

APPENDIX G

Phase II ESA



Phase II Environmental Site Assessment

Palomar Hospital Campus
555 East Valley Parkway
Escondido, California 92025

AEC Project No. 18-078SD
April 26, 2018

Prepared For:

Integral Communities
2235 Encinitas Blvd., Suite 216
Encinitas, CA 92024

Prepared By:

Advantage Environmental Consultants, LLC
145 Vallecitos De Oro, Suite 201
San Marcos, California 92069
Phone (760) 744-3363 • Fax (760) 744-3383

April 26, 2018

Ninia Hammond
Integral Communities
2235 Encinitas Blvd., Suite 216
Encinitas, CA 92024

Subject: Phase II Environmental Site Assessment
Palomar Hospital Campus
555 East Valley Parkway
Escondido, CA 92025
AEC Project No. 18-078SD

Dear Ms. Hammond:

Advantage Environmental Consultants, LLC (AEC) has performed a Phase II Environmental Site Assessment (ESA) at the above-referenced property. This report includes AEC's findings, conclusions, recommendations and supporting documentation. We appreciate the opportunity to be of service to you on this project. If you should have any questions regarding this report, or if we can be of further assistance, please contact us at (760) 744-3363.

Sincerely,



Daniel Weis, R.E.H.S.
Branch Manager
Western Regional Office



Eric Cathcart, MS, PG
Senior Geologist
California PG# 7548

TABLE OF CONTENTS

1.0	INTRODUCTION.....	1
1.1	Project Introduction	1
1.2	Site Location and Description	1
1.3	Project Objective	1
2.0	FIELD INVESTIGATION.....	2
3.0	INVESTIGATION RESULTS AND DISCUSSION.....	4
3.1	Subsurface Conditions.....	4
3.2	Soil Analytical Laboratory Data.....	4
3.3	Soil Gas Analytical Laboratory Data	4
4.0	CONCLUSIONS AND RECOMMENDATIONS.....	5
5.0	LIMITATIONS	6

FIGURES

FIGURE 1	VICINITY MAP
FIGURE 2	SITE PLAN

TABLES

TABLE 1	SOIL ANALYTICAL RESULTS
TABLE 2	SOIL GAS ANALYTICAL RESULTS

APPENDICES

APPENDIX A	GEOPHYSICAL SURVEY REPORT
APPENDIX B	ANALYTICAL LABORATORY REPORTS

1.0 INTRODUCTION

1.1 Project Introduction

On behalf of Integral Communities, AEC has prepared this Phase II Environmental Site Assessment (ESA) for the property located at 555 East Valley Parkway in Escondido, California (i.e. the Site). This assessment has been conducted in accordance with our proposal dated February 12, 2018.

1.2 Site Location and Description

The Site is located at 555 East Valley Parkway in Escondido, California. The Site is a reported 10.98 acres in size and is further identified by County of San Diego Assessor's Parcel Numbers 229-450-05-00 and -06-00. The Site is situated generally north of E. Grand Avenue, south of Valley Parkway, east of Valley Boulevard and west of N. Fig Street. We understand that the hospital facility at the Site is slated for future demolition in preparation for new mixed-use development. A Vicinity Map is included as Figure 1.

1.3 Project Objective

AEC reviewed prior environmental assessment reports pertaining to the Site. It was revealed in the reports that there are current and former underground storage tanks (UST) at the Site. Therefore, the primary objective of this assessment is to evaluate for the potential presence of potential Site impacts from such USTs.

2.0 FIELD INVESTIGATION

Geophysical Survey

On March 13, 2018, Southwest Geophysics, Inc. (SGI), a subcontractor to AEC, completed a geophysical survey in the vicinity of the anticipated locations of current and former USTs at the Site. Geophysical survey methods utilized during the evaluation included ground penetrating radar (GPR), electromagnetic technologies (EM) and other methods as described in the attached geophysical survey report (Appendix A). As described in the geophysical survey report, the results of the survey revealed the presence of two USTs in the northeastern portion of the Site identified as Areas 1 and 2. No USTs were identified in anticipated former tank locations identified as Areas 3 and 4. However, several relatively large EM anomalies, underground utilities and unidentified lines were identified during the survey. A copy of the geophysical survey report is included as Appendix A.

Soil and Soil Gas Sampling and Analysis

AEC notified Underground Service Alert utility marking service prior to the commencement of field sampling and in accordance with State law. In addition, AEC prepared a health and safety plan that outlined the procedures that AEC's personnel and subcontractors followed to minimize the potential for health and safety hazards during the course of work to be performed at the Site. As stated previously, a geophysical survey and boring location clearance was conducted on March 13, 2018, by SGI.

Twelve soil borings (identified as B1 through B12) were advanced at the Site on March 26, 2018, using a truck-mounted direct-push sampling rig equipped with approximate two-inch diameter stainless steel rods and soil sampling tools. A Site Plan depicting the approximate soil boring locations is included as Figure 2. The soil borings were advanced by Astech Environmental of Santa Ana, California under the oversight of AEC. One of the 12 soil borings (B2) was advanced to a depth of 17 feet below ground surface (bgs), four borings were advanced to 13 feet bgs (B1, B3, B4 and B8), five of the borings were advanced to 10 feet bgs (B6, B7, B10, B11 and B12), one of the borings was advanced to six feet bgs (B5), and one of the borings was advanced to three feet bgs (B9). Difficult drilling conditions resulting from apparent gravel and rock material and very dense soils resulted in not achieving target depths of 20 feet in the borings.

Soil samples were collected using stainless steel sampling rods lined with acetate sleeves. Soil samples were generally collected at depths of one foot bgs and at approximately five foot vertical depth increments or until refusal in each of the borings. The acetate sleeves were cut, sealed with Parafilm® sheets, capped, appropriately labeled and placed into a chilled cooler for transport to Baseline Analytical Services (Baseline) of Huntington Beach, California. A total of (36) soil samples were collected from the soil borings. Twenty-four (24) of the soil samples were analyzed for total petroleum hydrocarbons (TPH) by United States EPA test Method 8015B and twelve (12) of the soil samples were analyzed volatile organic compounds (VOCs) by EPA test Method 8260B.

Six of the 12 soil borings were converted to temporary soil gas probes installed at depths ranging from five to 17 feet at each of the respective boring locations. Soil gas probe installation was conducted by Astech Environmental, and soil gas sampling was conducted by Baseline Analytical of Huntington Beach, California under the oversight of AEC. Polyethylene tubing (1/4-inch diameter) equipped with an anchor was inserted through the probe holes and extended to the target sampling depth. The probe was gently lifted up from the bottom of the borehole and sand was poured down the borehole to encase the filter with a minimum of six inches of sand pack. Approximately six inches to one foot of dry granular bentonite was placed on top of the sand pack. The soil gas well was then completed to the surface with hydrated bentonite. The probe was allowed to set for at least two hours prior to sampling to allow the bentonite time to properly seal. After two hours following the installation of each vapor probe, Baseline collected soil vapor samples from the probes.

Eleven soil gas samples were collected using Tedlar™ bags, which connected to the tubing exiting the surface of the ground. During the sampling, a leak-check compound was placed near and around the sample trains. All soil gas samples were analyzed for VOCs by EPA test Method 8260B by Baseline. After the soil gas samples were collected, the vapor probes were removed from the boreholes.

Upon completion of drilling and sampling, the soil borings were backfilled with hydrated bentonite granules and capped to match existing surface conditions. Soil sampling equipment was decontaminated between uses by washing with a non-phosphate detergent solution followed by successive rinses in distilled water.

3.0 INVESTIGATION RESULTS AND DISCUSSION

3.1 Subsurface Conditions

Soil conditions encountered during exploration activities at the Site consisted primarily of light brown to dark brown, slightly plastic sand and clay mixtures and brown to dark brown, slightly dense, sand and gravel mixtures to approximately 10 feet bgs and light grey to brown, dense, decomposed granite mixtures to 10 and 15 feet bgs. Artificial fill material was noted as being present throughout the Site at varying depths. No staining or odors indicative of petroleum hydrocarbons were identified in any of the borings during the investigation. Groundwater was not encountered in the borings drilled during this investigation.

3.2 Soil Analytical Laboratory Data

TPH and VOC analytical results are presented in Table 1. The analytical laboratory report and chain-of-custody documentation are included in Appendix B.

TPH and VOCs

Neither TPH nor VOCs were detected at or above the laboratory reporting limits in any of the soil samples analyzed.

3.3 Soil Gas Analytical Laboratory Data

VOC analytical results are presented in Table 2. The analytical laboratory report and chain-of-custody documentation are included in Appendix B.

VOCs

No VOCs were detected at or above the laboratory reporting limits in any of the soil gas samples collected at the Site.

4.0 CONCLUSIONS AND RECOMMENDATIONS

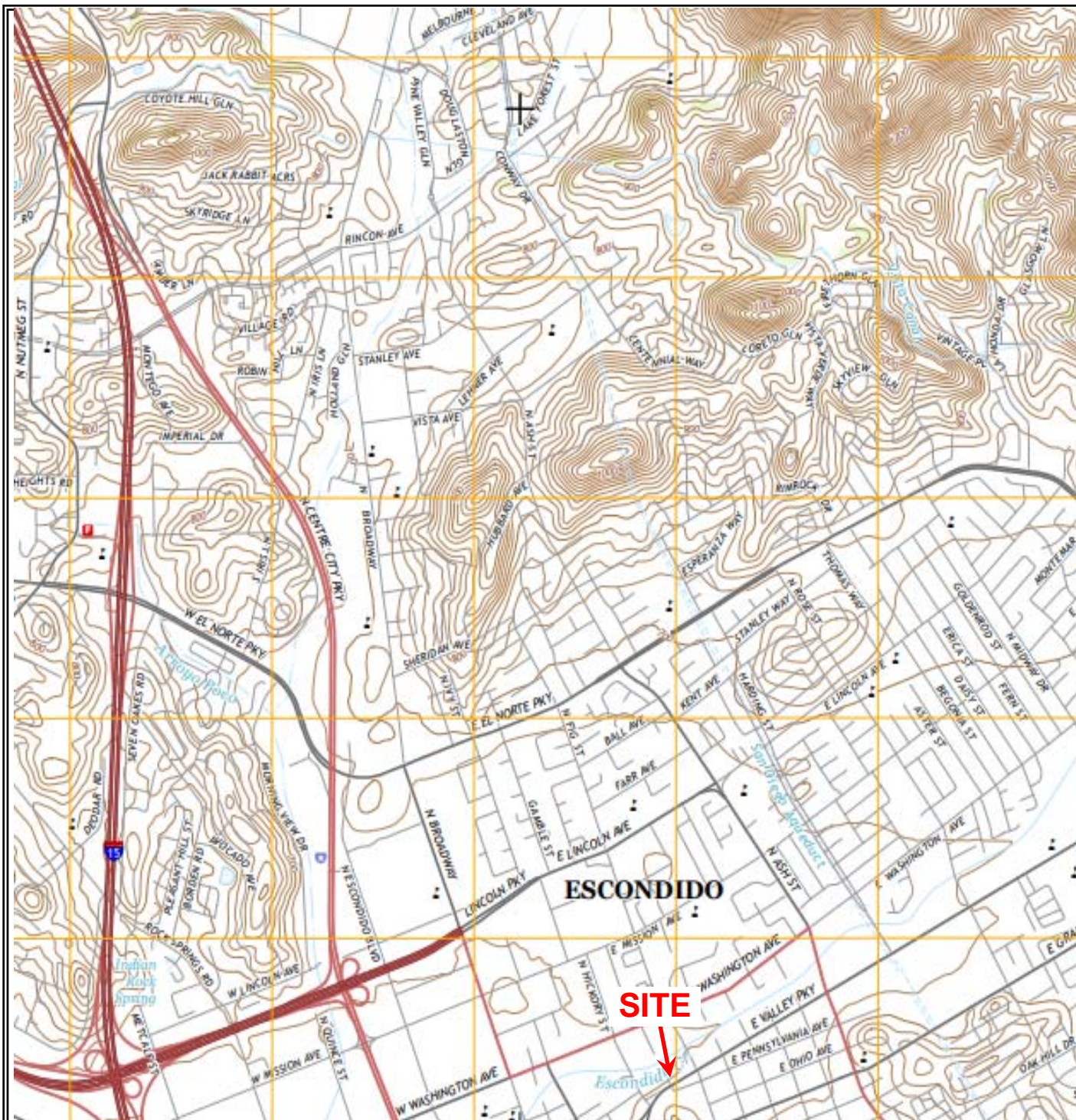
Conclusions and recommendations of this assessment are as follows:

- The geophysical survey revealed the presence of USTs at the Site. AEC has recommended to the client to budget for the removal of upwards to five USTs (to account for existing known and possible undocumented tanks) be assumed.
- No contaminants of concern were detected in the soil and soil gas samples collected at the Site.
- All data obtained during the subsurface investigation is considered to be valid and useful for decision-making purposes. In addition, no upset conditions occurred during the sampling events or completion of the laboratory analysis that may have adversely influenced the results of the investigation.
- Additional assessment at the Site is not considered to be warranted at this time.

5.0 LIMITATIONS

The services provided by AEC have been performed in accordance with practices and standards generally accepted by environmental scientists practicing in this industry. No other warranty, either expressed or implied, is made. The results and conclusions described herein are based on a limited geophysical survey and subsurface sampling program and do not purport to identify any and all sources or locations of USTs and/or subsurface impacts that may exist at the Site. Variations to the subsurface features noted during the completion of this geophysical survey may exist. It should also be noted that geophysical surveys are limited by a variety of factors including soil type, cultural interferences, and surface metal mass. Subsurface conditions at a given location may not be representative of conditions in other areas on the Site. In addition, conditions may change at any particular location as a function of time in response to natural conditions, chemical reactions, and other factors. Our conclusions regarding the condition of the Site does not represent a warranty that all areas of the Site are similar to those sampled. AEC is not responsible for the conclusions, opinions, or recommendations made by others based on this information.

FIGURES



Valley Center, CA 7.5' topographic quadrangle 2015



145 Vallecitos De Oro, Suite 201
San Marcos, CA 92069
Phone: 760-744-3363 Fax: 760-744-3383

Vicinity Map
Palomar Hospital Campus
555 East Valley Parkway
Escondido, California 92024

Work Order No.:
18-078SD


Report Date:
April 2018

Drawn By:
KL




 Scale
 1"=~200'

 Soil Boring Location

 Soil Boring Location With Soil Vapor Probe



145 Vallecitos De Oro, Suite 201
 San Marcos, CA 92069

Phone: 760-744-3363
 Fax: 760-744-3383

Site Plan

Palomar Health Campus
 555 East Valley Parkway
 Escondido, CA 92025

Work Order No.:
 18-078SD

Report Date:
 April 2018

Drawn By:
 KL

TABLES

TABLE 1
SOIL ANALYTICAL RESULTS

Palomar Hospital Campus
555 East Valley Parkway
Escondido, California 92025

Sample Identification	Depth (feet)	Date Collected	TPH concentrations (mg/kg)			Volatile Organic Compounds (mg/kg)
			TPHg	TPHd	TPHwo	
B1-5	5	3/26/2018	ND(<10)	ND(<10)	ND(<10)	--
B1-13	13	3/26/2018	ND(<10)	ND(<10)	ND(<10)	ND
B2-10	10	3/26/2018	ND(<10)	ND(<10)	ND(<10)	--
B2-15	15	3/26/2018	ND(<10)	ND(<10)	ND(<10)	ND
B3-1	1	3/26/2018	ND(<10)	ND(<10)	ND(<10)	--
B3-10	10	3/26/2018	ND(<10)	ND(<10)	ND(<10)	ND
B4-1	1	3/26/2018	ND(<10)	ND(<10)	ND(<10)	--
B4-10	10	3/26/2018	ND(<10)	ND(<10)	ND(<10)	--
B4-13	13	3/26/2018	ND(<10)	ND(<10)	ND(<10)	ND
B5-1	1	3/26/2018	ND(<10)	ND(<10)	ND(<10)	--
B5-5	5	3/26/2018	ND(<10)	ND(<10)	ND(<10)	ND
B6-5	5	3/26/2018	ND(<10)	ND(<10)	ND(<10)	--
B6-10	10	3/26/2018	ND(<10)	ND(<10)	ND(<10)	ND
B7-5	5	3/26/2018	ND(<10)	ND(<10)	ND(<10)	--
B7-10	10	3/26/2018	ND(<10)	ND(<10)	ND(<10)	ND
B8-5	5	3/26/2018	ND(<10)	ND(<10)	ND(<10)	--
B8-10	10	3/26/2018	--	--	--	ND
B8-13	13	3/26/2018	ND(<10)	ND(<10)	ND(<10)	--
B9-1	1	3/26/2018	ND(<10)	ND(<10)	ND(<10)	ND
B10-1	1	3/26/2018	ND(<10)	ND(<10)	ND(<10)	--
B10-10	10	3/26/2018	ND(<10)	ND(<10)	ND(<10)	ND
B11-1	1	3/26/2018	ND(<10)	ND(<10)	ND(<10)	--
B11-5	5	3/26/2018	ND(<10)	ND(<10)	ND(<10)	--
B11-10	10	3/26/2018	--		--	ND
B12-5	5	3/26/2018	ND(<10)	ND(<10)	ND(<10)	--
B12-10	10	3/26/2018	ND(<10)	ND(<10)	ND(<10)	ND

-- = Not analyzed

ND = Not detected at or above the laboratory method reporting limit

mg/kg = Milligrams per kilogram

TPHg = Total Petroleum Hydrocarbons as Gasoline

TPHd = Total Petroleum Hydrocarbons as Diesel

TPHwo = Total Petroleum Hydrocarbons as Waste Oil

Table 2
Soil Gas Analytical Results
Palomar Hospital Campus
555 East Valley Parkway
Escondido, California

Boring Name	Sample ID	Depth (feet)	Volatile Organic Compounds (µg/L)
B1	SV1-5'	5	ND
B1	SV1-13'	13	ND
B2	SV2-5'	5	ND
B2	SV2-17'	17	ND
B3	SV3-5	5	ND
B3	SV3-13	13	ND
B4	SV4-5	5	ND
B4	SV4-13	13	ND
B5	SV5-5	5	ND
B6	SV6-5	5	ND
B6	SV6-10	10	ND

Notes:

Samples analyzed by US EPA Test Method 8260B

µg/L = micrograms per liter

ND = Not detected at or above the laboratory reporting limit

APPENDIX A

GEOPHYSICAL SURVEY REPORT

**GEOPHYSICAL EVALUATION
PALOMAR MEDICAL CENTER ESCONDIDO
ESCONDIDO, CALIFORNIA**

PREPARED FOR:

Advantage Environmental Consultants, LLC
145 Vallecitos De Oro, Suite 201
San Marcos, CA 92069

PREPARED BY:

Southwest Geophysics, Inc.
8057 Raytheon Road, Suite 9
San Diego, CA 92111

March 31, 2018
Project No. 118113

March 31, 2018
Project No. 118113

Mr. Daniel A. Weis
Advantage Environmental Consultants, LLC
145 Vallecitos De Oro, Suite 201
San Marcos, CA 92069

Subject: Geophysical Evaluation
Palomar Medical Center Escondido
Escondido, California

Dear Mr. Weis:

In accordance with your authorization, we are pleased to submit this data report pertaining to our geophysical evaluation for portions of the Palomar Medical Center Escondido in Escondido, California. The purpose of our evaluation was to assess the presence of buried underground storage tanks (USTs) and/or backfilled excavations associated with UST removal at four different locations inside the subject property. In addition, the presence of detectable underground utilities was evaluated in the UST survey areas and in the vicinity of a total of 12 proposed borehole locations. Our services were conducted on March 13, 2018. This report presents the survey methodology, equipment used, analysis, and results from our study.

We appreciate the opportunity to be of service on this project. Should you have any questions please contact the undersigned at your convenience.

Sincerely,
SOUTHWEST GEOPHYSICS, INC.



Afrildo Iko Syahril
Project Geologist/Geophysicist

AIS/CFS/PFL/pfl

Distribution: Addressee (electronic)



Patrick F. Lehrmann, P.G., P.Gp.
Principal Geologist/Geophysicist



TABLE OF CONTENTS

	<u>Page</u>
1. INTRODUCTION	1
2. SCOPE OF SERVICES	1
3. SITE DESCRIPTION	1
4. GEOPHYSICAL INSTRUMENTATION AND APPLICATIONS	2
5. SURVEY METHODOLOGY	4
6. RESULTS, CONCLUSIONS, AND RECOMMENDATIONS	4
7. LIMITATIONS	6

Figures

- Figure 1 – Site Location Map
- Figure 2a – Site Data Map, Area 1
- Figure 2b – Site Data Map, Area 2
- Figure 2c – Site Data Map, Area 3
- Figure 2d – Site Data Map, Area 4
- Figure 3a – Site Photographs (Area 1)
- Figure 3b – Site Photographs (Area 2)
- Figure 3c – Site Photographs (Area 3)
- Figure 3d – Site Photographs (Area 4)

1. INTRODUCTION

In accordance with your authorization, we are pleased to submit this data report pertaining to our geophysical evaluation for portions of the Palomar Medical Center Escondido in Escondido, California (Figure 1). The purpose of our evaluation was to assess the presence of buried underground storage tanks (USTs) and/or backfilled excavations associated with UST removal at four different locations inside the subject property. In addition, the presence of detectable underground utilities was evaluated in the UST survey areas and in the vicinity of a total of 12 proposed borehole locations. Our services were conducted on March 13, 2018. This report presents the survey methodology, equipment used, analysis, and results from our study.

2. SCOPE OF SERVICES

Our scope of services included:

- Performance of a geophysical survey at the subject site. Our survey included the use of a Geonics model EM61 MK2 time domain instrument, GSSI SIR 3000 Ground Penetrating Radar (GPR) unit using a 400 MHz transducer, Schonstedt GA-52 magnetic gradiometer, Fisher M-Scope TW-6 pipe and cable locator, and RD8000 line tracer.
- Site reconnaissance including field mapping of surface structures at and near the survey areas.
- Compilation and analysis of the data collected.
- Preparation of this report presenting our findings, conclusions, and recommendations.

3. SITE DESCRIPTION

The subject property is located at northeast corner of East Grand Avenue and East Valley Boulevard in Escondido, California (Figure 1). The site is currently an active Medical Center. Specifically, our study included a total of two active UST areas and two former UST areas which are generally located on eastern side of the property. The two active USTs areas were located at the northeast side of the property in the planter and in the parking lot and labeled as Areas 1 and 2, respectively. The two former UST areas were located at the loading dock and a parking lot south of the loading dock adjacent with trash dumpster area and labeled as Areas 3 and 4, respectively. Improvement at the site include an asphalt paved parking lot, planter, and a loading dock. Figures 2a through 2d, and 3a through 3d depict the general site conditions in the study areas.

Based on our discussions with you, it is our understanding that Areas 1 and 2 had active USTs, while Areas 3 and 4 reportedly had USTs some time in the past. It is also our understanding, that details regarding the location and/or removal of the USTs in Areas 3 and 4 were not available. Additionally, detectable underground utilities were delineated in the vicinity of twelve proposed boring locations scattered throughout the subject property.

4. GEOPHYSICAL INSTRUMENTATION AND APPLICATIONS

Our evaluation included the use of a Geonics model EM61, GSSI SIR 3000 GPR, Schonstedt, model GA-52C magnetic gradiometer, Fisher M-Scope TW-6 pipe and cable locator, and RD8000 line tracer. These instruments provide real-time results and facilitate the delineation of subsurface features.

The EM61 instrument is a high resolution, time-domain device for detecting buried conductive objects. It consists of a powerful transmitter that generates a pulsed primary magnetic field when its coils are energized, which induces eddy currents in nearby conductive objects. The decay of the eddy currents, following the input pulse, is measured by the coils, which in turn serve as receiver coils. The decay rate is measured for two coils, mounted concentrically, one above the other. By making the measurements at a relatively long-time interval (measured in milliseconds) after termination of the primary pulse, the response is nearly independent of the electrical conductivity of the ground. Thus, the instrument is a super-sensitive metal detector. Due to its unique coil arrangement, the response curve is a single well-defined positive peak directly over a buried conductive object. This facilitates quick and accurate location of targets. Conductive objects to a depth of approximately 11 feet generally can be detected.

The GPR instrument beams energy into the ground from its transducer/antenna, in the form of electromagnetic waves. A portion of this energy is reflected back to the antenna at boundaries in the subsurface across which there are an electrical contrast. The recorder continuously makes a record of the reflected energy as the antenna is moved across the ground surface. The greater the electrical contrast, the higher the amplitude of the returned energy. The EM wave travels at a ve-

locity unique to the material properties of the ground being studied, and when these velocities are known, or closely estimated from ground conductivity values and other information, two-way travel times can be converted to depth. Penetration into the ground and resolution of the GPR images produced are a function of ground electrical conductivity and dielectric constant. Images tend to be graphic, even at considerable depth, in sandy soils, but penetration and resolution may be limited in more conductive clayey moist ground.

The magnetic gradiometer has two fluxgate magnetic fixed sensors that are passed closely to and over the ground. When not in close proximity to a magnetic object, that is, only in the earth's field, the instrument emits an audible signal at a low frequency. When the instrument passes over buried iron or steel objects (so that the field is significantly different at the two sensors) the frequency of the emitted sound increases. Frequency is a function of the gradient between the two sensors.

The M-Scope TW-6 device energizes the ground by producing an alternating primary magnetic field with alternating current (AC) in the transmitting coil. If conducting materials (including soils) are within the area of influence of the primary field, AC eddy currents are induced to flow in the conductors. A receiving coil senses the secondary magnetic field produced by these eddy currents, and outputs an audio response. The strength of the secondary field is a function of the conductivity of the object, its size, and its depth and position relative to the instrument's two coils. Conductive objects to a depth of approximately 10 feet are sensed. Also, the device is somewhat focused, that is, it is more sensitive to conductors below (and above) the instrument, than to conductors off to the side.

Where risers are present, the RD8000 utility locator transmitter can be connected to the object, and a current is impressed on the conductor pipe or cable. The receiver unit is tuned to this same frequency, and it is used to trace the pipe's surface projection away from the riser. The transmitter and receiver can also be used in a non-connect (induction) mode, whereby the transmitter is positioned on the ground and an electromagnetic signal is emitted. In the presence of buried metal pipes and wires, a discrete signal will be induced on the conductor which can be sensed by the

receiver. In addition, the instrument may be used in the passive mode, whereby radio and 60 Hz electromagnetic signals produced by communication and live electric lines are detected.

5. SURVEY METHODOLOGY

In order to facilitate the collection of EM61 data, a grid measuring 35 feet by 30 feet was established for Area 1, 30 feet by 35 feet for Area 2, 75 feet by 85 feet for Area 3, and 50 feet by 50 feet for Area 4. The limits of our EM61 survey areas were defined by your field representative (see Figures 2a through 2d). Traverses with the EM61 were conducted along roughly south-north profile lines spaced 5 feet apart across accessible portions of the survey areas. GPR traverses were conducted along roughly north-south and east-west profiles spaced approximately 5 feet apart. GPR traverses were also performed along random profiles across and near detected features. Traverses with the M-Scope and gradiometer were conducted along traverses spaced approximately 5 feet apart. The line tracer was used in passive, direct connect and inductive modes to delineate the presence of underground utilities in the study area and in the vicinity of twelve proposed borehole locations. The recorded EM61 data were downloaded to a portable computer in the field for preliminary analysis and significant anomalies as well as detectable underground utilities were marked on the ground surface with paint and reported to your field representative.

6. RESULTS, CONCLUSIONS, AND RECOMMENDATIONS

As previously discussed, the primary purpose of our evaluation was to assess the presence of USTs and/or backfilled excavations associated with UST removal at four different areas. In addition, the presence of detectable underground utilities was evaluated at the UST study areas and in the vicinity of twelve proposed boring locations.

As expected, the results of our field evaluation of Areas 1 and 2 revealed the presence of a UST at each of these locations. The USTs in Area 1 and 2 are currently active and service the medical center (see Figures 2a and 2b for Area 1 and 2, respectively). These existing USTs each had a high amplitude EM response which was also fairly large in areal extent, extending beyond the reinforced concrete pads and tank access ports. Other EM responses appear to be the effect of

UST elements and/or the surface features, such as tank access ports, reinforced concrete, water valves, and manholes. Figures 3a and 3b are presented to demonstrate site conditions of Areas 1 and 2, respectively.

The result of our evaluation of Area 3 and Area 4 did not reveal the presence of USTs (see Figures 2c and 2d). However, several anomalous EM responses were observed within these study areas. These EM responses appear to be the effect of the surface features such as metal railings, bollards, reinforced concrete areas, water vaults, water risers, manholes, and storm drain valve. Figures 3c and 3d are presented to demonstrate site conditions of Areas 3 and 4, respectively.

Several underground utilities and unidentified lines were also detected during our evaluation of each of the USTs study areas. The locations of these lines are shown on Figures 2a through 2d and 3a through 3d.

Additionally, the presence of detectable underground utilities was evaluated in the vicinity of twelve proposed borings located throughout the subject property. When conflicts occurred, the borings moved accordingly with your approval.

In order to further assess the features described above, we recommend that more direct methods be used. Such methods may include the excavation of exploratory trenches/test pits or borings.

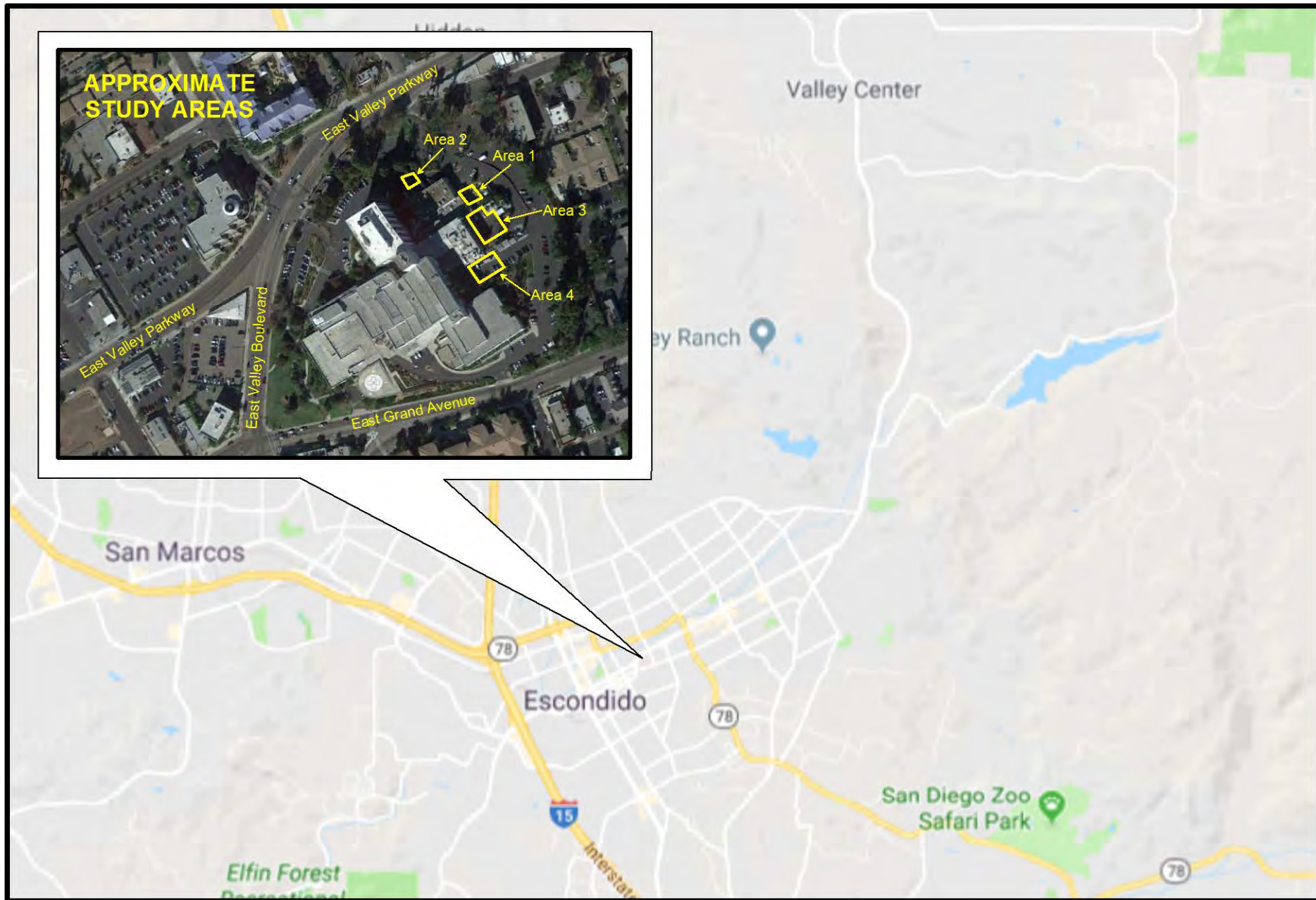
Our survey utilized industry standard equipment (i.e., GPR, electromagnetic, and magnetic instruments) and was conducted in general accordance with current practice. It should be noted, however, the presence of existing structures and surface objects (i.e., building elements, reinforced concrete, bollards, cut-off posts, cars, etc.) potentially limited the survey. Where obstructions were present, subsurface data could not be collected. Moreover, EM/magnetic responses produced by metal surface objects and underground lines can potentially obscure subsurface features. Figures 2a through 2d, and 3a through 3d present the general site conditions and some of the obstructions encountered. Radar penetration at the site was on the order of 1 to 2 feet below the ground surface; therefore, objects below this depth would not have been detected with GPR.

7. LIMITATIONS

The field evaluation and geophysical analyses presented in this report have been conducted in general accordance with current practice and the standard of care exercised by consultants performing similar tasks in the project area. No warranty, express or implied, is made regarding the conclusions and opinions presented in this report. There is no evaluation detailed enough to reveal every subsurface condition. Variations may exist and conditions not observed or described in this report may be present. Uncertainties relative to subsurface conditions can be reduced through additional subsurface surveying and/or exploration. Additional subsurface surveying can be performed upon request.

Please also note that our evaluation was limited to the detection of USTs and/or backfilled tank excavations, as well as the presence of detectable underground lines. “USA” or “Dig Alert” should also be contacted prior to conducting subsurface exploration activities. In addition, we recommend that available utility plans/drawings of the project site be reviewed as appropriate.

This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Southwest Geophysics, Inc. should be contacted if the reader requires additional information or has questions regarding the content, interpretations presented, or completeness of this document. This report is intended exclusively for use by the client. Any use or reuse of this report by parties other than the client is undertaken at said parties’ sole risk.



SITE LOCATION MAP

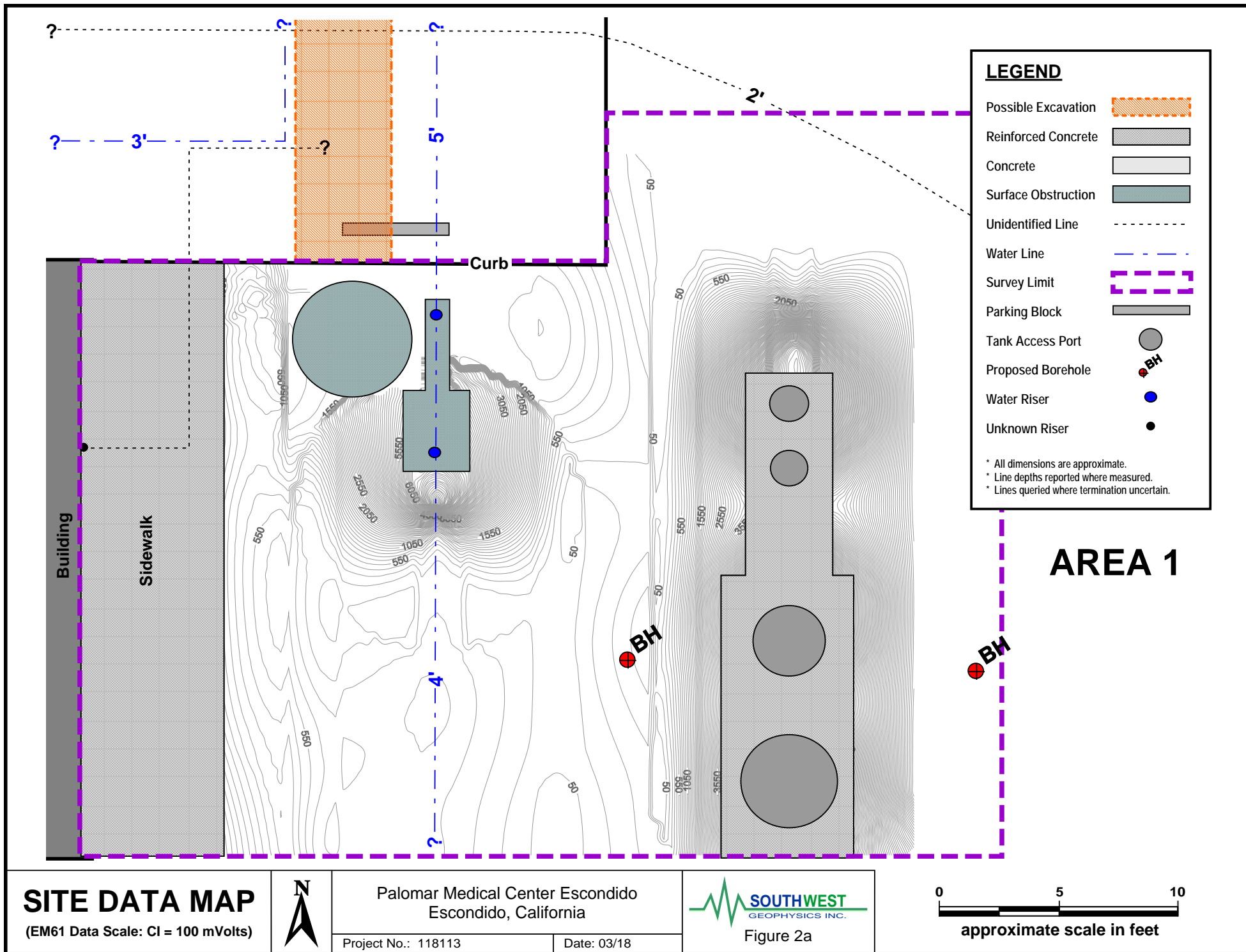


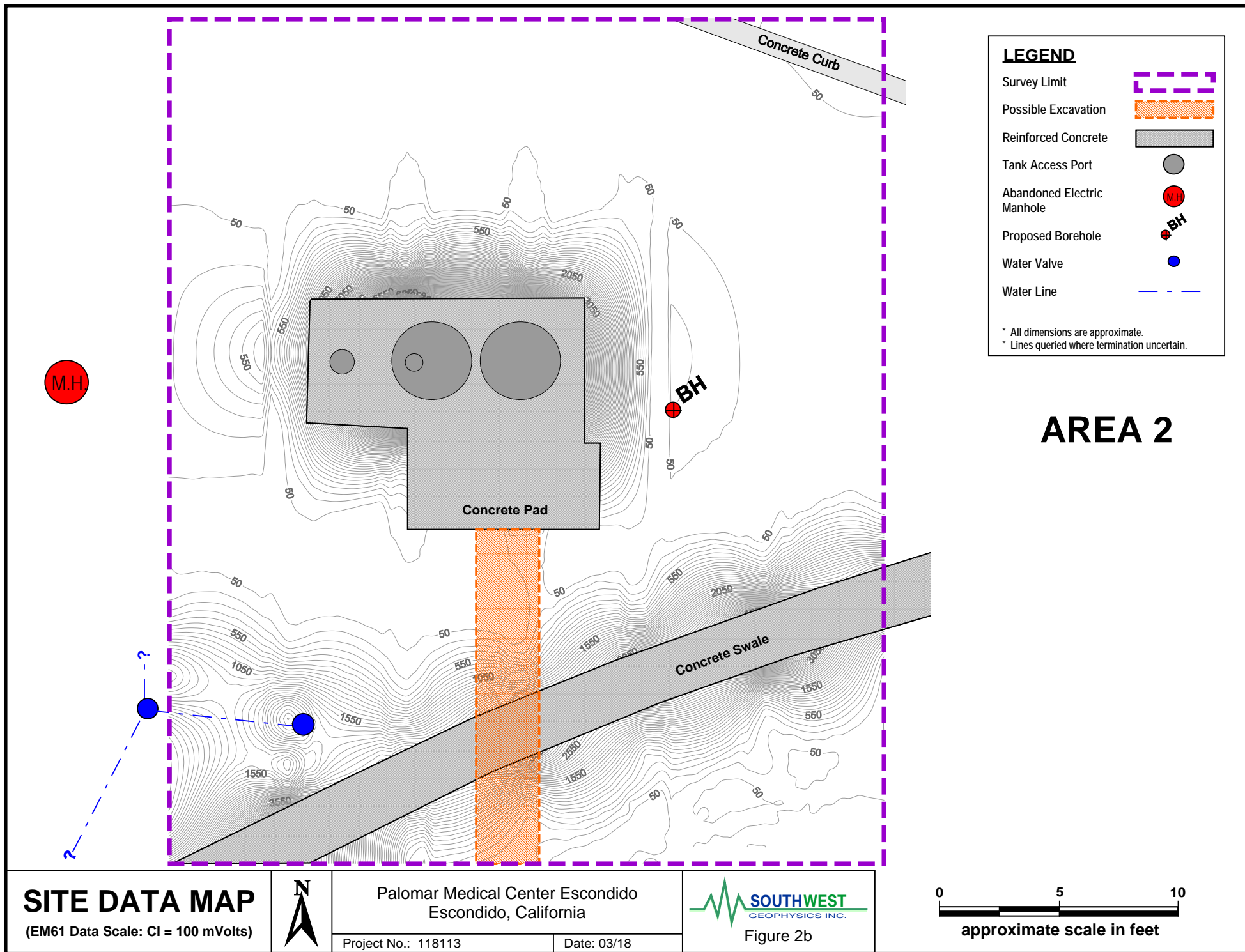
Palomar Medical Center Escondido
Escondido, California

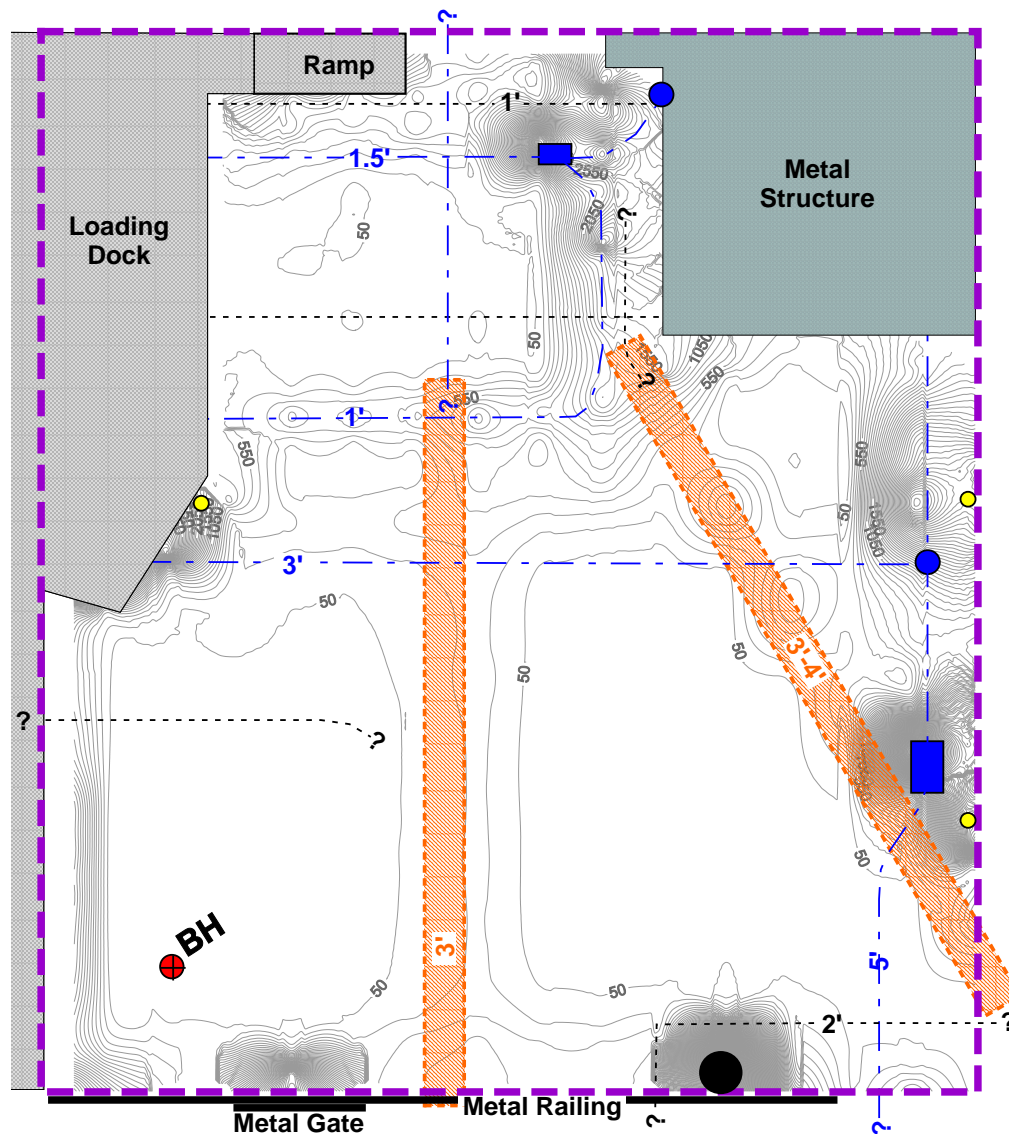
Project No.: 118113

Date: 03/18

 **SOUTHWEST**
GEOPHYSICS INC.
Figure 1







LEGEND

- Possible Excavation
- Reinforced Concrete
- Surface Obstruction
- Unidentified Line
- Water Line
- Survey Limit
- Proposed Borehole
- Unidentified Manhole
- Water Vault
- Water Riser
- Bollard

* All dimensions are approximate.
 * Line depths reported where measured.
 * Lines queried where termination uncertain.

AREA 3

SITE DATA MAP

(EM61 Data Scale: CI = 100 mVolts)



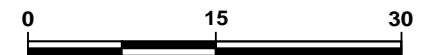
Palomar Medical Center Escondido
 Escondido, California

Project No.: 118113

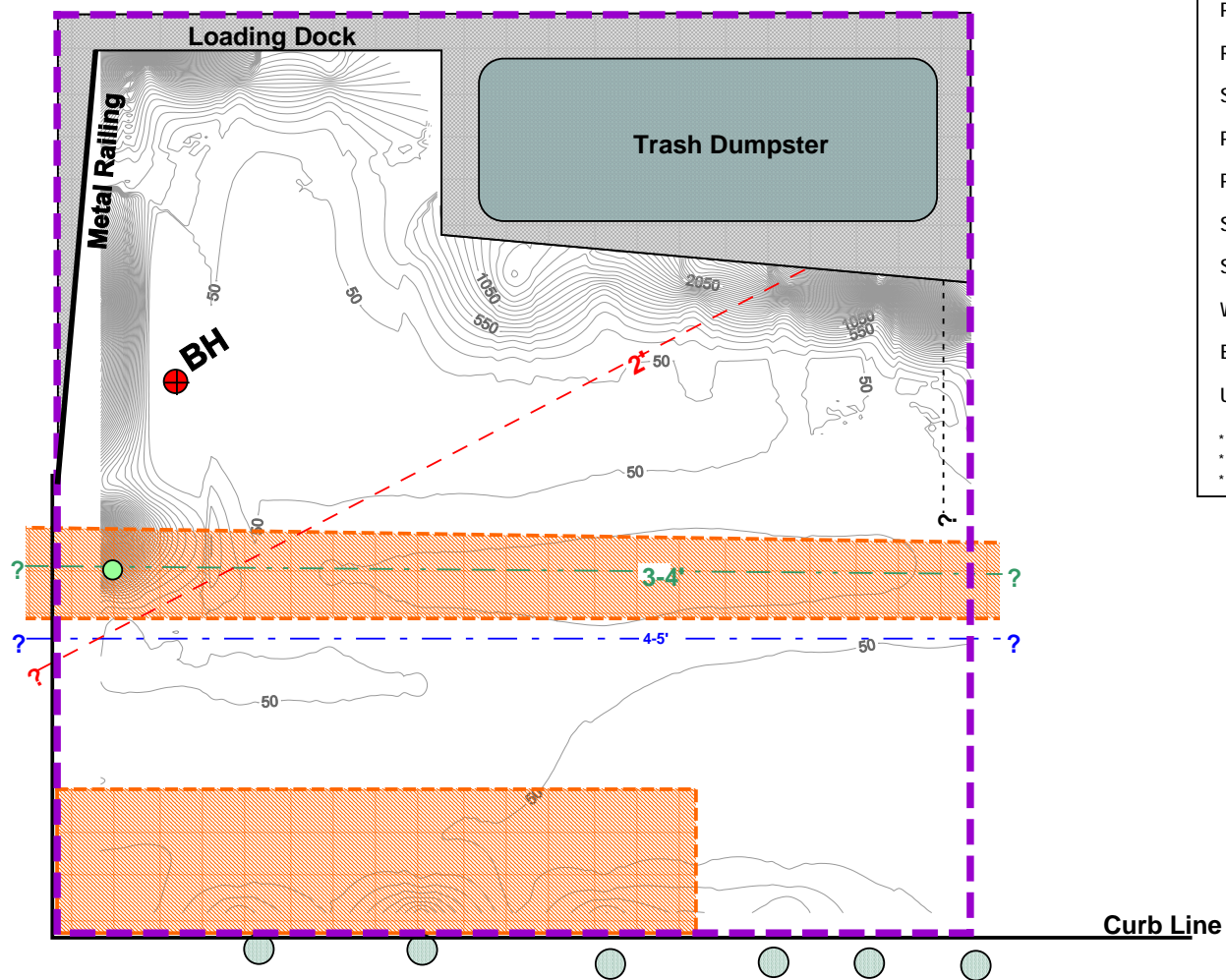
Date: 03/18



Figure 2c



approximate scale in feet



LEGEND

Survey Limit	
Possible Excavation	
Reinforced Concrete	
Surface Obstruction	
Proposed Borehole	
Planter	
Storm Drain Valve	
Storm Drain Line	
Water ine	
Electric Line	
Unidentified Line	

* All dimensions are approximate.
 * Line depths reported where measured.
 * Lines queried where termination uncertain.

AREA 4

SITE DATA MAP
 (EM61 Data Scale: CI = 100 mVolts)

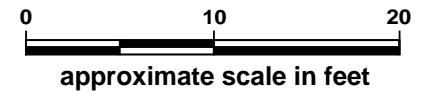


Palomar Medical Center Escondido
 Escondido, California

Project No.: 118113

Date: 03/18

SOUTHWEST
 GEOPHYSICS INC.
 Figure 2d





SITE PHOTOGRAPHS (Area 1)

Palomar Medical Center Escondido
Escondido, California

Project No.: 118113

Date: 03/18



Figure 3a



SITE PHOTOGRAPHS (Area 2)

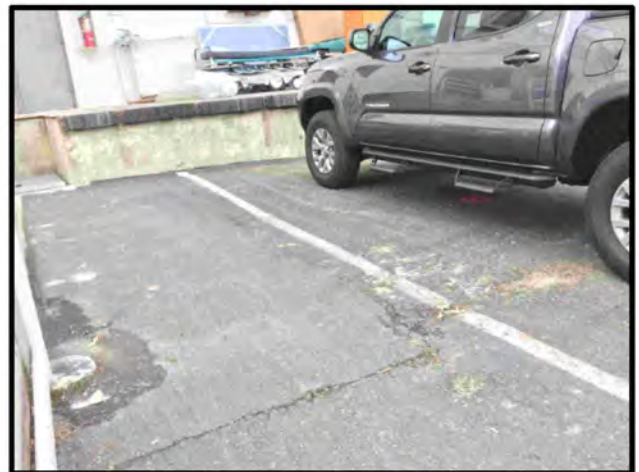
Palomar Medical Center Escondido
Escondido, California

Project No.: 118113

Date: 03/18



Figure 3b



SITE PHOTOGRAPHS (Area 3)

Palomar Medical Center Escondido
Escondido, California

Project No.: 118113

Date: 03/18



Figure 3c



SITE PHOTOGRAPHS (Area 4)

Palomar Medical Center Escondido
Escondido, California

Project No.: 118113

Date: 03/18



Figure 3d

APPENDIX B

ANALYTICAL LABORATORY REPORTS

Laboratory Report

Client: Advantage Environmental Consultants, LLC
Client Address: 145 Vallecitos De Oro, Suite 201
San Marcos, CA 92069

Report Date: 3/29/18
Lab Project Number: 18169
Client Project Number: 18-078SD

Project Name: Palomar Health Campus
Project Address: 555 East Valley Parkway
Escondido, California
Contact: Dan Weis

Dates Sampled: 3/26/18
Dates Received: 3/26/18
Dates Analyzed: 3/28/18
Sample Matrix: Soil

Analyses Requested:

1. EPA 8015B – Total Petroleum Hydrocarbons as Gasoline (TPH-G)
2. EPA 8015B – Total Petroleum Hydrocarbons as Diesel (TPH-D)
3. EPA 8015B – Total Petroleum Hydrocarbons as Waste Oil (TPH-WO)
4. EPA 8260B – Volatile Organic Compounds (VOC's) with Fuel Oxygenates

Baseline received samples collected from the project shown above. A Chain-of-Custody Record (COC) is attached.

The samples were analyzed for the parameters shown above per the COC. In this report, Baseline presents the results and a QA/QC summary for these analyses.



Approved

Brian K. Kato, Laboratory Manager

Laboratory Report

Client: Advantage Environmental Consultants, LLC
Client Address: 145 Vallecitos De Oro, Suite 201
San Marcos, CA 92069

Report Date: 3/29/18
Lab Project Number: 18169
Client Project Number: 18-078SD

Project Name: Palomar Health Campus
Project Address: 555 East Valley Parkway
Escondido, California
Contact: Dan Weis

Dates Sampled: 3/26/18
Dates Received: 3/26/18
Dates Analyzed: 3/28/18
Sample Matrix: Soil

Total Petroleum Hydrocarbons as Gasoline (TPH-G), Diesel (TPH-D), and Waste Oil (TPH-WO) Results

Constituent:	TPH-G	TPH-D	TPH-WO
Carbon Chain Range:	8015B	8015B	8015B
Method:	C4-C12	C10-C28	C29-C36
Units:	mg/kg	mg/kg	mg/kg
Sample ID			
B1-5	ND<10	ND<10	ND<10
B1-13	ND<10	ND<10	ND<10
B2-10	ND<10	ND<10	ND<10
B2-15	ND<10	ND<10	ND<10
B3-1	ND<10	ND<10	ND<10
B3-10	ND<10	ND<10	ND<10
B4-1	ND<10	ND<10	ND<10
B4-10	ND<10	ND<10	ND<10
B4-13	ND<10	ND<10	ND<10
B5-1	ND<10	ND<10	ND<10
B5-5	ND<10	ND<10	ND<10
B6-5	ND<10	ND<10	ND<10
B6-10	ND<10	ND<10	ND<10
B7-5	ND<10	ND<10	ND<10
B7-10	ND<10	ND<10	ND<10
B8-5	ND<10	ND<10	ND<10
B8-13	ND<10	ND<10	ND<10
B9-1	ND<10	ND<10	ND<10
B10-1	ND<10	ND<10	ND<10
B10-10	ND<10	ND<10	ND<10
B11-1	ND<10	ND<10	ND<10
B11-5	ND<10	ND<10	ND<10
B12-5	ND<10	ND<10	ND<10
B12-10	ND<10	ND<10	ND<10
Method Blank	ND<10	ND<10	ND<10

ND: Not detected at the indicated reporting limit (PQL)

Laboratory Report

Client: Advantage Environmental Consultants, LLC
Client Address: 145 Vallecitos De Oro, Suite 201
San Marcos, CA 92069

Project Name: Palomar Health Campus
Project Address: 555 East Valley Parkway
Escondido, California
Contact: Dan Weis

Report Date: 3/29/18
Lab Project Number: 18169
Client Project Number: 18-078SD
Dates Sampled: 3/26/18
Dates Received: 3/26/18
Dates Analyzed: 3/28/18
Sample Matrix: Soil

Volatiles Organic Compounds (EPA 8260B) - Part I

EPA Method:	8260B	8260B	8260B	8260B	8260B	8260B
Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Dilution Factor:	1	1	1	1	1	1
Sample ID:	B1-13	B2-15	B3-10	B4-13	B5-5	B6-10
Compound Name						
<u>Volatiles Aromatics (BTEX)</u>						
Benzene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Toluene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Ethylbenzene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Total Xylenes	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
<u>Fuel Oxygenates</u>						
Methyl t-Butyl Ether (MTBE)	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
t-Butanol (TBA)	ND<0.025	ND<0.025	ND<0.025	ND<0.025	ND<0.025	ND<0.025
Di-Isopropyl Ether (DIPE)	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Ethyl t-Butyl Ether (ETBE)	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
t-Amyl Methyl Ether (TAME)	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Ethanol	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
<u>Non-Halogenated VOC's</u>						
n-Butylbenzene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
sec-Butylbenzene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
tert-Butylbenzene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Isopropylbenzene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
p-isopropyltoluene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Naphthalene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
n-Propylbenzene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Styrene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
1,2,4-Trimethylbenzene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
1,3,5-Trimethylbenzene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
<u>Halogenated VOC's (HVOC's)</u>						
Bromobenzene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Bromochloromethane	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Bromoform	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Bromomethane	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Carbon Tetrachloride	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
2-Chlorotoluene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
4-Chlorotoluene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Chlorobenzene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Chloroethane	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Chloroform	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Chloromethane	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050

ND: Not detected at the indicated method detection limit

Laboratory Report

Client: Advantage Environmental Consultants, LLC
Client Address: 145 Vallecitos De Oro, Suite 201
San Marcos, CA 92069

Report Date: 3/29/18
Lab Project Number: 18169
Client Project Number: 18-078SD

Project Name: Palomar Health Campus
Project Address: 555 East Valley Parkway
Escondido, California
Contact: Dan Weis

Dates Sampled: 3/26/18
Dates Received: 3/26/18
Dates Analyzed: 3/28/18
Sample Matrix: Soil

Volatile Organic Compounds (EPA 8260B) - Part II

EPA Method:	8260B	8260B	8260B	8260B	8260B	8260B
Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Dilution Factor:	1	1	1	1	1	1
Sample ID:	B1-13	B2-15	B3-10	B4-13	B5-5	B6-10
Compound Name						
<i>HVOC's. continued</i>						
Dibromochloromethane	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
1,2-Dibromo-3-Chloropropane	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
1,2-Dibromomethane	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
1,2-Dichlorobenzene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
1,3-Dichlorobenzene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
1,4-Dichlorobenzene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Dichlorodifluoromethane	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
1,1-Dichloroethane	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
1,2-Dichloroethane	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
1,1-Dichloroethene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
cis-1,2-Dichloroethene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
trans-1,2-Dichloroethene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
1,2-Dichloropropane	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
1,3-Dichloropropane	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
2,2-Dichloropropane	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
1,1-Dichloropropene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Hexachlorobutadiene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Methylene Chloride	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Tetrachloroethene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
1,1,1,2-Tetrachloroethane	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
1,1,2,2-Tetrachloroethane	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
1,2,3-Trichlorobenzene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
1,2,4-Trichlorobenzene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
1,1,1-Trichloroethane	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
1,1,2-Trichloroethane	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Trichloroethene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Trichlorofluoromethane	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
1,2,3-Trichloropropane	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Vinyl Chloride	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050

ND: Not detected at the indicated method detection limit

Laboratory Report

Client: Advantage Environmental Consultants, LLC
Client Address: 145 Vallecitos De Oro, Suite 201
San Marcos, CA 92069

Project Name: Palomar Health Campus
Project Address: 555 East Valley Parkway
Escondido, California
Contact: Dan Weis

Report Date: 3/29/18
Lab Project Number: 18169
Client Project Number: 18-078SD
Dates Sampled: 3/26/18
Dates Received: 3/26/18
Dates Analyzed: 3/28/18
Sample Matrix: Soil

Volatile Organic Compounds (EPA 8260B) - Part I

EPA Method:	8260B	8260B	8260B	8260B	8260B	8260B
Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Dilution Factor:	1	1	1	1	1	1
Sample ID:	B7-10	B8-10	B9-1	B10-10	B11-10	B12-10
Compound Name						
<u>Volatile Aromatics (BTEX)</u>						
Benzene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Toluene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Ethylbenzene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Total Xylenes	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
<u>Fuel Oxygenates</u>						
Methyl t-Butyl Ether (MTBE)	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
t-Butanol (TBA)	ND<0.025	ND<0.025	ND<0.025	ND<0.025	ND<0.025	ND<0.025
Di-Isopropyl Ether (DIPE)	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Ethyl t-Butyl Ether (ETBE)	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
t-Amyl Methyl Ether (TAME)	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Ethanol	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
<u>Non-Halogenated VOC's</u>						
n-Butylbenzene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
sec-Butylbenzene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
tert-Butylbenzene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Isopropylbenzene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
p-isopropyltoluene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Naphthalene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
n-Propylbenzene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Styrene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
1,2,4-Trimethylbenzene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
1,3,5-Trimethylbenzene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
<u>Halogenated VOC's (HVOC's)</u>						
Bromobenzene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Bromochloromethane	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Bromoform	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Bromomethane	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Carbon Tetrachloride	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
2-Chlorotoluene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
4-Chlorotoluene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Chlorobenzene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Chloroethane	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Chloroform	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Chloromethane	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050

ND: Not detected at the indicated method detection limit

Laboratory Report

Client: Advantage Environmental Consultants, LLC
Client Address: 145 Vallecitos De Oro, Suite 201
San Marcos, CA 92069

Report Date: 3/29/18
Lab Project Number: 18169
Client Project Number: 18-078SD

Project Name: Palomar Health Campus
Project Address: 555 East Valley Parkway
Escondido, California
Contact: Dan Weis

Dates Sampled: 3/26/18
Dates Received: 3/26/18
Dates Analyzed: 3/28/18
Sample Matrix: Soil

Volatile Organic Compounds (EPA 8260B) - Part II

EPA Method:	8260B	8260B	8260B	8260B	8260B	8260B
Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Dilution Factor:	1	1	1	1	1	1
Sample ID:	B7-10	B8-10	B9-1	B10-10	B11-10	B12-10
Compound Name						
<i>HVOC's. continued</i>						
Dibromochloromethane	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
1,2-Dibromo-3-Chloropropane	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
1,2-Dibromomethane	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
1,2-Dichlorobenzene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
1,3-Dichlorobenzene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
1,4-Dichlorobenzene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Dichlorodifluoromethane	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
1,1-Dichloroethane	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
1,2-Dichloroethane	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
1,1-Dichloroethene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
cis-1,2-Dichloroethene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
trans-1,2-Dichloroethene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
1,2-Dichloropropane	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
1,3-Dichloropropane	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
2,2-Dichloropropane	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
1,1-Dichloropropene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Hexachlorobutadiene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Methylene Chloride	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Tetrachloroethene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
1,1,1,2-Tetrachloroethane	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
1,1,2,2-Tetrachloroethane	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
1,2,3-Trichlorobenzene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
1,2,4-Trichlorobenzene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
1,1,1-Trichloroethane	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
1,1,2-Trichloroethane	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Trichloroethene	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Trichlorofluoromethane	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
1,2,3-Trichloropropane	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Vinyl Chloride	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050

ND: Not detected at the indicated method detection limit

Laboratory Report

Client: Advantage Environmental Consultants, LLC
Client Address: 145 Vallecitos De Oro, Suite 201
San Marcos, CA 92069

Project Name: Palomar Health Campus
Project Address: 555 East Valley Parkway
Escondido, California
Contact: Dan Weis

Report Date: 3/29/18
Lab Project Number: 18169
Client Project Number: 18-078SD
Dates Sampled: 3/26/18
Dates Received: 3/26/18
Dates Analyzed: 3/28/18
Sample Matrix: Soil

Volatile Organic Compounds (EPA 8260B) - Part I

EPA Method:	8260B
Units:	mg/kg
Dilution Factor:	1
Sample ID:	Method Blank
Compound Name	
<u>Volatile Aromatics (BTEX)</u>	
Benzene	ND<0.0050
Toluene	ND<0.0050
Ethylbenzene	ND<0.0050
Total Xylenes	ND<0.0050
<u>Fuel Oxygenates</u>	
Methyl t-Butyl Ether (MTBE)	ND<0.0050
t-Butanol (TBA)	ND<0.025
Di-Isopropyl Ether (DIPE)	ND<0.0050
Ethyl t-Butyl Ether (ETBE)	ND<0.0050
t-Any l Methyl Ether (TAME)	ND<0.0050
Ethanol	ND<0.50
<u>Non-Halogenated VOC's</u>	
n-Butylbenzene	ND<0.0050
sec-Butylbenzene	ND<0.0050
tert-Butylbenzene	ND<0.0050
Isopropylbenzene	ND<0.0050
p-isopropyltoluene	ND<0.0050
Naphthalene	ND<0.0050
n-Propylbenzene	ND<0.0050
Styrene	ND<0.0050
1,2,4-Trimethylbenzene	ND<0.0050
1,3,5-Trimethylbenzene	ND<0.0050
<u>Halogenated VOC's (HVOC's)</u>	
Bromobenzene	ND<0.0050
Bromochloromethane	ND<0.0050
Bromoform	ND<0.0050
Bromomethane	ND<0.0050
Carbon Tetrachloride	ND<0.0050
2-Chlorotoluene	ND<0.0050
4-Chlorotoluene	ND<0.0050
Chlorobenzene	ND<0.0050
Chloroethane	ND<0.0050
Chloroform	ND<0.0050
Chloromethane	ND<0.0050

ND: Not detected at the indicated method detection limit

Laboratory Report

Client: Advantage Environmental Consultants, LLC
Client Address: 145 Vallecitos De Oro, Suite 201
San Marcos, CA 92069

Report Date: 3/29/18
Lab Project Number: 18169
Client Project Number: 18-078SD

Project Name: Palomar Health Campus
Project Address: 555 East Valley Parkway
Escondido, California
Contact: Dan Weis

Dates Sampled: 3/26/18
Dates Received: 3/26/18
Dates Analyzed: 3/28/18
Sample Matrix: Soil

Volatile Organic Compounds (EPA 8260B) - Part II

EPA Method:	8260B
Units:	mg/kg
Dilution Factor:	1
Sample ID:	Method Blank
Compound Name	
<u>HVOC's. continued</u>	
Dibromochloromethane	ND<0.0050
1,2-Dibromo-3-Chloropropane	ND<0.0050
1,2-Dibromomethane	ND<0.0050
1,2-Dichlorobenzene	ND<0.0050
1,3-Dichlorobenzene	ND<0.0050
1,4-Dichlorobenzene	ND<0.0050
Dichlorodifluoromethane	ND<0.0050
1,1-Dichloroethane	ND<0.0050
1,2-Dichloroethane	ND<0.0050
1,1-Dichloroethene	ND<0.0050
cis-1,2-Dichloroethene	ND<0.0050
trans-1,2-Dichloroethene	ND<0.0050
1,2-Dichloropropane	ND<0.0050
1,3-Dichloropropane	ND<0.0050
2,2-Dichloropropane	ND<0.0050
1,1-Dichloropropene	ND<0.0050
Hexachlorobutadiene	ND<0.0050
Methylene Chloride	ND<0.0050
Tetrachloroethene	ND<0.0050
1,1,1,2-Tetrachloroethane	ND<0.0050
1,1,2,2-Tetrachloroethane	ND<0.0050
1,2,3-Trichlorobenzene	ND<0.0050
1,2,4-Trichlorobenzene	ND<0.0050
1,1,1-Trichloroethane	ND<0.0050
1,1,2-Trichloroethane	ND<0.0050
Trichloroethene	ND<0.0050
Trichlorofluoromethane	ND<0.0050
1,2,3-Trichloropropane	ND<0.0050
Vinyl Chloride	ND<0.0050

ND: Not detected at the indicated method detection limit

Laboratory Report

Client: Advantage Environmental Consultants, LLC
Client Address: 145 Vallecitos De Oro, Suite 201
San Marcos, CA 92069
Project Name: Palomar Health Campus
Project Address: 555 East Valley Parkway
Escondido, California
Contact: Dan Weis

Report Date: 3/29/18
Lab Project Number: 18169
Client Project Number: 18-078SD
Dates Sampled: 3/26/18
Dates Received: 3/26/18
Dates Analyzed: 3/28/18
Sample Matrix: Soil

Quality Control Summary

Analytes	MS Recovery (%)	MSD Recovery (%)	RPD (%)	QC Sample
<i>Soils</i>				
TPH-C6-C36	98	91	7	B12-10
Benzene (8260B)	96	98	2	B12-10
Toluene (8260B)	98	94	4	B12-10
MTBE (8260B)	92	94	2	B12-10
1,1-Dichloroethene (8260B)	93	90	3	B12-10
Trichloroethene (8260B)	90	94	4	B12-10
Chlorobenzene (8260B)	91	96	5	B12-10
Acceptable QC Limits:	(65-135)	(65-135)	(0-30)	

Client Name AEC		Project Name Palomar Health Campus		Requested Analyses <div style="border: 1px solid black; height: 40px; width: 100%;"></div>		CHAIN-OF-CUSTODY RECORD	
Client Address 145 Vallecitos De Oro, Ste 201 San Marcos, CA 92065		Project Address 555 East Valley Pkwy Escondido, CA		Number of Containers <div style="border: 1px solid black; height: 40px; width: 100%;"></div>		Page 2 of 2 Laboratory Project #: <div style="font-size: 24pt; text-align: center;">18169</div>	
Phone: 760 744 3363 FAX: -3383		Project Number 14-07451		Soil (S), Water (W), Vapor (V)		Comments	
Contact: Don Weiss							

Sample ID	Sampling Date	Sampling Time	Lab ID	Soil (S)	Water (W)	Vapor (V)	Number of Containers	Requested Analyses	Requested Analyses	Requested Analyses	Requested Analyses	Requested Analyses	Requested Analyses	Requested Analyses	Requested Analyses	Requested Analyses	Requested Analyses	Requested Analyses
B7-10	3/26/14			S	X	X												
B8-1																		
B8-5					X													
B8-10						X												
B8-13					X													
B9-1					X	X												
B10-1					X													
B10-5																		
B10-10					X	X												
B11-1					X													
B11-5					X													
B11-10						X												
B12-1					X													
B12-5					X													
B12-10					X	X												

1. Relinquished by Signature: X <u><i>MB</i></u> Date/Time: <u>3/26/14</u>	2. Received by Signature: X <u><i>Bell</i></u> Date/Time: <u>3/26/14 14:30</u>	Turnaround Time: Special Instructions/Notes: <div style="border: 1px solid black; height: 80px; width: 100%;"></div>
3. Relinquished by Signature: X _____ Date/Time: _____	4. Received by Signature: X _____ Date/Time: _____	Sample Condition: Sealed? Y / N Chilled? Y / N



P. O. Box 2243
Huntington Beach, California 92647

Telephone: (888) 753-7553
FAX: (714) 840-1584

California Regional Water Quality Control Board/DTSC

Laboratory Report Form (Cover Page 1)

Laboratory Name: Baseline Analytical Services

Address: P.O. Box 2243
Huntington Beach, California 92647

Telephone: (714) 273-2955

ELAP Certification Number: 2284

Expiration Date: January 31, 2020

Authorized Signature

Name, Title (print) Brian Kato, Laboratory Director

Signature, Date

Brian K. Kato, 3/30/2018

Laboratory Project Number: 18168

Client Name: Advantage Environmental Consultants, LLC

Project Name: Palomar Health Campus

Project Address: 555 East Valley Parkway
Escondido, California

Date(s) Sampled: 3/26/18

Date(s) Received: 3/26/18

Date(s) Reported: 3/26/18

Chain of Custody Received: Yes

Comments: Sample Matrix: Vapor

California Regional Water Quality Control Board/DTSC

Laboratory Report Form (Cover Page 2)

<u>Organic Analyses</u>	<u>Number of Samples</u>	<u>Number of Samples Subcontracted</u>
VOC's (EPA 8260B)	13 Samples (Includes samples, duplicates, & blanks)	0

Sample Condition: good

<u>Inorganic Analyses</u>	<u>Number of Samples</u>	<u>Number of Samples Subcontracted</u>
---------------------------	--------------------------	--

Sample Condition:

<u>Microbiological Analyses</u>	<u>Number of Samples</u>	<u>Number of Samples Subcontracted</u>
---------------------------------	--------------------------	--

Sample Condition:

<u>Other Types of Analyses</u>	<u>Number of Samples</u>	<u>Number of Samples Subcontracted</u>
--------------------------------	--------------------------	--

Sample Condition:

ANALYTICAL RESULTS FOR ORGANICS (Units: µg/L)

METHOD: EPA 8260B

MATRIX: Vapor

REPORTING UNITS: µg/L

DATE ANALYZED			26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18
DATE EXTRACTED			26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18
CLIENT SAMPLE I.D			SV1-5	SV1-13	SV2-5	SV2-17	SV3-5	SV3-13
EXTRACTION GAS			Helium	Helium	Helium	Helium	Helium	Helium
EXTRACTION METHOD			EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030
DILUTION FACTOR			1	1	1	1	1	1
ANALYTE	MDL	PQL						
Benzene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Toluene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Ethylbenzene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Total Xylenes	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Methyl t-Butyl Ether (MTBE)	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
t-Butanol (TBA)	2.5	10	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5
Di-Isopropyl Ether (DIPE)	0.50	2.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
Ethyl t-Butyl Ether (ETBE)	0.50	2.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
t-Amyl Methyl Ether (TAME)	0.50	2.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
Ethanol	25	50	ND<25	ND<25	ND<25	ND<25	ND<25	ND<25
Acetone	2.5	10	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5
2-Butanone (MEK)	2.5	10	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5
n-Butylbenzene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
sec-Butylbenzene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
tert-Butylbenzene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Isopropyl Alcohol	2.5	10	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5
Isopropylbenzene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
p-isopropyltoluene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
4-Methyl-2-pentanone (MIBK)	2.5	10	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5
Naphthalene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
n-Propylbenzene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Styrene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
1,2,4-Trimethylbenzene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
1,3,5-Trimethylbenzene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Bromobenzene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Bromochloromethane	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Bromoform	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Bromomethane	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Carbon Tetrachloride	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
2-Chlorotoluene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
4-Chlorotoluene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Chlorobenzene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Chloroethane	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Chloroform	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Chloromethane	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Dibromochloromethane	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
1,2-Dibromo-3-Chloropropane	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
1,2-Dibromoethane (EDB)	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Dibromomethane	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050

ND: Not detected at the indicated Method Detection Limit (MDL)

J: Value is below Practical Quantification Limit and above the Method Detection Limit (MDL)

ANALYTICAL RESULTS FOR ORGANICS (Units: µg/L)

METHOD: EPA 8260B

MATRIX: Vapor

REPORTING UNITS: µg/L

DATE ANALYZED			26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18
DATE EXTRACTED			26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18
CLIENT SAMPLE I.D			SV1-5	SV1-13	SV2-5	SV2-17	SV3-5	SV3-13
EXTRACTION GAS			Helium	Helium	Helium	Helium	Helium	Helium
EXTRACTION METHOD			EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030
DILUTION FACTOR			1	1	1	1	1	1
ANALYTE	MDL	PQL						
1,2-Dichlorobenzene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
1,3-Dichlorobenzene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
1,4-Dichlorobenzene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Dichlorodifluoromethane	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
1,1-Dichloroethane	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
1,2-Dichloroethane (EDC)	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
1,1-Dichloroethene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
cis-1,2-Dichloroethene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
trans-1,2-Dichloroethene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
1,2-Dichloropropane	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
1,3-Dichloropropane	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
2,2-Dichloropropane	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
1,1-Dichloropropene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
cis-1,3-Dichloropropene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
trans-1,3-Dichloropropene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Freon 113	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Hexachlorobutadiene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Methylene Chloride	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Tetrachloroethene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
1,1,1,2-Tetrachloroethane	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
1,1,2,2-Tetrachloroethane	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
1,2,3-Trichlorobenzene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
1,2,4-Trichlorobenzene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
1,1,1-Trichloroethane	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
1,1,2-Trichloroethane	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Trichloroethene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Trichlorofluoromethane	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
1,2,3-Trichloropropane	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Vinyl Chloride	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
IPA (tracer ANALYTE)	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050

ND: Not detected at the indicated Method Detection Limit (MDL)

J: Value is below Practical Quantification Limit and above the Method Detection Limit (MDL)

ANALYTICAL RESULTS FOR ORGANICS (Units: µg/L)

METHOD: EPA 8260B

MATRIX: Vapor

REPORTING UNITS: µg/L

DATE ANALYZED			26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18
DATE EXTRACTED			26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18
CLIENT SAMPLE I.D			SV4-5	SV4-13	SV5-5	SV6-5	SV6-10	SV6-10 DUP
EXTRACTION GAS			Helium	Helium	Helium	Helium	Helium	Helium
EXTRACTION METHOD			EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030
DILUTION FACTOR			1	1	1	1	1	1
ANALYTE	MDL	PQL						
Benzene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Toluene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Ethylbenzene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Total Xylenes	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Methyl t-Butyl Ether (MTBE)	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
t-Butanol (TBA)	2.5	10	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5
Di-Isopropyl Ether (DIPE)	0.50	2.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
Ethyl t-Butyl Ether (ETBE)	0.50	2.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
t-Amyl Methyl Ether (TAME)	0.50	2.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
Ethanol	25	50	ND<25	ND<25	ND<25	ND<25	ND<25	ND<25
Acetone	2.5	10	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5
2-Butanone (MEK)	2.5	10	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5
n-Butylbenzene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
sec-Butylbenzene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
tert-Butylbenzene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Isopropyl Alcohol	2.5	10	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5
Isopropylbenzene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
p-isopropyltoluene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
4-Methyl-2-pentanone (MIBK)	2.5	10	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5
Naphthalene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
n-Propylbenzene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Styrene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
1,2,4-Trimethylbenzene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
1,3,5-Trimethylbenzene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Bromobenzene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Bromochloromethane	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Bromoform	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Bromomethane	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Carbon Tetrachloride	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
2-Chlorotoluene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
4-Chlorotoluene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Chlorobenzene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Chloroethane	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Chloroform	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Chloromethane	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Dibromochloromethane	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
1,2-Dibromo-3-Chloropropane	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
1,2-Dibromoethane (EDB)	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Dibromomethane	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050

ND: Not detected at the indicated Method Detection Limit (MDL) ¹¹

J: Value is below Practical Quantification Limit and above the Method Detection Limit (MDL)

ANALYTICAL RESULTS FOR ORGANICS (Units: µg/L)

METHOD: EPA 8260B

MATRIX: Vapor

REPORTING UNITS: µg/L

DATE ANALYZED			26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18
DATE EXTRACTED			26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18
CLIENT SAMPLE I.D			SV4-5	SV4-13	SV5-5	SV6-5	SV6-10	SV6-10 DUP
EXTRACTION GAS			Helium	Helium	Helium	Helium	Helium	Helium
EXTRACTION METHOD			EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030
DILUTION FACTOR			1	1	1	1	1	1
ANALYTE	MDL	PQL						
1,2-Dichlorobenzene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
1,3-Dichlorobenzene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
1,4-Dichlorobenzene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Dichlorodifluoromethane	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
1,1-Dichloroethane	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
1,2-Dichloroethane (EDC)	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
1,1-Dichloroethene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
cis-1,2-Dichloroethene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
trans-1,2-Dichloroethene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
1,2-Dichloropropane	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
1,3-Dichloropropane	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
2,2-Dichloropropane	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
1,1-Dichloropropene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
cis-1,3-Dichloropropene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
trans-1,3-Dichloropropene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Freon 113	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Hexachlorobutadiene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Methylene Chloride	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Tetrachloroethene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
1,1,1,2-Tetrachloroethane	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
1,1,2,2-Tetrachloroethane	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
1,2,3-Trichlorobenzene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
1,2,4-Trichlorobenzene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
1,1,1-Trichloroethane	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
1,1,2-Trichloroethane	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Trichloroethene	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Trichlorofluoromethane	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
1,2,3-Trichloropropane	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
Vinyl Chloride	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050
IPA (tracer ANALYTE)	0.050	0.10	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050	ND<0.050

ND: Not detected at the indicated Method Detection Limit (MDL)

J: Value is below Practical Quantification Limit and above the Method Detection Limit (MDL)

ANALYTICAL RESULTS FOR ORGANICS (Units: µg/L)

METHOD: EPA 8260B

MATRIX: Vapor

REPORTING UNITS: µg/L

DATE ANALYZED			26-Mar-18		26-Mar-18
DATE EXTRACTED			26-Mar-18		26-Mar-18
CLIENT SAMPLE I.D.			Equipment Blank		Method Blank
EXTRACTION GAS			Helium		Helium
EXTRACTION METHOD			EPA 5030		EPA 5030
DILUTION FACTOR			1		1
ANALYTE	MDL	PQL			
Benzene	0.050	0.10	ND<0.050		ND<0.050
Toluene	0.050	0.10	ND<0.050		ND<0.050
Ethylbenzene	0.050	0.10	ND<0.050		ND<0.050
Total Xylenes	0.050	0.10	ND<0.050		ND<0.050
Methyl t-Butyl Ether (MTBE)	0.050	0.10	ND<0.050		ND<0.050
t-Butanol (TBA)	2.5	10	ND<2.5		ND<2.5
Di-Isopropyl Ether (DIPE)	0.50	2.0	ND<0.50		ND<0.50
Ethyl t-Butyl Ether (ETBE)	0.50	2.0	ND<0.50		ND<0.50
t-Amyl Methyl Ether (TAME)	0.50	2.0	ND<0.50		ND<0.50
Ethanol	25	50	ND<25		ND<25
Acetone	2.5	10	ND<2.5		ND<2.5
2-Butanone (MEK)	2.5	10	ND<2.5		ND<2.5
n-Butylbenzene	0.050	0.10	ND<0.050		ND<0.050
sec-Butylbenzene	0.050	0.10	ND<0.050		ND<0.050
tert-Butylbenzene	0.050	0.10	ND<0.050		ND<0.050
Isopropyl Alcohol	2.5	10	ND<2.5		ND<2.5
Isopropylbenzene	0.050	0.10	ND<0.050		ND<0.050
p-isopropyltoluene	0.050	0.10	ND<0.050		ND<0.050
4-Methyl-2-pentanone (MIBK)	2.5	10	ND<2.5		ND<2.5
Naphthalene	0.050	0.10	ND<0.050		ND<0.050
n-Propylbenzene	0.050	0.10	ND<0.050		ND<0.050
Styrene	0.050	0.10	ND<0.050		ND<0.050
1,2,4-Trimethylbenzene	0.050	0.10	ND<0.050		ND<0.050
1,3,5-Trimethylbenzene	0.050	0.10	ND<0.050		ND<0.050
Bromobenzene	0.050	0.10	ND<0.050		ND<0.050
Bromochloromethane	0.050	0.10	ND<0.050		ND<0.050
Bromoform	0.050	0.10	ND<0.050		ND<0.050
Bromomethane	0.050	0.10	ND<0.050		ND<0.050
Carbon Tetrachloride	0.050	0.10	ND<0.050		ND<0.050
2-Chlorotoluene	0.050	0.10	ND<0.050		ND<0.050
4-Chlorotoluene	0.050	0.10	ND<0.050		ND<0.050
Chlorobenzene	0.050	0.10	ND<0.050		ND<0.050
Chloroethane	0.050	0.10	ND<0.050		ND<0.050
Chloroform	0.050	0.10	ND<0.050		ND<0.050
Chloromethane	0.050	0.10	ND<0.050		ND<0.050
Dibromochloromethane	0.050	0.10	ND<0.050		ND<0.050
1,2-Dibromo-3-Chloropropane	0.050	0.10	ND<0.050		ND<0.050
1,2-Dibromoethane (EDB)	0.050	0.10	ND<0.050		ND<0.050
Dibromomethane	0.050	0.10	ND<0.050		ND<0.050

ND: Not detected at the indicated Method Detection Limit (MDL)

J: Value is below Practical Quantification Limit and above the Method Detection Limit (MDL)

ANALYTICAL RESULTS FOR ORGANICS (Units: µg/L)

METHOD: EPA 8260B

MATRIX: Vapor

REPORTING UNITS: µg/L

DATE ANALYZED			26-Mar-18		26-Mar-18
DATE EXTRACTED			26-Mar-18		26-Mar-18
CLIENT SAMPLE I.D			Equipment Blank		Method Blank
EXTRACTION GAS			Helium		Helium
EXTRACTION METHOD			EPA 5030		EPA 5030
DILUTION FACTOR			1		1
ANALYTE	MDL	PQL			
1,2-Dichlorobenzene	0.050	0.10	ND<0.050		ND<0.050
1,3-Dichlorobenzene	0.050	0.10	ND<0.050		ND<0.050
1,4-Dichlorobenzene	0.050	0.10	ND<0.050		ND<0.050
Dichlorodifluoromethane	0.050	0.10	ND<0.050		ND<0.050
1,1-Dichloroethane	0.050	0.10	ND<0.050		ND<0.050
1,2-Dichloroethane (EDC)	0.050	0.10	ND<0.050		ND<0.050
1,1-Dichloroethene	0.050	0.10	ND<0.050		ND<0.050
cis-1,2-Dichloroethene	0.050	0.10	ND<0.050		ND<0.050
trans-1,2-Dichloroethene	0.050	0.10	ND<0.050		ND<0.050
1,2-Dichloropropane	0.050	0.10	ND<0.050		ND<0.050
1,3-Dichloropropane	0.050	0.10	ND<0.050		ND<0.050
2,2-Dichloropropane	0.050	0.10	ND<0.050		ND<0.050
1,1-Dichloropropene	0.050	0.10	ND<0.050		ND<0.050
cis-1,3-Dichloropropene	0.050	0.10	ND<0.050		ND<0.050
trans-1,3-Dichloropropene	0.050	0.10	ND<0.050		ND<0.050
Freon 113	0.050	0.10	ND<0.050		ND<0.050
Hexachlorobutadiene	0.050	0.10	ND<0.050		ND<0.050
Methylene Chloride	0.050	0.10	ND<0.050		ND<0.050
Tetrachloroethene	0.050	0.10	ND<0.050		ND<0.050
1,1,1,2-Tetrachloroethane	0.050	0.10	ND<0.050		ND<0.050
1,1,2,2-Tetrachloroethane	0.050	0.10	ND<0.050		ND<0.050
1,2,3-Trichlorobenzene	0.050	0.10	ND<0.050		ND<0.050
1,2,4-Trichlorobenzene	0.050	0.10	ND<0.050		ND<0.050
1,1,1-Trichloroethane	0.050	0.10	ND<0.050		ND<0.050
1,1,2-Trichloroethane	0.050	0.10	ND<0.050		ND<0.050
Trichloroethene	0.050	0.10	ND<0.050		ND<0.050
Trichlorofluoromethane	0.050	0.10	ND<0.050		ND<0.050
1,2,3-Trichloropropane	0.050	0.10	ND<0.050		ND<0.050
Vinyl Chloride	0.050	0.10	ND<0.050		ND<0.050
IPA (tracer ANALYTE)	0.050	0.10	ND<0.050		ND<0.050

ND: Not detected at the indicated Method Detection Limit (MDL)

J: Value is below Practical Quantification Limit and above the Method Detection Limit (MDL)

QA/QC Report - Vapor Samples

II. Lab Control Sample (LCS)/Lab Control Sample Duplicate (LCSD)

Date Performed: 3/26/18Batch #: GCVOC1-26MAR2018Instrument ID: GCVOC1Analytical Method: 8260BUnits: ug/L

Analyte	Sample Result	Spike Conc.	LCS	%LCS	Spike Conc.	LCSD	%LCSD	RPD	LCS/LCSD Limit	RPD Limit
1,1-Dichloroethene	ND	10	9.4	94	10	9.3	93	1	65-130	0-15
Benzene	ND	10	8.9	89	10	9.8	98	9	65-130	0-15
Trichloroethene	ND	10	9.2	92	10	9.4	94	2	65-130	0-15
Toluene	ND	10	9.6	96	10	9.0	90	7	65-130	0-15
Chlorobenzene	ND	10	9.3	93	10	9.1	91	2	65-130	0-15

ATTACHMENT:

(1) Results in Units of Parts Per Million by Volume (PPMv)

(2) Chain-of-Custody (C-O-C)

(3) Field Notes

ANALYTICAL RESULTS FOR ORGANICS Units: (PPMv)

METHOD: EPA 8260B

MATRIX: Vapor

REPORTING UNITS: PPMv

DATE ANALYZED			26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18
DATE EXTRACTED			26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18
CLIENT SAMPLE I.D			SV1-5	SV1-13	SV2-5	SV2-17	SV3-5	SV3-13
EXTRACTION GAS			Helium	Helium	Helium	Helium	Helium	Helium
EXTRACTION METHOD			EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030
DILUTION FACTOR			1	1	1	1	1	1
ANALYTE	MDL	PQL						
Benzene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Toluene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Ethylbenzene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Total Xylenes	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Methyl t-Butyl Ether (MTBE)	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
t-Butanol (TBA)	0.50	1.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
Di-Isopropyl Ether (DIPE)	0.10	0.20	ND<0.10	ND<0.10	ND<0.10	ND<0.10	ND<0.10	ND<0.10
Ethyl t-Butyl Ether (ETBE)	0.10	0.20	ND<0.10	ND<0.10	ND<0.10	ND<0.10	ND<0.10	ND<0.10
t-Amyl Methyl Ether (TAME)	0.10	0.20	ND<0.10	ND<0.10	ND<0.10	ND<0.10	ND<0.10	ND<0.10
Ethanol	5.0	10	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Acetone	0.50	1.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
2-Butanone (MEK)	0.50	1.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
n-Butylbenzene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
sec-Butylbenzene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
tert-Butylbenzene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Isopropyl Alcohol	0.50	1.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
Isopropylbenzene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
p-isopropyltoluene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
4-Methyl-2-pentanone (MIBK)	0.50	1.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
Naphthalene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
n-Propylbenzene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Styrene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
1,2,4-Trimethylbenzene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
1,3,5-Trimethylbenzene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Bromobenzene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Bromochloromethane	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Bromoform	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Bromomethane	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Carbon Tetrachloride	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
2-Chlorotoluene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
4-Chlorotoluene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Chlorobenzene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Chloroethane	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Chloroform	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Chloromethane	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Dibromochloromethane	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
1,2-Dibromo-3-Chloropropane	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
1,2-Dibromoethane (EDB)	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Dibromomethane	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010

ND: Not detected at the indicated Method Detection Limit (MDL)

J: Value is below Practical Quantification Limit and above the Method Detection Limit (MDL)

ANALYTICAL RESULTS FOR ORGANICS Units: (PPMv)

METHOD: EPA 8260B

MATRIX: Vapor

REPORTING UNITS: PPMv

DATE ANALYZED			26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18
DATE EXTRACTED			26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18
CLIENT SAMPLE I.D			SV1-5	SV1-13	SV2-5	SV2-17	SV3-5	SV3-13
EXTRACTION GAS			Helium	Helium	Helium	Helium	Helium	Helium
EXTRACTION METHOD			EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030
DILUTION FACTOR			1	1	1	1	1	1
ANALYTE	MDL	PQL						
1,2-Dichlorobenzene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
1,3-Dichlorobenzene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
1,4-Dichlorobenzene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Dichlorodifluoromethane	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
1,1-Dichloroethane	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
1,2-Dichloroethane (EDC)	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
1,1-Dichloroethene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
cis-1,2-Dichloroethene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
trans-1,2-Dichloroethene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
1,2-Dichloropropane	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
1,3-Dichloropropane	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
2,2-Dichloropropane	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
1,1-Dichloropropene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
cis-1,3-Dichloropropene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
trans-1,3-Dichloropropene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Freon 113	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Hexachlorobutadiene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Methylene Chloride	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Tetrachloroethene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
1,1,1,2-Tetrachloroethane	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
1,1,2,2-Tetrachloroethane	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
1,2,3-Trichlorobenzene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
1,2,4-Trichlorobenzene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
1,1,1-Trichloroethane	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
1,1,2-Trichloroethane	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Trichloroethene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Trichlorofluoromethane	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
1,2,3-Trichloropropane	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Vinyl Chloride	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
IPA (tracer ANALYTE)	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010

ND: Not detected at the indicated Method Detection Limit (MDL)

J: Value is below Practical Quantification Limit and above the Method Detection Limit (MDL)

ANALYTICAL RESULTS FOR ORGANICS Units: (PPMv)

METHOD: EPA 8260B

MATRIX: Vapor

REPORTING UNITS: PPMv

DATE ANALYZED			26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18
DATE EXTRACTED			26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18
CLIENT SAMPLE I.D			SV4-5	SV4-13	SV5-5	SV6-5	SV6-10	SV6-10 DUP
EXTRACTION GAS			Helium	Helium	Helium	Helium	Helium	Helium
EXTRACTION METHOD			EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030
DILUTION FACTOR			1	1	1	1	1	1
ANALYTE	MDL	PQL						
Benzene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Toluene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Ethylbenzene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Total Xylenes	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Methyl t-Butyl Ether (MTBE)	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
t-Butanol (TBA)	0.50	1.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
Di-Isopropyl Ether (DIPE)	0.10	0.20	ND<0.10	ND<0.10	ND<0.10	ND<0.10	ND<0.10	ND<0.10
Ethyl t-Butyl Ether (ETBE)	0.10	0.20	ND<0.10	ND<0.10	ND<0.10	ND<0.10	ND<0.10	ND<0.10
t-Amyl Methyl Ether (TAME)	0.10	0.20	ND<0.10	ND<0.10	ND<0.10	ND<0.10	ND<0.10	ND<0.10
Ethanol	5.0	10	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0
Acetone	0.50	1.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
2-Butanone (MEK)	0.50	1.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
n-Butylbenzene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
sec-Butylbenzene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
tert-Butylbenzene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Isopropyl Alcohol	0.50	1.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
Isopropylbenzene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
p-isopropyltoluene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
4-Methyl-2-pentanone (MIBK)	0.50	1.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
Naphthalene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
n-Propylbenzene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Styrene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
1,2,4-Trimethylbenzene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
1,3,5-Trimethylbenzene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Bromobenzene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Bromochloromethane	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Bromoform	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Bromomethane	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Carbon Tetrachloride	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
2-Chlorotoluene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
4-Chlorotoluene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Chlorobenzene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Chloroethane	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Chloroform	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Chloromethane	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Dibromochloromethane	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
1,2-Dibromo-3-Chloropropane	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
1,2-Dibromoethane (EDB)	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Dibromomethane	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010

ND: Not detected at the indicated Method Detection Limit (MDL)

J: Value is below Practical Quantification Limit and above the Method Detection Limit (MDL)

ANALYTICAL RESULTS FOR ORGANICS Units: (PPMv)

METHOD: EPA 8260B

MATRIX: Vapor

REPORTING UNITS: PPMv

DATE ANALYZED			26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18
DATE EXTRACTED			26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18	26-Mar-18
CLIENT SAMPLE I.D			SV4-5	SV4-13	SV5-5	SV6-5	SV6-10	SV6-10 DUP
EXTRACTION GAS			Helium	Helium	Helium	Helium	Helium	Helium
EXTRACTION METHOD			EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030
DILUTION FACTOR			1	1	1	1	1	1
ANALYTE	MDL	PQL						
1,2-Dichlorobenzene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
1,3-Dichlorobenzene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
1,4-Dichlorobenzene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Dichlorodifluoromethane	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
1,1-Dichloroethane	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
1,2-Dichloroethane (EDC)	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
1,1-Dichloroethene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
cis-1,2-Dichloroethene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
trans-1,2-Dichloroethene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
1,2-Dichloropropane	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
1,3-Dichloropropane	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
2,2-Dichloropropane	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
1,1-Dichloropropene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
cis-1,3-Dichloropropene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
trans-1,3-Dichloropropene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Freon 113	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Hexachlorobutadiene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Methylene Chloride	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Tetrachloroethene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
1,1,1,2-Tetrachloroethane	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
1,1,2,2-Tetrachloroethane	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
1,2,3-Trichlorobenzene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
1,2,4-Trichlorobenzene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
1,1,1-Trichloroethane	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
1,1,2-Trichloroethane	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Trichloroethene	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Trichlorofluoromethane	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
1,2,3-Trichloropropane	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
Vinyl Chloride	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010
IPA (tracer ANALYTE)	0.010	0.020	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010	ND<0.010

ND: Not detected at the indicated Method Detection Limit (MDL)

J: Value is below Practical Quantification Limit and above the Method Detection Limit (MDL)

ANALYTICAL RESULTS FOR ORGANICS Units: (PPMv)

METHOD: EPA 8260B

MATRIX: Vapor

REPORTING UNITS: PPMv

DATE ANALYZED			26-Mar-18		26-Mar-18
DATE EXTRACTED			26-Mar-18		26-Mar-18
CLIENT SAMPLE I.D			Equipment Blank		Method Blank
EXTRACTION GAS			Helium		Helium
EXTRACTION METHOD			EPA 5030		EPA 5030
DILUTION FACTOR			1		1
ANALYTE	MDL	PQL			
Benzene	0.010	0.020	ND<0.010		ND<0.010
Toluene	0.010	0.020	ND<0.010		ND<0.010
Ethylbenzene	0.010	0.020	ND<0.010		ND<0.010
Total Xylenes	0.010	0.020	ND<0.010		ND<0.010
Methyl t-Butyl Ether (MTBE)	0.010	0.020	ND<0.010		ND<0.010
t-Butanol (TBA)	0.50	1.0	ND<0.50		ND<0.50
Di-Isopropyl Ether (DIPE)	0.10	0.20	ND<0.10		ND<0.10
Ethyl t-Butyl Ether (ETBE)	0.10	0.20	ND<0.10		ND<0.10
t-Amyl Methyl Ether (TAME)	0.10	0.20	ND<0.10		ND<0.10
Ethanol	5.0	10	ND<5.0		ND<5.0
Acetone	0.50	1.0	ND<0.50		ND<0.50
2-Butanone (MEK)	0.50	1.0	ND<0.50		ND<0.50
n-Butylbenzene	0.010	0.020	ND<0.010		ND<0.010
sec-Butylbenzene	0.010	0.020	ND<0.010		ND<0.010
tert-Butylbenzene	0.010	0.020	ND<0.010		ND<0.010
Isopropyl Alcohol	0.50	1.0	ND<0.50		ND<0.50
Isopropylbenzene	0.010	0.020	ND<0.010		ND<0.010
p-isopropyltoluene	0.010	0.020	ND<0.010		ND<0.010
4-Methyl-2-pentanone (MIBK)	0.50	1.0	ND<0.50		ND<0.50
Naphthalene	0.010	0.020	ND<0.010		ND<0.010
n-Propylbenzene	0.010	0.020	ND<0.010		ND<0.010
Styrene	0.010	0.020	ND<0.010		ND<0.010
1,2,4-Trimethylbenzene	0.010	0.020	ND<0.010		ND<0.010
1,3,5-Trimethylbenzene	0.010	0.020	ND<0.010		ND<0.010
Bromobenzene	0.010	0.020	ND<0.010		ND<0.010
Bromochloromethane	0.010	0.020	ND<0.010		ND<0.010
Bromoform	0.010	0.020	ND<0.010		ND<0.010
Bromomethane	0.010	0.020	ND<0.010		ND<0.010
Carbon Tetrachloride	0.010	0.020	ND<0.010		ND<0.010
2-Chlorotoluene	0.010	0.020	ND<0.010		ND<0.010
4-Chlorotoluene	0.010	0.020	ND<0.010		ND<0.010
Chlorobenzene	0.010	0.020	ND<0.010		ND<0.010
Chloroethane	0.010	0.020	ND<0.010		ND<0.010
Chloroform	0.010	0.020	ND<0.010		ND<0.010
Chloromethane	0.010	0.020	ND<0.010		ND<0.010
Dibromochloromethane	0.010	0.020	ND<0.010		ND<0.010
1,2-Dibromo-3-Chloropropane	0.010	0.020	ND<0.010		ND<0.010
1,2-Dibromoethane (EDB)	0.010	0.020	ND<0.010		ND<0.010
Dibromomethane	0.010	0.020	ND<0.010		ND<0.010

ND: Not detected at the indicated Method Detection Limit (MDL)

J: Value is below Practical Quantification Limit and above the Method Detection Limit (MDL)

ANALYTICAL RESULTS FOR ORGANICS Units: (PPMv)

METHOD: EPA 8260B

MATRIX: Vapor

REPORTING UNITS: PPMv

DATE ANALYZED			26-Mar-18		26-Mar-18
DATE EXTRACTED			26-Mar-18		26-Mar-18
CLIENT SAMPLE I.D			Equipment Blank		Method Blank
EXTRACTION GAS			Helium		Helium
EXTRACTION METHOD			EPA 5030		EPA 5030
DILUTION FACTOR			1		1
ANALYTE	MDL	PQL			
1,2-Dichlorobenzene	0.010	0.020	ND<0.010		ND<0.010
1,3-Dichlorobenzene	0.010	0.020	ND<0.010		ND<0.010
1,4-Dichlorobenzene	0.010	0.020	ND<0.010		ND<0.010
Dichlorodifluoromethane	0.010	0.020	ND<0.010		ND<0.010
1,1-Dichloroethane	0.010	0.020	ND<0.010		ND<0.010
1,2-Dichloroethane (EDC)	0.010	0.020	ND<0.010		ND<0.010
1,1-Dichloroethene	0.010	0.020	ND<0.010		ND<0.010
cis-1,2-Dichloroethene	0.010	0.020	ND<0.010		ND<0.010
trans-1,2-Dichloroethene	0.010	0.020	ND<0.010		ND<0.010
1,2-Dichloropropane	0.010	0.020	ND<0.010		ND<0.010
1,3-Dichloropropane	0.010	0.020	ND<0.010		ND<0.010
2,2-Dichloropropane	0.010	0.020	ND<0.010		ND<0.010
1,1-Dichloropropene	0.010	0.020	ND<0.010		ND<0.010
cis-1,3-Dichloropropene	0.010	0.020	ND<0.010		ND<0.010
trans-1,3-Dichloropropene	0.010	0.020	ND<0.010		ND<0.010
Freon 113	0.010	0.020	ND<0.010		ND<0.010
Hexachlorobutadiene	0.010	0.020	ND<0.010		ND<0.010
Methylene Chloride	0.010	0.020	ND<0.010		ND<0.010
Tetrachloroethene	0.010	0.020	ND<0.010		ND<0.010
1,1,1,2-Tetrachloroethane	0.010	0.020	ND<0.010		ND<0.010
1,1,2,2-Tetrachloroethane	0.010	0.020	ND<0.010		ND<0.010
1,2,3-Trichlorobenzene	0.010	0.020	ND<0.010		ND<0.010
1,2,4-Trichlorobenzene	0.010	0.020	ND<0.010		ND<0.010
1,1,1-Trichloroethane	0.010	0.020	ND<0.010		ND<0.010
1,1,2-Trichloroethane	0.010	0.020	ND<0.010		ND<0.010
Trichloroethene	0.010	0.020	ND<0.010		ND<0.010
Trichlorofluoromethane	0.010	0.020	ND<0.010		ND<0.010
1,2,3-Trichloropropane	0.010	0.020	ND<0.010		ND<0.010
Vinyl Chloride	0.010	0.020	ND<0.010		ND<0.010
IPA (tracer ANALYTE)	0.010	0.020	ND<0.010		ND<0.010

ND: Not detected at the indicated Method Detection Limit (MDL)

J: Value is below Practical Quantification Limit and above the Method Detection Limit (MDL)



BASILINE
ON-SITE ANALYSIS™

Phone: (714) 273-2955

Field Notes

Client Information

Advantage Environmental Consultants, LLC
145 Vallecitos De Oro, Suite 201
San Marcos, CA 92069
Report to: Dan Weis

Project Information

Project Name Palomar Health Campus
Project Address 555 East Valley Parkway
Escondido, California
Start Time: 3/26/18, 1130

Baseline Analytical Information

Analyst Name Brian Kato
Telephone Number 714.273.2955
E-mail Address: BrianKato@MSN.com

(1) Site Conditions: At 1130, the temperature is 74 degrees F; clear skies

(2) Vapor Well Construction:

A probe tip is set in a sand pack with Teflon tubing leading to the surface.
The tubing ends are sealed with gas-tight plugs.

Sand Pack Specifications:

Converts to:
(cm)
Diameter: 2 inches 5.08
Height: 1 foot 30.48
Material: Sand

Tubing Specifications:

Converts to:
(cm)
Outer Diameter 0.25 inches 0.635
Inner Diameter: 0.19 inches 0.483
Lengths: 6'-18' 1' added for the lead

(3) Purge Volume & Time Calculation

Component	Diameter	X-Sect Area	Length or Height	Length or Height	Volume	Sand Pack times 0.35 porosity Volume	Tubing Purge Volumes		
							(ml) 1 pv	(ml) 3 pv	(ml) 10 pv
	(cm)	(cm ²)	(feet)	(cm)	(ml)	(ml)			
Tubing	0.483	0.183	6	183	33.5	---	34	101	335
Sand Pack	5.08	20.27	1	30.5	618	216	216	649	2162

Purge Time Calculation:

Total PV = Sand Pack Volume +
Tubing Volume
Purge Time = (Total PV)/Flowrate

	Flow rate (ml/min):	200	200	200
5' BGS: Purge Time (minutes):		1.25	3.75	12.49
10' BGS: Purge Time (minutes):		1.39	4.16	13.88
13' BGS: Purge Time (minutes):		1.47	4.42	14.72
17' BGS: Purge Time (minutes):		1.58	4.75	15.84

Purge Time (minutes)



Purge Volume: Based on the 7/15/15 DTSC Soil Gas Advisory, remove 3 purge volumes prior to each sample collection (purge times shown above).

(4) Pump Specifications

Pump Model: AIRCHEK SAMPLER
Vender: SKC, Inc.
Model Number: 224-PCXR4

Description: A portable battery-powered pump with an adjustable flow-rate and a built-in flow indicator, meter, & timer.
The flow was set for a fixed rate of 200ml/min.

Comments/Observations/Special Instructions:

Sampled and Analyzed by

signature: x 



Baseline Analytical Services

P. O. Box 2243
Huntington Beach, California 92647

Phone: (714) 273-2955