2020	P9-TS-05	ND	ND	79	ND	ND	6.7	4.7	7.6	18	ND	ND	4.1	ND	ND	ND	27	62
12/29/2020	P9-SB-05	ND	ND	78	ND	ND	8.2	5.4	6.4	12	ND	ND	4.5	ND	ND	ND	30	58
12/29/2020	P9-TS-06	ND	ND	60	ND	0.48	7.1	4.6	6	13	ND	ND	4	ND	ND	ND	26	49
12/29/2020	P9-SB-06	ND	ND	61	0.53	0.56	7.9	5.6	4.7	7.4	ND	ND	4.9	ND	ND	ND	33	47
12/29/2020	P9-TS-07	ND	ND	59	ND	ND	4.9	4.2	11	10	ND	ND	3.2	ND	ND	ND	30	44
12/29/2020	P9-SB-07	ND	ND	62	ND	0.49	4.7	4.3	12	11	ND	ND	3.2	ND	ND	ND	29	43
12/29/2020	P9-TS-08	ND	ND	100	0.54	0.61	8.9	6.8	15	16	ND	ND	4.6	ND	ND	ND	47	73
12/29/2020	P9-SB-08	ND	ND	100	0.58	0.62	10	7.7	15	11	ND	ND	4.8	ND	ND	ND	55	72
<i>DTSC Residential Soil Values</i> <sup>2</sup>		NE	0.11	NE	15	5.2 <sup>6</sup>	36,000 <sup>7</sup>	NE	NE	80	1	NE	490	NE	390	NE	390	NE
<i>USEPA Residential Soil RSL</i> <sup>3</sup>		31	0.68	15,000	160	71 <sup>6</sup>	120,000 <sup>7</sup>	23	3,100	400	11	390	1,500	390	390	0.78	390	23,000
<i>Residential Shallow Soil ESL</i> <sup>4</sup>		31	0.067	15,000	150	39	120,000 <sup>7</sup>	23	3,100	80	13	390	820	390	390	0.78	390	23,000
<i>CAO Background Value</i> <sup>8</sup>		8	12 <sup>5</sup>	152	0.50	5.0	38	47	20	15	0.25	3	83	8	10	2	74	38

**Notes:**

<sup>1</sup> = Mercury analyzed by USEPA 7471A

<sup>2</sup> = DTSC Residential Soil Values obtained from the California Department of Toxic Substances Control (DTSC) Human and Ecological Risk Office (HERO) Human Health Risk Assessment (HHRA) Note 3, DTSC-modified Screening Levels (DTSC-SLs), June 2018 (<https://www.dtsc.ca.gov/AssessingRisk/upload/HHRA-Note-3-June-2018.pdf>)

<sup>3</sup> = USEPA Residential Soil Regional Screening Level (RSL) values obtained from the USEPA RSL Summary Table (TR=1E-06, THQ=1) November 2018 (<https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables>)

<sup>4</sup> = Residential Shallow Soil Exposure (Direct Exposure Human Health Risk Levels) Environmental Screening Levels (ESLs) obtained from the San Francisco Bay Regional Water Quality Control Board (SFRWQCB) Environmental Screening Levels, February 2016 Revision 3

<sup>5</sup> = Arsenic background value obtained from the DTSC Determination of a Southern California Regional Background Arsenic Concentration in Soil, March 2008 (<https://www.dtsc.ca.gov/upload/Background-Arsenic.pdf>)

<sup>6</sup> = USEPA Cadmium diet RSL value used

<sup>7</sup> = Chromium (III) value used

<sup>8</sup> = Cleanup and Abatement Order (CAO) Background Values obtained from California Regional Water Quality Control Board (RWQCB), San Diego Region, CAO No. R9-2014-0019, Former South Campus Site, Chula Vista, CA (Site ID# 2092900), June 24, 2014

DUP = Duplicate

mg/kg = Milligrams per kilogram

ND = Not Detected

NE = Not Established