# Vapor Intrusion Study Report

East Adjacent Properties – Property 3
Robinson Helicopter Company
2530 and 2540 Skypark Drive
Torrance, California 90505

Investigative Order No.: R4-2020-0035

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# Sign-off Sheet

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# Table of Contents

## LIST OF TABLES



## LIST OF FIGURES



## LIST OF APPENDICES



# Executive Summary

This report was prepared on behalf of Robinson Helicopter Company (Robinson) by Stantec Consulting Services Inc. (Stantec) to document vapor intrusion study ("VI Study") activities performed at a property addressed as 2530 and 2540 Skypark Drive (the Site; Figure 1), collectively referred to as "Property 3" in the Los Angeles Regional Water Quality Control Board's (LARWQCB's) Investigative Order No. R4-2020-0035, dated May 12, 2020.

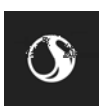
The LARWQCB has been overseeing environmental investigations at the Hi-Shear Corporation's (Hi-Shear's) facility located at 2600 Skypark Drive in Torrance, California (Site Cleanup Program [SCP] No. 0218) and at properties adjacent to the Hi-Shear facility which are identified as the East Adjacent Properties of Hi-Shear Corporation (EA Properties [SCP No. 1481]). Property 3, or the Site, is one of the EA Properties. Based on previous environmental investigations at both the Hi-Shear and EA Properties, it has been determined that volatile organic compounds (VOCs) are present in subsurface media. To further evaluate VOCs in the subsurface, the LARWQCB issued an investigative order to multiple parties, near the Hi-Shear Facility, including the Site.

The VI Study was conducted pursuant to the investigative order and was performed to evaluate whether the presence of subsurface VOCs potentially posed a vapor intrusion risk to Site workers. The VI Study scope of work included:

- Conducting a non-intrusive visual building survey;
- Collecting three outdoor ambient air samples;
- Collecting eight indoor air samples;
- Installing and sampling eight sub-slab vapor probes;
- Collecting pressure/vacuum measurements from the installed sub-slab vapor probes;
- Analyzing ambient air, indoor air, and sub-slab vapor samples for VOCs; and
- Preparing this report summarizing the VI Study procedures and findings.

Stantec compared the ambient air, indoor air, and sub-slab vapor analytical data to the following screening criteria:

- United States Environmental Protection Agency, Region 9, Regional Screening Levels (RSLs) for Indoor Air for Target Cancer Risk (TR) = 1E-06, Target Hazard Quotient (THQ) = 1.0, and industrial land use (November 2020); and
- California Environmental Protection Agency, Department of Toxic Substances Control Human and Ecological Risk Office (HERO), Human Health Risk Assessment Note Number 3, Modified Screening Levels (SLs) for Indoor Air (June 2020) for commercial/industrial land use.



Five (5) VOCs were reported above laboratory reporting limits in sub-slab samples. Of these, only one VOC (tetrachloroethene [PCE]) was reported above sub-slab screening levels using a conservative attenuation factor of 0.03. Thirteen (13) VOCs were reported in at least one indoor air sample. Of these, only benzene was reported above the commercial industrial screening level. Based on the data collected by Stantec, the following conclusions are made with respect to the two analytes detected in indoor air and/or sub-slab vapor samples at concentrations in excess of their respective RSLs and/or SLs:

- Benzene is present in indoor and outdoor ambient air at similar concentrations. A comparison of indoor air data to ambient air data suggests the benzene concentrations observed in indoor air are not originating subsurface vapors or from the indoor building space, but rather are reflective of background ambient air conditions in the vicinity of the Site.
- PCE was reported above the SL at all eight sub-slab vapor sample locations; however, PCE was not detected in any of the indoor samples at concentrations exceeding the SL. The ratio of indoor air to sub-slab PCE concentrations ranged from 0.0015 to 0.00003 with a mean ratio of 0.0001.

Based on evaluation of the data, this study did not find evidence of a significant vapor intrusion pathway of concern. The primary constituent of potential concern (COPC) for vapor intrusion is PCE. However, PCE was not reported above the chronic SL. Stantec opines that vapor intrusion is not a pathway of exposure of concern for other COPCs detected in indoor air, and that most of these COPCs are likely the result of sources other than intrusion from the subsurface.

# Abbreviations

| | |
|---|---|
| AA | Ambient air |
| bgs | Below ground surface |
| Cal-EPA | California Environmental Protection Agency |
| COC | Chain-of-custody |
| COPCs | Constituents of potential concern |
| DCE | Dichloroethene |
| DTSC | California Department of Toxic Substances Control |
| EA Properties | East-Adjacent Properties of Hi-Shear Corporation |
| ESA | Environmental Site Assessment |
| ft | Feet |
| FREY | Frey Environmental Inc. |
| GER | Genesis Engineering & Redevelopment |
| HASP | Health and safety plan |
| H&P | H&P Mobile Geochemistry |
| HERO | DTSC Human and Ecological Risk Office |
| HHRA | Human health risk assessment |
| Hi-Shear | Hi-Shear Corporation |
| HVAC | Heating, ventilation and air conditioning |
| IA | Indoor air |
| in | Inch |
| in Hg | Inches of mercury |
| LARWQCB | Los Angeles Regional Water Quality Control Board |
| LRL | Laboratory Reporting Limit |
| mL | Milliliter |
| msl | Mean seal level |
| µg/$m^3$ | Micrograms per cubic meter |
| µg/L | Micrograms per liter |
| PCE | Tetrachloroethene |
| RSLs | USEPA Region 9 Regional Screening Levels |
| Robinson | Robinson Helicopter Company |
| SCP | Site Cleanup Program |
| Stantec | Stantec Consulting Services, Inc. |
| SLs | Cal-EPA, DTSC, HERO, HHRA Note Number 3, Screening Levels (June 2020) |
| TCE | Trichloroethylene |
| USEPA | United States Environmental Protection Agency |
| VOCs | Volatile organic compounds |
| VI | Vapor intrusion |
| VP | Sub-slab vapor probe |

# 1.0 INTRODUCTION

This report documents vapor intrusion study ("VI Study") activities performed at a property addressed as 2530 and 2540 Skypark Drive (the Site), which is also referred to as "Property 3" in the Los Angeles Regional Water Quality Control Board's (LARWQCB's) Investigative Order No. R4-2020-0035, dated May 12, 2020 (the "Order", attached in Appendix A). The completed scope of work was originally proposed in Stantec's *Vapor Intrusion Investigation Workplan*, dated August 25, 2020 (Stantec, 2020), which was approved, with modifications, in a LARWQCB letter dated October 6, 2020 (Appendix A). An extension to the original January 20, 2021 reporting deadline was subsequently approved in a LARWQCB letter dated February 24, 2021 (Appendix A).

The LARWQCB has been overseeing environmental investigations at the Hi-Shear Corporation's (Hi-Shear's) facility located at 2600 Skypark Drive in Torrance, California (Site Cleanup Program [SCP] No. 0218) and at properties adjacent to the Hi-Shear facility which are identified as the East Adjacent Properties of Hi-Shear Corporation (EA Properties [SCP No. 1481]). Property 3, or the Site, is one of the EA Properties. Based on previous environmental investigations at both the Hi-Shear and EA Properties, it has been determined that volatile organic compounds (VOCs) are widely found in subsurface media. To further evaluate VOCs in the subsurface, LARWQCB issued an investigative order to multiple parties near the Hi-Shear facility, including the Site.

## 1.1 PURPOSE AND OBJECTIVE

The VI Study was conducted to evaluate the vapor intrusion exposure pathway, as it relates to the migration of vapor-phase VOCs through the soil and into the indoor air environment at the Site.

The objectives of the VI Study of the Site Investigation were to provide sufficient data to 1) evaluate the contribution of VOCs from VI to indoor air, and 2) provide information to assess the risk to Site workers' health from VI.

## 1.2 SCOPE OF WORK

The VI Study was performed to evaluate whether the presence of subsurface VOCs potentially located within the immediate vicinity of the Site building posed a potential vapor intrusion risk to Site workers. The VI Study scope of work included:

- Performing a non-intrusive visual building survey
- Collecting three outdoor ambient air samples;
- Collecting eight indoor air samples;
- Installing and sampling eight sub-slab vapor probes;
- Collecting pressure/vacuum measurements from the installed sub-slab vapor probes;

- Analyzing ambient air, indoor air, and sub-slab vapor samples for VOCs; and
- Preparing this report summarizing the VI Study procedures and findings.

# 2.0 BACKGROUND

The following sections provide a brief description of the site, physical conditions (topography, geology, and hydrogeology), a summary of the environmental history, and a description of the VI Study area.

## 2.1 SITE DESCRIPTION AND LAND USE

The Site (a.k.a. Property 3) consists of interconnected buildings located at 2530 and 2540 Skypark Drive in Torrance, California. Property 3 is part of a larger 27-acre parcel (Assessor Identification Number 7377-006-906) owned by the City of Torrance, which includes the Hi-Shear facility, the EA Properties, and the Torrance Airport. The Site is located in a predominantly commercial and light industrial area.

Frey Environmental Inc. (Frey) reportedly prepared a *Phase I Environmental Site Assessment* (ESA) report, dated September 14, 2015 for the 24701 and 24747 Crenshaw Boulevard (both part of Property 2) and 2530 and 2540 Skypark Drive (Property 3) addresses. While the complete Phase I ESA was not available to Stantec for review, a summary of findings was presented in Frey's *Evaluation of Subsurface VOCs*, dated February 23, 2018 (Frey, 2018). The Phase I ESA noted that aerospace and manufacturing industries had occupied the building addresses since the 1960s, and that VOCs were potentially utilized during the various manufacturing processes and generated heavy metal products, byproducts, and wastes. The Phase I also documented the use of petroleum-based products by current building occupants.

## 2.2 PHYSICAL SETTING

### 2.2.1 Topography

The Site is situated at an elevation of approximately 81 to 83 feet (ft) above mean sea level (msl). The topography slopes gently towards the north. The Site is bounded to the east by a commercial/industrial manufacturing facility (Property 2 of the EA Properties), to the north by Skypark Drive, to the south by a car dealership facility (Property 1 of the EA Properties), and to the west by a commercial/industrial manufacturing facility (the Hi-Shear facility).

### 2.2.2 Site Geology

A more detailed discussion of regional and local geology is presented in Sections 2.2 and 2.3 of Genesis Engineering & Redevelopment's (GER's) *Soil, Soil Vapor, and Groundwater Evaluation Delineation Module III – Interim Report*, dated July 3, 2020 (GER, 2020). GER described soils beneath the project area in four units as follows:

- *Unit 1: Silt and clay are predominant in the upper 15 to 25 feet of sediment with interbedded lenses of fat clay. This unit is generally uniform in thickness throughout the area; however, it thickens to 35 feet in the southwest part of the investigation area.*

- *Unit 2: This unit consists of primarily silty sand which grades to sand to the north along Crenshaw Boulevard. This unit extends to a depth of 40 to 50 feet below the ground surface ("bgs") and has a corresponding thickness between 20 feet and 30 feet.*

- *Unit 3: This unit consists generally of silt, clay, and fat clay that varies in thickness between 5 feet and 15 feet. Unit 3 is interbedded with clayey sand, silty sand, and/or sand layers that range in thickness between 1 foot and 3 feet. In the borings adjacent to Crenshaw Boulevard perched groundwater has occasionally been observed on top of Unit 3 or within the unit's interbeds. This unit is not as laterally continuous as are Units 1, 2, and 4 and tends to pinch out in areas resulting in windows that interconnect Unit 2 with Unit 4.*

- *Unit 4: Unit 4 is dominated by poorly graded to well graded sands and silty sand with interbedded 1 to 2-foot-thick layers of clayey sand. This unit is first encountered at a depth of 55 feet to 65 feet bgs and extends below the water table to at least 265 feet bgs. Occasional 1 to 3 foot thick discontinuous layers of silty sand and clayey sand occur throughout the unit. Heaving sands are encountered below the water table throughout the unit starting at approximately 110 feet bgs.*

### 2.2.3 Site Hydrogeology

As presented in Sections 2.2 and 2.3 of GER's report (GER, 2020), the Gage Aquifer is present at a depth of approximately 90 feet bgs with a thickness of approximately 100 feet in the vicinity of Property 3 and is comprised primarily of sand. A perched water layer was reported by GER at a depth of approximately 60 feet bgs in the vicinity of the EA Properties, with the static water table being encountered at a depth of approximately 90 feet bgs. Groundwater generally flows to the southeast beneath Property 3. As presented in GER's *Second Semi-Annual 2020 Groundwater Monitoring Report*, dated February 18, 2021 (GER, 2021), groundwater elevations observed in the Hi-Shear groundwater monitoring well network have been steadily increasing since at least 2007, with average groundwater elevations increasing by approximately one foot per year since 2014.

## 2.3 SITE ASSESSMENT SUMMARY

Stantec understands that multiple rounds of soil, soil vapor, and groundwater assessment have been performed on the Hi-Shear and EA Properties (including Property 3) by Hi-Shear's consultants. Reports documenting these assessment activities are available on the State Water Resources Control Board's online GeoTracker database page for SCP No. 0218 (https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=SL204231523). The most recent report documenting environmental assessment activities at Property 3 and the surrounding parcels is GER's *Soil, Soil Vapor, and Groundwater Evaluation Delineation Module III – Interim Report* (GER, 2020). A copy of a figure depicting the sample locations, as well as tables summarizing the collected analytical data are attached in Appendix B. The following summarizes key findings by GER as they relate to Property3 (determined to be on-site and nearby vapor probe locations VP-26, VP-30, VP-81, VP-132, and VP-133) :

- To date, no investigations have identified VOCs in soil samples beneath Property 3 that indicate an on-site VOC source. As identified in GER's *Soil, Soil Vapor, and Groundwater Evaluation Delineation Module III – Interim Report* (GER, 2020) – the highest concentrations of tetrachloroethene (PCE) and trichloroethene (TCE) in on-site soil are 0.010 milligrams per kilogram (mg/kg) and 0.013 mg/kg, respectively (both of which are well below applicable commercial/industrial screening criteria). In contrast, PCE and TCE concentrations in soil beneath the adjacent upgradient Hi-Shear property have been detected at concentrations as high as 1,600 mg/kg and 5,500 mg/kg, respectively (in HS3 at 50 feet bgs), as documented in Camp Dresser & McKee Inc.'s *Report of Subsurface Soil Investigation at Hi-Shear Torrance Facility*, dated May 15, 1991. Overall, the observed increasing concentration trend in soil vapor with depth, a general absence of appreciable concentrations of VOCs in shallow soil beneath Property 3, and known sources/releases of PCE (and other VOCs) at the adjacent/upgradient Hi-Shear property suggest that VOC impacts beneath Property 3 (and the EA Properties, more generally) are the result of releases that have occurred at off-site locations; chiefly from the Hi-Shear property.

- Based on data presented in GER's *Second Semi-Annual 2020 Groundwater Monitoring Report* (GER, 2021), one groundwater monitoring well (MW-8) is located on the north side of the Property 3 building; a second groundwater monitoring well (MW-15) is located between the western edge of Property 3 and the adjacent Hi-Shear Property. During a December 26, 2019 groundwater sampling event (the last time wells MW-8 and MW-15 were sampled), the sample collected from MW-8 contained PCE and TCE at concentrations of 70 micrograms per liter (µg/L) and 5,000 µg/L, respectively, while the sample collected from MW-15 contained PCE and TCE at concentrations of 79 µg/L and 22 µg/L, respectively. It should be noted that samples collected from well MW-15 historically contained PCE and TCE at concentrations of up to 1,300 µg/L and 56,000 µg/L, respectively. During the December 26, 2019 groundwater sampling event, GER observed the groundwater gradient to be towards the southeast (away from the Hi-Shear property and towards Properties 1, 2 and 3, which would be directly downgradient of GER's reported groundwater gradient and flow direction).

- When reviewing data collected from Property 3, the highest detected concentrations of PCE and TCE in soil vapor were observed in VP-132 at concentrations of 881,000 micrograms per cubic meter (µg/$m^3$ [at a depth of 80 feet bgs]) and 424,000 µg/$m^3$ (also at a depth of 80 feet bgs), respectively. A review of data presented in GER's report indicates that most of the collected soil vapor data on the EA Properties (including Property 3) exhibits increasing concentrations with depth suggests that the observed impacts are volatilizing from groundwater or the deep smear-zone resulting from fluctuations in groundwater levels over time.

In summary, based on the available data, the elevated vapor-phase concentrations of VOCs historically detected beneath Property 3 appear to represent volatilization of contaminants in groundwater or in smear-zone soils resulting from adsorption from impacted groundwater, rather than from a release at Property 3.

## 2.4 STUDY AREA DESCRIPTION

Property 3 is improved with a large slab-on-grade building occupying a footprint of approximately 37,000 square feet. The building was formerly configured as a warehouse with office space occupying a second floor. The building has since been renovated into its current configuration, with the second floor removed, creating a building space with 15 to 20-foot high ceilings. The building is constructed over a slab-on-grade foundation and is bordered by asphalt or concrete pavement on all sides.

# 3.0 VAPOR INTRUSION STUDY

Based on previous work performed by others, the primary constituents of potential concern (COPCs) for this investigation, as defined and determined by GER's *Soil, Soil Vapor, and Groundwater Evaluation Delineation Module III – Interim Report* (GER, 2020) are PCE, TCE, cis-1,2 dichloroethene (DCE), trans-1,2 DCE, 1,1-DCE, and vinyl chloride.

As presented in Table 2 of GER's 2020 report, vapor-phase COPC concentrations increase with depth to groundwater, with the highest observed concentrations being detected in soil vapor samples collected directly above groundwater; suggesting COPCs are partitioning from groundwater and/or smear-zone soils (interval of groundwater fluctuations within the lower vadose zone). Similarly, soil analytical data presented in Table 3 of GER's 2020 report (presented in Appendix B) suggests that the bulk of COPCs adsorbed to soil beneath Property 3 are constrained to smear-zone soils. Accordingly, the secondary source mass of the COPCs detected in groundwater and/or smear-zone soils are likely to be the primary source of COPCs in vapor phase below the Site building.

Of the identified COPCs, PCE is the primary risk-driver based on prevalence, concentration, and toxicity. While Stantec's Work Plan (Stantec, 2020) proposed limiting the analysis of the collected samples to the identified COPCs, in the LARWQCB's October 6, 2020 response letter, the LARWQCB requested that the collected samples be analyzed for the full suite of VOCs.

The following sub-sections describe the general methodology implemented for the VI Study along with a summary of deviations from the approved scope of work. It should be noted that all work was performed using methods reviewed and approved by a California-licensed professional engineer and/or geologist.

## 3.1 PRE-FIELD ACTIVITIES

### 3.1.1 Pre-Field Notification

Advanced scheduling and notification of sampling in and on private property was provided to the building owners and occupants. Advanced work notice was provided to the LARWQCB on February 2, 2021 prior to commencing with the ambient air, indoor air, and sub-slab vapor sampling activities.

### 3.1.2 Health and Safety Plan

A Site-specific Health and Safety Plan (HASP) was prepared as required by the State of California General Industry Safety Order 5192 and Title 29 of the Code of Federal Regulations, Section 1910.120. The HASP outlined potential hazards to Stantec personnel and subcontractors during planned field activities. The HASP also included required personal protective equipment to be worn by field personnel for each task. A copy of the HASP was available onsite during all field activities.

### 3.1.3 Utility Locating

A private utility locating subcontractor was contracted to evaluate each of the proposed sub-slab sampling locations for subsurface features that may potentially interfere with proposed sampling activities.

## 3.2 VISUAL BUILDING SURVEY AND CHEMICAL USE INVENTORY

A building inspection was conducted on January 26, 2021 to assess building construction characteristics, heating, ventilation, and air conditioning system characteristics, building use and occupancy, chemical use and storage areas, and floor penetrations and other preferential pathways for vapor intrusion. A copy of the completed inspection survey is included in Appendix C. The building survey was utilized to facilitate the final selection of co-located indoor air and sub-slab sampling locations, as depicted on Figure 3.

## 3.3 VAPOR INTRUSION SAMPLING

Ambient air, indoor air, and sub-slab vapor samples were collected to assess indoor air concentrations and evaluate whether VOCs appear to be intruding into the Site building from the subsurface. Three outdoor ambient air (AA-1 through AA-3) samples, and eight co-located indoor air and sub-slab vapor samples (IA-1/VP-1 through IA-10/VP-8) were collected at the locations depicted on Figure 3. The ambient air and indoor air samples were collected on February 5, 2021, while the sub-slab vapor samples were collected on February 10, 2021.

### 3.3.1 General Techniques and Methods

#### 3.3.1.1 Sample Collection Documentation

*Field Forms*

Several forms and the daily field log/report comprise the field record for the VI Study. Examples of various types of field forms include:

- Daily field notes;
- HASP tailgate safety meeting;
- Chain-of-custody (COC) forms; and
- Sample collections logs.

*Field Notes*

Field notes were collected during the field work and contains pertinent information regarding the Site conditions and sampling procedures implemented during the field VI Study. Information contained in the field notes included the date, time, location, and unique sample identifier, media sampled and description, analyses to be performed, observations, and any identified deviations from the Work Plan and rationale for the deviation.

### *Chain-of-Custody*

COC procedures were used to document the custody, control, transfer, and requested analysis of the samples collected as part of the VI Study. The COCs included sample identifiers, media sampled, container type and volume, and analyses to be performed. Signatures (relinquished by, received by) on the COC forms were made in ink and included the date and time of signature. COC accompanied samples from the time of collection to delivery to the laboratory. Copies of the COC forms are included with the laboratory reports in Appendix D.

### Sample Identification

Samples were labeled, with the unique sample identifier, sample time and sample date recorded on the label. Samples were generally identified with the following sample ID nomenclature:

- The sample media or type is indicated by the first two letters as follows:
    - AA: Ambient Air
    - IA: Indoor Air
    - VP: Sub-slab vapor
- The first "####" represents a sequential numerical identifier for the Site location number, based on the sample locations.

### Photographic Documentation

As permitted, sampling locations were documented with photographs. The photographic record of the sampling event allows positive identification of the sampling point, and shows existing conditions of the area before drilling activities and following the installation of the sub-slab vapor probes. To protect the privacy of the affected Site business, copies of the available sampling location photographs have been omitted from this report.

#### 3.3.1.2 Equipment Decontamination

Single-use, disposable vapor sample tubing was used at each sampling point to avoid cross contamination. All sample containers and additional sampling apparatus were provided by the laboratory subcontractor and certified clean for the COPCs of this VI Study, and not reused between sampling point or mobilization prior to returning to the laboratory for cleaning.

## 3.3.2 Ambient Air Sampling

To understand ambient conditions, and for comparative purposes, Stantec's subcontractor (H&P Mobile Geochemistry [H&P]) collected three outdoor ambient air samples during this VI Study (Figure 3) to ensure samples were collected both upwind and downwind of the Site building. To maintain quality assurance, the ambient air samples were collected at the same time as the indoor air samples and were outfitted with flow-controllers set at the same flow rate as the corresponding indoor air samples (10-hours for commercial sampling). The ambient air sampling containers' inlet tubing were located within the typical

breathing zone height for adults, approximately 4 to 5 ft above the ground. The initial vacuum of each canister was checked to assure that the canister had not leaked during transport from the laboratory to the sampling location. Throughout the sampling period, Stantec staff, or Stantec's air sampling subcontractor, periodically checked the vacuum gauges on the canisters to ensure that the canisters were sampling at the appropriate rate and operating properly. At the end of sample collection, the canister valve was closed before the vacuum reached zero vacuum; the final vacuum readings of the three collected ambient air samples ranged from 5 to 9 inches of mercury (in Hg). All samples were subsequently analyzed by H&P at their laboratory.

### 3.3.3 Indoor Air Sampling

Indoor air samples were collected from eight locations within the Site building to evaluate the VI exposure pathway. In addition to the eight indoor air samples, one replicate sample was also collected. The sample locations are shown at the locations depicted on Figure 3. Indoor air samples were collected over a 10-hour sampling period utilizing laboratory-provided, individually-certified 6-liter Summa® canisters. Indoor air sampling container inlets were located within the typical breathing zone, approximately 4 ft above the flooring. The initial vacuum of each canister was checked to assure that the canister had not leaked during transport from the laboratory to the sampling location. During the sampling period, Stantec and H&P staff periodically checked the vacuum in the canisters to ensure that the canisters were operating properly and sampling at the appropriate rate. The final vacuum readings of the three collected ambient air samples ranged from 5 to 9 in Hg; the samples were considered valid and were subsequently analyzed by H&P at their fixed laboratory.

### 3.3.4 Sub-Slab Vapor Probe Installation and Sampling

Eight (8) semi-permanent indoor sub-slab vapor probes were installed by Stantec's subcontractor (H&P). The locations of the probes were selected based on building features, flooring material, and observations and input from facility personnel during a Site walk with the property owner and building tenant representatives in advance of the installation. Initial soil vapor probe installation and subsequent sample collection was performed after indoor air sampling had been completed to avoid the potential for introducing subsurface vapors into indoor air samples.

#### 3.3.4.1 Probe Installation

Sub-slab vapor probes were installed at eight locations using the following process:

- An approximate 1.5-inch (in) diameter hole was advanced approximately two inches into the building concrete slab. A smaller-diameter hole (approximately 5/8-in diameter) was advanced in the center of the 1.5-in hole and through the building concrete slab, and approximately three inches into underlying soils using a rotary hammer drill. Dust and loose cuttings generated during drilling were collected with a portable vacuum, and care was taken to avoid applying suction directly to the hole.
- Sub-slab vapor probes were constructed using Vapor Pins® manufactured by Cox-Colvin. The probe assembly was fitted with the manufacturer-supplied silicon sleeve to ensure an air-tight fit

and then driven into the 5/8-in diameter hole in the concrete slab and inset into the 1.5-in-diameter hole. After installation and following sampling, a silicone cap was placed on the sub-slab sampling port to keep sub-slab vapors from migrating into the indoor air, and a plastic cover cap was placed over the sample port to protect from foot traffic, where applicable.

#### 3.3.4.2 Leak Testing

A shut-in test was conducted on the purge syringe by closing all the sampling valves and applying a vacuum of 100 inches-of-water-column using a 60-milliliter (mL) gas-tight syringe to verify that no leaks in the sample train were present. Shut-in tests were also conducted on the 450 mL sample canisters to assure that there were not leaks in the sampling train connections.

During sampling leak checks were performed by placing a helium shroud around the sampling setup to test for leaks in the sampling train. A helium tracer gas was contained in the shroud placed over the sub-slab vapor probe location and the entire sample train. The sampling shroud was equipped with a port to facilitate the purging of the sub-slab vapor probe and the use of an in-line helium detector, a tracer gas injection port, and a switch to facilitate actuating the sampling train's three-way valve located inside the sampling shroud. Inside the sampling shroud was the sub-slab vapor probe, the sampling train (including the Summa® canister) and a helium detector. Helium was then injected into the sampling shroud and the measured concentration on the in-shroud helium detector was recorded.

#### 3.3.4.3 Purging

After the sampling equipment passed the shut-in test, the probe was purged to remove internal air from the sample train (tubing and sub-slab implant only). Three internal volumes were purged from each sampling probe using a 60-mL gas-tight syringe. The flow rate during purging was approximately equivalent to the flow rate during sampling at not more than 200 mL/minute (approximately 20 seconds to fill a 60-mL syringe), which is set by the flow controller provided by the laboratory. Each probe was sampled immediately following purging.

#### 3.3.4.4 Sample Collection

Initial sub-slab vapor sampling was performed following a minimum equilibrium period of 2 hours. A total of eight sub-slab vapor samples (plus one replicate) were collected during this VI Study. The sub-slab vapor samples were collected using batch-certified 450-mL Summa® canisters, which were obtained from the project laboratory with the proper vacuum of approximately 30 in Hg. Teflon® or nylon tubing was used to connect the sub-slab sampling port to the sample containers fitted with flow regulators restricting flow to less than 200 mL per minute and an in-line particulate filter. The canister valve was closed when the laboratory-supplied analog vacuum gauge registered zero.

## 3.4 LABORATORY TESTING AND DATA VALIDATION

VI Study ambient air, indoor air, and sub-slab vapor samples were submitted to H&P under COC for analysis of full-scan VOCs by United States Environmental Protection Agency (USEPA) Test Method TO-15. Collected sub-slab vapor samples were also analyzed for helium by

ASTM International (ASTM) Test Method D1945M. H&P reviewed the reported sample collection details, reported analytical results, and reported quality control results (including equipment blanks and laboratory control samples); the results of which indicate that no data were rejected, and the data are suitable for their intended purpose. Refer to Appendix D for additional data validation information.

## 3.5 DEVIATIONS FROM THE WORK PLAN

The following is a summary of Work Plan deviations and modifications related to the VI Study:

- **Sample Location Addendum:** Due to difficulties in securing access, and the desire to complete the work as soon as possible, the results of the building survey and chemical use inventory, along with selected indoor and outdoor air sample locations were not presented in an addendum submitted to the LARWQCB prior to collecting the indoor air and sub-slab vapor samples. Stantec staff involved in the project's management met with the field staff to discuss the findings of the visual building survey, and considered ongoing business operations when selecting the sampling locations. Accordingly, the deviation is not expected to have a significant impact on the findings from the completed scope of work.
- **Differential Pressure Monitoring:** The Work Plan proposed the collection of differential pressures during the completion of the indoor air sampling activities. Due to the desire to avoid the potential for introducing subsurface vapors into indoor air samples, the sub-slab vapor pins were not installed until after the indoor air sampling work was completed. It should be noted that none of the sub-slab vapor pins exhibited a probe pressure that differed from that within the building space.
- **Sub-Slab Vapor Sampling:** The Work Plan proposed the use of a water dam at each sub-slab vapor sampling location as an additional measure to seal and isolate the sub-slab environment from the indoor air environment. In some instances, the water dam would have interfered with sampling. Therefore, all samples were collected utilizing a helium shroud without the extra precaution of a water dam.

There were no other significant deviations from the Work Plan.

# 4.0 DISCUSSION OF RESULTS

The following sections summarize the results of the building survey and the subsequent ambient air, indoor air, and sub-slab vapor sampling activities. The Site building is utilized for commercial purposes; accordingly, screening levels established for commercial/industrial land use were utilized in this VI study.

Screening levels are conservative guidelines used as initial screening tools to assess chemical vapor concentrations below and inside buildings. When a chemical is found at a level above its screening level it does not necessarily indicate that VI is occurring or that there is a significant health risk. However, it does suggest further investigation may be beneficial, as the COPCs are also found in many industrial and household products including, cleaners, adhesives, glues, etc.

These screening criteria are derived from the following sources:

- The USEPA, Region 9, Regional Screening Levels (RSLs) for Indoor Air for Target Cancer Risk (TR) = 1E-06, Target Hazard Quotient (THQ) = 1.0, and industrial land use (November 2020); and
- California Environmental Protection Agency (Cal-EPA), Department of Toxic Substances Control (DTSC) Human and Ecological Risk Office (HERO), Human Health Risk Assessment Note Number 3, Modified Screening Levels (SLs) for Indoor Air (June 2020) for commercial/industrial land use.

Sub-slab vapor COPC results were compared to the RSLs and SLs referenced above utilizing a conservative attenuation factor of 0.03 (Table 2). In instances in which a COPC has both an RSL and an SL, the COPC concentrations were compared to the more conservative SL. Similarly, in instances in which a COPC had both carcinogenic and non-carcinogenic RSLs and/or SLs, the more conservative SL value was utilized.

## 4.1 BUILDING SURVEY

Stantec performed an initial non-invasive visual inspection of the Site building on January 26, 2021. The building space with a footprint of approximately 310 feet by 120 feet, is partitioned into two areas; the partition consists of a wall with one door and one rollup door linking the two spaces. In the main portion of the building, helicopter assembly activities take place; there is a small media blast room in the northwest corner of the building and an office area and restrooms along the south building wall. The media blast room was observed to contain multiple sand blasting stations, two parts cleaning stations, and several drums (placed atop secondary containment structures) containing fuel that had been recovered from the helicopters being serviced. Along the north wall there are two rooms; the northernmost room is a static parts cleaning room using an ultrasound bath and the southernmost room is vacant, containing tables and chairs. The main portion of the building was observed to have a total of 19 passive roof vents, multiple heaters installed near the ceiling (approximately 15 to 20 feet above the interior grade) and no air conditioning units. The media blast room was observed to have one passive roof vent and its own active ventilation system.

The second portion of the building is utilized as warehouse space for helicopter engines, helicopter bodies, parts, and other related components. The warehouse portion of the building was noted as having four passive roof vents, no heaters, or air conditioning units.

During the January 26, 2021 visual building survey, except as noted above, Stantec staff did not have the opportunity to inspect any chemical storage areas. Based on a 2018 Chemical Use and Storage Questionnaire prepared for the Site by Robinson, the Site does not currently store chemicals, nor does it utilize any degreasers, have any storage tanks, sumps, clarifiers, etc., or possess an industrial use discharge permit. While no large slab penetrations (those greater than 1-foot across) were identified, a determination could not be made as to whether smaller slab penetrations were present; however, a test well was identified at the location of the rollup door between the two spaces. A copy of the completed visual building inspection form is included in Appendix C.

## 4.2 AMBIENT AIR

Ambient air samples were collected during the indoor air sampling event for comparative purposes to indoor air quality. As presented on Table 1, 12 COPCs were reported above laboratory reporting limits (LRLs) in ambient air: 2-butanone, benzene, carbon tetrachloride, chloromethane, dichlorodifluoromethane, ethylbenzene, methylene chloride, toluene, trichlorofluoromethane, 1,2,4-trimethylbenzene, m,p-xylene, and o-xylene. Only benzene was reported in the ambient air samples above the SL (0.42 $\mu g/m^3$) at concentrations ranging from 0.74 $\mu g/m^3$ to 1.1 $\mu g/m^3$. Ambient air sampling locations are presented on Figure 3. A copy of the associated laboratory analytical report and H&P's sample collection field notes are included in Appendix D.

## 4.3 INDOOR AIR

As presented on Table 1, 14 COPCs were reported above LRLs in indoor air: 2-butanone, benzene, carbon tetrachloride, chloromethane, dichlorodifluoromethane, ethylbenzene, 4-ethyltoluene, methylene chloride, PCE, toluene, thrichlorofluoromethane, 1,2,4-trimethylbenzene, m,p-xylene, and o-xylene. Of these COPCs, only benzene, which was reported in the indoor air samples at concentrations ranging from 0.81 $\mu g/m^3$ to 1.4 $\mu g/m^3$, exceeded the respective SL of 0.42 $\mu g/m^3$. Based on the detection of benzene in ambient air samples at similar concentrations (ranging from 0.74 $\mu g/m^3$ to 1.1 $\mu g/m^3$), Stantec concludes that indoor benzene concentrations are reflective of ambient air conditions and not the result of VI.

Indoor air data is summarized on Table 1, while a copy of the associated laboratory analytical report and H&P's sample collection field notes are included in Appendix D.

## 4.4 SUB-SLAB VAPOR

As presented on Table 2, five COPCs were reported above LRLs in sub-slab vapor samples: benzene, PCE, TCE, toluene, and 1,1,2-trichlorotrifluoroethane. Of these COPCs, only PCE, which was reported in the sub-slab vapor samples at concentrations ranging from 670 $\mu g/m^3$ to 43,000 $\mu g/m^3$, exceeded the SL of 67 $\mu g/m^3$ (when applying an attenuation factor of 0.03). While PCE was reported in all collected indoor

air samples, the concentrations of PCE detected in the collected indoor air samples (ranging from 0.90 $\mu g/m^3$ to 1.5$\mu g/m^3$) was below the established SL of 2.0 $\mu g/m^3$.

Sub-slab vapor data is summarized on Table 2, while a copy of the associated laboratory analytical report and H&P's sample collection field notes are included in Appendix D.

The ratio of indoor air to sub-slab PCE concentrations ranged from 0.0015 to 0.00003 with a mean ratio of 0.0001. This indicates that using an attenuation factor of 0.03 to assess sub-slab screening levels is extremely conservative.

Based on the collected data, if VI is occurring, PCE concentrations in indoor air do not exceed the chronic SL.

As part of the sampling process, H&P staff also affixed analog pressure gauges to each of the installed sub-slab vapor probes to evaluate the building space for potential differences in sub-slab vapor pressures. In all instances, the sub-slab vapor probes registered a probe pressure of "zero", suggesting differential pressure conditions in sub-slab vapor beneath the Site building are not present.

# 5.0 CONCLUSIONS

The VI Study was conducted pursuant to the investigative order and was performed to evaluate whether the presence of subsurface VOCs potentially posed a vapor intrusion risk to Site workers. Based on a review of the collected ambient air, indoor air, and sub-slab vapor samples, Stantec's conclusions regarding the COPCs identified in one or more samples at concentrations exceeding their respective RSLs or SLs are as follows:

- Benzene is present in indoor and outdoor ambient air at similar concentrations. A comparison of indoor air data to ambient air data suggests the benzene concentrations observed in indoor air are not originating subsurface vapors or from the indoor building space, but rather are reflective of background ambient air conditions in the vicinity of the Site.
- PCE was reported above the SL at all eight sub-slab vapor sample locations; however, PCE was not detected in any of the indoor samples at concentrations exceeding the SL. The ratio of indoor air to sub-slab PCE concentrations ranged from 0.0015 to 0.00003 with a mean ratio of 0.0001.

**Based on evaluation of the data, this study did not find evidence of a significant vapor intrusion pathway of concern. The primary COPC for vapor intrusion is PCE. However, PCE was not reported above the chronic SL. Stantec opines that vapor intrusion is not a pathway of exposure of concern for other COPCs detected in indoor air, and that most of these COPCs are likely the result of sources other than intrusion from the subsurface.**

# 6.0 REFERENCES

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# TABLES

**TABLE 1**
**Summary of Indoor Air & Ambient Air Sample Analytical Results**
**East-Adjacent Properties - Property 3**
**2530 & 2540 Skypark Drive, Torrance, California 90505**

| Sample Location | Date Sampled | 2-Butanone (ug/m$^3$) | Benzene (ug/m$^3$) | Carbon tetrachloride (ug/m$^3$) | Chloromethane (ug/m$^3$) | Dichlorodifluoromethane (ug/m$^3$) | Ethylbenzene (ug/m$^3$) | 4-Ethyltoluene (ug/m$^3$) | Methylene chloride (ug/m$^3$) | PCE (ug/m$^3$) | TCE (ug/m$^3$) | Toluene (ug/m$^3$) | Trichlorofluoromethane (ug/m$^3$) | 1,1,2-Trichlorotrifluoroethane (ug/m$^3$) | 1,2,4-Trimethylbenzene (ug/m$^3$) | m,p-Xylene (ug/m$^3$) | o-Xylene (ug/m$^3$) | All Other VOCs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **EPA Reg. 9 RSL (Industrial)[1]** | | 22,000 | 1.6 | 2.0 | 390 | 440 | 4.9 | -- | 1,200 | 47 | 3.0 | 22,000 | -- | 22,000 | 260 | 440 | 440 | various |
| **DTSC SL (Commercial/Industrial)[2]** | | -- | 0.42 | 2.0 | -- | -- | -- | -- | 12 | 2.0 | -- | 1,300 | 5,300 | -- | -- | -- | -- | various |
| **Indoor Air Samples** | | | | | | | | | | | | | | | | | | |
| IA-1 | 2/5/2021 | 3.2 | **0.84** | 0.57 | 1.4 | 1.0 | <0.44 | <0.50 | 0.85 | 1.1 | <0.55 | 7.3 | 1.5 | <0.77 | 0.60 | 1.5 | 0.6 | ND |
| IA-1 REP | 2/5/2021 | 3.3 | **0.81** | 0.57 | 1.3 | <1.0 | 0.44 | <0.50 | 0.78 | 1.0 | <0.55 | 6.7 | 1.4 | <0.77 | 0.65 | 1.5 | 0.7 | ND |
| IA-2 | 2/5/2021 | 3.4 | **0.84** | 0.57 | 1.3 | 1.1 | 0.44 | <0.50 | 0.78 | 1.2 | <0.55 | 3.9 | 1.1 | <0.77 | 0.75 | 1.5 | 0.7 | ND |
| IA-3 | 2/5/2021 | 3.3 | **1.3** | 0.57 | 1.3 | <1.0 | 1.1 | <0.50 | 0.88 | 1.5 | <0.55 | 14 | 1.3 | <0.77 | 1.4 | 3.9 | 1.8 | ND |
| IA-4 | 2/5/2021 | 4.0 | **1.4** | 0.57 | 1.3 | <1.0 | 0.88 | <0.50 | 0.88 | 1.4 | <0.55 | 6.6 | 1.4 | <0.77 | 1.0 | 3.2 | 1.3 | ND |
| IA-5 | 2/5/2021 | 4.1 | **1.2** | 0.57 | 1.2 | <1.0 | 0.92 | 0.50 | 0.88 | 1.2 | <0.55 | 7.8 | 1.1 | <0.77 | 1.4 | 3.4 | 1.5 | ND |
| IA-6 | 2/5/2021 | 3.4 | **1.2** | 0.51 | 1.2 | <1.0 | 0.88 | <0.50 | 0.88 | 1.0 | <0.55 | 5.2 | 1.2 | <0.77 | 1.3 | 3.1 | 1.4 | ND |
| IA-7 | 2/5/2021 | 3.7 | **1.3** | 0.57 | 1.2 | <1.0 | 0.92 | <0.50 | 0.92 | 0.90 | <0.55 | 5.6 | 1.3 | <0.77 | 1.3 | 3.2 | 1.4 | ND |
| IA-8 | 2/5/2021 | 3.9 | **1.3** | 0.51 | 1.2 | <1.0 | 1.1 | <0.50 | 0.92 | 1.0 | <0.55 | 7.6 | 1.3 | <0.77 | 1.5 | 4.1 | 1.7 | ND |
| **Ambient Air Samples** | | | | | | | | | | | | | | | | | | |
| AA-1 | 2/5/2021 | 1.3 | **1.1** | 0.57 | 1.3 | <1.0 | 0.57 | <0.50 | 1.1 | <0.69 | <0.55 | 2.3 | 1.4 | <0.77 | 0.90 | 2.0 | 0.88 | ND |
| AA-2 | 2/5/2021 | 3.0 | **0.81** | 0.57 | 1.4 | <1.0 | <0.44 | <0.50 | 0.78 | <0.69 | <0.55 | 1.7 | 1.4 | <0.77 | <0.50 | 1.1 | 0.48 | ND |
| AA-3 | 2/5/2021 | 2.6 | **0.74** | 0.51 | 1.2 | 1.0 | 0.53 | <0.50 | 0.88 | <0.69 | <0.55 | 1.8 | 1.3 | <0.77 | 0.80 | 1.8 | 0.75 | ND |

**Notes:**
Analysis for full-scan VOCs by USEPA Test Method TO-15.
PCE = Tetrachloroethene
TCE = Trichloroethene
VOC = Volatile organic compound
ug/m$^3$ = Micrograms per cubic meter
ND = Not detected at or above the laboratory's reporting limit
DUP = Duplicate sample
< = Analyte not reported at or above the laboratory's reporting limit
-- = Not analyzed or not applicable
**Bold** concentrations represent detections exceeding established screening level.

1 = US Environmental Protection Agency Region 9 Regional Screening Levels for Indoor Air (TR=1E-06, HQ=1), November 2020; the lower of the carcinogenic and non-carcinogenic values is listed for each analyte.
2 = Department of Toxic Substances Control HERO Note 3, Table 1 - DTSC Recommended Screening Levels for Indoor Air, June 2020; the lower of the carcinogenic and non-carcinogenic values is listed for each analyte.

**TABLE 2**
**Summary of Sub-Slab Vapor Sample Analytical Results**
**East-Adjacent Properties - Property 3**
**2530 & 2540 Skypark Drive, Torrance, California 90505**

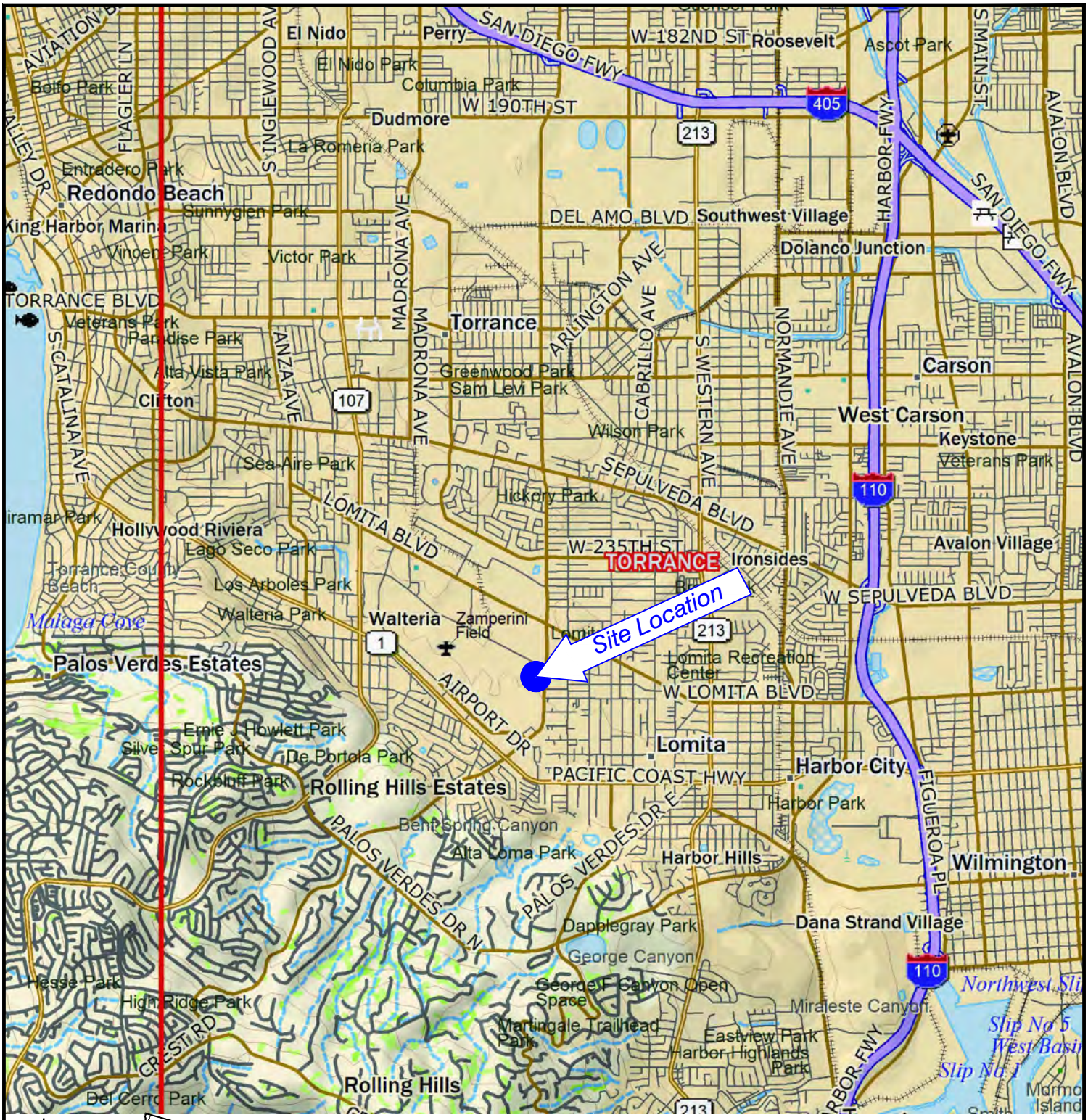
| Sample Location | Date Sampled | 2-Butanone ($ug/m^3$) | Benzene ($ug/m^3$) | Carbon tetrachloride ($ug/m^3$) | Chloromethane ($ug/m^3$) | Dichlorodifluoromethane ($ug/m^3$) | Ethylbenzene ($ug/m^3$) | 4-Ethyltoluene ($ug/m^3$) | Methylene chloride ($ug/m^3$) | PCE ($ug/m^3$) | TCE ($ug/m^3$) | Toluene ($ug/m^3$) | Trichlorofluoromethane ($ug/m^3$) | 1,1,2-Trichlorotrifluoroethane ($ug/m^3$) | 1,2,4-Trimethylbenzene ($ug/m^3$) | m,p-Xylene ($ug/m^3$) | o-Xylene ($ug/m^3$) | All Other VOCs | Helium (LCC) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **EPA Reg. 9 RSL (Industrial)[1]** | | 733,333 | 53 | 67 | 13,000 | 14,667 | 163 | -- | 40,000 | 1,567 | 100 | 733,333 | -- | 733,333 | 8,667 | 14,667 | 14,667 | various | -- |
| **DTSC SL (Commercial/Industrial)[2]** | | -- | 14 | 67 | -- | -- | -- | -- | 400 | 67 | -- | 43,333 | 176,667 | -- | -- | -- | -- | various | -- |
| VP-1 | 2/10/2021 | <150 | <16 | <32 | <10 | <25 | <22 | <25 | <18 | **5,700** | 75 | 19 | <28 | 750 | <25 | <44 | <22 | ND | <0.10 |
| VP-1 DUP | 2/10/2021 | <150 | <16 | <32 | <10 | <25 | <22 | <25 | <18 | **6,000** | 77 | <19 | <28 | 810 | <25 | <44 | <22 | ND | <0.10 |
| VP-2 | 2/10/2021 | <300 | <32 | <64 | <21 | <50 | <44 | <50 | <35 | **26,000** | <55 | 63 | <56 | 340 | <50 | <88 | <44 | ND | <0.10 |
| VP-3 | 2/10/2021 | <150 | <16 | <32 | <10 | <25 | <22 | <25 | <18 | **13,000** | <27 | 21 | <28 | 360 | <25 | <44 | <22 | ND | <0.10 |
| VP-4 | 2/10/2021 | <600 | <65 | <130 | <41 | <100 | <88 | <100 | <71 | **43,000** | <110 | <76 | <110 | 220 | <100 | <180 | <88 | ND | <0.10 |
| VP-5 | 2/10/2021 | <60 | <6.5 | <13 | <4.1 | <10 | <8.8 | <10 | <7.1 | **3,200** | <11 | 21 | <11 | 260 | <10 | <18 | <8.8 | ND | <0.10 |
| VP-6 | 2/10/2021 | <150 | <16 | <32 | <10 | <25 | <22 | <25 | <18 | **8,500** | <27 | 23 | <28 | 240 | <25 | <44 | <22 | ND | <0.10 |
| VP-7 | 2/10/2021 | <60 | <6.5 | <13 | <4.1 | <10 | <8.8 | <10 | <7.1 | **3,600** | <11 | 18 | <11 | 180 | <10 | <18 | <8.8 | ND | <0.10 |
| VP-8 | 2/10/2021 | <30 | 4.8 | <6.4 | <2.1 | <5.0 | <4.4 | <5.0 | <3.5 | **670** | <5.5 | 14 | <5.6 | 160 | <5.0 | <8.8 | <4.4 | ND | <0.10 |

**Notes:**
Analysis for full-scan VOCs by USEPA Test Method TO-15, and for helium by ASTM Method D1945M.
PCE = Tetrachloroethene
TCE = Trichloroethene
VOC = Volatile organic compound
LCC = Leak-check compound
$ug/m^3$ = Micrograms per cubic meter
ND = Not detected at or above the laboratory's reporting limit
DUP = Duplicate sample
< = Analyte not reported at or above the laboratory's reporting limit
-- = Not analyzed or not applicable
**Bold** concentrations represent detections exceeding established screening level.

1 = US Environmental Protection Agency Region 9 Regional Screening Levels for Indoor Air (TR=1E-06, HQ=1), November 2020 with an attenuation factor of 0.03 was utilized to calculate the listed values. The lower of the carcinogenic and non-carcinogenic values was utilized for each analyte.

2 = Department of Toxic Substances Control HERO Note 3, Table 1 - DTSC Recommended Screening Levels for Indoor Air, June 2020 with an attenuation factor of 0.03 was utilized to calculate the listed values. The lower of the carcinogenic and non-carcinogenic values was utilized for each analyte.

# FIGURES




REFERENCE: DELORME TOPO MAP, TORRANCE, CALIFORNIA



Stantec
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Thousand Oaks, CA 91361
PHONE:(805) 230-1266 FAX:(805) 230-1277

**EAST ADJACENT PROPERTIES**
**PROPERTY 3**
**2530 AND 2540 SKYPARK DRIVE**
**TORRANCE, CALIFORNIA**

**SITE LOCATION MAP**

FIGURE: **1**

| JOB NUMBER: | DRAWN BY: | CHECKED BY: | APPROVED BY: | DATE: |
|---|---|---|---|---|
| 185804849 | STA | BC | BC | 08/10/20 |

FILEPATH:C:\Users\SAguinaldo\Desktop_WORKING FILES_2020\TO\185804849\FIG 2_185804849_SITE PLAN_A.dwg | Layout Tab: 1P3 | Drafter: SAguinaldo | Aug 12, 2020 at 18:49


**LEGEND:**

PROPERTY BOUNDARY

N

0 100 200

APPROXIMATE SCALE IN FEET



REFERENCE: GOOGLE EARTH PRO AND STANTEC FIELD NOTES.

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**EAST ADJACENT PROPERTIES**
**PROPERTY 3**
**2530 AND 2540 SKYPARK DRIVE**
**TORRANCE, CALIFORNIA**

**SITE PLAN**

FIGURE: **2**

| JOB NUMBER: | DRAWN BY: | CHECKED BY: | APPROVED BY: | DATE: |
|---|---|---|---|---|
| 185804849 | STA | BC | BC | 08/10/20 |

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LEGEND:

- APPROXIMATE PROPERTY BOUNDARY
- INDOOR AIR/SUB-SLAB VAPOR SAMPLE LOCATION
- AMBIENT AIR SAMPLING LOCATION

N

0 50 100

APPROXIMATE SCALE IN FEET

NOTE:
INTERIOR FLOOR PLAN DIGITIZED USING A SITE PLAN PROVIDED BY ROBINSON HELICOPTER COMPANY



Stantec
290 Conejo Ridge Avenue
Thousand Oaks, CA 91361
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FOR:
EAST ADJACENT PROPERTIES
PROPERTY 3
2530 AND 2540 SKYPARK DRIVE
TORRANCE, CALIFORNIA

VAPOR INTRUSION STUDY
SAMPLE LOCATIONS

FIGURE: 3

| JOB NUMBER: | DRAWN BY: | CHECKED BY: | APPROVED BY: | DATE: |
|---|---|---|---|---|
| 185804980 | JBL | BC | LS | 02/12/21 |

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# APPENDIX A

## LARWQCB Correspondences

**INVESTIGATIVE ORDER NO. R4-2020-0035**

**CALIFORNIA WATER CODE SECTION 13267 ORDER**

**ORDER TO PROVIDE A TECHNICAL WORK PLAN TO ASSESS VAPOR INTRUSION RISK IN INDOOR AIR AND TO IMPLEMENT A VAPOR INTRUSION RESPONSE PLAN**

**DIRECTED TO**
**THE CITY OF TORRANCE**
**MAGELLAN AEROSPACE, MIDDLETOWN, INC. (FORMERLY KNOWN AS AERONCA, INC., FORMERLY KNOWN AS AERONCA MANUFACTURING CORPORATION)**
**EXCELLON INDUSTRIES, INC. (ALSO KNOWN AS EXCELLON AUTOMATION COMPANY AND NOW KNOWN AS EXCELLON TECHNOLOGIES, LLC)**
**ESTERLINE TECHNOLOGIES CORPORATION**
**ROBINSON HELICOPTER COMPANY**
**DASCO ENGINEERING CORPORATION**
**HI-SHEAR CORPORATION (ALSO KNOWN AS LISI AEROSPACE)**

**SKYPARK COMMERCIAL PROPERTIES**

**NORTHEAST PORTION OF CITY OF TORRANCE PARCEL**
**ASSESSOR PARCEL NO. 7377-006-906**
**24751 CRENSHAW BOULEVARD, TORRANCE, CALIFORNIA**
**24777 CRENSHAW BOULEVARD, TORRANCE, CALIFORNIA**
**24707 CRENSHAW BOULEVARD, TORRANCE, CALIFORNIA**
**24747 CRENSHAW BOULEVARD, TORRANCE, CALIFORNIA**
**24701 CRENSHAW BOULEVARD, TORRANCE, CALIFORNIA**
**2530 SKYPARK DRIVE, TORRANCE, CALIFORNIA**
**2540 SKYPARK DRIVE, TORRANCE, CALIFORNIA**
**2600 SKYPARK DRIVE, TORRANCE, CALIFORNIA**

**(SCP NO. 1499)**

**ON**
**MAY 12, 2020**

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board) makes the following findings and issues this Order pursuant to California Water Code (CWC) section 13267 requiring the City of Torrance; Magellan Aerospace, Middletown, Inc. (formerly known as Aeronca, Inc. formerly known as Aeronca Manufacturing Corporation); Excellon Industries, Inc. (also known as Excellon Automation Company and now known as Excellon Technologies, LLC); Esterline Technologies Corporation; Robinson Helicopter Company; Dasco Engineering Corporation; and Hi-Shear Corporation (also known as Lisi Aerospace) (hereinafter collectively referred to as Parties) to assess the vapor intrusion risk to indoor air at the properties located at 24751, 24777, 24707, 24747, and 24701 Crenshaw Boulevard and 2530, 2540, and 2600 Skypark Drive in the City of Torrance (hereinafter collectively referred to as the "Site") and properties off-Site. Volatile organic compounds (VOCs), primarily trichloroethene (TCE) and tetrachloroethene (PCE), are among the chemicals of concern.

1. The Site is approximately 27 acres in size and is located on the northeast portion of assessor parcel number (APN) 7377-006-906 in Torrance, California shown in Attachment 1. The Site envelops existing Regional Board cases Hi-Shear Corporation (Hi-Shear; Global ID No. SL204231523; Site ID No. 2042300; File SCP No. 0218) and East Adjacent Properties of Hi-Shear Corporation (EA Properties; Global ID No. T10000013835; File SCP No. 1481). The entire parcel APN 7377-006-906, including the Site, is owned by the City of Torrance and has been primarily leased to aviation or aerospace-related companies since 1954.

2. The following is a summary of the current and former occupants and the historical property use for the Hi-Shear Corporation property and the EA Properties.

    A. Hi-Shear Corporation (Hi-Shear) is located at 2600 Skypark Drive and occupies the western half of the Site. Hi-Shear has been an occupant as early as 1954. Activities performed on the property include the manufacture, production, assembly and cleaning of fasteners for the aerospace industry. Wastes generated as part of the activities contained VOCs, primarily TCE and PCE. Maximum historical soil PCE and TCE concentrations detected beneath the Hi-Shear property are 3,200,000 micrograms per kilogram (µg/kg) and 7,200,000 µg/kg, respectively.

    B. EA Properties are located at 24751, 24777, 24707, 24747, and 24701 Crenshaw Boulevard, and at 2530 and 2540 Skypark Drive and occupy the eastern half of the Site. EA Properties consist of Property 1 (24751 and 24777 Crenshaw Boulevard), Property 2 (24707, 24747 and 24701 Crenshaw Boulevard), and Property 3 (2530 and 2540 Skypark Drive).

        i. Property 1 occupants include: Aeronca, Inc. (a manufacturer of aircraft, missiles and their components from 1954 to 1987), Excellon

Industries, Inc., an Esterline Company, also known as Excellon Automation Company (a manufacturer of printed circuit board fabrication equipment from 1979 to 2003), and South Bay Lexus (a vehicle dealership from 2006 to present). Wastes generated as part of the historical occupants' activities contained PCE, 1,1,1-trichloroethane (1,1,1-TCA), trichlorotrifluoroethane, alkaline and solvent mixtures, waste oil mixtures, and organic waste mixtures.

ii. Property 2 occupants include: Aeronca, Inc. (a manufacturer of aircraft, missiles and their components from 1966 to 1973), Robinson Helicopter Company (a manufacturer of rotorcraft and related components from 1978 to 1996), and Dasco Engineering Corporation (a manufacturer of precision mechanical aircraft and space components from 1995 to present).

iii. Property 3 has been occupied by Robinson Helicopter from 1978 to present. The occupant has used the property to operate paint spray booths and store solvents.

Maximum historical soil PCE and TCE concentrations detected beneath the EA Properties are 3,390 µg/kg and 223 µg/kg, respectively.

3. Under the oversight of this Regional Board, Hi-Shear has been implementing onsite and offsite investigations and interim mitigation measures under a Water Code section 13267 Order dated October 29, 2009. The most recent investigations completed are documented in the technical reports titled, "Soil, Soil Vapor, and Groundwater Delineation – Module I" (Module I) dated March 13, 2020 and "Soil, Soil Vapor, and Groundwater Delineation Report – Module II" (Module II) dated March 16, 2020, prepared by Genesis Engineering and Redevelopment, Inc. (Genesis) on behalf of Hi-Shear. Additionally, on March 20, 2020, Genesis submitted the "Vapor Intrusion Response Plan" (VIRP), which proposes response actions to assess vapor intrusion risk based on the VOCs detected in soil vapor in the residential and commercial areas located east of Crenshaw Boulevard. A summary of Module I, Module II and the VIRP is provided below.

A. Module I documented the results of the soil vapor assessment east of Crenshaw Boulevard (i.e., off-Site into the City of Torrance and City of Lomita neighborhoods). Soil vapor sample results indicated elevated concentrations of VOCs in the area between Crenshaw Boulevard and Pennsylvania Avenue, and the area between Amsler Avenue and in the vicinity of 247th Street. Additional delineation and the implementation of the VIRP are warranted to fully assess and address potential threats to human health and the environment.

B. Module II documented the results of the soil and soil vapor assessment on the Hi-Shear property. Soil vapor sample results indicated elevated concentrations of VOCs on the eastern and western portions of the Hi-Shear property, converging towards the center of the property. The restart of the soil vapor extraction system and an indoor air assessment are warranted.

C. The VIRP provides the criteria and sequence for response actions and proposed further soil vapor, sub-slab vapor, and indoor air sampling for VOCs at residential and commercial properties east of Crenshaw Boulevard. The Regional Board is in the process of reviewing the VIRP.

4. On January 13, 2020, the Regional Board issued a Water Code section 13267 Order to the City of Torrance; Magellan Aerospace, Middletown, Inc. (formerly known as Aeronca, Inc. formerly known as Aeronca Manufacturing Corporation); Excellon Industries, Inc. (also known as Excellon Automation Company and now known as Excellon Technologies, LLC); Esterline Technologies Corporation; Robinson Helicopter Company; and Dasco Engineering Corporation for the EA Properties to submit a technical work plan for the complete delineation of the vertical and lateral extent of VOCs impacts to soil, soil vapor, and groundwater onsite and offsite. This Order discusses the relationship of each of the parties to the various properties and identifies reasons why each is a suspected discharger. To date, the EA Properties have not submitted the required work plan which was due on April 3, 2020.

5. On March 6, 2020, the Regional Board issued an amendment to a Water Code section 13267 Order, requiring Hi-Shear to submit an indoor air sampling and analysis plan to assess the vapor intrusion risk for occupants on the Hi-Shear property. On April 28, 2020, the Regional Board received the “Onsite Indoor Assessment Workplan.”

6. California Water Code (CWC) section 13267, subdivision (b)(1) states, in part:

> “In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or, discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person

with a written explanation with regard to the need for the reports and shall identify the evidence that supports requiring that person to provide the reports."

7. The Regional Board has evidence in the case file for the Site and data collected as part of Hi-Shear's ongoing investigations and interim mitigation measures indicating that there was a discharge of waste at or from the Site that continues to migrate unabated. The discharge of waste poses a potential vapor intrusion risk to on-Site and off-Site occupants that has not been assessed or evaluated. For the purposes of the findings of this Order, pertinent historical report(s) and the most recently available soil vapor data at depths of 5 and 15 feet below ground surface (ft-bgs) from the Module I and Module II reports were reviewed. These depths are consistent with the "Public Draft Supplemental Guidance: Screening and Evaluating Vapor Intrusion" (Supplemental Guidance), prepared by Department of Toxic Substances Control (DTSC) and California Water Resources Control Boards dated February 2020. For ease of reference, the soil vapor data is summarized below by the following locations – Hi-Shear, EA Properties, and off-Site in the City of Torrance and City of Lomita neighborhoods.

   A. Hi-Shear

      i. Maximum soil vapor PCE and TCE concentrations at 5 ft-bgs are 2,850,000 micrograms per cubic meter (µg/$m^3$) and 684,000 µg/$m^3$, respectively. Soil vapor samples were collected and analyzed in October and November 2019.

      ii. Maximum soil vapor PCE and TCE concentrations at 15 ft-bgs are 290,000 µg/$m^3$ and 36,100 µg/$m^3$, respectively. Soil vapor samples were collected and analyzed in October and November 2019.

      iii. These soil vapor concentrations exceed the commercial soil vapor screening level of 67 µg/$m^3$ for PCE and 100 µg/$m^3$ for TCE.

   B. EA Properties

      i. Maximum soil vapor PCE and TCE, concentrations at 5 ft-bgs are 17,700,000 µg/$m^3$ and 791,000 µg/$m^3$ respectively. Soil vapor samples were collected in August 2014 and June 2016.

      ii. Maximum soil vapor PCE and TCE concentrations at 15 ft-bgs are 27,900,000 µg/$m^3$ and 899,000 µg/$m^3$, respectively. Soil vapor samples were collected and analyzed in August 2014 and June 2016.

      iii. These soil vapor concentrations exceed the commercial soil vapor screening level of 67 µg/$m^3$ for PCE and 100 µg/$m^3$ for TCE.

C. Off-Site in the City of Torrance and City of Lomita neighborhoods

i. Maximum soil vapor PCE and TCE concentrations at 5 ft-bgs are 6,070 µg/$m^3$ and 30,000 µg/$m^3$, respectively. Soil vapor samples were collected and analyzed in January 2020.

ii. Maximum soil vapor PCE and TCE concentrations at 15 ft-bgs are 7,710 µg/$m^3$ and 152,000 µg/$m^3$, respectively. Soil vapor samples were collected and analyzed in January 2020.

iii. These soil vapor concentrations exceed both the commercial and residential soil vapor screening levels of 67 µg/$m^3$ and 15 µg/$m^3$ for PCE, 100 µg/$m^3$ and 16 µg/$m^3$ for TCE, respectively

Based on the available case files, the recent soil vapor PCE and TCE concentrations summarized above and the soil concentrations detected on the Hi-Shear and EA Properties, the VOC soil vapor plumes beneath the Hi-Shear property and EA Properties are commingled. The recent soil vapor concentrations demonstrate that the plumes have migrated off-Site and east of Crenshaw Boulevard.

8. This Order identifies the above suspected dischargers of waste identified in paragraphs one (1) through five (5) and seven (7), because, as described above these entities own(ed) and/or operated the properties on which the waste is or has been discharged and continues to migrate unabated in soil and soil vapor, which is a potential threat to human health.

9. This Order requires the Parties to prepare and submit a technical work plan to completely assess the vapor intrusion risk to indoor air on-Site and off-Site and to implement the VIRP or a substantively similar plan that will assess the vapor intrusion threat to human health and the environment in areas impacted above DTSC Human Health Risk Assessment (HHRA) Note No.3 screening levels or USEPA Regional Screening Levels (RSLs). You are expected to submit a complete work plan as required by this Order. The Regional Board may reject the report if it is deemed incomplete and/or require revisions to the report under this Order.

10. The burdens, including costs, of these reports bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports. The information is necessary to adequately determine the extent of discharges of wastes at and from the Site to assure adequate cleanup of the Site, as contaminants at the Site may pose a threat to public health and the environment. The technical reports required by this Order are needed by the Regional Board in order to assess the vapor intrusion risk for occupants on-Site and off-Site resulting

from the discharges of waste, specifically VOCs and identify appropriate on-Site and off-Site interim mitigation measures.

11. The issuance of this Order is an enforcement action by a regulatory agency and is categorically exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to California Code of Regulations, title 14, section 15321, subdivision (a)(2). This Order requires submittal of technical reports, and may require the submittal of including workplans. The scope of activities required to prepare the reports required by this Order are not yet known. It is unlikely that compliance with this Order, including implementation of the work plans, could result in anything more than minor physical changes to the environment. If the implementation of this Order may result in significant impacts on the environment, the appropriate lead agency will address the CEQA requirements prior to approval of any work plan.

12. Any person aggrieved by this action of the Regional Water Board may petition the State Water Resources Control Board (State Water Board) to review the action in accordance with California Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at: http://www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.

**THEREFORE, IT IS HEREBY ORDERED** that the City of Torrance; Magellan Aerospace, Middletown, Inc. (formerly known as Aeronca, Inc. formerly known as Aeronca Manufacturing Corporation); Excellon Industries, Inc. (also known as Excellon Automation Company and now known as Excellon Technologies, LLC); Esterline Technologies Corporation; Robinson Helicopter Company; Dasco Engineering Corporation; and Hi-Shear Corporation (also known as Lisi Aerospace) pursuant to Water Code section 13267, subdivision (b), are required to submit the following:

1. By **July 10, 2020**, a technical work plan, acceptable to the Executive Officer, to assess the vapor intrusion risk to indoor air at the EA Properties and off-Site. This shall contain but is not limited to items (A) through (D) listed below.

    A. The technical work plan shall be developed in accordance with the Supplemental Guidance; DTSC's "Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air," dated October 2011; DTSC's "Vapor Intrusion Mitigation Advisory," (VIMA) dated October 2011; and other applicable existing California guidance.

B. A description of the proposed soil vapor, sub-slab vapor and/or indoor air sampling locations. The soil vapor, sub-slab vapor and/or indoor air sampling locations shall consider the available environmental data collected as part of Hi-Shear's onsite and offsite investigations and interim mitigation measures. The sampling locations shall be presented on an accurately scaled map.

C. Soil vapor, sub-slab vapor and/or indoor air samples shall be analyzed for VOCs and laboratory reporting limit concentrations shall be sufficiently low to identify risks such that all known or suspected carcinogens are included in the risk assessment. Vapor concentration units shall be reported in $\mu g/m^3$.

D. A timeline for implementing the work plan. Completion of all indoor air sampling contemplated by the work plan shall occur no later than **October 30, 2020**. This Order contemplates one technical work plan for the EA Properties and the soil vapor plume identified east of Crenshaw Boulevard.

2. On March 20, 2020, Genesis submitted the VIRP on behalf of Hi-Shear. The Parties must implement the VIRP (with any conditions of approval by the Regional Board) or a substantively similar work plan designed to assess the vapor intrusion threat to human health and the environment for buildings east of Crenshaw Boulevard, in areas exceeding DTSC HHRA Note No. 3 screening levels or USEPA RSLs. The Parties must complete the VIRP (as conditionally approved) or any substantively similar plan (reviewed and approved by the Regional Board) no later than **October 15, 2020**.

3. The Regional Board recommends the Parties work together to implement the work plan in Item 1 and VIRP (or equivalent plan) to avoid duplication of efforts. If the results of the work plan implementation indicate unacceptable risk to building occupants, the Regional Board further recommends that the Parties develop and implement mitigation measures as soon as possible to reduce vapor intrusion. Refer to the DTSC's VIMA for examples of various mitigation measures.

4. This Order shall not supersede, rescind, nor amend requirements set forth in the existing Hi-Shear Corporation (Global ID No. SL204231523; Site ID No. 2042300; File SCP No. 0218) and East Adjacent Properties of Hi-Shear Corporation (Global ID No. T10000013835; File SCP No. 1481) orders originally dated October 29, 2009 and January 13, 2020, respectively. All aspects of those orders, and their amendments thereto, remain in full force and effect.

5. The above items shall be submitted to:

   Kevin Lin, P.E.
   Los Angeles Regional Water Quality Control Board
   320 West 4th Street, Suite 200

Los Angeles, CA 90013
Phone: (213) 576-6781
Email: kevin.lin@waterboards.ca.gov

6. Pursuant to Water Code section 13268, subdivision (a), any person who fails to submit reports in accordance with the Order is guilty of a misdemeanor. Pursuant to Water Code section 13268, subdivision (b)(1), failure to submit the required technical report described above by the specified due date(s) may result in the imposition of administrative civil liability by the Regional Board in an amount up to one thousand dollars ($1,000) per day for each day the technical report is not received after the above due date. These civil liabilities may be assessed by the Regional Board for failure to comply, beginning with the date that the violations first occurred, and without further warning.

7. The State Water Resources Control Board adopted regulations (California Code of Regulations, title 23, sections 3891 et seq.) requiring the electronic submittals of information (ESI) for all site cleanup programs, starting January 1, 2005. Currently, all of the information on electronic submittals and GeoTracker contacts can be found on the Internet at the following link: http://www.waterboards.ca.gov/ust/electronic_submittal/index.shtml.

   To comply with the above referenced regulation, you are required to upload all technical reports, documents, and well data to GeoTracker by the due dates specified in the Regional Board letters and orders issued to you or for the Site. However, the Regional Board may request that you submit hard copies of selected documents and data in addition to electronic submittal of information to GeoTracker. For your convenience, the GeoTracker Global ID for this site is T10000014333.

8. The Regional Board, under the authority given by Water Code section 13267, subdivision (b)(1), requires you to include a perjury statement in all reports as required by this Order. The perjury statement shall be signed by senior authorized representatives of the City of Torrance; Magellan Aerospace, Middletown, Inc. (formerly known as Aeronca, Inc. formerly known as Aeronca Manufacturing Corporation); Excellon Industries, Inc. (also known as Excellon Automation Company and now known as Excellon Technologies, LLC); Esterline Technologies Corporation; Robinson Helicopter Company; Dasco Engineering Corporation; and Hi-Shear Corporation [also known as Lisi Aerospace] (not by a consultant). The perjury statement shall be in the following format:

   > "I, [NAME], certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision, in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information

submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

SO ORDERED.

_____ May 12, 2020
Renee Purdy Date
Executive Officer

Attachment:
Attachment 1 – Site

**ATTACHMENT 1 – SITE**

October 6, 2020

CT Corporation System
c/o Esterline Technologies Corporation
500 – 108th Avenue NE,
Suite 1500
Bellevue, Washington 98004

Certified Mail
Return Receipt Requested
**Claim No. 7018 2290 0001 8504 0511**

Mr. Richard Doyle
Magellan Aerospace, Middletown, Inc.
2320 Wedekind Drive
Middletown, Ohio 45042-2390

Certified Mail
Return Receipt Requested
**Claim No. 7018 2290 0001 8504 0528**

Mr. Tim A. Goetz
Robinson Helicopter Company
2901 Airport Drive
Torrance, California 90505

Certified Mail
Return Receipt Requested
**Claim No. 7018 2290 0001 8504 0535**

Mr. Ward Olson
Dasco Engineering Corporation
24747 Crenshaw Boulevard
Torrance, California 90505

Certified Mail
Return Receipt Requested
**Claim No. 7018 2290 0001 8504 0542**

Mr. Bailey Su
Excellon Technologies, LLC
20001 S. Rancho Way
Rancho Dominguez, California 90220

Certified Mail
Return Receipt Requested
**Claim No. 7018 2290 0001 8504 0559**

Mr. Christian Darville
Lisi Aerospace/Hi-Shear Corporation
2600 Skypark Drive
Torrance, California 90509-2975

Certified Mail
Return Receipt Requested
**Claim No. 7018 2290 0001 8504 0566**

Mr. Leroy Jackson
City of Torrance
3031 Torrance Boulevard
Torrance, California 90503

Certified Mail
Return Receipt Requested
**Claim No. 7018 2290 0001 8504 0573**

**SUBJECT: REVIEW OF TECHNICAL WORK PLANS PURSUANT TO CALIFORNIA WATER CODE SECTION 13267**

**SITE: SKYPARK COMMERCIAL PROPERTIES (ASSESSOR PARCEL NO. 7377-006-906), 24701 – 24777 CRENSHAW BOULEVARD AND 2530, 2540, AND 2600 SKYPARK DRIVE, TORRANCE, CALIFORNIA (SCP NO. 1499)**

Dear Mr. Doyle, Goetz, Olson, Darville, Su, Jackson, and Representative of Esterline Technologies Corporation:

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board) staff have reviewed the following work plans:

- "Indoor Air Sampling Work Plan – 24751/24777 Crenshaw Boulevard, Torrance, California," dated August 25, 2020, prepared by Ramboll US Corporation (Ramboll) on behalf of Esterline Technologies Corporation (Esterline) for Property 1.

- "Indoor Air Sampling Workplan – 24751-24777 Crenshaw Boulevard, Torrance, California," dated August 25, 2020, prepared by MK Environmental Consulting, Inc. (MK) on behalf of Magellan, Middletown, Inc. (Middletown) for Property 1

- "Vapor Intrusion Investigation Workplan – East Adjacent Properties – Property 2," dated August 25, 2020, prepared by Stantec Consulting Services Inc. (Stantec) on behalf of Middletown and Robinson Helicopter (RHC) for Property 2 (Property 2 Work Plan).

- "Vapor Intrusion Investigation Workplan – East Adjacent Properties – Property 3," dated August 25, 2020, prepared by Stantec on behalf of RHC for Property 3 (Property 3 Work Plan).

The two work plans prepared by Ramboll and MK for Property 1 are nearly identical; therefore, for the purposes of this letter those two work plans will discussed as one (Property 1 Work Plan).

Each work plan was accompanied with cover letters prepared by Cermak & Inglin, LLP (C&I; for Property 1), Lamb and Kawakami, LLP (L&K; for Property 1), and Gordon Rees Scully Mansukhani, LLP (GRSM; for Property 2 and Property 3). C&I and L&K noted that

in submitting the work plans, Esterline and Middletown are not agreeing to implement the work.

Brief summaries of the work plans followed by Regional Board comments and requirements are included below.

**SUMMARY OF PROPERTY 1 WORK PLAN**

The Property 1 Work Plan proposed the following:

1. Collect up to six indoor air samples in six-liter Summa canisters over an 8-hour period with 1 duplicate sample

2. Collect three outdoor ambient air samples in six-liter Summa canisters over an 8-hour period

3. Install up to six semi-permanent sub-slab soil vapor probes using Cox-Colvin Vapor Pin. Sub-slab soil vapor samples will be collected in Summa canisters collocated with each of the indoor air sample locations

4. Analyze soil vapor samples using USEPA Method TO-15 for volatile organic compounds – tetrachloroethylene (PCE); trichloroethene (TCE); 1,1-dichloroethene (1,1 DCE); and 1,1,2-trichloro-1,2,2-trifluoroethane (Freon 113)

**SUMMARY OF PROPERTY 2 WORK PLAN**

The Property 2 Work Plan proposed the following:

1. Collect up to 10 indoor air samples (approximately one for every 5,000 square feet of occupied interior building space) in 6-liter Summa cannisters over an 8- or 10-hour period with 1 duplicate sample.

2. Collect 3 outdoor air samples around the exterior of the buildings with 1 duplicate sample.

3. Install sub-slab vapor monitoring probes using Vapor Pin (or equivalent) with sampling ports collocated with each of the indoor air sample locations. Sub-slab soil vapor samples will be collected in Summa cannisters.

4. Monitor the sampling period with differential pressure meters to assess the role of HVAC operations and building stack effect on vapor migration potential.

5. Analyze samples using USEPA Method TO-15 for the compounds of concern (COCs) – PCE; TCE; and their degradation products cis-1,2 dichloroethene (cis-1,2 DCE); trans-1,2 dichloroethene (trans-1,2 DCE); 1,1 DCE; and vinyl chloride.

6. Compare indoor air, outdoor air, and sub-slab vapor concentrations to the June 2020 update to Human and Ecological Risk Office (HERO) Human Health Risk Assessment (HHRA) Note 3.

**SUMMARY OF PROPERTY 3 WORK PLAN**

The Property 3 Work Plan proposed the following:

1. Collect up to 8 indoor air samples (approximately one for every 5,000 square feet of occupied interior building space) in 6-liter Summa cannisters over an 8- or 10-hour period with 1 duplicate sample.

2. Collect 3 outdoor air samples around the exterior of the building with 1 duplicate sample.

3. Install sub-slab vapor monitoring probes using Vapor Pin (or equivalent) with sampling ports collocated with each of the indoor air sample locations. Sub-slab soil vapor samples will be collected in Summa cannisters.

4. Monitor the sampling period with differential pressure meters to assess the role of HVAC operations and building stack effect on vapor migration potential.

5. Analyze samples using USEPA Method TO-15 for the COCs – PCE; TCE; and their degradation products cis-1,2 DCE; trans-1,2 DCE; 1,1 DCE; and vinyl chloride.

6. Compare indoor air, outdoor air, and sub-slab vapor concentrations to the June 2020 update to HERO HHRA Note 3.

**REGIONAL BOARD COMMENTS AND REQUIREMENTS**

The work plans are approved with the following comments and requirements:

1. The work plans must be conducted in accordance with the methodology outlined in the Department of Toxic Substances Control (DTSC) Vapor Intrusion Guidance titled “Final – Guidance for the Evaluation and Mitigation of subsurface Vapor Intrusion to Indoor Air” (DTSC October 2011), and the “Draft Supplemental Guidance: Screening and Evaluating Vapor Intrusion”, prepared by DTSC and California Water Resources Control Boards, dated February 14, 2020.

2. Property 1 Work Plan

    a. The footprint of the showroom is approximately 40,000 square feet. Consistent with the Property 2 Work Plan and Property 3 Work Plan, eight indoor air samples (approximately one for every 5,000 square feet of occupied interior building space) paired and collocated with sub-slab soil vapor samples, with one duplicate, should be collected within the footprint of the showroom.

b. The footprint of the existing service portion of the building is approximately 65,000 square feet. Consistent with the Property 2 Work Plan and Property 3 Work Plan, 13 indoor air samples (approximately one for every 5,000 square feet of occupied interior building space) paired and collocated with sub-slab soil vapor samples, with one duplicate, should be collected within the footprint of the existing service portion of the building.

c. Although currently unoccupied, the second smaller building shall be sampled to assess and evaluate potential future occupants' risks. The footprint of the second smaller building, located southwest of the larger building on Property 1, is approximately 28,000 square feet. Consistent with the Property 2 Work Plan and Property 3 Work Plan, six indoor air samples (approximately one for every 5,000 square feet of occupied interior building space) paired and collocated with sub-slab soil vapor samples, with one duplicate, should be collected.

3. Property 2 Work Plan

   a. Consistent with the proposed criteria (one sample for every 5,000 square feet), one indoor air and a collocated sub-slab soil vapor sample located within the footprint of trapezoidal modular building along the northeast facing portion of the main building shall be collected.

4. All indoor air, ambient outdoor air, and sub-slab vapor samples shall be analyzed using USEPA Method TO-15 for the full suite of VOCs. Laboratory reporting limits for each analyte shall be sufficiently low to adequately evaluate and assess risk.

5. Indoor air, ambient outdoor air, and sub-slab vapor samples shall be evaluated in accordance with the June 2020 update to HERO HHRA Note 3 and/or the 2019 San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels.

6. Indoor air data should also be evaluated in accordance with the DTSC HERO HHRA Note 5, which identifies the EPA Region 9 Interim Indoor Air Response Action Levels for indoor air concentrations of TCE under differing exposure scenarios. If necessary, any interim measures and/or response actions should adhere to the DTSC HERO HHRA Note 5.

7. Notify the Regional Board case manager at least ten (10) working days in advance of field work.

8. Submit technical reports for the implementation of the Property 1 Work Plan, Property 2 Work Plan, and Property 3 Work Plan by **January 20, 2021**. The technical reports shall include detailed descriptions of current uses and detailed floor plans and schematics of site buildings. All indoor air, ambient outdoor air, and sub-slab vapor sample concentrations shall be reported in units of microgram per cubic meter.

The above requirement for submittal of technical reports constitutes an amendment to the requirements of the California Water Code section 13267 Order originally dated May 12, 2020. All other aspects of the Order originally dated May 12, 2020, and the amendments thereto, remain in full force and effect. The required technical reports are necessary to investigate the characteristics of and extent of the discharges of waste at the site and to evaluate cleanup alternatives. Therefore, the burden, including costs, of the reports bears a reasonable relationship to the need for the report and benefits to be obtained. Pursuant to section 13268 of the California Water Code, failure to submit the required technical report by the specified due date may result in civil liability administratively imposed by the Regional Board in an amount up to one thousand dollars ($1000) for each day each technical report is not received.

**If you have any questions regarding this letter, please contact Mr. Kevin Lin at (213) 576-6781 or via email at kevin.lin@waterboards.ca.gov, or contact Ms. Jillian Ly, Unit IV Chief, at (213) 576-6664 or via email at jillian.ly@waterboards.ca.gov.**

Sincerely,

R Purdy Digitally signed by R Purdy
Date: 2020.10.05 20:45:58 -07'00'
Water Boards

Renee Purdy
Executive Officer

cc:
Aram Chaparyan, City of Torrance
Travis Van Ligten, Rutan & Tucker, LLP
Richard Montevideo, Rutan & Tucker, LLP
Sonja A. Inglin, Cermak & Inglin, LLC
Patrick L. Rendon, Lamb and Kawakami, LLP
William J. Beverly, Law Offices of William J. Beverly
Brian M. Ledger, Gordon Rees Scully Mansukhani, LLP
Thomas Schmidt, Hamrick & Evans, LLP
David L. Evans, Hamrick & Evans, LLP

February 24, 2021

Mr. Aram Chaparyan
City Manager
City of Torrance
3031 Torrance Boulevard
Torrance, California 90503

Certified Mail
Return Receipt Requested
**Claim No. 7020 1290 0001 8571 7190**

Mr. Christian Darville
Lisi Aerospace/Hi-Shear Corporation
2600 Skypark Drive
Torrance, California 90509-2975

Certified Mail
Return Receipt Requested
**Claim No. 7020 1290 0001 8571 7206**

Mr. Richard Doyle
Magellan Aerospace, Middletown, Inc.
2320 Wedekind Drive
Middletown, Ohio 45042-2390

Certified Mail
Return Receipt Requested
**Claim No. 7020 1290 0001 8571 7213**

Mr. Bailey Su
Excellon Technologies, LLC
20001 S. Rancho Way
Rancho Dominguez, California 90220

Certified Mail
Return Receipt Requested
**Claim No. 7020 1290 0001 8571 7220**

CT Corporation System
c/o Esterline Technologies Corporation
500 – 108th Avenue NE,
Suite 1500
Bellevue, Washington 98004

Certified Mail
Return Receipt Requested
**Claim No. 7020 1290 0001 8571 7237**

Mr. Tim A. Goetz
Robinson Helicopter Company
2901 Airport Drive
Torrance, California 90505

Certified Mail
Return Receipt Requested
**Claim No. 7020 1290 0001 8571 7244**

Mr. Ward Olson
Dasco Engineering Corporation
24747 Crenshaw Boulevard
Torrance, California 90505

Certified Mail
Return Receipt Requested
**Claim No. 7020 1290 0001 8571 7251**

**SUBJECT: RESPONSE TO TIME EXTENSION REQUESTS FOR SUBMITTAL OF TECHNICAL REPORTS PURSUANT TO CALIFORNIA WATER CODE SECTION 13267**

**SITE: SKYPARK COMMERCIAL PROPERTIES (ASSESSOR PARCEL NO. 7377-006-906), 24701 – 24777 CRENSHAW BOULEVARD AND 2530, 2540, AND 2600 SKYPARK DRIVE, TORRANCE, CALIFORNIA (SCP NO. 1499)**

Dear Mr. Chaparyan, et al.:

The California Regional Water Quality Control Board, Los Angeles Region (Regional Water Board) staff have reviewed the following letters dated January 19, 2021:

1. "Investigative Order No R4-2020-0035/California Water Code Section 13267 Order ("Order") - Request for Extension of Deadline to Submit Technical Report for Property 1," prepared by Cermak & Inglin, LLP on behalf of Esterline Technologies Corporation for Property 1 of the referenced site (Site).

2. "Request for Extension for Vapor Intrusion Investigation Report Submittal: East Adjacent Properties – Property 2, 24701, 24707, and 24747 Crenshaw Boulevard, Torrance, CA 90505 (Investigative Order No. R4-2020-0035)," prepared by Stantec Consulting Services Inc. (Stantec) on behalf of Magellan Aerospace, Middletown, Inc. and Robinson Helicopter Company (Robinson) for Property 2 of the Site.

3. "Request for Extension for Vapor Intrusion Investigation Report Submittal: East Adjacent Properties – Property 3, 2530 and 2540 Skypark Dr., Torrance, CA 90505 (Investigative Order No. R4-2020-0035)," prepared by Stantec on behalf of Robinson for Property 3 of the Site.

The letters request an extension to submit the indoor air sampling and/or vapor intrusion investigation reports for Property 1, Property 2, and Property 3. The initial due date for the technical reports was January 20, 2021 as required in the Regional Water Board's California Water Code (CWC) Section 13267 Order amended on October 6, 2020.

The letters provide the following reasons for the extension request:

1. To allow for receipt and analysis of the analytical results of the sampling completed in early January, additional time is needed to submit the indoor air sampling report for Property 1.

2. Due to delays in negotiating and securing an access agreement and non-disclosure agreement between Robinson and DASCO (one of the Property 2 building tenants) and coordination efforts to conduct investigation at Property 2 and Property 3 concurrently, additional time is needed to submit the vapor intrusion report for Property 2 and Property 3.

After reviewing your request, additional information and file documents for this Site, the Regional Water Board has made the following determinations:

1. The Regional Water Board approves the extension request for submitting the indoor air sampling report for Property 1 from January 20, 2021 to **February 12, 2021**.

2. The Regional Water Board approves the extension request for the submittal of vapor intrusion reports for Property 2 and Property 3 from January 20, 2021 to **March 31, 2021**.

The above due date extensions for submittal of technical reports constitute an amendment to the requirements of the California Water Code section 13267 Order originally dated May 12, 2020. All other aspects of the Order originally dated May 12, 2020, and the amendments thereto, remain in full force and effect. Pursuant to section 13268 of the California Water Code, failure to submit the required technical report by the specified due date may result in civil liability administratively imposed by the Regional Water Board in an amount up to one thousand dollars ($1,000) for each day each technical report is not received.

**If you have any questions regarding this letter, please contact Mr. Kevin Lin at (213) 576-6781 or via email at kevin.lin@waterboards.ca.gov, or contact Ms. Jillian Ly, Unit IV Chief, at (213) 576-6664 or via email at jillian.ly@waterboards.ca.gov.**

Sincerely,

R Purdy Digitally signed by R Purdy Date: 2021.02.24 06:58:00 -08'00'

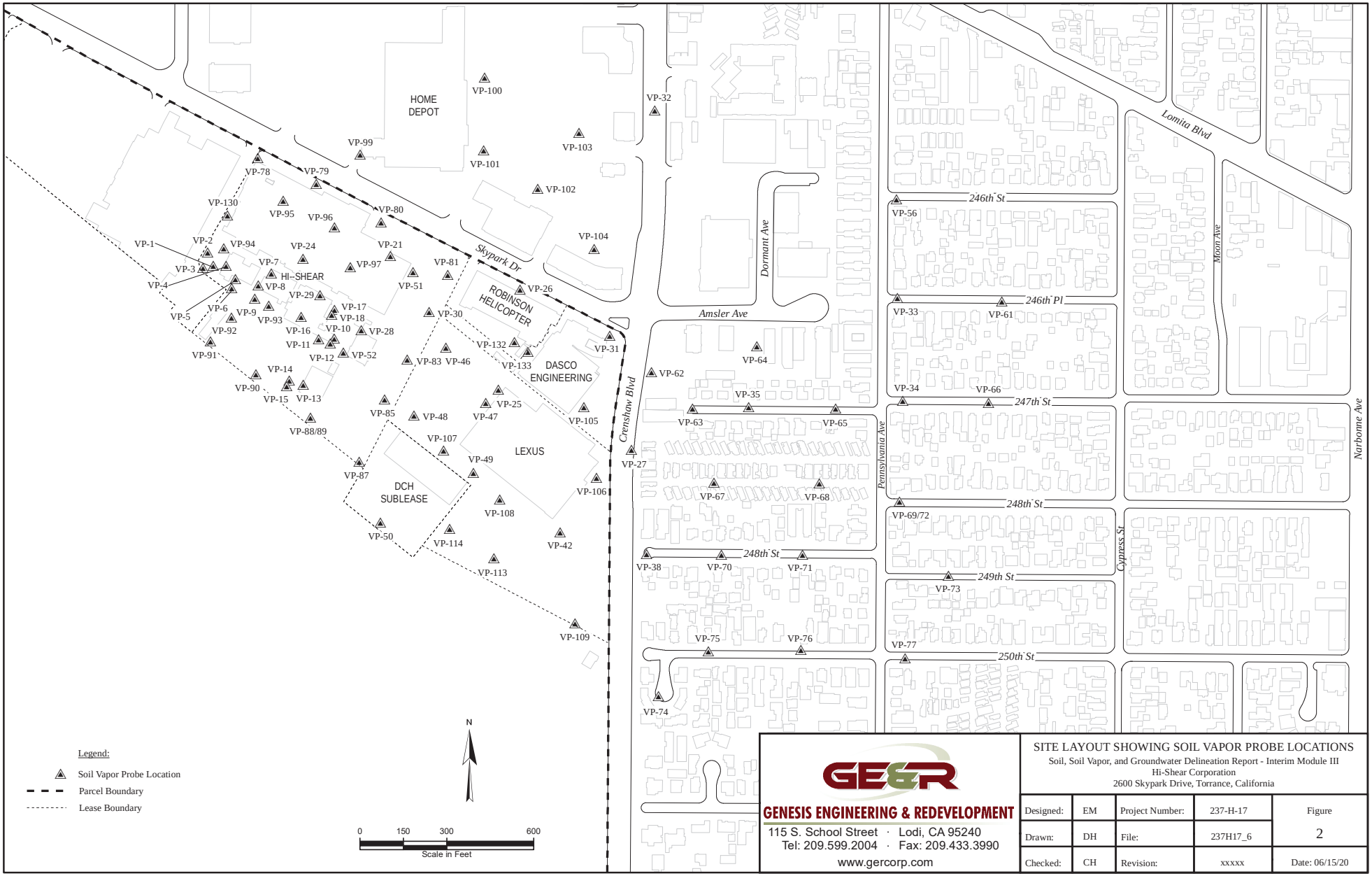
Renee Purdy
Executive Officer

cc:

Dmitriy Ginzburg, State Water Board Division of Drinking Water
Joseph Liles, Water Replenishment District
Carla Dillon, City of Lomita
Ryan Smoot, City of Lomita
Travis Van Ligten, Rutan & Tucker, LLP
Richard Montevideo, Rutan & Tucker, LLP
Sonja A. Inglin, Cermak & Inglin, LLC
Patrick L. Rendon, Lamb and Kawakami, LLP
William J. Beverly, Law Offices of William J. Beverly
Brian M. Ledger, Gordon Rees Scully Mansukhani, LLP
Thomas Schmidt, Hamrick & Evans, LLP
David L. Evans, Hamrick & Evans, LLP
Steve Van der Hoven, Genesis Engineering & Redevelopment

# APPENDIX B

## Historical Data




GENESIS ENGINEERING & REDEVELOPMENT
115 S. School Street · Lodi, CA 95240
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www.gercorp.com

# SITE LAYOUT SHOWING SOIL VAPOR PROBE LOCATIONS

Soil, Soil Vapor, and Groundwater Delineation Report - Interim Module III
Hi-Shear Corporation
2600 Skypark Drive, Torrance, California

| | | | | |
|---|---|---|---|---|
| Designed: | EM | Project Number: | 237-H-17 | Figure 2 |
| Drawn: | DH | File: | 237H17_6 | |
| Checked: | CH | Revision: | xxxxx | Date: 06/15/20 |

GENESIS ENGINEERING & REDEVELOPMENT

**Table 2**

**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**COPC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration ($\mu g/m^3$) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | PCE | TCE | cis-1,2-DCE | trans-1,2-DCE | 1,1-DCE | Vinyl Chloride |
| VP-25 | 5 | 8/9/14 | **26,200** | **7,930** | <20 | <20 | 472 | <20 |
| | | 3/3/20 | **34,200** | **1,560** | <20 | <20 | 199 | <20 |
| | 15 | 8/9/14 | **18,600** | **16,000** | 1,020 | <20 | <20 | <20 |
| | | 3/5/20 | **89,400** | **11,400** | 225 | <20 | 169 | <20 |
| | 25 | 8/9/14 | **980,000** | **403,000** | 29,200 | 199 | **40,300** | <20 |
| | | 3/3/20 | NA | **132,000** | 6,850 | 176 | **24,200** | <20 |
| | | Summa | **720,000** | **140,000** | 4,400 | <330 | **15,000** | <330 |
| | 45 | 8/9/14 | **1,500,000** | **784,000** | 40,900 | 31 | **59,000** | **144** |
| | | DUP | **1,540,000** | **768,000** | 40,600 | <20 | **57,300** | **144** |
| | | 3/5/20 | **543,000** | **238,000** | 16,200 | 286 | **44,300** | **36** |
| | 55 | 8/9/14 | **995,000** | **677,000** | 28,600 | 709 | **90,000** | <20 |
| | | 3/5/20 | **685,000** | **377,000** | 20,400 | 351 | 7,180 | **48** |
| | 65 | 8/9/14 | **1,270,000** | **874,000** | 34,900 | 115 | **124,000** | **208** |
| | | 3/5/20 | **548,000** | **341,000** | 19,600 | 347 | 7,420 | **47** |
| | 85 | 8/9/14 | **1,140,000** | **853,000** | 21,800 | 577 | **113,000** | <20 |
| | | 3/5/20 | **475,000** | **321,000** | 19,000 | 344 | 7,600 | **49** |
| VP-26 | 5 | 8/9/14 | **2,620** | **1,000** | <20 | <20 | <0.020 | <20 |
| | | 5/7/20 | **2,700** | **60** | <31 | <31 | <78 | <31 |
| | 15 | 8/9/14 | **13,200** | **2,880** | <20 | <20 | <0.020 | <20 |
| | | 5/7/20 | **8,900** | **490** | <34 | <34 | <84 | <34 |
| | 25 | 8/9/14 | **24,600** | **14,700** | 43 | <20 | 1,180 | <20 |
| | | 5/7/20 | **37,000** | **30,000** | <3,100 | <3,100 | <7,800 | <3,100 |
| | 45 | 8/9/14 | **19,900** | **14,100** | <20 | <20 | 935 | <20 |
| | | 5/7/20 | **67,000** | **100,000** | 230 | 20 | 1,400 | <33 |
| | 65 | 8/9/14 | **66,600** | **134,000** | <20 | <20 | 2,020 | <20 |
| | | 5/7/20 | **97,000** | **190,000** | <3,300 | <3,300 | 1,600 | <3,300 |
| | 85 | 8/9/14 | **112,000** | **173,000** | 260 | <20 | 2,380 | <20 |
| | | 5/7/20 | **87,000** | **330,000** | <3,600 | <3,600 | 1,700 | <3,600 |
| | | DUP | **120,000** | **450,000** | <3,200 | <3,200 | 2,200 | <8,000 |
| **Commercial Screening Level** ($\alpha$=0.03) | | | **67** | **100** | **NA** | **NA** | **10,333** | **5.3** |

**Table 2**

**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**COPC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration ($\mu g/m^3$) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | PCE | TCE | cis-1,2-DCE | trans-1,2-DCE | 1,1-DCE | Vinyl Chloride |
| VP-31 | 5 | 8/9/14 | **3,760** | **16,000** | <20 | <20 | <0.020 | <20 |
| | | 1/31/20 | 38 | **<20** | <20 | <20 | <20 | <20 |
| | | Summa | <5.2 | **<5.8** | <3.5 | <3.1 | <3.1 | <4.4 |
| | 15 | 8/9/14 | **2,350** | **1,660** | <20 | <20 | <0.020 | <20 |
| | | 1/31/20 | **1,500** | **1,440** | <20 | <20 | 186 | <20 |
| | 25 | 8/9/14 | **3,910** | **10,900** | <20 | <20 | 1,270 | <20 |
| | | 1/31/20 | **3,560** | **6,260** | <20 | <20 | 918 | <20 |
| | 45 | 8/9/14 | **10,900** | **43,600** | <20 | <20 | 3,780 | <20 |
| | | 1/31/20 | **14,600** | **66,400** | 216 | <20 | 5,270 | <20 |
| | 65 | 8/9/14 | **18,200** | **50,700** | 95 | <20 | 6,730 | <20 |
| | | 1/31/20 | **25,800** | **119,000** | 268 | 15 | 7,290 | <20 |
| | 85 | 8/9/14 | **22,200** | **76,900** | <20 | <20 | 5,680 | <20 |
| | | 1/31/20 | **33,300** | **183,000** | 393 | 94 | 7,220 | <20 |
| VP-42 | 5 | 6/7/16 | **53,100** | **1,510** | <8 | <8 | 6,030 | <8 |
| | | 1/22/19 | Not Sampled | | | | | |
| | 15 | 6/7/16 | **8,180** | **1,110** | <8 | <8 | **31,900** | <8 |
| | | 1/22/19 | Not Sampled | | | | | |
| | 25 | 6/7/16 | **13,700** | **583** | <8 | <8 | **71,900** | <8 |
| | | 1/22/19 | Not Sampled | | | | | |
| | 45 | 6/7/16 | **13,000** | **1,510** | <8 | <8 | **85,800** | <8 |
| | | 1/22/19 | Not Sampled | | | | | |
| | | 1/23/20 | **10,200** | **377** | <20 | <20 | **98,101** | <21 |
| | 55 | 6/7/16 | **3,480** | **261** | <8 | <8 | **97,100** | <8 |
| | | 1/22/19 | Not Sampled | | | | | |
| **Commercial Screening Level (α=0.03)** | | | **67** | **100** | **NA** | **NA** | **10,333** | **5.3** |

**Table 2**

**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**COPC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration ($\mu g/m^3$) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | PCE | TCE | cis-1,2-DCE | trans-1,2-DCE | 1,1-DCE | Vinyl Chloride |
| VP-46 | 5 | 6/9/16 | **18,500** | **29,600** | 12,300 | 3,950 | 8,670 | **413** |
| | | 1/27/20 | **22,900** | **42,300** | 13,100 | 1,920 | 854 | **142** |
| | | DUP | **23,700** | **41,900** | 13,000 | 2,000 | 912 | **131** |
| | 15 | 6/9/16 | **27,900** | **45,600** | 11,000 | 5,480 | 7,380 | **197** |
| | | 1/27/20 | **24,200** | **18,600** | 5,650 | 1,040 | 671 | **23** |
| | 25 | 5/31/16 | **775,000** | **192,000** | 15,300 | 2,530 | **12,000** | **46** |
| | | 1/27/20 | **94,300** | **24,900** | 5,060 | 1,370 | 1,681 | **31** |
| | 45 | 5/31/16 | **781,000** | **170,000** | 14,100 | 2,260 | **11,400** | **30** |
| | | 1/27/20 | **222,000** | **71,300** | 8,320 | 1,090 | 7,470 | **31** |
| | 65 | 5/31/16 | **1,400,000** | **348,000** | 17,200 | 1,800 | **13,900** | **41** |
| | | 1/27/20 | **483,000** | **170,000** | 15,800 | 826 | **13,500** | **29** |
| | 85 | 5/31/16 | **1,430,000** | **417,000** | 13,800 | 1,790 | 6,990 | **44** |
| | | 1/27/20 | **494,000** | **129,000** | 11,300 | 701 | 8,190 | <20 |
| VP-47 | 5 | 6/8/16 | **6,420** | **4,920** | 94 | <8 | 6,450 | <8 |
| | | 3/3/20 | **3,910** | **1,420** | <20 | <20 | 3,400 | <20 |
| | 15 | 6/8/16 | **4,780** | **5,070** | <8 | <8 | 9,720 | <8 |
| | | 3/3/20 | **47,000** | **21,000** | 152 | 22 | **63,700** | <20 |
| | 25 | 6/8/16 | **242,000** | **241,000** | 8,440 | 154 | **258,000** | **19** |
| | | 3/3/20 | **593,000** | **234,000** | 6,570 | 194 | **229,000** | **32** |
| | 45 | 6/8/16 | **886,000** | **786,000** | 19,600 | 827 | **293,000** | **95** |
| | | DUP | **884,000** | **773,000** | 17,900 | 773 | **276,000** | **95** |
| | | 3/4/20 | **946,000** | **584,000** | 21,500 | 432 | **247,000** | **80** |
| | 65 | 6/8/16 | **1,180,000** | **907,000** | 25,900 | 847 | **358,000** | **113** |
| | | 3/4/20 | **86,500** | **64,600** | 3,180 | 61 | **45,500** | **24** |
| | 85 | 6/8/16 | **1,350,000** | **1,040,000** | 29,000 | 857 | **400,000** | **114** |
| | | 3/4/20 | **995,000** | **642,000** | 26,600 | 510 | **391,000** | **97** |
| **Commercial Screening Level (α=0.03)** | | | **67** | **100** | **NA** | **NA** | **10,333** | **5.3** |

**Table 2**

**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**COPC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration ($\mu g/m^3$) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | PCE | TCE | cis-1,2-DCE | trans-1,2-DCE | 1,1-DCE | Vinyl Chloride |
| VP-48 | 5 | 6/1/16 | **115,000** | **38,200** | 88 | <8 | **204,000** | <8 |
| | | 1/22/20 | **8,230** | **5,840** | <20 | <20 | **12,300** | <20 |
| | | DUP | **7,250** | **6,000** | <20 | 22 | **14,700** | <20 |
| | 15 | 6/1/16 | **665,000** | **203,000** | 3,000 | 726 | **453,000** | <8 |
| | | 1/22/20 | **18,200** | **3,820** | 136 | 84 | **58,100** | **57** |
| | 25 | 6/1/16 | **927,000** | **418,000** | 7,470 | 3,200 | **1,470,000** | **80** |
| | | 1/22/20 | **65,000** | **49,300** | 2,000 | 433 | **515,000** | <20 |
| | | Summa | **520,000** | **600,000** | 2,900 | 600 | **2,800,000** | **25** |
| | 45 | 6/3/16 | **2,170,000** | **1,080,000** | 6,960 | 2,930 | **2,360,000** | **111** |
| | | 1/22/20 | **321,000** | **203,000** | 4,710 | 1,150 | **802,000** | **56** |
| | 65 | 6/3/16 | **8,770,000** | **1,150,000** | 6,890 | 1,370 | **3,610,000** | **120** |
| | | 1/24/20 | **11,300,000** | **846,000** | 6,960 | 1,010 | **3,480,000** | **104** |
| | | DUP | **16,000,000** | **1,160,000** | 6,430 | 837 | **3,880,000** | **95** |
| | 85 | 6/3/16 | **25,300,000** | **1,650,000** | 8,630 | 1,260 | **4,130,000** | **125** |
| | | 1/24/20 | **23,300,000** | **1,770,000** | 7,170 | 940 | **5,350,000** | **112** |
| VP-49 | 5 | 6/3/16 | **17,700,000** | 79 | 957 | 130 | **5,070,000** | **49** |
| | | 1/22/20 | **593,000** | **21,700** | 79 | 40 | **1,470,000** | **70** |
| | 15 | 6/7/16 | **27,900,000** | **899,000** | 1,400 | <8 | **6,990,000** | **88** |
| | | 1/22/20 | **1,860,000** | **89,400** | 753 | 137 | **3,800,000** | **112** |
| | 25 | 6/7/16 | **11,500,000** | **729,000** | 2,980 | <8 | **13,600,000** | **157** |
| | | 1/22/20 | **5,470,000** | **237,000** | 3,760 | 273 | **9,560,000** | **171** |
| | 45 | 6/7/16 | **5,880,000** | **588,000** | 4,380 | <8 | **13,300,000** | **146** |
| | | 1/22/20 | **3,450,000** | **63,600** | 9,880 | <20 | **1,300,000** | **189** |
| | | Summa | **300,000** | **200,000** | 6,900 | <390 | **1,600,000** | <570 |
| | 65 | 6/7/16 | **27,700,000** | **1,010,000** | 2,950 | <8 | **9,180,000** | **175** |
| | | DUP | **22,000,000** | **818,000** | 2,840 | <8 | **7,430,000** | **168** |
| | | 1/22/20 | **6,440,000** | **53,400** | 618 | 147 | **453,000** | **58** |
| | 85 | 6/7/16 | **35,900,000** | **1,100,000** | 1,800 | 293 | **6,100,000** | **108** |
| | | 1/22/20 | **8,040,000** | **212,000** | 1,630 | 278 | **2,520,000** | **146** |
| **Commercial Screening Level (α=0.03)** | | | **67** | **100** | **NA** | **NA** | **10,333** | **5.3** |

**Table 2**

**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**COPC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration ($\mu g/m^3$) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | PCE | TCE | cis-1,2-DCE | trans-1,2-DCE | 1,1-DCE | Vinyl Chloride |
| VP-50 | 5 | 6/8/16 | **36,100** | **7,140** | <0.008 | <8 | **278,000** | <8 |
| | | 1/24/20 | **5,900** | **10,100** | <20 | <20 | **578,000** | <20 |
| | | Summa | **7,700** | **<630** | <380 | <330 | **100,000** | <480 |
| | 15 | 6/8/16 | **201,000** | **60,700** | 156 | <8 | **4,160,000** | **35** |
| | | 1/24/20 | **724,000** | **86,200** | 22 | 46 | **3,000,000** | **28** |
| | 25 | 6/8/16 | **834,000** | **239,000** | 146 | <8 | **17,500,000** | **34** |
| | | 1/24/20 | **3,950,000** | **338,000** | 81 | 92 | **6,650,000** | **41** |
| | 45 | 6/9/16 | **1,970,000** | **322,000** | 358 | <8 | **12,500,000** | **61** |
| | | 1/24/20 | **5,140,000** | **444,000** | 597 | 246 | **13,700,000** | **97** |
| | 53 | 6/9/16 | **4,940,000** | **893,000** | 3,380 | <8 | **20,600,000** | **76** |
| | | DUP | **6,060,000** | **976,000** | 3,480 | <8 | **22,600,000** | **113** |
| | | 1/24/20 | **71,500,000** | **4,100,000** | 3,590 | 618 | **86,700,000** | **301** |
| VP-99 | 5 | 4/22/20 | <20 | <20 | <20 | <20 | <20 | <20 |
| | 15 | 4/22/20 | **125** | <20 | <20 | <20 | <20 | <20 |
| | 30 | 4/22/20 | **296** | <20 | <20 | <20 | <20 | <20 |
| | 45 | 4/22/20 | **256** | <20 | <20 | <20 | <20 | <20 |
| | 65 | 4/22/20 | **486** | <20 | <20 | <20 | <20 | <20 |
| | 80 | 4/22/20 | **471** | <20 | <20 | <20 | <20 | <20 |
| VP-100 | 5 | 4/21/20 | <20 | <20 | <20 | <20 | <20 | <20 |
| | 15 | 4/21/20 | <20 | <20 | <20 | <20 | <20 | <20 |
| | 30 | 4/21/20 | <20 | <20 | <20 | <20 | <20 | <20 |
| | 45 | 4/21/20 | <20 | <20 | <20 | <20 | <20 | <20 |
| | 65 | 4/21/20 | <20 | <20 | <20 | <20 | <20 | <20 |
| | 80 | 4/21/20 | <20 | <20 | <20 | <20 | <20 | <20 |
| **Commercial Screening Level (α=0.03)** | | | **67** | **100** | **NA** | **NA** | **10,333** | **5.3** |

**Table 2**

**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**COPC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration ($\mu g/m^3$) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | PCE | TCE | cis-1,2-DCE | trans-1,2-DCE | 1,1-DCE | Vinyl Chloride |
| VP-101 | 5 | 4/22/20 | <20 | <20 | <20 | <20 | <20 | <20 |
| | 15 | 4/22/20 | <20 | <20 | <20 | <20 | <20 | <20 |
| | 30 | 4/22/20 | 36 | <20 | <20 | <20 | <20 | <20 |
| | 45 | 4/22/20 | **250** | **317** | <20 | <20 | <20 | <20 |
| | | REP | **262** | **305** | <20 | <20 | <20 | <20 |
| | 65 | 4/22/20 | **290** | **315** | <20 | <20 | <20 | <20 |
| | 80 | 4/22/20 | **290** | **308** | <20 | <20 | <20 | <20 |
| VP-102 | 5 | 4/21/20 | No Flow | | | | | |
| | | 5/7/20 | 32 | <34 | <34 | <34 | <85 | <34 |
| | 15 | 4/21/20 | 25 | <20 | <20 | <20 | <20 | <20 |
| | 30 | 4/21/20 | **1,250** | **2,370** | <20 | <20 | <20 | <20 |
| | 45 | 4/21/20 | **1,460** | **2,850** | <20 | <20 | <20 | <20 |
| | 65 | 4/21/20 | **1,770** | **3,260** | <20 | <20 | <20 | <20 |
| | 80 | 4/21/20 | **1,490** | **2,670** | <20 | <20 | <20 | <20 |
| **Commercial Screening Level (α=0.03)** | | | **67** | **100** | **NA** | **NA** | **10,333** | **5.3** |

**Table 2**

**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**COPC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration ($\mu g/m^3$) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | PCE | TCE | cis-1,2-DCE | trans-1,2-DCE | 1,1-DCE | Vinyl Chloride |
| VP-103 | 5 | 4/21/20 | <20 | <20 | <20 | <20 | <20 | <20 |
| | 15 | 4/21/20 | <20 | <20 | <20 | <20 | <20 | <20 |
| | 30 | 4/21/20 | <20 | <20 | <20 | <20 | <20 | <20 |
| | 45 | 4/21/20 | <20 | <20 | <20 | <20 | <20 | <20 |
| | 65 | 4/21/20 | <20 | <20 | <20 | <20 | <20 | <20 |
| | | REP | **98** | <20 | <20 | <20 | <20 | <20 |
| | 80 | 4/21/20 | 38 | <20 | <20 | <20 | <20 | <20 |
| VP-104 | 5 | 4/22/20 | Tracer in Probe | | | | | |
| | | 5/7/20 | **79** | **290** | <32 | <32 | <80 | <32 |
| | 15 | 4/22/20 | **649** | **8,110** | <20 | <20 | <20 | <20 |
| | 30 | 4/22/20 | **2,550** | **15,400** | <20 | <20 | <20 | <20 |
| | 45 | 4/22/20 | **5,160** | **32,600** | <20 | <20 | <20 | <20 |
| | 65 | 4/22/20 | **6,720** | **58,400** | <20 | 21 | <20 | <20 |
| | 80 | 4/22/20 | **6,350** | **65,600** | 25 | <20 | <20 | <20 |
| VP-105 | 5 | 12/26/19 | **320** | **470** | 7 | <2.0 | 28 | <1.3 |
| | 15 | 12/26/19 | <3.4 | <2.7 | <2.0 | <2.0 | <2.0 | <1.3 |
| | 30 | 12/26/19 | **2,500** | **3,700** | 22 | <20 | 6,600 | <13 |
| | 45 | 12/26/19 | 13 | 19 | <2.0 | <2.0 | 21 | <1.3 |
| | | REP | **3,200** | **3,600** | <9.9 | <9.9 | 3,300 | <6.4 |
| VP-106 | 5 | 3/3/20 | **201** | <20 | <20 | <20 | 102 | <20 |
| | 15 | 3/3/20 | **582** | **119** | <20 | <20 | 1,100 | <20 |
| | 30 | 3/3/20 | **1,540** | 89 | <20 | <20 | **16,900** | <20 |
| | | REP | **1550** | **111** | <20 | <20 | **18,800** | <20 |
| | 45 | 3/5/20 | **2,310** | **654** | 30.0 | <20 | **11,100** | <20 |
| | | REP | **3050** | **582** | <20 | <20 | **15,100** | <20 |
| | 53 | 3/5/20 | **1,260** | **293** | <20 | <20 | 674 | <20 |
| | | REP | **9200** | **1200** | <320 | <320 | **13,000** | <320 |
| **Commercial Screening Level ($\alpha$=0.03)** | | | **67** | **100** | **NA** | **NA** | **10,333** | **5.3** |

**Table 2**

**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**COPC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration ($\mu g/m^3$) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | PCE | TCE | cis-1,2-DCE | trans-1,2-DCE | 1,1-DCE | Vinyl Chloride |
| VP-107 | 5 | 1/28/20 | **46,700** | **11,000** | <20 | <20 | **53,600** | <20 |
| | | DUP | **49,500** | **11,400** | <20 | <20 | **56,200** | <20 |
| | 15 | 1/28/20 | **46,300** | **22,000** | 108 | 32 | **29,600** | <20 |
| | 25 | 1/28/20 | **2,310,000** | **305,000** | 2,270 | 425 | **5,030,000** | **153** |
| | 30 | 1/28/20 | **1,820,000** | **325,000** | 2,170 | 459 | **5,440,000** | **143** |
| | 45 | 1/28/20 | **727,000** | **38,000** | 1,880 | 456 | **469,000** | **125** |
| | 65 | 1/28/20 | **5,490,000** | **235,000** | 1,850 | 451 | **2,890,000** | **138** |
| VP-108 | 5 | 1/27/20 | **25,400** | **1,580** | 60 | <20 | **134,000** | <20 |
| | | Summa | **6,400** | <590 | <360 | <310 | **140,000** | <450 |
| | 15 | 1/27/20 | **267,000** | **21,000** | 531 | 41 | **1,880,000** | **28** |
| | 30 | 1/27/20 | **10,500,000** | **120,000** | 5,450 | 291 | **9,790,000** | **258** |
| | 40 | 1/27/20 | **1,770,000** | **22,900** | 1,440 | 61 | **5,710,000** | **22** |
| | 54 | 1/27/20 | **83,500** | **2,770** | 81 | <20 | **86,200** | <20 |
| VP-109 | 5 | 1/31/20 | **5,590** | **591** | <20 | <20 | 46 | <20 |
| | 15 | 3/2/20 | **2,330** | 47 | <20 | <20 | <20 | <20 |
| | 25 | 3/2/20 | **159** | 23 | 72 | <20 | 72 | <20 |
| | 45 | 3/2/20 | **1,260** | 34 | 5,860 | <20 | 5,860 | <20 |
| | | Summa | **1,500** | <320 | <320 | <320 | 4,200 | <320 |
| **Commercial Screening Level (α=0.03)** | | | **67** | **100** | **NA** | **NA** | **10,333** | **5.3** |

**Table 2**

**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**COPC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration ($\mu g/m^3$) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | PCE | TCE | cis-1,2-DCE | trans-1,2-DCE | 1,1-DCE | Vinyl Chloride |
| VP-113 | 5 | 3/2/20 | **13,700** | **237** | <20 | <20 | 6,120 | <20 |
| | | REP | **14,500** | **251** | <20 | <20 | 9,090 | <20 |
| | 15 | 3/2/20 | **12,800** | **1,400** | <20 | <20 | **125,000** | <20 |
| | 30 | 3/2/20 | **300,000** | **20,600** | <20 | <20 | **780,000** | <20 |
| | 45 | 3/2/20 | **1,640,000** | **55,700** | 179 | <20 | **2,110,000** | <20 |
| | 60 | 3/2/20 | **7,690,000** | **150,000** | 1,440 | 363 | **4,630,000** | <20 |
| VP-114 | 5 | 3/3/20 | **19,800** | **877** | <20 | <20 | **79,000** | <20 |
| | 15 | 3/3/20 | **658,000** | **16,400** | 110 | <20 | **3,170,000** | <20 |
| | | REP | **25,800,000** | **15,800** | 103 | <20 | **26,100,000** | **40** |
| | 30 | 3/3/20 | **14,000,000** | **126,000** | 2,000 | 320 | **16,800,000** | **84** |
| | 45 | 3/3/20 | **26,800,000** | **231,000** | 5,260 | 737 | **22,800,000** | **256** |
| VP-132 | 5 | 4/23/20 | **2,200** | **596** | 30 | <20 | <20 | <20 |
| | 15 | 4/23/20 | **18,800** | **1,630** | 125 | <20 | 80 | <20 |
| | 30 | 4/23/20 | **484,000** | **35,800** | 9,160 | 230 | 1,200 | <20 |
| | | REP | **456,000** | **33,900** | 8,790 | 223 | 1,450 | <20 |
| | 45 | 4/23/20 | **31,200** | **8,850** | 2,310 | 49 | 1,560 | <20 |
| | 65 | 4/23/20 | **865,000** | **375,000** | 10,600 | 396 | **16,400** | <20 |
| | 80 | 4/23/20 | **881,000** | **424,000** | 11,200 | 419 | **19,500** | <20 |
| **Commercial Screening Level (α=0.03)** | | | **67** | **100** | **NA** | **NA** | **10,333** | **5.3** |

**Table 2**

**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**COPC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration ($\mu g/m^3$) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | PCE | TCE | cis-1,2-DCE | trans-1,2-DCE | 1,1-DCE | Vinyl Chloride |
| VP-133 | 5 | 12/26/19 | 10 | 18 | <2.0 | <2.0 | <2.0 | <1.3 |
| | 15 | 12/26/19 | **470** | **300** | 30 | <2.0 | 26 | <1.3 |
| | 30 | 12/26/19 | **98,000** | **22,000** | 13,000 | 320 | 1,800 | <51 |
| | 45 | 12/26/19 | **150,000** | **85,000** | 12,000 | 430 | 7,500 | <51 |
| | 65 | 12/26/19 | **250,000** | **260,000** | 7,100 | 280 | **19,000** | <51 |
| | 85 | 12/26/19 | **130,000** | **160,000** | 4,000 | 180 | **12,000** | <20 |
| | | DUP-1 | **180,000** | **280,000** | 5,700 | 240 | **19,000** | 21 |
| **Commercial Screening Level (α=0.03)** | | | **67** | **100** | **NA** | **NA** | **10,333** | **5.3** |

**NOTES:**

- "feet bgs" - feet below ground surface
- "PCE" - tetrachloroethene
- "TCE" - trichloroethene
- "cis-1,2-DCE" - cis-1,2-dichloroethene
- "NA" - not analyzed
- "**Bold**"- concentration exceeds the commercial screening level
- "ND" - Non-detect
- "trans-1,2-DCE" - trans-1,2-dichloroethene
- "1,1-DCE" - 1,1-dichloroethene
- "*" - Screening levels obtained from HHRA Note No. 3 (April 2019) or EPA Region 9 RSL (April 2019) with attenuation factor of 0.03

GENESIS ENGINEERING & REDEVELOPMENT

**Table 2B**
**Hi-Shear Corporation Project**
**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**Other Chlorinated VOC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration (µg/m³) | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | CT | CF | MC | 1,1,2-TCA | 1,1,1-TCA | 1,2-DCA | 1,1-DCA | BDCM | CB | DBCM | DCDFM | 1,2-DCP | cis-1,3-DCP | trans-1,3-DCP | Freon 113 (aka 1,1,2-TC-1,2,2-TFA) | HCB | 1,1,1,2-PCA | 1,1,2,2-PCA | 1,2,4-TCB | TCFM |
| VP-25 | 5 | 8/9/14 | <20 | **187** | <20 | <20 | <20 | <20 | <20 | 408 | <20 | 584 | <20 | <20 | <20 | <20 | <100 | <20 | <20 | <20 | <20 | <20 |
| | | 3/3/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 | <20 | <20 | 106 | <60 | <20 | <40 | <40 | <40 |
| | 15 | 8/9/14 | <20 | **215** | <20 | <20 | <20 | <20 | <20 | **104** | <20 | 66 | <20 | <20 | <20 | <20 | <100 | <20 | <20 | <20 | <20 | <20 |
| | | 3/3/20 | <20 | **36** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 | <20 | <20 | 187 | <60 | <20 | <40 | <40 | <40 |
| | 25 | 8/9/14 | <20 | **763** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 1,690 | <20 | <20 | <20 | <20 | <20 |
| | | 3/3/20 | <20 | **326** | <20 | **43** | <20 | <20 | **605** | <20 | <20 | <20 | <40 | <20 | <20 | <20 | 2,430 | <60 | <20 | <40 | <40 | 72 |
| | | Summa | <820 | **220** | <1600 | <820 | <820 | <820 | **390** | <820 | <820 | <820 | <820 | <820 | <820 | <820 | 1,700 | <1600 | -- | <820 | <1600 | <820 |
| | 45 | 8/9/14 | <20 | **931** | <20 | <20 | 133 | **690** | <20 | **78** | <20 | <20 | <20 | <20 | <20 | <20 | 3,370 | <20 | **153** | <20 | <20 | <20 |
| | | DUP | <20 | **907** | <20 | <20 | 146 | **690** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 3,200 | <20 | **151** | <20 | <20 | <20 |
| | | 3/5/20 | 22 | **536** | <20 | **1,260** | 62 | <20 | **1,010** | <20 | <20 | <20 | <40 | <20 | <20 | <20 | 5,090 | <60 | **103** | <40 | <40 | 177 |
| | 55 | 8/9/14 | <20 | **1,020** | <20 | **8,160** | 518 | **28,600** | 87 | <20 | <20 | <20 | <20 | **2,320** | <20 | <20 | <100 | <20 | **140** | <20 | <20 | <20 |
| | | 3/5/20 | 37 | **580** | <20 | **1,040** | 126 | <20 | **1,050** | <20 | <20 | <20 | <40 | <20 | <20 | <20 | 6,380 | <60 | **127** | <40 | <40 | 228 |
| | 65 | 8/9/14 | **141** | **884** | <20 | <20 | 909 | <20 | **589** | **77** | <20 | <20 | <20 | <20 | <20 | <20 | 11,100 | <20 | **185** | <20 | <20 | 235 |
| | | 3/5/20 | **43** | **575** | <20 | **1,430** | 148 | <20 | **1,010** | <20 | <20 | <20 | <40 | <20 | <20 | <20 | 6,320 | <60 | **117** | <40 | <40 | 234 |
| | 85 | 8/9/14 | <20 | **924** | <20 | <20 | 754 | <20 | 81 | <20 | <20 | <20 | <20 | **2,410** | <20 | <20 | 9,550 | <20 | **108** | <20 | <20 | 28 |
| | | 3/5/20 | 43 | **564** | <20 | **1,060** | 186 | <20 | **992** | <20 | <20 | <20 | <40 | <20 | <20 | <20 | 7,260 | <60 | **114** | <40 | <40 | 241 |
| **Commercial Screening Level (α=0.03)** | | | **67** | **18** | **400** | **26** | **146,667** | **16** | **257** | **11** | **7,333** | **NA** | **14,667** | **110** | **103** | **103** | **733,333** | **19** | **57** | **7** | **57** | **176,667** |

GENESIS ENGINEERING & REDEVELOPMENT

**Table 2B**
**Hi-Shear Corporation Project**
**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**Other Chlorinated VOC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration (µg/m³) | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | CT | CF | MC | 1,1,2-TCA | 1,1,1-TCA | 1,2-DCA | 1,1-DCA | BDCM | CB | DBCM | DCDFM | 1,2-DCP | cis-1,3-DCP | trans-1,3-DCP | Freon 113 (aka 1,1,2-TC-1,2,2-TFA) | HCB | 1,1,1,2-PCA | 1,1,2,2-PCA | 1,2,4-TCB | TCFM |
| VP-26 | 5 | 5/16/11 | <20 | **329** | <20 | <20 | <20 | <20 | **2,530** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 389 | <20 | <20 | <20 | <20 | <20 |
| | | 5/7/20 | <78 | <78 | <160 | <78 | <78 | <78 | <78 | <78 | <78 | <78 | <78 | <78 | <78 | <78 | 620 | <160 | -- | -- | <160 | <78 |
| | 15 | 5/16/11 | <20 | **6,020** | <20 | <20 | 16,800 | <20 | **27,800** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 9,800 | <20 | <20 | <20 | <20 | <20 |
| | | 5/7/20 | <84 | <84 | <170 | <84 | <84 | <84 | <84 | <84 | <84 | <84 | <84 | <84 | <84 | <84 | 860 | <170 | -- | -- | <170 | <84 |
| | 30 | 5/16/11 | <20 | **2,270** | <20 | <20 | 16,600 | <20 | **4,200** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 219 | <20 | <20 | <20 | <20 | <20 |
| | | 5/7/20 | <7,800 | <7,800 | <16,000 | <7,800 | <7,800 | <7,800 | <7,800 | <7,800 | <7,800 | <7,800 | <7,800 | <7,800 | <7,800 | <7,800 | 3,900 | <16,000 | -- | -- | <16,000 | <7,800 |
| | 45 | 5/16/11 | <20 | <20 | <20 | <20 | 12,900 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 |
| | | 5/7/20 | <82 | 2,400 | <160 | <82 | <82 | <82 | <82 | <82 | <82 | <82 | <82 | <82 | <82 | <82 | 7,400 | <160 | -- | -- | <160 | 33 |
| | 65 | 5/16/11 | <20 | **112** | <20 | <20 | 3,340 | <20 | 108 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 106 | <20 | <20 | <20 | <20 | <20 |
| | | 5/7/20 | <8,400 | 2,800 | <17,000 | <8,400 | <8,400 | <8,400 | <8,400 | <8,400 | <8,400 | <8,400 | <8,400 | <8,400 | <8,400 | <8,400 | 11,000 | <17,000 | -- | -- | <17,000 | <8,400 |
| | 85 | 5/16/11 | | | | | | | | | | | | | | | | | | | | |
| | | 5/7/20 | <9,000 | 2,100 | <18,000 | <9,000 | <9,000 | <9,000 | <9,000 | <9,000 | <9,000 | <9,000 | <9,000 | <9,000 | <9,000 | <9,000 | 8,400 | <18,000 | -- | -- | <18,000 | <9,000 |
| | | DUP | <8,000 | 3,000 | <16,000 | <8,000 | <8,000 | <8,000 | <8,000 | <8,000 | <8,000 | <8,000 | <8,000 | <8,000 | <8,000 | <8,000 | 11,000 | <16,000 | -- | -- | <16,000 | <8,000 |
| **Commercial Screening Level (α=0.03)** | | | **67** | **18** | **400** | **26** | **146,667** | **16** | **257** | **11** | **7,333** | **NA** | **14,667** | **110** | **103** | **103** | **733,333** | **19** | **57** | **7** | **57** | **176,667** |

GENESIS ENGINEERING & REDEVELOPMENT

**Table 2B**
**Hi-Shear Corporation Project**
**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**Other Chlorinated VOC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration ($\mu g/m^3$) | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | CT | CF | MC | 1,1,2-TCA | 1,1,1-TCA | 1,2-DCA | 1,1-DCA | BDCM | CB | DBCM | DCDFM | 1,2-DCP | cis-1,3-DCP | trans-1,3-DCP | Freon 113 (aka 1,1,2-TC-1,2,2-TFA) | HCB | 1,1,1,2-PCA | 1,1,2,2-PCA | 1,2,4-TCB | TCFM |
| VP-31 | 5 | 8/9/14 | <20 | **167** | <20 | <20 | <20 | <20 | <20 | 132 | <20 | 104 | <20 | <20 | <20 | <20 | 14,800 | <20 | <20 | <20 | <20 | <20 |
| | | 1/31/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 569 | <60 | <20 | <40 | <40 | <40 |
| | | Summa | <5.8 | <3.8 | <3.7 | <4.3 | <4.3 | <3.2 | <4.3 | <6.1 | <5 | <6.6 | <5.8 | <4.6 | <3.5 | <4.6 | 180 | <38 | NS | <17 | <8.9 | <4.6 |
| | 15 | 8/9/14 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 1,770 | <20 | <20 | <20 | <20 | <20 |
| | | 1/31/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 6,930 | <60 | <20 | <40 | <40 | 21 |
| | 25 | 8/9/14 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 12,600 | <20 | <20 | <20 | <20 | <20 |
| | | 1/31/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 11,400 | <60 | <20 | <40 | <40 | 60 |
| | 45 | 8/9/14 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 15,000 | <20 | <20 | <20 | <20 | <20 |
| | | 1/31/20 | <20 | **82** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 28,800 | <60 | <20 | <40 | <40 | 134 |
| | 65 | 8/9/14 | <20 | **188** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 29,500 | <20 | <20 | <20 | <20 | <20 |
| | | 1/31/20 | <20 | **141** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 37,100 | <60 | <20 | <40 | <40 | 202 |
| | 85 | 8/9/14 | <20 | **270** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 29,400 | <20 | <20 | <20 | <20 | <20 |
| | | 1/31/20 | <20 | **157** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 48,300 | <60 | <20 | <40 | <40 | 194 |
| **Commercial Screening Level ($\alpha$=0.03)** | | | **67** | **18** | **400** | **26** | **146,667** | **16** | **257** | **11** | **7,333** | **NA** | **14,667** | **110** | **103** | **103** | **733,333** | **19** | **57** | **7** | **57** | **176,667** |

GENESIS ENGINEERING & REDEVELOPMENT

**Table 2B**
**Hi-Shear Corporation Project**
**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**Other Chlorinated VOC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration ($\mu g/m^3$) | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | CT | CF | MC | 1,1,2-TCA | 1,1,1-TCA | 1,2-DCA | 1,1-DCA | BDCM | CB | DBCM | DCDFM | 1,2-DCP | cis-1,3-DCP | trans-1,3-DCP | Freon 113 (aka 1,1,2-TC-1,2,2-TFA) | HCB | 1,1,1,2-PCA | 1,1,2,2-PCA | 1,2,4-TCB | TCFM |
| VP-42 | 5 | 6/7/16 | 71 | <8 | <8 | <8 | 577 | <8 | <8 | <8 | <8 | <8 | <8 | <8 | <8 | <8 | 892 | <8 | <8 | <8 | <8 | <8 |
| | 15 | 6/7/16 | <8 | <8 | <8 | <8 | 186 | <8 | <8 | <8 | <8 | <8 | <8 | <8 | <8 | <8 | 3,920 | <8 | <8 | <8 | <8 | 324 |
| | 25 | 6/7/16 | <8 | <8 | <8 | <8 | 229 | <8 | <8 | <8 | <8 | <8 | <8 | <8 | <8 | <8 | 6,090 | <8 | <8 | <8 | <8 | 709 |
| | 45 | 6/7/16 | <8 | 195 | <8 | <8 | 459 | <8 | <8 | 92 | <8 | <8 | <8 | <8 | <8 | <8 | 2,630 | <8 | <8 | <8 | <8 | 233 |
| | | 1/22/20 | <20 | 33 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 | <20 | <20 | 5,910 | <60 | <20 | <40 | <40 | 687 |
| | 55 | 6/7/16 | <8 | <8 | <8 | <8 | 44 | <8 | <8 | <8 | <8 | <8 | <8 | <8 | <8 | <8 | 3,640 | <8 | <8 | <8 | <8 | 311 |
| **Commercial Screening Level (α=0.03)** | | | **67** | **18** | **400** | **26** | **146,667** | **16** | **257** | **11** | **7,333** | **NA** | **14,667** | **110** | **103** | **103** | **733,333** | **19** | **57** | **7** | **57** | **176,667** |

GENESIS ENGINEERING & REDEVELOPMENT

**Table 2B**
**Hi-Shear Corporation Project**
**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**Other Chlorinated VOC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration ($\mu g/m^3$) | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | CT | CF | MC | 1,1,2-TCA | 1,1,1-TCA | 1,2-DCA | 1,1-DCA | BDCM | CB | DBCM | DCDFM | 1,2-DCP | cis-1,3-DCP | trans-1,3-DCP | Freon 113 (aka 1,1,2-TC-1,2,2-TFA) | HCB | 1,1,1,2-PCA | 1,1,2,2-PCA | 1,2,4-TCB | TCFM |
| VP-46 | 5 | 6/9/16 | <8 | **156** | <8 | <8 | 116 | <8 | <8 | **32** | <8 | 86 | <8 | <8 | <8 | <8 | <40 | <8 | <8 | <8 | <8 | <8 |
| | | 1/27/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 | <20 | <20 | <40 | <60 | <20 | <40 | <40 | <40 |
| | | DUP | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 | <20 | <20 | <40 | <60 | <20 | <40 | <40 | <40 |
| | 15 | 6/9/16 | <8 | **203** | <8 | <8 | 81 | <8 | <8 | **38** | <8 | 88 | <8 | <8 | <8 | <8 | <40 | <8 | <8 | <8 | <8 | <8 |
| | | 1/27/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 | <20 | <20 | 89 | <60 | <20 | <40 | <40 | <40 |
| | 25 | 5/31/16 | <8 | **366** | <8 | <8 | 49 | <8 | <8 | <8 | <8 | <8 | <8 | <8 | <8 | <8 | 2,250 | <8 | **100** | <8 | <8 | <8 |
| | | 1/27/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 | <20 | <20 | 548 | <60 | <20 | <40 | <40 | <40 |
| | 45 | 5/31/16 | <8 | 351 | <8 | <8 | <8 | <8 | <8 | <8 | <8 | <8 | <8 | <8 | <8 | <8 | 2,050 | <8 | **104** | <8 | <8 | <8 |
| | | 1/27/20 | <20 | <20 | <20 | <20 | <20 | <20 | 41 | <20 | <20 | <20 | <40 | <20 | <20 | <20 | 2,390 | <60 | <20 | <40 | <40 | 30 |
| | 65 | 5/31/16 | <8 | **673** | <8 | <8 | 105 | <8 | <8 | <8 | <8 | <8 | <8 | <8 | <8 | <8 | 6,400 | <8 | **181** | <8 | <8 | <8 |
| | | 1/27/20 | <20 | **370** | <20 | <20 | 30 | <20 | 156 | <20 | <20 | <20 | <40 | <20 | <20 | <20 | 3,300 | <60 | **174** | <40 | <40 | 42 |
| | 80 | 5/31/16 | <8 | **774** | <8 | <8 | 121 | <8 | <8 | <8 | <8 | <8 | <8 | <8 | <8 | <8 | 7,230 | <8 | **220** | <8 | <8 | <8 |
| | | 1/27/20 | <20 | **298** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 | <20 | <20 | 1,600 | <60 | **141** | <40 | <40 | 24 |
| **Commercial Screening Level ($\alpha$=0.03)** | | | **67** | **18** | **400** | **26** | **146,667** | **16** | **257** | **11** | **7,333** | **NA** | **14,667** | **110** | **103** | **103** | **733,333** | **19** | **57** | **7** | **57** | **176,667** |

GENESIS ENGINEERING & REDEVELOPMENT

**Table 2B**
**Hi-Shear Corporation Project**
**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**Other Chlorinated VOC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration ($\mu g/m^3$) | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | CT | CF | MC | 1,1,2-TCA | 1,1,1-TCA | 1,2-DCA | 1,1-DCA | BDCM | CB | DBCM | DCDFM | 1,2-DCP | cis-1,3-DCP | trans-1,3-DCP | Freon 113 (aka 1,1,2-TC-1,2,2-TFA) | HCB | 1,1,1,2-PCA | 1,1,2,2-PCA | 1,2,4-TCB | TCFM |
| VP-47 | 5 | 6/8/16 | <8 | **128** | <8 | <8 | 56 | <8 | <8 | **23** | <8 | <8 | <8 | <8 | <8 | <8 | <40 | <8 | <8 | <8 | <8 | <8 |
| | | 3/3/20 | <20 | **<20** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 | <20 | <20 | <40 | <60 | <20 | <40 | <40 | <40 |
| | 15 | 6/8/16 | <8 | **43** | <8 | <8 | 20 | <8 | <8 | **18** | <8 | <8 | <8 | <8 | <8 | <8 | <40 | <8 | <8 | <8 | <8 | <8 |
| | | 3/3/20 | <20 | **25** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 | <20 | <20 | 1,480 | <60 | <20 | <40 | <40 | 121 |
| | 25 | 6/8/16 | 26 | **458** | <8 | <8 | 94 | <8 | 10 | <8 | <8 | <8 | <8 | <8 | <8 | <8 | 3,920 | <8 | 22 | <8 | <8 | 275 |
| | | 3/3/20 | 26 | **276** | 23 | <20 | 27 | <20 | **225** | <20 | <20 | <20 | <40 | <20 | <20 | <20 | 3,660 | <60 | <20 | <40 | <40 | 260 |
| | 45 | 6/8/16 | **140** | **988** | <8 | <8 | 1,600 | 43 | 66 | <8 | <8 | <8 | <8 | <8 | <8 | <8 | 6,810 | <8 | **97** | <8 | <8 | 316 |
| | | DUP | **137** | **932** | <8 | <8 | 1,590 | 40 | 66 | <8 | <8 | <8 | <8 | <8 | <8 | <8 | 6,450 | <8 | **95** | <8 | <8 | 28 |
| | | 3/4/20 | 46 | **698** | 56 | 32 | 167 | <20 | **442** | <20 | <20 | <20 | <40 | <20 | <20 | <20 | 7,430 | <60 | **186** | <40 | <40 | 296 |
| | 65 | 6/8/16 | **209** | **900** | <8 | 51 | 3,110 | <8 | 71 | <8 | <8 | <8 | <8 | <8 | <8 | <8 | 7,680 | <8 | **171** | <8 | <8 | 341 |
| | | 3/4/20 | <20 | **81** | <20 | <20 | 52 | <20 | 37 | <20 | <20 | <20 | <40 | <20 | <20 | <20 | 383 | <60 | <20 | <40 | <40 | 42 |
| | 85 | 6/8/16 | **227** | **908** | <8 | 68 | 3,510 | <8 | 76 | <8 | <8 | <8 | <8 | <8 | <8 | <8 | 8,020 | <8 | **187** | <8 | <8 | 351 |
| | | 3/4/20 | **158** | **801** | 45 | 78 | 468 | <20 | **671** | <20 | <20 | <20 | <40 | <20 | <20 | <20 | 6,590 | <60 | <20 | <40 | <40 | 400 |
| **Commercial Screening Level ($\alpha$=0.03)** | | | **67** | **18** | **400** | **26** | **146,667** | **16** | **257** | **11** | **7,333** | **NA** | **14,667** | **110** | **103** | **103** | **733,333** | **19** | **57** | **7** | **57** | **176,667** |

GENESIS ENGINEERING & REDEVELOPMENT

**Table 2B**
**Hi-Shear Corporation Project**
**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**Other Chlorinated VOC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration ($\mu g/m^3$) | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | CT | CF | MC | 1,1,2-TCA | 1,1,1-TCA | 1,2-DCA | 1,1-DCA | BDCM | CB | DBCM | DCDFM | 1,2-DCP | cis-1,3-DCP | trans-1,3-DCP | Freon 113 (aka 1,1,2-TC-1,2,2-TFA) | HCB | 1,1,1,2-PCA | 1,1,2,2-PCA | 1,2,4-TCB | TCFM |
| VP-48 | 5 | 6/1/16 | 41 | <8 | <8 | <8 | 3,070 | <8 | <8 | **26** | <8 | <8 | <8 | <8 | <8 | <8 | 2,610 | <8 | <8 | <8 | <8 | <8 |
| | | 1/22/20 | <20 | **23** | <20 | <20 | 35 | <20 | <20 | <20 | <20 | <20 | <40 | <20 | <20 | <20 | 114 | <60 | <20 | <40 | <40 | <40 |
| | | DUP | <20 | **26** | <20 | <20 | 46 | <20 | <20 | <20 | <20 | <20 | <40 | <20 | <20 | <20 | 66 | <60 | <20 | <40 | <40 | <40 |
| | 15 | 6/1/16 | **172** | <8 | <8 | <8 | 14,700 | <8 | 15 | <8 | <8 | <8 | <8 | <8 | <8 | <8 | 2,190 | <8 | 24 | <8 | <8 | <8 |
| | | 1/22/20 | <20 | **32** | <20 | <20 | 299 | <20 | <20 | <20 | <20 | <20 | <40 | <20 | <20 | <20 | <40 | <60 | <20 | <40 | <40 | <40 |
| | 25 | 6/1/16 | **316** | <8 | <8 | 579 | 11,400 | <8 | 78 | **15** | <8 | 81 | <8 | <8 | <8 | <8 | 1,380 | <8 | **62** | <8 | <8 | 11 |
| | | 1/22/20 | **38** | **116** | 25 | <20 | 208 | <20 | 112 | <20 | <20 | <20 | <40 | <20 | <20 | <20 | 23 | <60 | <20 | <40 | <40 | <40 |
| | | DUP | **46** | **160** | <4.9 | 330 | 610 | <4.3 | 170 | <8.2 | <6.7 | <8.8 | <7.8 | <6.1 | <4.7 | <6.1 | 510 | <51 | NS | <22 | <12 | 43 |
| | 45 | 6/3/16 | **654** | <8 | <8 | 1,910 | 33,700 | 15 | 107 | <8 | <8 | <8 | <8 | <8 | <8 | <8 | 1,410 | <8 | **211** | <8 | <8 | 299 |
| | | 1/22/20 | **138** | **397** | 55 | 1,410 | 1,310 | <20 | **396** | <20 | <20 | <20 | <40 | <20 | <20 | <20 | 2,640 | <60 | **123** | <40 | <40 | 97 |
| | 65 | 6/3/16 | **119** | <8 | 152 | 294 | 119,000 | <8 | **244** | <8 | <8 | <8 | <8 | <8 | <8 | <8 | 3,920 | <8 | **237** | <8 | <8 | 708 |
| | | 1/24/20 | **1,320** | **927** | 375 | <20 | 93,700 | 110 | **2,670** | <20 | 38 | <20 | <40 | <20 | <20 | <20 | 6,210 | <60 | **404** | <40 | <40 | 847 |
| | | DUP | **1,240** | **833** | 295 | <20 | 92,100 | 97 | **2,500** | <20 | 46 | <20 | <40 | <20 | <20 | <20 | 5,210 | <60 | **419** | <40 | <40 | 833 |
| | 85 | 6/3/16 | **114** | <8 | <8 | 125 | **149,000** | <8 | **1,770** | <8 | <8 | <8 | <8 | <8 | <8 | <8 | 5,170 | <8 | **295** | <8 | <8 | 856 |
| | | 1/24/20 | **1,350** | **963** | 311 | <20 | **211,000** | 102 | **2,970** | **22** | 31 | <20 | <40 | <20 | <20 | <20 | 7,390 | <60 | 441 | <40 | <40 | 982 |
| **Commercial Screening Level (α=0.03)** | | | **67** | **18** | **400** | **26** | **146,667** | **16** | **257** | **11** | **7,333** | **NA** | **14,667** | **110** | **103** | **103** | **733,333** | **19** | **57** | **7** | **57** | **176,667** |

GENESIS ENGINEERING & REDEVELOPMENT

**Table 2B**
**Hi-Shear Corporation Project**
**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**Other Chlorinated VOC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration ($\mu g/m^3$) | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | CT | CF | MC | 1,1,2-TCA | 1,1,1-TCA | 1,2-DCA | 1,1-DCA | BDCM | CB | DBCM | DCDFM | 1,2-DCP | cis-1,3-DCP | trans-1,3-DCP | Freon 113 (aka 1,1,2-TC-1,2,2-TFA) | HCB | 1,1,1,2-PCA | 1,1,2,2-PCA | 1,2,4-TCB | TCFM |
| VP-49 | 5 | 6/3/16 | **1,140** | <8 | <8 | **595** | **764,000** | **1,350** | **718** | <8 | 118 | 70 | <8 | <8 | <8 | <8 | 1,090 | <8 | **1,540** | <8 | <8 | 1,150 |
| | | 1/22/20 | 65 | **291** | <20 | <20 | 510 | <20 | **896** | <20 | <20 | <20 | <40 | <20 | <20 | <20 | 5,920 | <60 | <20 | <40 | <40 | 870 |
| | 15 | 6/7/16 | **1,970** | <8 | <8 | **813** | **751,000** | **1,260** | **740** | <8 | 162 | <8 | <8 | <8 | <8 | <8 | 2,810 | <8 | **1,820** | <8 | <8 | 2,870 |
| | | 1/22/20 | **716** | **1,410** | 40 | <20 | 4,360 | <20 | **4,770** | <20 | <20 | <20 | <40 | <20 | <20 | <20 | 5,140 | <60 | 29 | <40 | <40 | 1,460 |
| | 25 | 6/7/16 | **3,410** | <8 | <8 | **971** | **593,000** | **1,290** | **867** | <8 | 122 | <8 | <8 | <8 | <8 | <8 | <40 | <8 | **1,550** | <8 | <8 | 5,890 |
| | | 1/22/20 | **2,650** | **2,010** | 46 | <20 | 75,700 | <20 | **6,920** | <20 | 30 | <20 | <40 | <20 | <20 | <20 | 2,480 | <60 | 77 | <40 | <40 | 3,570 |
| | 45 | 6/7/16 | **2,970** | <8 | <8 | **193** | **655,000** | **769** | **1,000** | <8 | <20 | <8 | <8 | <8 | <8 | <8 | 1,960 | <8 | **512** | <8 | <8 | 3,440 |
| | | 1/22/20 | **4,740** | **4,930** | <20 | <20 | 38,900 | **586** | **13,500** | <20 | 98 | <20 | <40 | <20 | <20 | <20 | 3,180 | <60 | **242** | <40 | <40 | 5,270 |
| | | Summa | **3,200** | **3,800** | <470 | <550 | **400,000** | <410 | **9,700** | <780 | <640 | <840 | <740 | <580 | <450 | <580 | 56,000 | <4,900 | **NS** | <2,100 | <1,100 | 4,500 |
| | 65 | 6/7/16 | **1,660** | <8 | <8 | **1,220** | **985,000** | **4,070** | **830** | <8 | 196 | <8 | <8 | <8 | <8 | <8 | 412 | <8 | **1,950** | <8 | <8 | 1,920 |
| | | DUP | **2,570** | <8 | <8 | **1,200** | **812,000** | **3,990** | **195** | <8 | 194 | <8 | <8 | <8 | <8 | <8 | 1,260 | <8 | **2,060** | <8 | <8 | 1,950 |
| | | 1/22/20 | 22 | **164** | 90 | <20 | 2,160 | **582** | **433** | <20 | 25 | <20 | <40 | <20 | <20 | <20 | 362 | <60 | <20 | <40 | <40 | 131 |
| | 85 | 6/7/16 | **2,560** | <8 | <8 | **1,570** | **1,200,000** | **2,860** | **419** | <8 | 338 | <8 | <8 | <8 | <8 | <8 | 1,660 | <8 | **3,490** | <8 | <8 | 1,420 |
| | | 1/22/20 | **1,460** | **1,090** | 255 | **1,150** | 36,500 | **3,500** | **2,290** | <20 | 207 | <20 | <40 | <20 | <20 | <20 | 2,890 | <60 | **2,900** | <40 | <40 | 645 |
| **Commercial Screening Level (α=0.03)** | | | **67** | **18** | **400** | **26** | **146,667** | **16** | **257** | **11** | **7,333** | **NA** | **14,667** | **110** | **103** | **103** | **733,333** | **19** | **57** | **7** | **57** | **176,667** |

GENESIS ENGINEERING & REDEVELOPMENT

**Table 2B**
**Hi-Shear Corporation Project**
**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**Other Chlorinated VOC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration (µg/m³) | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | CT | CF | MC | 1,1,2-TCA | 1,1,1-TCA | 1,2-DCA | 1,1-DCA | BDCM | CB | DBCM | DCDFM | 1,2-DCP | cis-1,3-DCP | trans-1,3-DCP | Freon 113 (aka 1,1,2-TC-1,2,2-TFA) | HCB | 1,1,1,2-PCA | 1,1,2,2-PCA | 1,2,4-TCB | TCFM |
| VP-50 | 5 | 6/8/16 | 16 | <8 | <8 | <8 | 992 | **22** | <8 | <8 | <8 | <8 | <8 | <8 | <8 | <8 | 4,020 | <8 | <8 | <8 | <8 | <8 |
| | | 1/24/20 | 45 | 74 | <20 | <20 | 137 | <20 | <20 | <20 | <20 | <20 | <40 | <20 | <20 | <20 | 6,850 | <60 | <20 | <40 | <40 | 617 |
| | | Summa | <630 | <420 | <400 | <460 | <460 | <350 | <460 | <660 | <550 | <710 | <630 | <500 | <380 | <500 | <650 | <4,200 | NS | <1,800 | <960 | <500 |
| | 15 | 6/8/16 | 2,210 | <8 | <8 | **110** | 29,400 | **717** | 213 | <8 | <8 | <8 | <8 | <8 | <8 | <8 | 1,660 | <8 | <8 | <8 | <8 | 4,580 |
| | | 1/24/20 | 628 | **330** | <20 | <20 | 1,300 | <20 | 157 | <20 | <20 | <20 | <40 | <20 | <20 | <20 | 13,500 | <60 | <20 | <40 | <40 | 2,770 |
| | 25 | 6/8/16 | 2,100 | <8 | <8 | **108** | 49,200 | **672** | 210 | <8 | <8 | <8 | <8 | <8 | <8 | <8 | 1,710 | <8 | <8 | <8 | <8 | 4,420 |
| | | 1/24/20 | 910 | **417** | 44 | <20 | 2,890 | **35** | **366** | **25** | <20 | <20 | <40 | <20 | <20 | <20 | 11,600 | <60 | <20 | <40 | <40 | 3,220 |
| | 45 | 6/9/16 | 3,060 | <8 | <8 | **148** | 84,200 | **312** | **361** | <8 | <8 | 59 | <8 | <8 | <8 | <8 | 706 | <8 | 49 | <8 | <8 | 7,430 |
| | | 1/24/20 | 2,420 | **873** | 190 | <20 | 68,200 | **186** | **2,690** | **24** | <20 | <20 | <40 | <20 | <20 | <20 | 6,830 | <60 | **71** | <40 | <40 | 4,960 |
| | 53 | 6/9/16 | 3,220 | <8 | <8 | **4,210** | **804,000** | **12,700** | **3,980** | <8 | <8 | <8 | <8 | <8 | <8 | <8 | <40 | <8 | **528** | <8 | <8 | 11,400 |
| | | DUP | 3,100 | <8 | <8 | **4,110** | **901,000** | **12,800** | **3,770** | <8 | <8 | <8 | <8 | <8 | <8 | <8 | <40 | <8 | **534** | <8 | <8 | 11,900 |
| | | 1/24/20 | 2,750 | **6,460** | **1,170** | <20 | **2,590,000** | **7,380** | **19,500** | <20 | 29 | <20 | <40 | <20 | <20 | <20 | 1,760 | <60 | **487** | <40 | <40 | 16,600 |
| **Commercial Screening Level (α=0.03)** | | | **67** | **18** | **400** | **26** | **146,667** | **16** | **257** | **11** | **7,333** | **NA** | **14,667** | **110** | **103** | **103** | **733,333** | **19** | **57** | **7** | **57** | **176,667** |

GENESIS ENGINEERING & REDEVELOPMENT

**Table 2B**
**Hi-Shear Corporation Project**
**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**Other Chlorinated VOC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration ($\mu g/m^3$) | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | CT | CF | MC | 1,1,2-TCA | 1,1,1-TCA | 1,2-DCA | 1,1-DCA | BDCM | CB | DBCM | DCDFM | 1,2-DCP | cis-1,3-DCP | trans-1,3-DCP | Freon 113 (aka 1,1,2-TC-1,2,2-TFA) | HCB | 1,1,1,2-PCA | 1,1,2,2-PCA | 1,2,4-TCB | TCFM |
| VP-99 | 5 | 4/22/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <40 | <40 | <40 | <60 | <20 | <40 | <40 | <40 |
| | 15 | 4/22/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <40 | <40 | <40 | <60 | <20 | <40 | <40 | <40 |
| | 30 | 4/22/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <40 | <40 | <40 | <60 | <20 | <40 | <40 | <40 |
| | 45 | 4/22/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <40 | <40 | <40 | <60 | <20 | <40 | <40 | <40 |
| | 65 | 4/22/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <40 | <40 | <40 | <60 | <20 | <40 | <40 | <40 |
| | 80 | 4/22/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <40 | <40 | <40 | <60 | <20 | <40 | <40 | <40 |
| **Commercial Screening Level (α=0.03)** | | | **67** | **18** | **400** | **26** | **146,667** | **16** | **257** | **11** | **7,333** | **NA** | **14,667** | **110** | **103** | **103** | **733,333** | **19** | **57** | **7** | **57** | **176,667** |

GENESIS ENGINEERING & REDEVELOPMENT

**Table 2B**
**Hi-Shear Corporation Project**
**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**Other Chlorinated VOC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration ($\mu g/m^3$) | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | CT | CF | MC | 1,1,2-TCA | 1,1,1-TCA | 1,2-DCA | 1,1-DCA | BDCM | CB | DBCM | DCDFM | 1,2-DCP | cis-1,3-DCP | trans-1,3-DCP | Freon 113 (aka 1,1,2-TC-1,2,2-TFA) | HCB | 1,1,1,2-PCA | 1,1,2,2-PCA | 1,2,4-TCB | TCFM |
| VP-100 | 5 | 4/21/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <60 | <20 | <40 | <40 | <40 |
| | 15 | 4/21/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <60 | <20 | <40 | <40 | <40 |
| | 30 | 4/21/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <60 | <20 | <40 | <40 | <40 |
| | 45 | 4/21/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <60 | <20 | <40 | <40 | <40 |
| | 65 | 4/21/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <60 | <20 | <40 | <40 | <40 |
| | 80 | 4/21/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <60 | <20 | <40 | <40 | <40 |
| **Commercial Screening Level (α=0.03)** | | | **67** | **18** | **400** | **26** | **146,667** | **16** | **257** | **11** | **7,333** | **NA** | **14,667** | **110** | **103** | **103** | **733,333** | **19** | **57** | **7** | **57** | **176,667** |

GENESIS ENGINEERING & REDEVELOPMENT

**Table 2B**
**Hi-Shear Corporation Project**
**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**Other Chlorinated VOC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration ($\mu g/m^3$) | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | CT | CF | MC | 1,1,2-TCA | 1,1,1-TCA | 1,2-DCA | 1,1-DCA | BDCM | CB | DBCM | DCDFM | 1,2-DCP | cis-1,3-DCP | trans-1,3-DCP | Freon 113 (aka 1,1,2-TC-1,2,2-TFA) | HCB | 1,1,1,2-PCA | 1,1,2,2-PCA | 1,2,4-TCB | TCFM |
| VP-101 | 5 | 4/22/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <60 | <20 | <40 | <40 | No Flow |
| | 15 | 4/22/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 74 | <60 | <20 | <40 | <40 | <40 |
| | 30 | 4/22/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 260 | <60 | <20 | <40 | <40 | <40 |
| | 45 | 4/22/20 | <20 | **59** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 1,350 | <60 | <20 | <40 | <40 | <40 |
| | | DUP | <20 | **61** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 1,290 | <60 | <20 | <40 | <40 | <40 |
| | 65 | 4/22/20 | <20 | **42** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 896 | <60 | <20 | <40 | <40 | <40 |
| | 80 | 4/22/20 | <20 | **51** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 1,180 | <60 | <20 | <40 | <40 | <40 |
| **Commercial Screening Level ($\alpha$=0.03)** | | | **67** | **18** | **400** | **26** | **146,667** | **16** | **257** | **11** | **7,333** | **NA** | **14,667** | **110** | **103** | **103** | **733,333** | **19** | **57** | **7** | **57** | **176,667** |

GENESIS ENGINEERING & REDEVELOPMENT

**Table 2B**
**Hi-Shear Corporation Project**
**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**Other Chlorinated VOC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration (µg/m³) | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | CT | CF | MC | 1,1,2-TCA | 1,1,1-TCA | 1,2-DCA | 1,1-DCA | BDCM | CB | DBCM | DCDFM | 1,2-DCP | cis-1,3-DCP | trans-1,3-DCP | Freon 113 (aka 1,1,2-TC-1,2,2-TFA) | HCB | 1,1,1,2-PCA | 1,1,2,2-PCA | 1,2,4-TCB | TCFM |
| VP-102 | 5 | 4/21/20 | No Flow | | | | | | | | | | | | | | | | | | |
| | | 5/7/20 | <85 | <85 | <20 | <85 | <85 | <85 | <85 | <85 | <85 | <85 | <85 | <85 | <85 | <85 | <85 | <170 | -- | -- | <170 | <85 |
| | 15 | 4/21/20 | <20 | **47** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 124 | <60 | <20 | <40 | <40 | <40 |
| | 30 | 4/21/20 | <20 | **361** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 6,440 | <60 | <20 | <40 | <40 | <40 |
| | 45 | 4/21/20 | <20 | **469** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 7,020 | <60 | <20 | <40 | <40 | <40 |
| | 65 | 4/21/20 | <20 | **557** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 7,970 | <60 | <20 | <40 | <40 | <40 |
| | 80 | 4/21/20 | <20 | **444** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 6,750 | <60 | <20 | <40 | <40 | <40 |
| **Commercial Screening Level (α=0.03)** | | | **67** | **18** | **400** | **26** | **146,667** | **16** | **257** | **11** | **7,333** | **NA** | **14,667** | **110** | **103** | **103** | **733,333** | **19** | **57** | **7** | **57** | **176,667** |

GENESIS ENGINEERING & REDEVELOPMENT

**Table 2B**
**Hi-Shear Corporation Project**
**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**Other Chlorinated VOC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration ($\mu g/m^3$) | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | CT | CF | MC | 1,1,2-TCA | 1,1,1-TCA | 1,2-DCA | 1,1-DCA | BDCM | CB | DBCM | DCDFM | 1,2-DCP | cis-1,3-DCP | trans-1,3-DCP | Freon 113 (aka 1,1,2-TC-1,2,2-TFA) | HCB | 1,1,1,2-PCA | 1,1,2,2-PCA | 1,2,4-TCB | TCFM |
| VP-103 | 5 | 4/21/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <60 | <20 | <40 | <40 | <40 |
| | 15 | 4/21/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <60 | <20 | <40 | <40 | <40 |
| | 30 | 4/21/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 658.0 | <60 | <20 | <40 | <40 | <40 |
| | 45 | 4/21/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 710.0 | <60 | <20 | <40 | <40 | <40 |
| | 65 | 4/21/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 810.0 | <60 | <20 | <40 | <40 | <40 |
| | | REP | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 792.0 | <60 | <20 | <40 | <40 | <40 |
| | 80 | 4/21/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 694.0 | <60 | <20 | <40 | <40 | <40 |
| **Commercial Screening Level (α=0.03)** | | | **67** | **18** | **400** | **26** | **146,667** | **16** | **257** | **11** | **7,333** | **NA** | **14,667** | **110** | **103** | **103** | **733,333** | **19** | **57** | **7** | **57** | **176,667** |

GENESIS ENGINEERING & REDEVELOPMENT

**Table 2B**
**Hi-Shear Corporation Project**
**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**Other Chlorinated VOC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration ($\mu g/m^3$) | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | CT | CF | MC | 1,1,2-TCA | 1,1,1-TCA | 1,2-DCA | 1,1-DCA | BDCM | CB | DBCM | DCDFM | 1,2-DCP | cis-1,3-DCP | trans-1,3-DCP | Freon 113 (aka 1,1,2-TC-1,2,2-TFA) | HCB | 1,1,1,2-PCA | 1,1,2,2-PCA | 1,2,4-TCB | TCFM |
| VP-104 | 5 | 4/22/20 | Tracer in Probe | | | | | | | | | | | | | | | | | | |
| | | 5/7/20 | <80 | <80 | <20 | <80 | <80 | <80 | <80 | <80 | <80 | <80 | <80 | <80 | <80 | <80 | 38 | <160 | -- | -- | <160 | <80 |
| | 15 | 4/22/20 | <20 | **69** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 22,400 | <60 | <20 | <40 | <40 | <40 |
| | 30 | 4/22/20 | <20 | **113** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 24,500 | <60 | <20 | <40 | <40 | <40 |
| | 45 | 4/22/20 | <20 | **205** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 23,300 | <60 | <20 | <40 | <40 | <40 |
| | 65 | 4/22/20 | <20 | **379** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 30,700 | <60 | <20 | <40 | <40 | <40 |
| | 80 | 4/22/20 | <20 | **396** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 23,500 | <60 | <20 | <40 | <40 | <40 |
| **Commercial Screening Level ($\alpha$=0.03)** | | | **67** | **18** | **400** | **26** | **146,667** | **16** | **257** | **11** | **7,333** | **NA** | **14,667** | **110** | **103** | **103** | **733,333** | **19** | **57** | **7** | **57** | **176,667** |

GENESIS ENGINEERING & REDEVELOPMENT

**Table 2B**
**Hi-Shear Corporation Project**
**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**Other Chlorinated VOC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration ($\mu g/m^3$) | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | CT | CF | MC | 1,1,2-TCA | 1,1,1-TCA | 1,2-DCA | 1,1-DCA | BDCM | CB | DBCM | DCDFM | 1,2-DCP | cis-1,3-DCP | trans-1,3-DCP | Freon 113 (aka 1,1,2-TC-1,2,2-TFA) | HCB | 1,1,1,2-PCA | 1,1,2,2-PCA | 1,2,4-TCB | TCFM |
| VP-105 | 5 | 12/26/19 | <3.1 | <2.4 | <17 | <2.7 | <2.7 | <2.0 | <2.0 | <3.4 | <2.3 | <4.3 | <2.5 | <2.3 | <2.3 | <4.5 | 17.0 | <16 | <6.9 | <6.9 | <15 | <5.6 |
| | 15 | 12/26/19 | <3.1 | <2.4 | <17 | <2.7 | <2.7 | <2.0 | <2.0 | <3.4 | <2.3 | <4.3 | 2.6 | <2.3 | <2.3 | <4.5 | <11 | <16 | <6.9 | <6.9 | <15 | <5.6 |
| | 30 | 12/26/19 | <31 | <24 | <170 | <27 | <27 | <20 | <20 | <34 | <23 | <43 | <25 | <23 | <23 | <45 | 1,900 | <160 | <69 | <69 | <150 | 240 |
| | 45 | 12/26/19 | <3.1 | <2.4 | <17 | <2.7 | <2.7 | <2.0 | <2.0 | <3.4 | <2.3 | <4.3 | 2.5 | <2.3 | <2.3 | <4.5 | <11 | <16 | <6.9 | <6.9 | <15 | <5.6 |
| | | DUP | <16 | <12 | <87 | <14 | <14 | <10 | <10 | <17 | <12 | <21 | <12 | <12 | <11 | <23 | 550 | <80 | <34 | <34 | <74 | 67 |
| **Commercial Screening Level (α=0.03)** | | | **67** | **18** | **400** | **26** | **146,667** | **16** | **257** | **11** | **7,333** | **NA** | **14,667** | **110** | **103** | **103** | **733,333** | **19** | **57** | **7** | **57** | **176,667** |

GENESIS ENGINEERING & REDEVELOPMENT

**Table 2B**
**Hi-Shear Corporation Project**
**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**Other Chlorinated VOC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration ($\mu g/m^3$) | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | CT | CF | MC | 1,1,2-TCA | 1,1,1-TCA | 1,2-DCA | 1,1-DCA | BDCM | CB | DBCM | DCDFM | 1,2-DCP | cis-1,3-DCP | trans-1,3-DCP | Freon 113 (aka 1,1,2-TC-1,2,2-TFA) | HCB | 1,1,1,2-PCA | 1,1,2,2-PCA | 1,2,4-TCB | TCFM |
| VP-106 | 5 | 3/3/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 | <20 | <20 | 48.0 | <60 | <20 | <40 | <40 | <20 |
| | 15 | 3/3/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 | <20 | <20 | 98.0 | <60 | <20 | <40 | <40 | 44.0 |
| | 30 | 3/3/20 | <20 | 20.0 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 | <20 | <20 | 1,760.0 | <60 | <20 | <40 | <40 | 319.0 |
| | | REP | <20 | 26.0 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 | <20 | <20 | 1,840.0 | <60 | <20 | <40 | <40 | 372.0 |
| | 45 | 3/5/20 | <20 | 27.0 | <20 | 64 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 1,510.0 | <60 | <20 | <40 | <40 | 441.0 |
| | | REP | <20 | 27.0 | <20 | 56 | 22 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 1,920.0 | <60 | <20 | <40 | <40 | 505.0 |
| | 53 | 3/5/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 322.0 | <60 | <20 | <40 | <40 | 68.0 |
| | | Summa | <800 | <800 | <1600 | <800 | <800 | <800 | <800 | <800 | <800 | <800 | <800 | <800 | <800 | <800 | 1,700.0 | <1600 | -- | <800 | <1600 | <800 |
| **Commercial Screening Level (α=0.03)** | | | **67** | **18** | **400** | **26** | **146,667** | **16** | **257** | **11** | **7,333** | **NA** | **14,667** | **110** | **103** | **103** | **733,333** | **19** | **57** | **7** | **57** | **176,667** |

GENESIS ENGINEERING & REDEVELOPMENT

**Table 2B**
**Hi-Shear Corporation Project**
**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**Other Chlorinated VOC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration (µg/m³) | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | CT | CF | MC | 1,1,2-TCA | 1,1,1-TCA | 1,2-DCA | 1,1-DCA | BDCM | CB | DBCM | DCDFM | 1,2-DCP | cis-1,3-DCP | trans-1,3-DCP | Freon 113 (aka 1,1,2-TC-1,2,2-TFA) | HCB | 1,1,1,2-PCA | 1,1,2,2-PCA | 1,2,4-TCB | TCFM |
| VP-107 | 5 | 1/28/20 | <20 | **95** | <20 | <20 | 292 | <20 | 20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 929 | <60 | <20 | <40 | <40 | 54 |
| | | DUP | <20 | **99** | <20 | <20 | 307 | <20 | 21 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 1,010 | <60 | <20 | <40 | <40 | 54 |
| | 15 | 1/28/20 | **72** | **254** | 162 | <20 | 1,690 | <20 | **359** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 1,550 | <60 | <20 | <40 | <40 | 120 |
| | 25 | 1/28/20 | **22,000** | **2,810** | **5,370** | <20 | 29,700 | 629 | **8,170** | 31.0 | 30 | <20 | <20 | <20 | <20 | <20 | 7,330 | <60 | 194 | <40 | <40 | 897 |
| | 30 | 1/28/20 | **1,890** | **1,350** | **1,280** | <20 | 23,800 | 1,120 | **4,680** | <20 | 133 | <20 | <20 | <20 | <20 | <20 | 2,670 | <60 | 1,110 | <40 | <40 | 1,160 |
| | 45 | 1/28/20 | **1,890** | **1,200** | **1,170** | <20 | 16,200 | 963 | **4,600** | <20 | 109 | <20 | <20 | <20 | <20 | <20 | 2,520 | <60 | 921 | <40 | <40 | 1,190 |
| | 65 | 1/28/20 | **1,770** | **1,030** | **864** | <20 | 27,200 | 975 | **4,060** | <20 | 122 | <20 | <20 | <20 | <20 | <20 | 2,990 | <60 | 1,130 | <40 | <40 | 1,140 |
| **Commercial Screening Level (α=0.03)** | | | **67** | **18** | **400** | **26** | **146,667** | **16** | **257** | **11** | **7,333** | **NA** | **14,667** | **110** | **103** | **103** | **733,333** | **19** | **57** | **7** | **57** | **176,667** |

GENESIS ENGINEERING & REDEVELOPMENT

**Table 2B**
**Hi-Shear Corporation Project**
**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**Other Chlorinated VOC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration (µg/m³) | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | CT | CF | MC | 1,1,2-TCA | 1,1,1-TCA | 1,2-DCA | 1,1-DCA | BDCM | CB | DBCM | DCDFM | 1,2-DCP | cis-1,3-DCP | trans-1,3-DCP | Freon 113 (aka 1,1,2-TC-1,2,2-TFA) | HCB | 1,1,1,2-PCA | 1,1,2,2-PCA | 1,2,4-TCB | TCFM |
| VP-108 | 5 | 1/27/20 | <20 | **52** | 60 | <20 | 180 | <20 | 124 | <20 | <20 | <20 | <40 | <20 | <20 | <20 | 1,150.0 | <60 | <20 | <40 | <40 | 218 |
| | | DUP | <590 | <390 | <370 | <440 | <440 | <330 | <440 | <620 | <510 | <670 | <590 | <470 | <360 | <470 | <610 | <3,900 | NS | <1,700 | <900 | <470 |
| | 15 | 1/27/20 | **218** | **374** | 60 | <20 | 1,930 | <20 | **1,380** | <20 | <20 | <20 | <40 | <20 | <20 | <20 | 7,860.0 | <60 | <20 | <40 | <40 | 2,980 |
| | 30 | 1/27/20 | **2,370** | **1,080** | 60 | <20 | 58,400 | 30 | **18,700** | 28 | 26 | <20 | <40 | <20 | <20 | <20 | 5,290.0 | <60 | <20 | <40 | <40 | 10,800 |
| | 45 | 1/27/20 | **285** | **265** | 27 | <20 | 7,500 | 27 | **3,140** | <20 | <20 | <20 | <40 | <20 | <20 | <20 | 5,440.0 | <60 | <20 | <40 | <40 | 1,340 |
| | 54 | 1/27/20 | <20 | **52** | <20 | <20 | <20 | 35 | 36 | <20 | <20 | <20 | <40 | <20 | <20 | <20 | <40 | <60 | <20 | <40 | <40 | <40 |
| VP-109 | 5 | 1/31/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 59 | <60 | <20 | <40 | <40 | <40 |
| | 15 | 3/2/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 115 | <60 | <20 | <40 | <40 | <40 |
| | 30 | 3/2/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 122 | <60 | <20 | <40 | <40 | <40 |
| | 45 | 3/2/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 163 | <60 | <20 | <40 | <40 | <40 |
| | | DUP | <800 | <800 | <1600 | <800 | <800 | <800 | <800 | <800 | <800 | <800 | <800 | <800 | <800 | <800 | 280 | <1600 | -- | <800 | <800 | <800 |
| **Commercial Screening Level (α=0.03)** | | | **67** | **18** | **400** | **26** | **146,667** | **16** | **257** | **11** | **7,333** | **NA** | **14,667** | **110** | **103** | **103** | **733,333** | **19** | **57** | **7** | **57** | **176,667** |

GENESIS ENGINEERING & REDEVELOPMENT

**Table 2B**
**Hi-Shear Corporation Project**
**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**Other Chlorinated VOC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration ($\mu g/m^3$) | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | CT | CF | MC | 1,1,2-TCA | 1,1,1-TCA | 1,2-DCA | 1,1-DCA | BDCM | CB | DBCM | DCDFM | 1,2-DCP | cis-1,3-DCP | trans-1,3-DCP | Freon 113 (aka 1,1,2-TC-1,2,2-TFA) | HCB | 1,1,1,2-PCA | 1,1,2,2-PCA | 1,2,4-TCB | TCFM |
| VP-113 | 5 | 3/2/20 | <20 | <20 | <20 | <20 | 24 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 894 | <60 | <20 | <40 | <40 | 51 |
| | | REP | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 1,160 | <60 | <20 | <40 | <40 | 82 |
| | 15 | 3/2/20 | <20 | **62** | <20 | <20 | 20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 1,020 | <60 | <20 | <40 | <40 | 129 |
| | 30 | 3/2/20 | **401** | **148** | <20 | <20 | 599 | <20 | 91 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 8,740 | <60 | <20 | <40 | <40 | 1,310 |
| | 45 | 3/2/20 | **1,070** | **298** | <20 | <20 | 2,880 | <20 | **509** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 5,060 | <60 | <20 | <40 | <40 | 2,090 |
| | 60 | 3/2/20 | **648** | **1,320** | 59 | <20 | 1,830 | **414** | **5,030** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 4,070 | <60 | <20 | <40 | <40 | 3,690 |
| VP-114 | 5 | 3/3/20 | <20 | 34 | <20 | <20 | 282 | <20 | 33 | <20 | <20 | <20 | <40 | <20 | <20 | <20 | <60 | <20 | <20 | <40 | <40 | <40 |
| | 15 | 3/3/20 | **169** | **275** | <20 | <20 | 4,470 | <20 | **717** | <20 | <20 | <20 | <40 | <20 | <20 | <20 | <60 | <20 | <20 | <40 | <40 | 489 |
| | | REP | **207** | **292** | <20 | <20 | 4,590 | <20 | **773** | <20 | <20 | <20 | <40 | <20 | <20 | <20 | <60 | <20 | <20 | <40 | <40 | 469 |
| | 30 | 3/3/20 | **1,950** | **1,500** | 132 | <20 | 106,000 | <20 | **7,170** | <20 | <20 | <20 | <40 | <20 | <20 | <20 | <60 | **132** | <20 | <40 | <40 | 1,100 |
| | 45 | 3/3/20 | **8,290** | **4,730** | **1,550** | <20 | 1,210,000 | **308** | **18,600** | <20 | 49 | <20 | <40 | <20 | <20 | <20 | <60 | **1,550** | **167** | <40 | <40 | 2,850 |
| **Commercial Screening Level (α=0.03)** | | | **67** | **18** | **400** | **26** | **146,667** | **16** | **257** | **11** | **7,333** | **NA** | **14,667** | **110** | **103** | **103** | **733,333** | **19** | **57** | **7** | **57** | **176,667** |

GENESIS ENGINEERING & REDEVELOPMENT

**Table 2B**
**Hi-Shear Corporation Project**
**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**Other Chlorinated VOC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration ($\mu g/m^3$) | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | CT | CF | MC | 1,1,2-TCA | 1,1,1-TCA | 1,2-DCA | 1,1-DCA | BDCM | CB | DBCM | DCDFM | 1,2-DCP | cis-1,3-DCP | trans-1,3-DCP | Freon 113 (aka 1,1,2-TC-1,2,2-TFA) | HCB | 1,1,1,2-PCA | 1,1,2,2-PCA | 1,2,4-TCB | TCFM |
| VP-132 | 5 | 4/23/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <60 | <20 | <40 | <40 | <40 |
| | 15 | 4/23/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 43 | <60 | <20 | <40 | <40 | <40 |
| | 30 | 4/23/20 | <20 | **218** | <20 | <20 | <20 | <20 | **962** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 893 | <60 | **216** | <40 | <40 | <40 |
| | | REP | <20 | **208** | <20 | <20 | <20 | <20 | **898** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 919 | <60 | **213** | <40 | <40 | <40 |
| | 45 | 4/23/20 | <20 | **81** | <20 | <20 | <20 | <20 | 171 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 1,260 | <60 | 31 | <40 | <40 | <40 |
| | 65 | 4/23/20 | <20 | **480** | <20 | <20 | <20 | <20 | **996** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 12,000 | <60 | **108** | <40 | <40 | <40 |
| | 80 | 4/23/20 | <20 | **579** | <20 | <20 | <20 | <20 | **1,110** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | 12,000 | <60 | **145** | <40 | <40 | 99 |
| **Commercial Screening Level (α=0.03)** | | | **67** | **18** | **400** | **26** | **146,667** | **16** | **257** | **11** | **7,333** | **NA** | **14,667** | **110** | **103** | **103** | **733,333** | **19** | **57** | **7** | **57** | **176,667** |

GENESIS ENGINEERING & REDEVELOPMENT

**Table 2B**
**Hi-Shear Corporation Project**
**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**Other Chlorinated VOC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration ($\mu g/m^3$) | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | CT | CF | MC | 1,1,2-TCA | 1,1,1-TCA | 1,2-DCA | 1,1-DCA | BDCM | CB | DBCM | DCDFM | 1,2-DCP | cis-1,3-DCP | trans-1,3-DCP | Freon 113 (aka 1,1,2-TC-1,2,2-TFA) | HCB | 1,1,1,2-PCA | 1,1,2,2-PCA | 1,2,4-TCB | TCFM |
| VP-133 | 5 | 12/26/19 | <3.1 | <2.4 | <17 | <2.7 | <2.7 | <2.0 | <2.0 | <3.4 | <2.3 | <4.3 | <2.5 | <2.3 | <2.3 | <4.5 | <11 | <16 | <6.9 | <6.9 | <15 | <5.6 |
| | 15 | 12/26/19 | <3.1 | 3 | <17 | <2.7 | <2.7 | <2.0 | 13 | <3.4 | <2.3 | <4.3 | 2.9 | <2.3 | <2.3 | <4.5 | <11 | <16 | <6.9 | <6.9 | <15 | <5.6 |
| | 30 | 12/26/19 | <130 | **160** | <690 | <110 | <110 | <81 | **2,400** | <130 | <92 | <170 | <99 | <92 | <91 | <180 | 1,000 | <640 | <270 | <270 | <590 | <220 |
| | 45 | 12/26/19 | <130 | **260** | <690 | <110 | <110 | <81 | **2,900** | **830** | <92 | <170 | <99 | <92 | <91 | <180 | 6,400 | <640 | <270 | <270 | <590 | <220 |
| | 65 | 12/26/19 | <130 | **410** | <690 | <110 | <110 | <81 | **1,200** | <130 | <92 | <170 | <99 | <92 | <91 | <180 | 14,000 | <640 | <270 | <270 | <590 | <220 |
| | 85 | 12/26/19 | <50 | **270** | <280 | <44 | <44 | <32 | **750** | <54 | <37 | <68 | <40 | <37 | <36 | <73 | 9,500 | <260 | <110 | <110 | <240 | 94 |
| | | DUP | <50 | **390** | <280 | <44 | <44 | <32 | **990** | <54 | <37 | <68 | <40 | <37 | <36 | <73 | 12,000 | <260 | <110 | <110 | <240 | 130 |
| **Commercial Screening Level (α=0.03)** | | | **67** | **18** | **400** | **26** | **146,667** | **16** | **257** | **11** | **7,333** | **NA** | **14,667** | **110** | **103** | **103** | **733,333** | **19** | **57** | **7** | **57** | **176,667** |

**NOTES:**

- "feet bgs" - feet below ground surface
- "**Bold**"- concentration exceeds the commercial screening level
- "ND" - Non-detect
- "*" - Screening levels obtained from HHRA Note No. 3 (April 2019) or EPA Region 9 RSL (April 2019) with attenuation factor of 0.03
- "DBCM" - Dibromochloromethane
- "BDCM" - Bromodichloromethane
- "CT" - Carbon tetrachloride
- "CB" - Chlorobenzene
- "CF" - Chloroform
- "1,2-DCP" - 1,2-dichloropropane
- "cis-1,3-DCP" - cis-1,3-dichloropropane
- "trans -1,3-DCP" - trans-1,3-dichloropropane
- "HCB" - Hexachlorobutadiene
- "MC" - Methylene chloride
- "1,1,1,2-PCA" - 1,1,1,2-tetrachloroethane
- "1,1,2,2-PCA" - 1,1,2,2-tetrachloroethane
- "1,1,1-TCA" - 1,1,1-trichloroethane
- "1,1,2-TCA" - 1,1,2-trichloroethane
- "TCFM" - Trichlorofluoromethane
- "1,2,4-TCB" - 1,2,3-trichlorobenzene
- "1,1-DCA" - 1,1-dichloroethane
- "1,2-TCA" - 1,2-dichloroethane

GENESIS ENGINEERING & REDEVELOPMENT

**Table 2C**

**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**Other VOC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration ($\mu g/m^3$) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Benzene | Bromoform | 1,2-Dibromoethane | Ethylbenzene | Styrene | Toluene | 1,2,4-TMB | 1,3,5-TMB | m,p-Xylene | o-Xylene |
| VP-25 | 5 | 8/9/14 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | -- | <20 |
| | | 3/3/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 |
| | 15 | 8/9/14 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | -- | <20 |
| | | 3/5/20 | 27 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 |
| | 25 | 8/9/14 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | -- | <20 |
| | | 3/3/20 | **143** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 |
| | | Summa | **390** | <1600 | <820 | <820 | <820 | 180 | <820 | <820 | <820 | <820 |
| | 45 | 8/9/14 | **404** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | -- | <20 |
| | | DUP | **390** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | -- | <20 |
| | | 3/5/20 | **242** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 |
| | 55 | 8/9/14 | **604** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | -- | <20 |
| | | 3/5/20 | **275** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 |
| | 65 | 8/9/14 | **440** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | -- | <20 |
| | | 3/5/20 | **269** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 |
| | 85 | 8/9/14 | **584** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | -- | <20 |
| | | 3/5/20 | **270** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 |
| **Commercial Screening Level ($\alpha$=0.03)** | | | **14** | **367** | **0.67** | **163** | **130,000** | **43,333** | **8,667** | **8,667** | **14,667** | **14,667** |

GENESIS ENGINEERING & REDEVELOPMENT

**Table 2C**

**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**Other VOC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration ($\mu g/m^3$) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Benzene | Bromoform | 1,2-Dibromoethane | Ethylbenzene | Styrene | Toluene | 1,2,4-TMB | 1,3,5-TMB | m,p-Xylene | o-Xylene |
| VP-26 | 5 | 8/9/14 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | -- | <20 |
| | | 5/7/20 | <31 | <160 | <78 | <78 | <78 | 20 | <78 | <78 | 23 | <78 |
| | 15 | 8/9/14 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | -- | <20 |
| | | 5/7/20 | <34 | <170 | <84 | <84 | <84 | 18.0 | <84 | <84 | 22 | <84 |
| | 30 | 8/9/14 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | -- | <20 |
| | | 5/7/20 | <3,100 | **<16,000** | <7,800 | <7,800 | <7,800 | <3,100 | <7,800 | <7,800 | <7,800 | <7,800 |
| | 45 | 8/9/14 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | -- | <20 |
| | | 5/7/20 | <33 | **<160** | <82 | <82 | <82 | <33 | <82 | <82 | <82 | <82 |
| | 65 | 8/9/14 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | -- | <20 |
| | | 5/7/20 | <3,300 | **<17,000** | <8,400 | <8,400 | <8,400 | <3,300 | <8,400 | <8,400 | <8,400 | <8,400 |
| | 80 | 8/9/14 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | -- | <20 |
| | | 5/7/20 | <3,600 | **<18,000** | <9,000 | <9,000 | <9,000 | <3,600 | <9,000 | <9,000 | <9,000 | <9,000 |
| | | DUP | <3,200 | **<16,000** | <8,000 | <8,000 | <8,000 | <3,200 | <8,000 | <8,000 | <8,000 | <8,000 |
| **Commercial Screening Level (α=0.03)** | | | **14** | **367** | **0.67** | **163** | **130,000** | **43,333** | **8,667** | **8,667** | **14,667** | **14,667** |

GENESIS ENGINEERING & REDEVELOPMENT

**Table 2C**

**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**Other VOC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration ($\mu g/m^3$) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Benzene | Bromoform | 1,2-Dibromoethane | Ethylbenzene | Styrene | Toluene | 1,2,4-TMB | 1,3,5-TMB | m,p-Xylene | o-Xylene |
| VP-31 | 5 | 8/9/14 | <20 | **1,100** | <20 | <20 | <20 | <20 | <20 | <20 | -- | <20 |
| | | 1/31/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 |
| | | Summa | <2.4 | <11 | <6.3 | <5.5 | <5.8 | 17.0 | <9.8 | <23 | 14 | <8.1 |
| | 15 | 8/9/14 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | -- | <20 |
| | | 1/31/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 |
| | 25 | 8/9/14 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | -- | <20 |
| | | 1/31/20 | <20 | 21 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 |
| | 45 | 8/9/14 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | -- | <20 |
| | | 1/31/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 |
| | 65 | 8/9/14 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | -- | <20 |
| | | 1/31/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 |
| | 85 | 8/9/14 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | -- | <20 |
| | | 1/31/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 |
| **Commercial Screening Level ($\alpha$=0.03)** | | | **14** | **367** | **0.67** | **163** | **130,000** | **43,333** | **8,667** | **8,667** | **14,667** | **14,667** |

GENESIS ENGINEERING & REDEVELOPMENT

**Table 2C**

**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**Other VOC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration ($\mu g/m^3$) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Benzene | Bromoform | 1,2-Dibromoethane | Ethylbenzene | Styrene | Toluene | 1,2,4-TMB | 1,3,5-TMB | m,p-Xylene | o-Xylene |
| VP-42 | 5 | 6/7/16 | <8 | <8 | <8 | <8 | <8 | 70 | <8 | <8 | -- | <8 |
| | 15 | 6/7/16 | <8 | <8 | <8 | <8 | <8 | 60 | 42 | <8 | -- | <8 |
| | 25 | 6/7/16 | <8 | <8 | <8 | <8 | <8 | 58 | 47 | <8 | -- | <8 |
| | 45 | 6/7/16 | <8 | <8 | <8 | <8 | <8 | 25 | 30 | <8 | -- | <8 |
| | | 1/22/20 | <20 | <20 | <20 | 33 | <20 | <20 | <20 | <20 | 84 | <20 |
| | 55 | 6/7/16 | <8 | <8 | <8 | <8 | <8 | 38 | 38 | <8 | -- | <8 |
| **Commercial Screening Level (α=0.03)** | | | **14** | **367** | **0.67** | **163** | **130,000** | **43,333** | **8,667** | **8,667** | **14,667** | **14,667** |

GENESIS ENGINEERING & REDEVELOPMENT

**Table 2C**

**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**Other VOC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration (µg/m³) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Benzene | Bromoform | 1,2-Dibromoethane | Ethylbenzene | Styrene | Toluene | 1,2,4-TMB | 1,3,5-TMB | m,p-Xylene | o-Xylene |
| VP-46 | 5 | 6/9/16 | **51** | <8 | <8 | <8 | <8 | 56 | 135 | <8 | -- | <8 |
| | | 1/27/20 | **124** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 |
| | | DUP | **129** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 |
| | 15 | 6/9/16 | 38 | <8 | <8 | <8 | <8 | 43 | 134 | <8 | -- | <8 |
| | | 1/27/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 |
| | 25 | 5/31/16 | <8 | <8 | <8 | <8 | <8 | 32 | <8 | <8 | -- | <8 |
| | | 1/27/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 |
| | 45 | 5/31/16 | <8 | <8 | <8 | <8 | <8 | 22 | <8 | <8 | -- | <8 |
| | | 1/27/20 | 80 | <20 | <20 | <20 | 33 | <20 | <20 | <20 | <40 | <20 |
| | 65 | 5/31/16 | <8 | <8 | <8 | <8 | <8 | 32 | <8 | <8 | -- | <8 |
| | | 1/27/20 | 120 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 |
| | 85 | 5/31/16 | <8 | <8 | <8 | <8 | <8 | 30 | <8 | <8 | -- | <8 |
| | | 1/27/20 | **111** | <20 | <20 | 160 | <20 | 38 | 75 | 43 | 353 | 51 |
| **Commercial Screening Level (α=0.03)** | | | **14** | **367** | **0.67** | **163** | **130,000** | **43,333** | **8,667** | **8,667** | **14,667** | **14,667** |

GENESIS ENGINEERING & REDEVELOPMENT

**Table 2C**

**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**Other VOC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration (µg/m³) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Benzene | Bromoform | 1,2-Dibromoethane | Ethylbenzene | Styrene | Toluene | 1,2,4-TMB | 1,3,5-TMB | m,p-Xylene | o-Xylene |
| VP-47 | 5 | 6/8/16 | <8 | <8 | <8 | <8 | <8 | 38 | 38 | <8 | -- | <8 |
| | | 3/3/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 |
| | 15 | 6/8/16 | <8 | <8 | <8 | <8 | <8 | 26 | 32 | <8 | -- | <8 |
| | | 3/3/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 |
| | 25 | 6/8/16 | <8 | <8 | <8 | <8 | <8 | 66 | 51 | <8 | -- | <8 |
| | | 3/3/20 | **166** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 |
| | 45 | 6/8/16 | **331** | <8 | <8 | 52 | <8 | 295 | 61 | <8 | -- | 115 |
| | | DUP | **290** | <8 | <8 | 51 | <8 | 294 | 56 | <8 | -- | 98 |
| | | 3/4/20 | **384** | <20 | <20 | <20 | <20 | 29 | <20 | <20 | <40 | <20 |
| | 65 | 6/8/16 | **343** | <8 | <8 | <8 | <8 | 141 | 50 | <8 | -- | <8 |
| | | 3/4/20 | **47** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 |
| | 85 | 6/8/16 | **351** | <8 | <8 | <8 | <8 | 127 | 44 | <8 | -- | <8 |
| | | 3/4/20 | **398** | <20 | <20 | <20 | <20 | 23 | <20 | <20 | <40 | <20 |
| **Commercial Screening Level (α=0.03)** | | | **14** | **367** | **0.67** | **163** | **130,000** | **43,333** | **8,667** | **8,667** | **14,667** | **14,667** |

GENESIS ENGINEERING & REDEVELOPMENT

**Table 2C**

**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**Other VOC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration ($\mu g/m^3$) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Benzene | Bromoform | 1,2-Dibromoethane | Ethylbenzene | Styrene | Toluene | 1,2,4-TMB | 1,3,5-TMB | m,p-Xylene | o-Xylene |
| VP-48 | 5 | 6/1/16 | <8 | <8 | <8 | <8 | <8 | 61 | 60 | <8 | -- | <8 |
| | | 1/22/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 |
| | | DUP | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 |
| | 15 | 6/1/16 | <8 | <8 | <8 | 45 | <8 | 147 | 95 | <8 | -- | 174 |
| | | 1/22/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 |
| | 25 | 6/1/16 | <8 | <8 | <8 | 46 | <8 | 207 | 82 | <8 | -- | 123 |
| | | 1/22/20 | **23** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 |
| | | Summa | **29** | <14 | <8.4 | <7.3 | <7.8 | <3.9 | <13 | <31 | <17 | <11 |
| | 45 | 6/3/16 | <8 | <8 | <8 | <8 | <8 | 202 | 56 | <8 | -- | <8 |
| | | 1/22/20 | **55** | <20 | <20 | <20 | <20 | 45 | <20 | <20 | <40 | <20 |
| | 65 | 6/3/16 | <8 | <8 | <8 | <8 | <8 | 644 | 43 | <8 | -- | <8 |
| | | 1/24/20 | **130** | <20 | <20 | <20 | <20 | 998 | <20 | <20 | <40 | <20 |
| | | DUP | **121** | <20 | <20 | <20 | <20 | 955 | <20 | <20 | <40 | <20 |
| | 85 | 6/3/16 | <8 | <8 | <8 | <8 | <8 | 786 | 40 | <8 | -- | <8 |
| | | 1/24/20 | **145** | <20 | <20 | <20 | <20 | 916 | <20 | <20 | <40 | <20 |
| **Commercial Screening Level (α=0.03)** | | | **14** | **367** | **0.67** | **163** | **130,000** | **43,333** | **8,667** | **8,667** | **14,667** | **14,667** |

GENESIS ENGINEERING & REDEVELOPMENT

**Table 2C**

**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**Other VOC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration (µg/m³) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Benzene | Bromoform | 1,2-Dibromoethane | Ethylbenzene | Styrene | Toluene | 1,2,4-TMB | 1,3,5-TMB | m,p-Xylene | o-Xylene |
| VP-49 | 5 | 6/3/16 | <8 | <8 | <8 | 11 | <8 | 1,140 | 39 | <8 | -- | <8 |
| | | 1/22/20 | **111** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 |
| | 15 | 6/7/16 | <8 | <8 | <8 | 46 | <8 | 1,540 | 61 | <8 | -- | <8 |
| | | 1/22/20 | **133** | <20 | <20 | <20 | <20 | 102 | <20 | <20 | <40 | <20 |
| | 25 | 6/7/16 | <8 | <8 | <8 | 37 | <8 | 1,280 | 46 | <8 | -- | 14 |
| | | 1/22/20 | **227** | <20 | <20 | <20 | <20 | 107 | <20 | <20 | <40 | <20 |
| | 45 | 6/7/16 | 101 | <8 | <8 | 12 | <8 | 658 | 34 | <8 | -- | <8 |
| | | 1/22/20 | **443** | <20 | <20 | 30 | <20 | 82 | <20 | <20 | <40 | <20 |
| | | Summa | <310 | <780 | <800 | <700 | <740 | <370 | <1,200 | <2,900 | <1,600 | <1,000 |
| | 65 | 6/7/16 | <8 | <8 | <8 | 54 | <8 | 2,730 | 58 | <8 | -- | <8 |
| | | DUP | **<8** | <8 | <8 | 53 | <8 | 2,660 | 58 | <8 | -- | <8 |
| | | 1/22/20 | **26** | <20 | <20 | <20 | <20 | 618 | <20 | <20 | <40 | <20 |
| | 85 | 6/7/16 | <8 | <8 | <8 | 15 | <8 | 2,000 | 30 | <8 | -- | <8 |
| | | 1/22/20 | **91** | <20 | <20 | <20 | <20 | 734 | <20 | <20 | <40 | <20 |
| **Commercial Screening Level (α=0.03)** | | | **14** | **367** | **0.67** | **163** | **130,000** | **43,333** | **8,667** | **8,667** | **14,667** | **14,667** |

GENESIS ENGINEERING & REDEVELOPMENT

**Table 2C**

**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**Other VOC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration (µg/m³) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Benzene | Bromoform | 1,2-Dibromoethane | Ethylbenzene | Styrene | Toluene | 1,2,4-TMB | 1,3,5-TMB | m,p-Xylene | o-Xylene |
| VP-50 | 5 | 6/8/16 | <8 | <8 | <8 | <8 | <8 | 16 | <8 | <8 | -- | <8 |
| | | 1/24/20 | **24** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 |
| | | Summa | <270 | <1,200 | <680 | <600 | <630 | <320 | <1,100 | <2,500 | <1,400 | <880 |
| | 15 | 6/8/16 | <8 | <8 | <8 | <8 | <8 | 258 | 30 | <8 | -- | <8 |
| | | 1/24/20 | **30** | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 |
| | 25 | 6/8/16 | <8 | <8 | <8 | <8 | <8 | 253 | 30 | <8 | -- | <8 |
| | | 1/24/20 | <20 | <20 | <20 | <20 | <20 | 22 | <20 | <20 | <40 | <20 |
| | 45 | 6/9/16 | <8 | <8 | <8 | <8 | <8 | 212 | 131 | <8 | -- | <8 |
| | | 1/24/20 | **21** | <20 | <20 | <20 | <20 | 26 | <20 | <20 | <40 | <20 |
| | 53 | 6/9/16 | <8 | <8 | <8 | 62 | <8 | 709 | 129 | <8 | -- | <8 |
| | | DUP | <8 | <8 | <8 | 62 | <8 | 660 | 129 | <8 | -- | <8 |
| | | 1/24/20 | **164** | <20 | <20 | 232 | <20 | 103 | 75 | 37 | 302 | 53 |
| **Commercial Screening Level (α=0.03)** | | | **14** | **367** | **0.67** | **163** | **130,000** | **43,333** | **8,667** | **8,667** | **14,667** | **14,667** |

GENESIS ENGINEERING & REDEVELOPMENT

**Table 2C**

**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**Other VOC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration ($\mu g/m^3$) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Benzene | Bromoform | 1,2-Dibromoethane | Ethylbenzene | Styrene | Toluene | 1,2,4-TMB | 1,3,5-TMB | m,p-Xylene | o-Xylene |
| VP-99 | 5 | 4/22/20 | <20 | <20 | <20 | <20 | <20 | 112 | <20 | <20 | <40 | <20 |
| | 15 | 4/22/20 | **26** | <20 | <20 | <20 | <20 | 1,830 | <20 | <20 | 62 | 22 |
| | 30 | 4/22/20 | <20 | <20 | <20 | <20 | <20 | 1,790 | <20 | <20 | <40 | <20 |
| | 45 | 4/22/20 | <20 | <20 | <20 | <20 | <20 | 3,250 | <20 | <20 | <40 | <20 |
| | 65 | 4/22/20 | <20 | <20 | <20 | <20 | <20 | 1,160 | <20 | <20 | <40 | <20 |
| | 80 | 4/22/20 | <20 | <20 | <20 | <20 | <20 | 2,220 | <20 | <20 | <40 | <20 |
| **Commercial Screening Level (α=0.03)** | | | **14** | **367** | **0.67** | **163** | **130,000** | **43,333** | **8,667** | **8,667** | **14,667** | **14,667** |

**Table 2C**

**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**Other VOC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration ($\mu g/m^3$) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Benzene | Bromoform | 1,2-Dibromoethane | Ethylbenzene | Styrene | Toluene | 1,2,4-TMB | 1,3,5-TMB | m,p-Xylene | o-Xylene |
| VP-100 | 5 | 4/21/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 |
| | 15 | 4/21/20 | <20 | <20 | <20 | <20 | <20 | 379 | <20 | <20 | <40 | <20 |
| | 30 | 4/21/20 | **144** | <20 | <20 | 116 | <20 | 6,330 | 142 | 42 | 310 | 174 |
| | 45 | 4/21/20 | <20 | <20 | <20 | <20 | <20 | 360 | <20 | <20 | <40 | <20 |
| | 65 | 4/21/20 | <20 | <20 | <20 | <20 | <20 | 251 | <20 | <20 | <40 | <20 |
| | 80 | 4/21/20 | <20 | <20 | <20 | <20 | <20 | 230 | <20 | <20 | <40 | <20 |
| **Commercial Screening Level (α=0.03)** | | | **14** | **367** | **0.67** | **163** | **130,000** | **43,333** | **8,667** | **8,667** | **14,667** | **14,667** |

GENESIS ENGINEERING & REDEVELOPMENT

**Table 2C**

**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**Other VOC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration ($\mu g/m^3$) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Benzene | Bromoform | 1,2-Dibromoethane | Ethylbenzene | Styrene | Toluene | 1,2,4-TMB | 1,3,5-TMB | m,p-Xylene | o-Xylene |
| VP-101 | 5 | 4/22/20 | **47** | <20 | <20 | <20 | <20 | 218 | <20 | <20 | <40 | <20 |
| | 15 | 4/22/20 | **183** | <20 | <20 | <20 | <20 | 411 | 149 | <20 | <40 | <20 |
| | 30 | 4/22/20 | **76** | <20 | <20 | <20 | <20 | 211 | <20 | <20 | <40 | <20 |
| | 45 | 4/22/20 | <20 | <20 | <20 | <20 | <20 | 346 | <20 | <20 | <40 | <20 |
| | | REP | <20 | <20 | <20 | <20 | <20 | 335 | <20 | <20 | <40 | <20 |
| | 65 | 4/22/20 | <20 | <20 | <20 | <20 | <20 | 2,450 | <20 | <20 | <40 | <20 |
| | 80 | 4/22/20 | <20 | <20 | <20 | <20 | <20 | 84 | <20 | <20 | <40 | <20 |
| **Commercial Screening Level (α=0.03)** | | | **14** | **367** | **0.67** | **163** | **130,000** | **43,333** | **8,667** | **8,667** | **14,667** | **14,667** |

GENESIS ENGINEERING & REDEVELOPMENT

**Table 2C**

**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**Other VOC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration ($\mu g/m^3$) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Benzene | Bromoform | 1,2-Dibromoethane | Ethylbenzene | Styrene | Toluene | 1,2,4-TMB | 1,3,5-TMB | m,p-Xylene | o-Xylene |
| VP-102 | 5 | 4/21/20 | No Flow | | | | | | | | | |
| | | 5/7/20 | <34 | <170 | <8,000 | <85 | <20 | 1,140 | 30 | <85 | 140 | 57 |
| | 15 | 4/21/20 | <20 | <20 | <20 | <20 | <20 | 1,140 | <20 | <20 | <40 | <20 |
| | 30 | 4/21/20 | **144** | <20 | <20 | <20 | <20 | 850 | 28 | <20 | 41 | <20 |
| | 45 | 4/21/20 | <20 | <20 | <20 | <20 | <20 | 167 | <20 | <20 | <40 | <20 |
| | 65 | 4/21/20 | <20 | <20 | <20 | <20 | <20 | 178 | <20 | <20 | <40 | <20 |
| | 80 | 4/21/20 | <20 | <20 | <20 | <20 | <20 | 33 | <20 | <20 | <40 | <20 |
| **Commercial Screening Level (α=0.03)** | | | **14** | **367** | **0.67** | **163** | **130,000** | **43,333** | **8,667** | **8,667** | **14,667** | **14,667** |

GENESIS ENGINEERING & REDEVELOPMENT

**Table 2C**

**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**Other VOC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration ($\mu g/m^3$) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Benzene | Bromoform | 1,2-Dibromoethane | Ethylbenzene | Styrene | Toluene | 1,2,4-TMB | 1,3,5-TMB | m,p-Xylene | o-Xylene |
| VP-103 | 5 | 4/21/20 | <20 | <20 | <20 | <20 | <20 | 79 | <20 | <20 | <40 | <20 |
| | 15 | 4/21/20 | <20 | <20 | <20 | <20 | <20 | 653 | <20 | <20 | <40 | <20 |
| | 30 | 4/21/20 | <20 | <20 | <20 | <20 | <20 | 529 | <20 | <20 | <40 | <20 |
| | 45 | 4/21/20 | <20 | <20 | <20 | <20 | <20 | 578 | <20 | <20 | <40 | <20 |
| | 65 | 4/21/20 | <20 | <20 | <20 | <20 | <20 | 2,410 | <20 | <20 | <40 | <20 |
| | | REP | <20 | <20 | <20 | <20 | <20 | 4,750 | <20 | <20 | <40 | <20 |
| | 80 | 4/21/20 | <20 | <20 | <20 | <20 | <20 | 407 | <20 | <20 | <40 | <20 |
| **Commercial Screening Level (α=0.03)** | | | **14** | **367** | **0.67** | **163** | **130,000** | **43,333** | **8,667** | **8,667** | **14,667** | **14,667** |

**Table 2C**

**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**Other VOC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration ($\mu g/m^3$) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Benzene | Bromoform | 1,2-Dibromoethane | Ethylbenzene | Styrene | Toluene | 1,2,4-TMB | 1,3,5-TMB | m,p-Xylene | o-Xylene |
| VP-104 | 5 | 4/22/20 | Tracer in Probe | | | | | | | | | |
| | | | <32 | <160 | <80 | <80 | <80 | 41 | 31 | <80 | 83 | 31 |
| | 15 | 4/22/20 | **31** | <20 | <20 | <20 | <20 | 4,050 | <20 | <20 | 72 | <20 |
| | 30 | 4/22/20 | <20 | <20 | <20 | <20 | <20 | 2,250 | <20 | <20 | 25 | <20 |
| | 45 | 4/22/20 | <20 | <20 | <20 | <20 | <20 | 1,960 | <20 | <20 | <40 | <20 |
| | 65 | 4/22/20 | <20 | <20 | <20 | <20 | <20 | 887 | <20 | <20 | <40 | <20 |
| | 80 | 4/22/20 | <20 | <20 | <20 | <20 | <20 | 1,100 | <20 | <20 | <40 | <20 |
| **Commercial Screening Level (α=0.03)** | | | **14** | **367** | **0.67** | **163** | **130,000** | **43,333** | **8,667** | **8,667** | **14,667** | **14,667** |

GENESIS ENGINEERING & REDEVELOPMENT

**Table 2C**

**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**Other VOC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration ($\mu g/m^3$) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Benzene | Bromoform | 1,2-Dibromoethane | Ethylbenzene | Styrene | Toluene | 1,2,4-TMB | 1,3,5-TMB | m,p-Xylene | o-Xylene |
| VP-105 | 5 | 12/26/19 | <1.6 | <5.2 | <3.8 | <2.2 | <6.4 | <1.9 | <7.4 | <2.5 | <8.7 | <2.2 |
| | 15 | 12/26/19 | <1.6 | <5.2 | <3.8 | <2.2 | <6.4 | 3.4 | <7.4 | <2.5 | <8.7 | <2.2 |
| | 30 | 12/26/19 | <16 | <52 | <38 | <22 | <64 | <19 | <74 | <25 | <87 | <22 |
| | 45 | 12/26/19 | <1.6 | <5.2 | <3.8 | <2.2 | <6.4 | 3.3 | <7.4 | <2.5 | <8.7 | <2.2 |
| | | DUP | <8.0 | <26 | <19 | <11 | <32 | 73 | <37 | <12 | <43 | <41 |
| **Commercial Screening Level (α=0.03)** | | | **14** | **367** | **0.67** | **163** | **130,000** | **43,333** | **8,667** | **8,667** | **14,667** | **14,667** |

**Table 2C**

**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**Other VOC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration ($\mu g/m^3$) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Benzene | Bromoform | 1,2-Dibromoethane | Ethylbenzene | Styrene | Toluene | 1,2,4-TMB | 1,3,5-TMB | m,p-Xylene | o-Xylene |
| VP-106 | 5 | 3/3/20 | **190** | <20 | <20 | <20 | <20 | 39.0 | <20 | <20 | <40 | <20 |
| | 15 | 3/3/20 | **62** | <20 | <20 | <20 | <20 | 91.0 | <20 | <20 | <40 | <20 |
| | 30 | 3/3/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 |
| | | REP | <20 | <20 | <20 | <20 | <20 | 83 | <20 | <20 | <40 | <20 |
| | 45 | 3/5/20 | **25** | <20 | <20 | <20 | <20 | 55 | <20 | <20 | <40 | <20 |
| | | REP | **33** | <20 | <20 | <20 | <20 | 220 | <20 | <20 | <40 | <20 |
| | 53 | 3/5/20 | <20 | <20 | <20 | <20 | <20 | 116 | <20 | <20 | <40 | <20 |
| | | Summa | <320 | <1600 | <800 | <800 | <800 | 200 | <800 | <800 | <800 | <800 |
| **Commercial Screening Level (α=0.03)** | | | **14** | **367** | **0.67** | **163** | **130,000** | **43,333** | **8,667** | **8,667** | **14,667** | **14,667** |

GENESIS ENGINEERING & REDEVELOPMENT

**Table 2C**

**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**Other VOC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration ($\mu g/m^3$) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Benzene | Bromoform | 1,2-Dibromoethane | Ethylbenzene | Styrene | Toluene | 1,2,4-TMB | 1,3,5-TMB | m,p-Xylene | o-Xylene |
| VP-107 | 5 | 1/28/20 | **158** | <20 | <20 | <20 | <20 | 128 | 23 | <20 | 71 | 27 |
| | | DUP | **153** | <20 | <20 | <20 | <20 | 133 | 23 | <20 | 74 | 24 |
| | 15 | 1/28/20 | **197** | <20 | <20 | 31 | <20 | 248 | 36 | <20 | 112 | 35 |
| | 25 | 1/28/20 | **207** | <20 | <20 | 25 | <20 | 456 | <20 | <20 | 22 | <20 |
| | 30 | 1/28/20 | **122** | <20 | <20 | 27 | <20 | 1,660 | <20 | <20 | 32 | <20 |
| | 45 | 1/28/20 | **114** | <20 | <20 | 25 | <20 | 1,570 | <20 | 37 | <40 | <20 |
| | 65 | 1/28/20 | **120** | <20 | <20 | 29 | <20 | 3,440 | <20 | <20 | <40 | <20 |
| **Commercial Screening Level ($\alpha$=0.03)** | | | **14** | **367** | **0.67** | **163** | **130,000** | **43,333** | **8,667** | **8,667** | **14,667** | **14,667** |

GENESIS ENGINEERING & REDEVELOPMENT

**Table 2C**

**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**Other VOC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration ($\mu g/m^3$) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Benzene | Bromoform | 1,2-Dibromoethane | Ethylbenzene | Styrene | Toluene | 1,2,4-TMB | 1,3,5-TMB | m,p-Xylene | o-Xylene |
| VP-108 | 5 | 1/27/20 | **194** | <20 | <20 | 34 | <20 | 223 | 35 | <20 | <40 | <20 |
| | | Summa | <250 | <1,100 | <640 | <560 | <590 | <300 | <1,000 | <2,300 | <1,300 | <830 |
| | 15 | 1/27/20 | **121** | <20 | <20 | <20 | <20 | 162 | <20 | <20 | <40 | <20 |
| | 30 | 1/27/20 | **328** | <20 | <20 | <20 | <20 | 165 | <20 | <20 | <40 | <20 |
| | 40 | 1/27/20 | **81** | <20 | <20 | 28 | <20 | 285 | <20 | <20 | 86 | <20 |
| | 54 | 1/27/20 | <20 | <20 | <20 | <20 | <20 | 207 | <20 | <20 | <40 | <20 |
| **Commercial Screening Level (α=0.03)** | | | **14** | **367** | **0.67** | **163** | **130,000** | **43,333** | **8,667** | **8,667** | **14,667** | **14,667** |

GENESIS ENGINEERING & REDEVELOPMENT

**Table 2C**

**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**Other VOC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration ($\mu g/m^3$) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Benzene | Bromoform | 1,2-Dibromoethane | Ethylbenzene | Styrene | Toluene | 1,2,4-TMB | 1,3,5-TMB | m,p-Xylene | o-Xylene |
| VP-109 | 5 | 1/31/20 | <20 | <20 | <20 | 43.0 | <20 | 92.0 | 34.0 | 214 | <40 | 180 |
| | 15 | 3/2/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 |
| | 30 | 3/2/20 | <20 | <20 | <20 | <20 | <20 | 20.0 | <20 | <20 | <40 | <20 |
| | 45 | 3/2/20 | <20 | <20 | <20 | <20 | <20 | 32.0 | <20 | <20 | <40 | <20 |
| | | Summa | <320 | <1600 | <800 | <800 | <800 | 140 | <800 | <800 | <800 | <800 |
| **Commercial Screening Level (α=0.03)** | | | **14** | **367** | **0.67** | **163** | **130,000** | **43,333** | **8,667** | **8,667** | **14,667** | **14,667** |

**Table 2C**

**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**Other VOC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration ($\mu g/m^3$) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Benzene | Bromoform | 1,2-Dibromoethane | Ethylbenzene | Styrene | Toluene | 1,2,4-TMB | 1,3,5-TMB | m,p-Xylene | o-Xylene |
| VP-113 | 5 | 3/2/20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 |
| | | REP | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 |
| | 15 | 3/2/20 | **155** | <20 | <20 | <20 | <20 | 54 | <20 | <20 | <40 | <20 |
| | 30 | 3/2/20 | **108** | <20 | <20 | <20 | <20 | 63 | <20 | <20 | <40 | <20 |
| | 45 | 3/2/20 | **59** | <20 | <20 | <20 | <20 | 41 | <20 | <20 | <40 | <20 |
| | 60 | 3/2/20 | **148** | <20 | <20 | 37 | <20 | 761 | <20 | <20 | <40 | <20 |
| **Commercial Screening Level (α=0.03)** | | | **14** | **367** | **0.67** | **163** | **130,000** | **43,333** | **8,667** | **8,667** | **14,667** | **14,667** |

GENESIS ENGINEERING & REDEVELOPMENT

**Table 2C**

**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**Other VOC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration ($\mu g/m^3$) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Benzene | Bromoform | 1,2-Dibromoethane | Ethylbenzene | Styrene | Toluene | 1,2,4-TMB | 1,3,5-TMB | m,p-Xylene | o-Xylene |
| VP-114 | 5 | 3/3/20 | **63** | <20 | <20 | <20 | <20 | 283 | <20 | <20 | <40 | <20 |
| | 15 | 3/3/20 | **293** | <20 | <20 | <20 | <20 | 294 | <20 | <20 | <40 | <20 |
| | | REP | **290** | <20 | <20 | <20 | <20 | 246 | <20 | <20 | <40 | <20 |
| | 30 | 3/3/20 | **333** | <20 | <20 | 100 | <20 | 2,450 | <20 | 41 | <40 | 74 |
| | 45 | 3/3/20 | **188** | <20 | <20 | 108 | <20 | 321 | <20 | <20 | <40 | 27 |
| **Commercial Screening Level (α=0.03)** | | | **14** | **367** | **0.67** | **163** | **130,000** | **43,333** | **8,667** | **8,667** | **14,667** | **14,667** |

GENESIS ENGINEERING & REDEVELOPMENT

**Table 2C**

**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**Other VOC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration ($\mu g/m^3$) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Benzene | Bromoform | 1,2-Dibromoethane | Ethylbenzene | Styrene | Toluene | 1,2,4-TMB | 1,3,5-TMB | m,p-Xylene | o-Xylene |
| VP-132 | 5 | 4/23/20 | **44** | <20 | <20 | <20 | <20 | 434 | <20 | <20 | <40 | <20 |
| | 15 | 4/23/20 | <20 | <20 | <20 | <20 | <20 | 573 | <20 | <20 | <40 | <20 |
| | 30 | 4/23/20 | **50** | <20 | <20 | <20 | <20 | 131 | 36 | <20 | <40 | <20 |
| | | REP | **46** | <20 | <20 | <20 | <20 | 125 | 41 | <20 | <40 | <20 |
| | 45 | 4/23/20 | <20 | <20 | <20 | <20 | <20 | 336 | <20 | <20 | <40 | <20 |
| | 65 | 4/23/20 | **61** | <20 | <20 | <20 | <20 | 86 | <20 | <20 | <40 | <20 |
| | 80 | 4/23/20 | **70** | <20 | <20 | <20 | <20 | 288 | <20 | <20 | <40 | <20 |
| **Commercial Screening Level (α=0.03)** | | | **14** | **367** | **0.67** | **163** | **130,000** | **43,333** | **8,667** | **8,667** | **14,667** | **14,667** |

GENESIS ENGINEERING & REDEVELOPMENT

**Table 2C**

**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**Other VOC Concentrations in Soil Vapor**

| Boring | Sample Depth | Sampling Date | Concentration ($\mu g/m^3$) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Benzene | Bromoform | 1,2-Dibromoethane | Ethylbenzene | Styrene | Toluene | 1,2,4-TMB | 1,3,5-TMB | m,p-Xylene | o-Xylene |
| VP-133 | 5 | 12/26/19 | 2 | <5.2 | <3.8 | 2 | <6.4 | 12 | <7.4 | <2.5 | 9 | 3 |
| | 15 | 12/26/19 | 13 | <5.2 | <3.8 | 18 | <6.4 | 41 | <7.4 | 4 | 19 | 22 |
| | 30 | 12/26/19 | <64 | <210 | <150 | <87 | <260 | 130 | <290 | <98 | <350 | <87 |
| | 45 | 12/26/19 | **67** | <210 | <150 | 140 | <260 | 190 | <290 | <98 | <350 | <87 |
| | 65 | 12/26/19 | <64 | <210 | <150 | <87 | <260 | <75 | <290 | <98 | <350 | <87 |
| | 85 | 12/26/19 | **43** | <83 | <61 | <35 | <100 | <30 | <120 | <39 | <140 | <35 |
| | | DUP | **56** | <83 | <61 | <35 | <100 | <30 | <120 | <39 | <140 | <35 |
| **Commercial Screening Level (α=0.03)** | | | **14** | **367** | **0.67** | **163** | **130,000** | **43,333** | **8,667** | **8,667** | **14,667** | **14,667** |

**NOTES:**

- "feet bgs" - feet below ground surface
- "**Bold**"- concentration exceeds the residential screening level
- "ND" - Non-detect
- "*" - Screening levels obtained from HHRA Note No. 3 (April 2019) or EPA Region 9 RSL (April 2019) with attenuation factor of 0.03

GENESIS ENGINEERING & REDEVELOPMENT

**Table 3A**

## Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report

### COPC Concentrations in Soil

| Sample ID | Depth (*ft bgs*) | Sampling Date | Concentration (*mg/kg*) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | PCE | TCE | cis-1,2-DCE | trans-1,2-DCE | 1,1-DCE | Vinyl Chloride |
| VP-107 | 27 | 1/15/20 | 0.0099 | <0.0022 | <0.0018 | <0.0019 | 0.0032 | <0.0018 |
| | 39 | 1/16/20 | 0.11 | 0.021 | <0.0018 | <0.0019 | 0.026 | <0.0019 |
| | 45.5 | 1/16/20 | 0.15 | 0.047 | <0.0018 | <0.0019 | 0.076 | <0.0019 |
| VP-108 | 26 | 1/8/20 | 0.0035 | <0.0022 | <0.0018 | <0.0019 | <0.0021 | <0.0019 |
| | 33 | 1/8/20 | <0.0022 | <0.0022 | <0.0018 | <0.0019 | <0.0021 | <0.0019 |
| | 40 | 1/8/20 | 0.079 | 0.0028 | <0.0018 | <0.0019 | <0.0021 | <0.0019 |
| VP-114 | 50 | 1/8/20 | 0.003 | <0.0022 | <0.0018 | <0.0019 | <0.0021 | <0.0019 |
| | 60 | 1/8/20 | 0.02 | <0.0022 | <0.0018 | <0.0019 | <0.0021 | <0.0019 |
| VP-133 | 5 | 12/7/19 | <0.0022 | <0.0022 | <0.0018 | <0.0019 | <0.0021 | <0.0019 |
| | 15 | 12/7/19 | <0.0015 | <0.0015 | <0.0012 | <0.0013 | <0.0014 | <0.0013 |
| | 15 | DUP-1 | <0.0015 | <0.0015 | <0.0013 | <0.0013 | <0.0015 | <0.0013 |
| | 30 | 12/7/19 | 0.002 | 0.0035 | <0.0015 | <0.0015 | <0.0017 | <0.0015 |
| | 45 | 12/7/19 | 0.0029 | <0.0016 | <0.0013 | <0.0014 | <0.0015 | <0.0014 |
| | 65 | 12/7/19 | 0.0074 | 0.0073 | <0.0016 | <0.0017 | <0.0019 | <0.0017 |
| | 85 | 12/7/19 | 0.01 | 0.013 | <0.0018 | <0.0019 | <0.0021 | <0.0019 |
| **Commercial Screening Level*** | | | **2.7** | **6.0** | **84** | **600** | **1,000** | **0.15** |

**Notes:**

- "PCE" - tetrachloroethene
- "TCE" - trichloroethene
- "1,1-DCE" - 1,1-dichloroethene
- "mg'kg" - milligrams per kilogram
- "cis-1,2-DCE" - cis-1,2-dichloroethene
- "trans-1,2-DCE" - trans-1,2-dichloroethene
- "feet bgs" - feet below the ground surface
- "ND" - Not Detected
- "*" - Screening levels obtained from HHRA Note No. 3 (April 2019), EPA Region 9 RSL (April 2019)

GENESIS ENGINEERING & REDEVELOPMENT

**Table 3B**

## Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report

### Historical COPC Concentrations in Soil

| Sample ID | Depth (*ft bgs*) | Sampling Date | Concentration (*mg/kg*) | | | | |
|---|---|---|---|---|---|---|---|
| | | | PCE | TCE | cis-1,2-DCE | 1,1-DCE | Vinyl Chloride |
| VP-35 | 5 | 4/26/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 35 | 4/28/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 75 | 4/28/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| VP-42 | 5 | 5/18/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 10 | 5/18/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 15 | 5/18/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 20 | 5/18/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 25 | 5/18/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 30 | 5/18/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 35 | 5/18/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 40 | 5/18/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 45 | 5/18/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 50 | 5/18/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 55 | 5/18/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 60 | 5/18/16 | 0.012 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 65 | 5/18/16 | 0.004 | 0.006 | <0.005 | 0.013 | <0.005 |
| VP-46 | 5 | 5/17/16 | 0.011 | 0.006 | <0.005 | <0.005 | <0.005 |
| | 10 | 5/17/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 15 | 5/17/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 20 | 5/17/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 25 | 5/17/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 30 | 5/17/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 35 | 5/17/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 40 | 5/17/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 45 | 5/17/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 50 | 5/17/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 55 | 5/17/16 | 0.006 | 0.002 | <0.005 | <0.005 | <0.005 |
| | 60 | 5/17/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 65 | 5/17/16 | 0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 70 | 5/17/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 75 | 5/17/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 80 | 5/17/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 85 | 5/17/16 | 0.008 | 0.002 | <0.005 | <0.005 | <0.005 |
| **Commercial Screening Level*** | | | **2.7** | **6.0** | **84** | **1,000** | **0.15** |

GENESIS ENGINEERING & REDEVELOPMENT

**Table 3B**

## Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report

### Historical COPC Concentrations in Soil

| Sample ID | Depth (*ft bgs*) | Sampling Date | Concentration (*mg/kg*) | | | | |
|---|---|---|---|---|---|---|---|
| | | | PCE | TCE | cis-1,2-DCE | 1,1-DCE | Vinyl Chloride |
| VP-47 | 5 | 5/16/16 | 0.017 | 0.002 | <0.005 | <0.005 | <0.005 |
| | 10 | 5/16/16 | 0.003 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 15 | 5/16/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 20 | 5/16/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 25 | 5/16/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 30 | 5/16/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 35 | 5/16/16 | 0.020 | 0.010 | <0.005 | <0.005 | <0.005 |
| | 45 | 5/16/16 | 0.024 | 0.026 | <0.005 | <0.005 | <0.005 |
| | 50 | 5/16/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 55 | 5/16/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 60 | 5/16/16 | 0.027 | 0.030 | <0.005 | <0.005 | <0.005 |
| | 65 | 5/16/16 | 0.010 | 0.009 | <0.005 | <0.005 | <0.005 |
| | 70 | 5/16/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 75 | 5/16/16 | 0.013 | 0.008 | <0.005 | <0.005 | <0.005 |
| | 80 | 5/16/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 85 | 5/16/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| VP-48 | 5 | 5/17/16 | <0.002 | 0.003 | <0.005 | <0.005 | <0.005 |
| | 10 | 5/17/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 15 | 5/17/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 20 | 5/17/16 | <0.002 | 0.002 | <0.005 | <0.005 | <0.005 |
| | 25 | 5/17/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 30 | 5/17/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 35 | 5/17/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 40 | 5/17/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 45 | 5/17/16 | <0.002 | 0.005 | <0.005 | <0.005 | <0.005 |
| | 60 | 5/18/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 70 | 5/18/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 75 | 5/18/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 80 | 5/18/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| VP-49 | 5 | 5/12/16 | 0.025 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 10 | 5/12/16 | 0.071 | 0.003 | <0.005 | 0.021 | <0.005 |
| | 15 | 5/12/16 | 0.017 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 20 | 5/12/16 | 0.025 | 0.002 | <0.005 | 0.008 | <0.005 |
| | 25 | 5/12/16 | <0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 30 | 5/12/16 | 0.002 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 35 | 5/12/16 | 0.032 | 0.003 | <0.005 | 0.041 | <0.005 |
| | 40 | 5/12/16 | 0.077 | 0.003 | <0.005 | 0.017 | <0.005 |
| | 45 | 5/12/16 | 0.117 | 0.006 | <0.005 | 0.052 | <0.005 |
| | 50 | 5/12/16 | 0.635 | 0.078 | 0.007 | 1.170 | <0.005 |
| | 55 | 5/12/16 | 0.852 | 0.073 | 0.006 | 0.181 | <0.005 |
| | 60 | 5/12/16 | 0.747 | 0.067 | 0.005 | 0.168 | <0.005 |
| | 65 | 5/12/16 | 0.441 | 0.042 | <0.005 | 0.304 | <0.005 |
| | 70 | 5/12/16 | 0.039 | 0.002 | <0.005 | 0.009 | <0.005 |
| | 75 | 5/12/16 | 0.034 | 0.002 | <0.005 | <0.005 | <0.005 |
| | 80 | 5/12/16 | 0.085 | 0.004 | <0.005 | 0.011 | <0.005 |
| | 85 | 5/12/16 | 0.047 | 0.002 | <0.005 | 0.005 | <0.005 |
| **Commercial Screening Level*** | | | **2.7** | **6.0** | **84** | **1,000** | **0.15** |

GENESIS ENGINEERING & REDEVELOPMENT

**Table 3B**

## Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report

### Historical COPC Concentrations in Soil

| Sample ID | Depth (*ft bgs*) | Sampling Date | Concentration (*mg/kg*) | | | | |
|---|---|---|---|---|---|---|---|
| | | | PCE | TCE | cis-1,2-DCE | 1,1-DCE | Vinyl Chloride |
| VP-50 | 5 | 5/11/16 | 0.011 | 0.002 | <0.005 | <0.005 | <0.005 |
| | 10 | 5/11/16 | 0.027 | 0.005 | <0.005 | 0.022 | <0.005 |
| | 15 | 5/11/16 | 0.004 | <0.001 | <0.005 | <0.005 | <0.005 |
| | 20 | 5/11/16 | 0.010 | 0.002 | <0.005 | <0.005 | <0.005 |
| | 25 | 5/11/16 | 0.014 | 0.004 | <0.005 | <0.005 | <0.005 |
| | 30 | 5/11/16 | 0.113 | 0.026 | <0.005 | 0.229 | <0.005 |
| | 35 | 5/11/16 | 0.006 | 0.002 | <0.005 | 0.008 | <0.005 |
| | 40 | 5/11/16 | 0.005 | <0.001 | <0.005 | 0.008 | <0.005 |
| | 45 | 5/11/16 | 0.005 | <0.005 | <0.005 | 0.006 | <0.005 |
| | 50 | 5/11/16 | 0.018 | 0.004 | <0.005 | 0.022 | <0.005 |
| | 55 | 5/11/16 | **3.390** | 0.083 | <0.005 | 6.320 | <0.005 |
| | 60 | 5/11/16 | 0.450 | 0.089 | <0.005 | 0.392 | <0.005 |
| **Commercial Screening Level*** | | | **2.7** | **6.0** | **84** | **1,000** | **0.15** |

**Notes:**

- "PCE" - tetrachloroethene
- "TCE" - trichloroethene
- "1,1-DCE" - 1,1-dichloroethene
- "cis-1,2-DCE" - cis-1,2-dichloroethene
- "mg'kg" - milligrams per kilogram
- "feet bgs" - feet below the ground surface
- "*" - Screening levels obtained from HHRA Note No. 3 (April 2019), EPA Region 9 RSL (April 2019)

GENESIS ENGINEERING & REDEVELOPMENT

**Table 4**

**Soil, Soil Vapor, and Groundwater Delineation - Interim Module III Report**

**VOC Concentrations in Perched Groundwater**

| Well ID | Sampling Date | Concentration (µg/L) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | PCE | TCE | cis-1,2-DCE | trans-1,2-DCE | 1,1-DCE | Vinyl Chloride | Benzene | CT | 1,2-DCA | MC | 1,1,1-TCA | 1,1,2-TCA |
| VP-42-GW | 5/19/16 | **2,550** | **90** | <25 | <25 | **1,680** | -- | <25 | -- | -- | -- | <25 | -- |
| VP-50-GW | 5/11/16 | **36,600** | **2,870** | <250 | <250 | **56,000** | -- | <250 | -- | -- | -- | **22,600** | -- |
| VP-106-GW | 1/14/20 | <0.13 | 1.0 | <0.085 | <0.15 | 1.0 | <0.12 | <0.083 | <0.18 | <0.17 | <0.48 | <0.11 | <0.16 |
| VP-108-GW | 1/8/20 | **1,900** | **110** | 10 | 0.87 | **2,400** | 0.2 | 0.54 | 0.64 | 3.5 | <0.48 | 7.2 | 2.1 |
| VP-109-GW | 1/2/20 | 0.39 | <0.085 | <0.085 | <0.15 | 0.52 | <0.12 | 0.18 | <0.18 | <0.17 | <0.48 | <0.11 | <0.16 |
| VP-113-GW | 1/6/20 | **5,200** | **600** | 67 | 4.6 | **4,800** | **1.3** | **1.7** | **2.9** | **33** | 0.84 | 4.1 | **9.8** |
| VP-114-GW | 1/8/20 | **15,000** | **1,000** | 59 | 5.9 | **16,000** | **0.51** | 0.96 | **8.1** | **30** | **54** | **230** | **9.9** |
| | **MCL*** | **5** | **5** | **6** | **10** | **6** | **0.5** | **1** | **0.5** | **5** | **5** | **200** | **5** |

**NOTES:**

- "feet bgs" - feet below ground surface
- "PCE" - tetrachloroethene
- "TCE" - trichloroethene
- "cis-1,2-DCE" - cis-1,2-dichloroethene
- "trans-1,2-DCE" - trans-1,2-dichloroethene
- "CT" - carbon tetrachloride
- "MC" - methylene chloride
- "1,1-DCA" - 1,1-dichloroethane
- "1,1,1-TCA" - 1,1,1-trichloroethane
- "1,1,2-TCA" - 1,1,2-trichloroethane
- "-" - not analyzed
- "**Bold**"- concentration exceeds the residential screening level
- "*" - State Water Resources Control Board Maximum Contaminant Level (Oct. 2019)

# APPENDIX C
## Initial Building Survey

# Building Survey Form

**Type in or select answers from drop-down lists in the righthand column.**
**Upload answers to GeoTracker database for criteria marked with an asterisks (*).**
**See Table 1 in the *Guidance on Uploading Vapor Intrusion Information into GeoTracker* (Attachment 4 of Supplemental Vapor Intrusion Guidance) for a description of Building Design Type input choices.**

| Person Conducting Survey | Input |
|---|---|
| Name: | Kelly C. Brown |
| Company: | Stantec Consulting Services Inc. |
| Phone Number: | 714 470-6494 |
| Email: | kelly.brown@stantec.com |

| Building Contact Information | Input |
|---|---|
| Name: | Joel Chaves |
| Contact Title: | Manager |
| Phone Number: | 310-539-0508 x264 |
| Email: | rs3@robinsonheli.com |
| Building Occupant Interviewed? | Yes |

| Building Information | Input |
|---|---|
| Date of Building Survey (dd/mm/yy): | January 26, 2021 |
| *Building Name: | Robinson Helicopter |
| *Building Address (Street, City): | 2530/2540 Skypark Dr. Torrance, CA |
| Coordinates for Center of Building (Latitude, Longitude; decimal degrees to 0.00000): | 33.802197 -118.329845 |
| *Building Location Onsite/Offsite with respect to Site/Facility: | Onsite |
| *Year Built (yyyy; approximate if unsure): | Unknown |
| *Building Occupants: | Onsite |

Building was formerly warehouse. Remodeled a number of years ago to current configuration. Removed second story offices and relocated bathrooms.

# Building Survey Form

| Building Dimensions | Input |
|---|---|
| *Building Footprint Area (within enclosed space; square feet [Ft2]): | 37,200 ft2 |
| Building Dimensions (at grade; feet by feet): | 310' x 120' |
| *Ceiling Height of Ground Floor (Feet): | ~15-20'; 20' in center |
| *Number of Floors (excluding the basement): | 1 |

| Building Design | Input |
|---|---|
| *Building Design Type: | Manufacturing facility |
| Has the design been modified? | Yes |
| *Foundation Type: | Slab-on-Grade |
| *Building Vapor Intrusion Mitigation System: | None |
| *Heating, Ventilation, & Air Conditioning (HVAC) System: | Heating only |
| Type of Energy Used in Building? | More Than One Type |
| Energy Primarily Used For? | Other |
| Number of Units for Multi-Unit Buildings: | N/A |
| Number of Rooms (average per unit for multi-unit buildings): | N/A |
| Number of Exterior Doors: | Main - 4, Warehouse - 6 |
| Number of Elevators: | 0 |
| Number of Active Exhaust Fans (e.g., kitchen/bathroom): | 1 in media blast room |
| Chimney or Other Vertical Draft Source? | Yes |

| Building Slab | Input |
|---|---|
| Slab Thickness (inches; approximate if unsure): | ~4-6" |
| Large Slab Penetrations (> 1 Foot Diameter): | None |
| Soil Type 0 to 3 Feet Below Building: | Unknown |
| Evidence of moisture intrusion from Below Slab? | N/A |

Active ventilation unit is Media Blast Room. Warehouse has 4 passive vents on roof. Main building as 19 passive vents on roof. Media Blast unit has 1 passive vent on roof.

Two interior doors between main building and warehouse.

# Building Survey Form

| Building Windows | Input |
|---|---|
| Number of Windows: | 9 - warehouse: 5 along N side, 4 along S side |
| Weather Sealed Windows and Exterior Doors? | Some Sealed |
| Average Area of Window Open to Outside Air (Feet2): | 3'9"x13'2" = 49.5 ft2 |
| Ventilation During Sampling: | - |

| Building Crawl Space | Input |
|---|---|
| Crawl Space Height (Feet): | N/A |
| Number Crawl Space Vents: | N/A |
| Average Area per Crawl Space Vent (Feet2): | N/A |
| Evidence of moisture intrusion into Crawl Space from Soil? | N/A |

| Building Basement | Input |
|---|---|
| Basement Height (Feet): | N/A |
| Basement Footprint Area (Feet2): | N/A |
| Basement Wall Area Below Ground Surface (Feet2): | N/A |
| Exposed Basement above grade? | N/A |
| Vents or Windows above-grade in exposed basement? | N/A |
| Unfinished Basement? | N/A |
| Evidence of moisture intrusion into Basement from Soil? | N/A |

# Building Survey Form

| Factors Potentially Influencing Indoor Air Quality | Input |
|---|---|
| Is there an attached garage? | No |
| Is there smoking in the building? | No |
| Is there new carpet or furniture? | No |
| Have clothes or drapes been recently dry cleaned? | N/A |
| Has painting or staining been done within the last six months? | No |
| Has the building been recently remodeled? | No |
| Has the building ever had a fire? | No |
| Is there a hobby or craft area in the building? | No |
| Are cleaning solvents stored in the building (e.g., spot cleaner, gun cleaner? | Yes |
| Is there a fuel oil tank on the property? | No |
| Is there a septic tank on the property? | No |
| Has the building been fumigated or sprayed for pests recently? | No |
| Historically the building was primarily used for? | Manufacturing |
| Do current building occupants use solvents at another location (e.g., work, hobby)? | Industrial Degreasing/Cleaning |

| Meteorological Conditions | Input |
|---|---|
| Weather: | |
| Outdoor Temperature - High (°F): | |
| Outdoor Temperature - Low (°F): | |
| Indoor Temperature (°F): | |
| Barometric Pressure Reading (mmHg): | |
| Wind Direction: | - |
| Average Wind Speed (mph): | |
| HVAC Setting for Current Season: | - |

(End of Form)

Two parts cleaning stations and fuel storage drums are located in Media Blast Room. Fuel is removed from helicopters and stored in drums. Drums have small secondary containment skids.

# APPENDIX D

## Laboratory Analytical and Data Validation Reports

Mobile Geochemistry Inc.

16 February 2021

Ben Chevlen
Stantec - Thousand Oaks
290 Conejo Ridge Avenue, Suite 200
Thousand Oaks, CA 91361

H&P Project: ST020821-12
Client Project: 185804979 / Skypark Dr

Dear Ben Chevlen:

Enclosed is the analytical report for the above referenced project. The data herein applies to samples as received by H&P Mobile Geochemistry, Inc. on 05-Feb-21 which were analyzed in accordance with the attached Chain of Custody record(s).

The results for all sample analyses and required QA/QC analyses are presented in the following sections and summarized in the documents:

- Sample Summary
- Case Narrative (if applicable)
- Sample Results
- Quality Control Summary
- Notes and Definitions / Appendix
- Chain of Custody
- Sampling Logs (if applicable)

Unless otherwise noted, I certify that all analyses were performed and reviewed in compliance with our Quality Systems Manual and Standard Operating Procedures. This report shall not be reproduced, except in full, without the written approval of H&P Mobile Geochemistry, Inc.

We at H&P Mobile Geochemistry, Inc. sincerely appreciate the opportunity to provide analytical services to you on this project. If you have any questions or concerns regarding this analytical report, please contact me at your convenience at 760-804-9678.

Sincerely,

Lisa Eminhizer
Laboratory Director

H&P Mobile Geochemistry, Inc. is certified under the California ELAP and the National Environmental Laboratory Accreditation Conference (NELAC) for the fields of proficiency and analytes listed on those certificates. H& P is approved as an Environmental Testing Laboratory in accordance with the DoD-ELAP Program and ISO/IEC 17025:2005 programs for the fields of proficiency and analytes included in the certification process and to the extent offered by the accreditation agency . Unless otherwise noted, accreditation certificate numbers, expiration of certificates, and scope of accreditation can be found at: www.handpmg.com/about/certifications. Fields of services and analytes contained in this report that are not listed on the certificates should be considered uncertified or unavailable for certification.

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| | | |
|---|---|---|
| Stantec - Thousand Oaks | Project: ST020821-12 | |
| 290 Conejo Ridge Avenue, Suite 200 | Project Number: 185804979 / Skypark Dr | Reported: |
| Thousand Oaks, CA 91361 | Project Manager: Ben Chevlen | 16-Feb-21 12:25 |

**ANALYTICAL REPORT FOR SAMPLES**

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|
| IA-1 | E102028-01 | Vapor | 05-Feb-21 | 05-Feb-21 |
| IA-1 REP | E102028-02 | Vapor | 05-Feb-21 | 05-Feb-21 |
| IA-2 | E102028-03 | Vapor | 05-Feb-21 | 05-Feb-21 |
| IA-3 | E102028-04 | Vapor | 05-Feb-21 | 05-Feb-21 |
| IA-4 | E102028-05 | Vapor | 05-Feb-21 | 05-Feb-21 |
| IA-5 | E102028-06 | Vapor | 05-Feb-21 | 05-Feb-21 |
| IA-6 | E102028-07 | Vapor | 05-Feb-21 | 05-Feb-21 |
| IA-7 | E102028-08 | Vapor | 05-Feb-21 | 05-Feb-21 |
| IA-8 | E102028-09 | Vapor | 05-Feb-21 | 05-Feb-21 |
| AA-1 | E102028-10 | Vapor | 05-Feb-21 | 05-Feb-21 |
| AA-2 | E102028-11 | Vapor | 05-Feb-21 | 05-Feb-21 |
| AA-3 | E102028-12 | Vapor | 05-Feb-21 | 05-Feb-21 |

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|---|---|---|
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| 290 Conejo Ridge Avenue, Suite 200 | Project Number: 185804979 / Skypark Dr | Reported: |
| Thousand Oaks, CA 91361 | Project Manager: Ben Chevlen | 16-Feb-21 12:25 |

## DETECTIONS SUMMARY

Sample ID: **IA-1** Laboratory ID: **E102028-01**

| Analyte | Result | Reporting Limit | Units | Method | Notes |
|---|---|---|---|---|---|
| **Dichlorodifluoromethane (F12)** | **1.0** | 1.0 | ug/m3 | EPA TO-15 | |
| **Chloromethane** | **1.4** | 0.21 | ug/m3 | EPA TO-15 | |
| **Trichlorofluoromethane (F11)** | **1.5** | 0.56 | ug/m3 | EPA TO-15 | |
| **Methylene chloride (Dichloromethane)** | **0.85** | 0.35 | ug/m3 | EPA TO-15 | |
| **2-Butanone (MEK)** | **3.2** | 0.60 | ug/m3 | EPA TO-15 | |
| **Benzene** | **0.84** | 0.16 | ug/m3 | EPA TO-15 | |
| **Carbon tetrachloride** | **0.57** | 0.32 | ug/m3 | EPA TO-15 | |
| **Toluene** | **7.3** | 0.76 | ug/m3 | EPA TO-15 | |
| **Tetrachloroethene** | **1.1** | 0.69 | ug/m3 | EPA TO-15 | |
| **m,p-Xylene** | **1.5** | 0.44 | ug/m3 | EPA TO-15 | |
| **o-Xylene** | **0.66** | 0.44 | ug/m3 | EPA TO-15 | |
| **1,2,4-Trimethylbenzene** | **0.60** | 0.50 | ug/m3 | EPA TO-15 | |

Sample ID: **IA-1 REP** Laboratory ID: **E102028-02**

| Analyte | Result | Reporting Limit | Units | Method | Notes |
|---|---|---|---|---|---|
| **Chloromethane** | **1.3** | 0.21 | ug/m3 | EPA TO-15 | |
| **Trichlorofluoromethane (F11)** | **1.4** | 0.56 | ug/m3 | EPA TO-15 | |
| **Methylene chloride (Dichloromethane)** | **0.78** | 0.35 | ug/m3 | EPA TO-15 | |
| **2-Butanone (MEK)** | **3.3** | 0.60 | ug/m3 | EPA TO-15 | |
| **Benzene** | **0.81** | 0.16 | ug/m3 | EPA TO-15 | |
| **Carbon tetrachloride** | **0.57** | 0.32 | ug/m3 | EPA TO-15 | |
| **Toluene** | **6.7** | 0.76 | ug/m3 | EPA TO-15 | |
| **Tetrachloroethene** | **1.0** | 0.69 | ug/m3 | EPA TO-15 | |
| **Ethylbenzene** | **0.44** | 0.44 | ug/m3 | EPA TO-15 | |
| **m,p-Xylene** | **1.5** | 0.44 | ug/m3 | EPA TO-15 | |
| **o-Xylene** | **0.70** | 0.44 | ug/m3 | EPA TO-15 | |
| **1,2,4-Trimethylbenzene** | **0.65** | 0.50 | ug/m3 | EPA TO-15 | |

Sample ID: **IA-2** Laboratory ID: **E102028-03**

| Analyte | Result | Reporting Limit | Units | Method | Notes |
|---|---|---|---|---|---|
| **Dichlorodifluoromethane (F12)** | **1.1** | 1.0 | ug/m3 | EPA TO-15 | |
| **Chloromethane** | **1.3** | 0.21 | ug/m3 | EPA TO-15 | |
| **Trichlorofluoromethane (F11)** | **1.1** | 0.56 | ug/m3 | EPA TO-15 | |
| **Methylene chloride (Dichloromethane)** | **0.78** | 0.35 | ug/m3 | EPA TO-15 | |
| **2-Butanone (MEK)** | **3.4** | 0.60 | ug/m3 | EPA TO-15 | |

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|---|---|---|
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| Thousand Oaks, CA 91361 | Project Manager: Ben Chevlen | 16-Feb-21 12:25 |

Sample ID: **IA-2** Laboratory ID: **E102028-03**

| Analyte | Result | Reporting Limit | Units | Method | Notes |
|---|---|---|---|---|---|
| **Benzene** | **0.84** | 0.16 | ug/m3 | EPA TO-15 | |
| **Carbon tetrachloride** | **0.57** | 0.32 | ug/m3 | EPA TO-15 | |
| **Toluene** | **3.9** | 0.76 | ug/m3 | EPA TO-15 | |
| **Tetrachloroethene** | **1.2** | 0.69 | ug/m3 | EPA TO-15 | |
| **Ethylbenzene** | **0.44** | 0.44 | ug/m3 | EPA TO-15 | |
| **m,p-Xylene** | **1.5** | 0.44 | ug/m3 | EPA TO-15 | |
| **o-Xylene** | **0.70** | 0.44 | ug/m3 | EPA TO-15 | |
| **1,2,4-Trimethylbenzene** | **0.75** | 0.50 | ug/m3 | EPA TO-15 | |

Sample ID: **IA-3** Laboratory ID: **E102028-04**

| Analyte | Result | Reporting Limit | Units | Method | Notes |
|---|---|---|---|---|---|
| **Chloromethane** | **1.3** | 0.21 | ug/m3 | EPA TO-15 | |
| **Trichlorofluoromethane (F11)** | **1.3** | 0.56 | ug/m3 | EPA TO-15 | |
| **Methylene chloride (Dichloromethane)** | **0.88** | 0.35 | ug/m3 | EPA TO-15 | |
| **2-Butanone (MEK)** | **3.3** | 0.60 | ug/m3 | EPA TO-15 | |
| **Benzene** | **1.3** | 0.16 | ug/m3 | EPA TO-15 | |
| **Carbon tetrachloride** | **0.57** | 0.32 | ug/m3 | EPA TO-15 | |
| **Toluene** | **14** | 0.76 | ug/m3 | EPA TO-15 | |
| **Tetrachloroethene** | **1.5** | 0.69 | ug/m3 | EPA TO-15 | |
| **Ethylbenzene** | **1.1** | 0.44 | ug/m3 | EPA TO-15 | |
| **m,p-Xylene** | **3.9** | 0.44 | ug/m3 | EPA TO-15 | |
| **o-Xylene** | **1.8** | 0.44 | ug/m3 | EPA TO-15 | |
| **1,2,4-Trimethylbenzene** | **1.4** | 0.50 | ug/m3 | EPA TO-15 | |

Sample ID: **IA-4** Laboratory ID: **E102028-05**

| Analyte | Result | Reporting Limit | Units | Method | Notes |
|---|---|---|---|---|---|
| **Chloromethane** | **1.3** | 0.21 | ug/m3 | EPA TO-15 | |
| **Trichlorofluoromethane (F11)** | **1.4** | 0.56 | ug/m3 | EPA TO-15 | |
| **Methylene chloride (Dichloromethane)** | **0.88** | 0.35 | ug/m3 | EPA TO-15 | |
| **2-Butanone (MEK)** | **4.0** | 0.60 | ug/m3 | EPA TO-15 | |
| **Benzene** | **1.4** | 0.16 | ug/m3 | EPA TO-15 | |
| **Carbon tetrachloride** | **0.57** | 0.32 | ug/m3 | EPA TO-15 | |
| **Toluene** | **6.6** | 0.76 | ug/m3 | EPA TO-15 | |
| **Tetrachloroethene** | **1.4** | 0.69 | ug/m3 | EPA TO-15 | |
| **Ethylbenzene** | **0.88** | 0.44 | ug/m3 | EPA TO-15 | |
| **m,p-Xylene** | **3.2** | 0.44 | ug/m3 | EPA TO-15 | |
| **o-Xylene** | **1.3** | 0.44 | ug/m3 | EPA TO-15 | |

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Sample ID: **IA-4** Laboratory ID: **E102028-05**

| Analyte | Result | Reporting Limit | Units | Method | Notes |
|---|---|---|---|---|---|
| **1,2,4-Trimethylbenzene** | **1.0** | 0.50 | ug/m3 | EPA TO-15 | |

Sample ID: **IA-5** Laboratory ID: **E102028-06**

| Analyte | Result | Reporting Limit | Units | Method | Notes |
|---|---|---|---|---|---|
| **Chloromethane** | **1.2** | 0.21 | ug/m3 | EPA TO-15 | |
| **Trichlorofluoromethane (F11)** | **1.1** | 0.56 | ug/m3 | EPA TO-15 | |
| **Methylene chloride (Dichloromethane)** | **0.88** | 0.35 | ug/m3 | EPA TO-15 | |
| **2-Butanone (MEK)** | **4.1** | 0.60 | ug/m3 | EPA TO-15 | |
| **Benzene** | **1.2** | 0.16 | ug/m3 | EPA TO-15 | |
| **Carbon tetrachloride** | **0.57** | 0.32 | ug/m3 | EPA TO-15 | |
| **Toluene** | **7.8** | 0.76 | ug/m3 | EPA TO-15 | |
| **Tetrachloroethene** | **1.2** | 0.69 | ug/m3 | EPA TO-15 | |
| **Ethylbenzene** | **0.92** | 0.44 | ug/m3 | EPA TO-15 | |
| **m,p-Xylene** | **3.4** | 0.44 | ug/m3 | EPA TO-15 | |
| **o-Xylene** | **1.5** | 0.44 | ug/m3 | EPA TO-15 | |
| **4-Ethyltoluene** | **0.50** | 0.50 | ug/m3 | EPA TO-15 | |
| **1,2,4-Trimethylbenzene** | **1.4** | 0.50 | ug/m3 | EPA TO-15 | |

Sample ID: **IA-6** Laboratory ID: **E102028-07**

| Analyte | Result | Reporting Limit | Units | Method | Notes |
|---|---|---|---|---|---|
| **Chloromethane** | **1.2** | 0.21 | ug/m3 | EPA TO-15 | |
| **Trichlorofluoromethane (F11)** | **1.2** | 0.56 | ug/m3 | EPA TO-15 | |
| **Methylene chloride (Dichloromethane)** | **0.88** | 0.35 | ug/m3 | EPA TO-15 | |
| **2-Butanone (MEK)** | **3.4** | 0.60 | ug/m3 | EPA TO-15 | |
| **Benzene** | **1.2** | 0.16 | ug/m3 | EPA TO-15 | |
| **Carbon tetrachloride** | **0.51** | 0.32 | ug/m3 | EPA TO-15 | |
| **Toluene** | **5.2** | 0.76 | ug/m3 | EPA TO-15 | |
| **Tetrachloroethene** | **1.0** | 0.69 | ug/m3 | EPA TO-15 | |
| **Ethylbenzene** | **0.88** | 0.44 | ug/m3 | EPA TO-15 | |
| **m,p-Xylene** | **3.1** | 0.44 | ug/m3 | EPA TO-15 | |
| **o-Xylene** | **1.4** | 0.44 | ug/m3 | EPA TO-15 | |
| **1,2,4-Trimethylbenzene** | **1.3** | 0.50 | ug/m3 | EPA TO-15 | |

Sample ID: **IA-7** Laboratory ID: **E102028-08**

| Analyte | Result | Reporting Limit | Units | Method | Notes |
|---|---|---|---|---|---|
| **Chloromethane** | **1.2** | 0.21 | ug/m3 | EPA TO-15 | |

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Sample ID: **IA-7** Laboratory ID: **E102028-08**

| Analyte | Result | Reporting Limit | Units | Method | Notes |
|---|---|---|---|---|---|
| **Trichlorofluoromethane (F11)** | **1.3** | 0.56 | ug/m3 | EPA TO-15 | |
| **Methylene chloride (Dichloromethane)** | **0.92** | 0.35 | ug/m3 | EPA TO-15 | |
| **2-Butanone (MEK)** | **3.7** | 0.60 | ug/m3 | EPA TO-15 | |
| **Benzene** | **1.3** | 0.16 | ug/m3 | EPA TO-15 | |
| **Carbon tetrachloride** | **0.57** | 0.32 | ug/m3 | EPA TO-15 | |
| **Toluene** | **5.6** | 0.76 | ug/m3 | EPA TO-15 | |
| **Tetrachloroethene** | **0.90** | 0.69 | ug/m3 | EPA TO-15 | |
| **Ethylbenzene** | **0.92** | 0.44 | ug/m3 | EPA TO-15 | |
| **m,p-Xylene** | **3.2** | 0.44 | ug/m3 | EPA TO-15 | |
| **o-Xylene** | **1.4** | 0.44 | ug/m3 | EPA TO-15 | |
| **1,2,4-Trimethylbenzene** | **1.3** | 0.50 | ug/m3 | EPA TO-15 | |

Sample ID: **IA-8** Laboratory ID: **E102028-09**

| Analyte | Result | Reporting Limit | Units | Method | Notes |
|---|---|---|---|---|---|
| **Chloromethane** | **1.2** | 0.21 | ug/m3 | EPA TO-15 | |
| **Trichlorofluoromethane (F11)** | **1.3** | 0.56 | ug/m3 | EPA TO-15 | |
| **Methylene chloride (Dichloromethane)** | **0.92** | 0.35 | ug/m3 | EPA TO-15 | |
| **2-Butanone (MEK)** | **3.9** | 0.60 | ug/m3 | EPA TO-15 | |
| **Benzene** | **1.3** | 0.16 | ug/m3 | EPA TO-15 | |
| **Carbon tetrachloride** | **0.51** | 0.32 | ug/m3 | EPA TO-15 | |
| **Toluene** | **7.6** | 0.76 | ug/m3 | EPA TO-15 | |
| **Tetrachloroethene** | **1.0** | 0.69 | ug/m3 | EPA TO-15 | |
| **Ethylbenzene** | **1.1** | 0.44 | ug/m3 | EPA TO-15 | |
| **m,p-Xylene** | **4.1** | 0.44 | ug/m3 | EPA TO-15 | |
| **o-Xylene** | **1.7** | 0.44 | ug/m3 | EPA TO-15 | |
| **1,2,4-Trimethylbenzene** | **1.5** | 0.50 | ug/m3 | EPA TO-15 | |

Sample ID: **AA-1** Laboratory ID: **E102028-10**

| Analyte | Result | Reporting Limit | Units | Method | Notes |
|---|---|---|---|---|---|
| **Chloromethane** | **1.3** | 0.21 | ug/m3 | EPA TO-15 | |
| **Trichlorofluoromethane (F11)** | **1.4** | 0.56 | ug/m3 | EPA TO-15 | |
| **Methylene chloride (Dichloromethane)** | **1.1** | 0.35 | ug/m3 | EPA TO-15 | |
| **2-Butanone (MEK)** | **1.3** | 0.60 | ug/m3 | EPA TO-15 | |
| **Benzene** | **1.1** | 0.16 | ug/m3 | EPA TO-15 | |
| **Carbon tetrachloride** | **0.57** | 0.32 | ug/m3 | EPA TO-15 | |
| **Toluene** | **2.3** | 0.76 | ug/m3 | EPA TO-15 | |
| **Ethylbenzene** | **0.57** | 0.44 | ug/m3 | EPA TO-15 | |

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| Thousand Oaks, CA 91361 | Project Manager: Ben Chevlen | 16-Feb-21 12:25 |

Sample ID: **AA-1** Laboratory ID: **E102028-10**

| Analyte | Result | Reporting Limit | Units | Method | Notes |
|---|---|---|---|---|---|
| **m,p-Xylene** | **2.0** | 0.44 | ug/m3 | EPA TO-15 | |
| **o-Xylene** | **0.88** | 0.44 | ug/m3 | EPA TO-15 | |
| **1,2,4-Trimethylbenzene** | **0.90** | 0.50 | ug/m3 | EPA TO-15 | |

Sample ID: **AA-2** Laboratory ID: **E102028-11**

| Analyte | Result | Reporting Limit | Units | Method | Notes |
|---|---|---|---|---|---|
| **Chloromethane** | **1.4** | 0.21 | ug/m3 | EPA TO-15 | |
| **Trichlorofluoromethane (F11)** | **1.4** | 0.56 | ug/m3 | EPA TO-15 | |
| **Methylene chloride (Dichloromethane)** | **0.78** | 0.35 | ug/m3 | EPA TO-15 | |
| **2-Butanone (MEK)** | **3.0** | 0.60 | ug/m3 | EPA TO-15 | |
| **Benzene** | **0.81** | 0.16 | ug/m3 | EPA TO-15 | |
| **Carbon tetrachloride** | **0.57** | 0.32 | ug/m3 | EPA TO-15 | |
| **Toluene** | **1.7** | 0.76 | ug/m3 | EPA TO-15 | |
| **m,p-Xylene** | **1.1** | 0.44 | ug/m3 | EPA TO-15 | |
| **o-Xylene** | **0.48** | 0.44 | ug/m3 | EPA TO-15 | |

Sample ID: **AA-3** Laboratory ID: **E102028-12**

| Analyte | Result | Reporting Limit | Units | Method | Notes |
|---|---|---|---|---|---|
| **Dichlorodifluoromethane (F12)** | **1.0** | 1.0 | ug/m3 | EPA TO-15 | |
| **Chloromethane** | **1.2** | 0.21 | ug/m3 | EPA TO-15 | |
| **Trichlorofluoromethane (F11)** | **1.3** | 0.56 | ug/m3 | EPA TO-15 | |
| **Methylene chloride (Dichloromethane)** | **0.88** | 0.35 | ug/m3 | EPA TO-15 | |
| **2-Butanone (MEK)** | **2.6** | 0.60 | ug/m3 | EPA TO-15 | |
| **Benzene** | **0.74** | 0.16 | ug/m3 | EPA TO-15 | |
| **Carbon tetrachloride** | **0.51** | 0.32 | ug/m3 | EPA TO-15 | |
| **Toluene** | **1.8** | 0.76 | ug/m3 | EPA TO-15 | |
| **Ethylbenzene** | **0.53** | 0.44 | ug/m3 | EPA TO-15 | |
| **m,p-Xylene** | **1.8** | 0.44 | ug/m3 | EPA TO-15 | |
| **o-Xylene** | **0.75** | 0.44 | ug/m3 | EPA TO-15 | |
| **1,2,4-Trimethylbenzene** | **0.80** | 0.50 | ug/m3 | EPA TO-15 | |

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| Thousand Oaks, CA 91361 | Project Manager: Ben Chevlen | 16-Feb-21 12:25 |

## Volatile Organic Compounds by EPA TO-15

## H&P Mobile Geochemistry, Inc.

| Analyte | Result | Reporting Limit | Units | Dilution Factor | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **IA-1 (E102028-01) Vapor Sampled: 05-Feb-21 Received: 05-Feb-21** | | | | | | | | | |
| **Dichlorodifluoromethane (F12)** | **1.0** | 1.0 | ug/m3 | 1 | EB11106 | 11-Feb-21 | 11-Feb-21 | EPA TO-15 | |
| **Chloromethane** | **1.4** | 0.21 | " | " | " | " | " | " | |
| Dichlorotetrafluoroethane (F114) | ND | 0.71 | " | " | " | " | " | " | |
| Vinyl chloride | ND | 0.13 | " | " | " | " | " | " | |
| Bromomethane | ND | 0.39 | " | " | " | " | " | " | |
| Chloroethane | ND | 0.27 | " | " | " | " | " | " | |
| **Trichlorofluoromethane (F11)** | **1.5** | 0.56 | " | " | " | " | " | " | |
| 1,1-Dichloroethene | ND | 0.40 | " | " | " | " | " | " | |
| 1,1,2-Trichlorotrifluoroethane (F113) | ND | 0.77 | " | " | " | " | " | " | |
| **Methylene chloride (Dichloromethane)** | **0.85** | 0.35 | " | " | " | " | " | " | |
| Carbon disulfide | ND | 0.32 | " | " | " | " | " | " | |
| trans-1,2-Dichloroethene | ND | 0.40 | " | " | " | " | " | " | |
| 1,1-Dichloroethane | ND | 0.41 | " | " | " | " | " | " | |
| **2-Butanone (MEK)** | **3.2** | 0.60 | " | " | " | " | " | " | |
| cis-1,2-Dichloroethene | ND | 0.40 | " | " | " | " | " | " | |
| Chloroform | ND | 0.25 | " | " | " | " | " | " | |
| 1,1,1-Trichloroethane | ND | 0.55 | " | " | " | " | " | " | |
| 1,2-Dichloroethane (EDC) | ND | 0.41 | " | " | " | " | " | " | |
| **Benzene** | **0.84** | 0.16 | " | " | " | " | " | " | |
| **Carbon tetrachloride** | **0.57** | 0.32 | " | " | " | " | " | " | |
| Trichloroethene | ND | 0.55 | " | " | " | " | " | " | |
| 1,2-Dichloropropane | ND | 0.47 | " | " | " | " | " | " | |
| Bromodichloromethane | ND | 0.68 | " | " | " | " | " | " | |
| cis-1,3-Dichloropropene | ND | 0.46 | " | " | " | " | " | " | |
| 4-Methyl-2-pentanone (MIBK) | ND | 0.83 | " | " | " | " | " | " | |
| trans-1,3-Dichloropropene | ND | 0.46 | " | " | " | " | " | " | |
| **Toluene** | **7.3** | 0.76 | " | " | " | " | " | " | |
| 1,1,2-Trichloroethane | ND | 0.55 | " | " | " | " | " | " | |
| 2-Hexanone (MBK) | ND | 0.83 | " | " | " | " | " | " | |
| Dibromochloromethane | ND | 1.7 | " | " | " | " | " | " | |
| **Tetrachloroethene** | **1.1** | 0.69 | " | " | " | " | " | " | |
| 1,2-Dibromoethane (EDB) | ND | 0.78 | " | " | " | " | " | " | |
| 1,1,1,2-Tetrachloroethane | ND | 0.70 | " | " | " | " | " | " | |
| Chlorobenzene | ND | 0.47 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 0.44 | " | " | " | " | " | " | |
| **m,p-Xylene** | **1.5** | 0.44 | " | " | " | " | " | " | |
| Styrene | ND | 0.43 | " | " | " | " | " | " | |
| **o-Xylene** | **0.66** | 0.44 | " | " | " | " | " | " | |

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## Volatile Organic Compounds by EPA TO-15

## H&P Mobile Geochemistry, Inc.

| Analyte | Result | Reporting Limit | Units | Dilution Factor | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **IA-1 (E102028-01) Vapor Sampled: 05-Feb-21 Received: 05-Feb-21** | | | | | | | | | |
| Bromoform | ND | 1.0 | ug/m3 | 1 | EB11106 | 11-Feb-21 | 11-Feb-21 | EPA TO-15 | |
| 1,1,2,2-Tetrachloroethane | ND | 0.70 | " | " | " | " | " | " | |
| 4-Ethyltoluene | ND | 0.50 | " | " | " | " | " | " | |
| 1,3,5-Trimethylbenzene | ND | 0.50 | " | " | " | " | " | " | |
| **1,2,4-Trimethylbenzene** | **0.60** | 0.50 | " | " | " | " | " | " | |
| 1,3-Dichlorobenzene | ND | 0.61 | " | " | " | " | " | " | |
| 1,4-Dichlorobenzene | ND | 0.61 | " | " | " | " | " | " | |
| 1,2-Dichlorobenzene | ND | 0.61 | " | " | " | " | " | " | |
| 1,2,4-Trichlorobenzene | ND | 1.9 | " | " | " | " | " | " | |
| Hexachlorobutadiene | ND | 2.7 | " | " | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *108 %* | | *76-134* | " | " | " | " | |
| *Surrogate: Toluene-d8* | | *108 %* | | *78-125* | " | " | " | " | |
| *Surrogate: 4-Bromofluorobenzene* | | *94.7 %* | | *77-127* | " | " | " | " | |
| **IA-1 REP (E102028-02) Vapor Sampled: 05-Feb-21 Received: 05-Feb-21** | | | | | | | | | |
| Dichlorodifluoromethane (F12) | ND | 1.0 | ug/m3 | 1 | EB11106 | 11-Feb-21 | 11-Feb-21 | EPA TO-15 | |
| **Chloromethane** | **1.3** | 0.21 | " | " | " | " | " | " | |
| Dichlorotetrafluoroethane (F114) | ND | 0.71 | " | " | " | " | " | " | |
| Vinyl chloride | ND | 0.13 | " | " | " | " | " | " | |
| Bromomethane | ND | 0.39 | " | " | " | " | " | " | |
| Chloroethane | ND | 0.27 | " | " | " | " | " | " | |
| **Trichlorofluoromethane (F11)** | **1.4** | 0.56 | " | " | " | " | " | " | |
| 1,1-Dichloroethene | ND | 0.40 | " | " | " | " | " | " | |
| 1,1,2-Trichlorotrifluoroethane (F113) | ND | 0.77 | " | " | " | " | " | " | |
| **Methylene chloride (Dichloromethane)** | **0.78** | 0.35 | " | " | " | " | " | " | |
| Carbon disulfide | ND | 0.32 | " | " | " | " | " | " | |
| trans-1,2-Dichloroethene | ND | 0.40 | " | " | " | " | " | " | |
| 1,1-Dichloroethane | ND | 0.41 | " | " | " | " | " | " | |
| **2-Butanone (MEK)** | **3.3** | 0.60 | " | " | " | " | " | " | |
| cis-1,2-Dichloroethene | ND | 0.40 | " | " | " | " | " | " | |
| Chloroform | ND | 0.25 | " | " | " | " | " | " | |
| 1,1,1-Trichloroethane | ND | 0.55 | " | " | " | " | " | " | |
| 1,2-Dichloroethane (EDC) | ND | 0.41 | " | " | " | " | " | " | |
| **Benzene** | **0.81** | 0.16 | " | " | " | " | " | " | |
| **Carbon tetrachloride** | **0.57** | 0.32 | " | " | " | " | " | " | |
| Trichloroethene | ND | 0.55 | " | " | " | " | " | " | |
| 1,2-Dichloropropane | ND | 0.47 | " | " | " | " | " | " | |

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## Volatile Organic Compounds by EPA TO-15

## H&P Mobile Geochemistry, Inc.

| Analyte | Result | Reporting Limit | Units | Dilution Factor | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **IA-1 REP (E102028-02) Vapor Sampled: 05-Feb-21 Received: 05-Feb-21** | | | | | | | | | |
| Bromodichloromethane | ND | 0.68 | ug/m3 | 1 | EB11106 | 11-Feb-21 | 11-Feb-21 | EPA TO-15 | |
| cis-1,3-Dichloropropene | ND | 0.46 | " | " | " | " | " | " | |
| 4-Methyl-2-pentanone (MIBK) | ND | 0.83 | " | " | " | " | " | " | |
| trans-1,3-Dichloropropene | ND | 0.46 | " | " | " | " | " | " | |
| **Toluene** | **6.7** | 0.76 | " | " | " | " | " | " | |
| 1,1,2-Trichloroethane | ND | 0.55 | " | " | " | " | " | " | |
| 2-Hexanone (MBK) | ND | 0.83 | " | " | " | " | " | " | |
| Dibromochloromethane | ND | 1.7 | " | " | " | " | " | " | |
| **Tetrachloroethene** | **1.0** | 0.69 | " | " | " | " | " | " | |
| 1,2-Dibromoethane (EDB) | ND | 0.78 | " | " | " | " | " | " | |
| 1,1,1,2-Tetrachloroethane | ND | 0.70 | " | " | " | " | " | " | |
| Chlorobenzene | ND | 0.47 | " | " | " | " | " | " | |
| **Ethylbenzene** | **0.44** | 0.44 | " | " | " | " | " | " | |
| **m,p-Xylene** | **1.5** | 0.44 | " | " | " | " | " | " | |
| Styrene | ND | 0.43 | " | " | " | " | " | " | |
| **o-Xylene** | **0.70** | 0.44 | " | " | " | " | " | " | |
| Bromoform | ND | 1.0 | " | " | " | " | " | " | |
| 1,1,2,2-Tetrachloroethane | ND | 0.70 | " | " | " | " | " | " | |
| 4-Ethyltoluene | ND | 0.50 | " | " | " | " | " | " | |
| 1,3,5-Trimethylbenzene | ND | 0.50 | " | " | " | " | " | " | |
| **1,2,4-Trimethylbenzene** | **0.65** | 0.50 | " | " | " | " | " | " | |
| 1,3-Dichlorobenzene | ND | 0.61 | " | " | " | " | " | " | |
| 1,4-Dichlorobenzene | ND | 0.61 | " | " | " | " | " | " | |
| 1,2-Dichlorobenzene | ND | 0.61 | " | " | " | " | " | " | |
| 1,2,4-Trichlorobenzene | ND | 1.9 | " | " | " | " | " | " | |
| Hexachlorobutadiene | ND | 2.7 | " | " | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *104 %* | | *76-134* | " | " | " | " | |
| *Surrogate: Toluene-d8* | | *102 %* | | *78-125* | " | " | " | " | |
| *Surrogate: 4-Bromofluorobenzene* | | *87.0 %* | | *77-127* | " | " | " | " | |

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## Volatile Organic Compounds by EPA TO-15

## H&P Mobile Geochemistry, Inc.

| Analyte | Result | Reporting Limit | Units | Dilution Factor | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **IA-2 (E102028-03) Vapor Sampled: 05-Feb-21 Received: 05-Feb-21** | | | | | | | | | |
| **Dichlorodifluoromethane (F12)** | **1.1** | 1.0 | ug/m3 | 1 | EB11106 | 11-Feb-21 | 11-Feb-21 | EPA TO-15 | |
| **Chloromethane** | **1.3** | 0.21 | " | " | " | " | " | " | |
| Dichlorotetrafluoroethane (F114) | ND | 0.71 | " | " | " | " | " | " | |
| Vinyl chloride | ND | 0.13 | " | " | " | " | " | " | |
| Bromomethane | ND | 0.39 | " | " | " | " | " | " | |
| Chloroethane | ND | 0.27 | " | " | " | " | " | " | |
| **Trichlorofluoromethane (F11)** | **1.1** | 0.56 | " | " | " | " | " | " | |
| 1,1-Dichloroethene | ND | 0.40 | " | " | " | " | " | " | |
| 1,1,2-Trichlorotrifluoroethane (F113) | ND | 0.77 | " | " | " | " | " | " | |
| **Methylene chloride (Dichloromethane)** | **0.78** | 0.35 | " | " | " | " | " | " | |
| Carbon disulfide | ND | 0.32 | " | " | " | " | " | " | |
| trans-1,2-Dichloroethene | ND | 0.40 | " | " | " | " | " | " | |
| 1,1-Dichloroethane | ND | 0.41 | " | " | " | " | " | " | |
| **2-Butanone (MEK)** | **3.4** | 0.60 | " | " | " | " | " | " | |
| cis-1,2-Dichloroethene | ND | 0.40 | " | " | " | " | " | " | |
| Chloroform | ND | 0.25 | " | " | " | " | " | " | |
| 1,1,1-Trichloroethane | ND | 0.55 | " | " | " | " | " | " | |
| 1,2-Dichloroethane (EDC) | ND | 0.41 | " | " | " | " | " | " | |
| **Benzene** | **0.84** | 0.16 | " | " | " | " | " | " | |
| **Carbon tetrachloride** | **0.57** | 0.32 | " | " | " | " | " | " | |
| Trichloroethene | ND | 0.55 | " | " | " | " | " | " | |
| 1,2-Dichloropropane | ND | 0.47 | " | " | " | " | " | " | |
| Bromodichloromethane | ND | 0.68 | " | " | " | " | " | " | |
| cis-1,3-Dichloropropene | ND | 0.46 | " | " | " | " | " | " | |
| 4-Methyl-2-pentanone (MIBK) | ND | 0.83 | " | " | " | " | " | " | |
| trans-1,3-Dichloropropene | ND | 0.46 | " | " | " | " | " | " | |
| **Toluene** | **3.9** | 0.76 | " | " | " | " | " | " | |
| 1,1,2-Trichloroethane | ND | 0.55 | " | " | " | " | " | " | |
| 2-Hexanone (MBK) | ND | 0.83 | " | " | " | " | " | " | |
| Dibromochloromethane | ND | 1.7 | " | " | " | " | " | " | |
| **Tetrachloroethene** | **1.2** | 0.69 | " | " | " | " | " | " | |
| 1,2-Dibromoethane (EDB) | ND | 0.78 | " | " | " | " | " | " | |
| 1,1,1,2-Tetrachloroethane | ND | 0.70 | " | " | " | " | " | " | |
| Chlorobenzene | ND | 0.47 | " | " | " | " | " | " | |
| **Ethylbenzene** | **0.44** | 0.44 | " | " | " | " | " | " | |
| **m,p-Xylene** | **1.5** | 0.44 | " | " | " | " | " | " | |
| Styrene | ND | 0.43 | " | " | " | " | " | " | |
| **o-Xylene** | **0.70** | 0.44 | " | " | " | " | " | " | |

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## Volatile Organic Compounds by EPA TO-15

## H&P Mobile Geochemistry, Inc.

| Analyte | Result | Reporting Limit | Units | Dilution Factor | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **IA-2 (E102028-03) Vapor Sampled: 05-Feb-21 Received: 05-Feb-21** | | | | | | | | | |
| Bromoform | ND | 1.0 | ug/m3 | 1 | EB11106 | 11-Feb-21 | 11-Feb-21 | EPA TO-15 | |
| 1,1,2,2-Tetrachloroethane | ND | 0.70 | " | " | " | " | " | " | |
| 4-Ethyltoluene | ND | 0.50 | " | " | " | " | " | " | |
| 1,3,5-Trimethylbenzene | ND | 0.50 | " | " | " | " | " | " | |
| **1,2,4-Trimethylbenzene** | **0.75** | 0.50 | " | " | " | " | " | " | |
| 1,3-Dichlorobenzene | ND | 0.61 | " | " | " | " | " | " | |
| 1,4-Dichlorobenzene | ND | 0.61 | " | " | " | " | " | " | |
| 1,2-Dichlorobenzene | ND | 0.61 | " | " | " | " | " | " | |
| 1,2,4-Trichlorobenzene | ND | 1.9 | " | " | " | " | " | " | |
| Hexachlorobutadiene | ND | 2.7 | " | " | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *105 %* | | *76-134* | " | " | " | " | |
| *Surrogate: Toluene-d8* | | *104 %* | | *78-125* | " | " | " | " | |
| *Surrogate: 4-Bromofluorobenzene* | | *92.2 %* | | *77-127* | " | " | " | " | |
| **IA-3 (E102028-04) Vapor Sampled: 05-Feb-21 Received: 05-Feb-21** | | | | | | | | | |
| Dichlorodifluoromethane (F12) | ND | 1.0 | ug/m3 | 1 | EB11106 | 11-Feb-21 | 11-Feb-21 | EPA TO-15 | |
| **Chloromethane** | **1.3** | 0.21 | " | " | " | " | " | " | |
| Dichlorotetrafluoroethane (F114) | ND | 0.71 | " | " | " | " | " | " | |
| Vinyl chloride | ND | 0.13 | " | " | " | " | " | " | |
| Bromomethane | ND | 0.39 | " | " | " | " | " | " | |
| Chloroethane | ND | 0.27 | " | " | " | " | " | " | |
| **Trichlorofluoromethane (F11)** | **1.3** | 0.56 | " | " | " | " | " | " | |
| 1,1-Dichloroethene | ND | 0.40 | " | " | " | " | " | " | |
| 1,1,2-Trichlorotrifluoroethane (F113) | ND | 0.77 | " | " | " | " | " | " | |
| **Methylene chloride (Dichloromethane)** | **0.88** | 0.35 | " | " | " | " | " | " | |
| Carbon disulfide | ND | 0.32 | " | " | " | " | " | " | |
| trans-1,2-Dichloroethene | ND | 0.40 | " | " | " | " | " | " | |
| 1,1-Dichloroethane | ND | 0.41 | " | " | " | " | " | " | |
| **2-Butanone (MEK)** | **3.3** | 0.60 | " | " | " | " | " | " | |
| cis-1,2-Dichloroethene | ND | 0.40 | " | " | " | " | " | " | |
| Chloroform | ND | 0.25 | " | " | " | " | " | " | |
| 1,1,1-Trichloroethane | ND | 0.55 | " | " | " | " | " | " | |
| 1,2-Dichloroethane (EDC) | ND | 0.41 | " | " | " | " | " | " | |
| **Benzene** | **1.3** | 0.16 | " | " | " | " | " | " | |
| **Carbon tetrachloride** | **0.57** | 0.32 | " | " | " | " | " | " | |
| Trichloroethene | ND | 0.55 | " | " | " | " | " | " | |
| 1,2-Dichloropropane | ND | 0.47 | " | " | " | " | " | " | |

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| 290 Conejo Ridge Avenue, Suite 200 | Project Number: 185804979 / Skypark Dr | Reported: |
| Thousand Oaks, CA 91361 | Project Manager: Ben Chevlen | 16-Feb-21 12:25 |

## Volatile Organic Compounds by EPA TO-15

## H&P Mobile Geochemistry, Inc.

| Analyte | Result | Reporting Limit | Units | Dilution Factor | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **IA-3 (E102028-04) Vapor Sampled: 05-Feb-21 Received: 05-Feb-21** | | | | | | | | | |
| Bromodichloromethane | ND | 0.68 | ug/m3 | 1 | EB11106 | 11-Feb-21 | 11-Feb-21 | EPA TO-15 | |
| cis-1,3-Dichloropropene | ND | 0.46 | " | " | " | " | " | " | |
| 4-Methyl-2-pentanone (MIBK) | ND | 0.83 | " | " | " | " | " | " | |
| trans-1,3-Dichloropropene | ND | 0.46 | " | " | " | " | " | " | |
| **Toluene** | **14** | 0.76 | " | " | " | " | " | " | |
| 1,1,2-Trichloroethane | ND | 0.55 | " | " | " | " | " | " | |
| 2-Hexanone (MBK) | ND | 0.83 | " | " | " | " | " | " | |
| Dibromochloromethane | ND | 1.7 | " | " | " | " | " | " | |
| **Tetrachloroethene** | **1.5** | 0.69 | " | " | " | " | " | " | |
| 1,2-Dibromoethane (EDB) | ND | 0.78 | " | " | " | " | " | " | |
| 1,1,1,2-Tetrachloroethane | ND | 0.70 | " | " | " | " | " | " | |
| Chlorobenzene | ND | 0.47 | " | " | " | " | " | " | |
| **Ethylbenzene** | **1.1** | 0.44 | " | " | " | " | " | " | |
| **m,p-Xylene** | **3.9** | 0.44 | " | " | " | " | " | " | |
| Styrene | ND | 0.43 | " | " | " | " | " | " | |
| **o-Xylene** | **1.8** | 0.44 | " | " | " | " | " | " | |
| Bromoform | ND | 1.0 | " | " | " | " | " | " | |
| 1,1,2,2-Tetrachloroethane | ND | 0.70 | " | " | " | " | " | " | |
| 4-Ethyltoluene | ND | 0.50 | " | " | " | " | " | " | |
| 1,3,5-Trimethylbenzene | ND | 0.50 | " | " | " | " | " | " | |
| **1,2,4-Trimethylbenzene** | **1.4** | 0.50 | " | " | " | " | " | " | |
| 1,3-Dichlorobenzene | ND | 0.61 | " | " | " | " | " | " | |
| 1,4-Dichlorobenzene | ND | 0.61 | " | " | " | " | " | " | |
| 1,2-Dichlorobenzene | ND | 0.61 | " | " | " | " | " | " | |
| 1,2,4-Trichlorobenzene | ND | 1.9 | " | " | " | " | " | " | |
| Hexachlorobutadiene | ND | 2.7 | " | " | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *98.6 %* | | *76-134* | " | " | " | " | |
| *Surrogate: Toluene-d8* | | *104 %* | | *78-125* | " | " | " | " | |
| *Surrogate: 4-Bromofluorobenzene* | | *106 %* | | *77-127* | " | " | " | " | |

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| Thousand Oaks, CA 91361 | Project Manager: Ben Chevlen | 16-Feb-21 12:25 |

## Volatile Organic Compounds by EPA TO-15

## H&P Mobile Geochemistry, Inc.

| Analyte | Result | Reporting Limit | Units | Dilution Factor | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **IA-4 (E102028-05) Vapor Sampled: 05-Feb-21 Received: 05-Feb-21** | | | | | | | | | |
| Dichlorodifluoromethane (F12) | ND | 1.0 | ug/m3 | 1 | EB11106 | 11-Feb-21 | 11-Feb-21 | EPA TO-15 | |
| **Chloromethane** | **1.3** | 0.21 | " | " | " | " | " | " | |
| Dichlorotetrafluoroethane (F114) | ND | 0.71 | " | " | " | " | " | " | |
| Vinyl chloride | ND | 0.13 | " | " | " | " | " | " | |
| Bromomethane | ND | 0.39 | " | " | " | " | " | " | |
| Chloroethane | ND | 0.27 | " | " | " | " | " | " | |
| **Trichlorofluoromethane (F11)** | **1.4** | 0.56 | " | " | " | " | " | " | |
| 1,1-Dichloroethene | ND | 0.40 | " | " | " | " | " | " | |
| 1,1,2-Trichlorotrifluoroethane (F113) | ND | 0.77 | " | " | " | " | " | " | |
| **Methylene chloride (Dichloromethane)** | **0.88** | 0.35 | " | " | " | " | " | " | |
| Carbon disulfide | ND | 0.32 | " | " | " | " | " | " | |
| trans-1,2-Dichloroethene | ND | 0.40 | " | " | " | " | " | " | |
| 1,1-Dichloroethane | ND | 0.41 | " | " | " | " | " | " | |
| **2-Butanone (MEK)** | **4.0** | 0.60 | " | " | " | " | " | " | |
| cis-1,2-Dichloroethene | ND | 0.40 | " | " | " | " | " | " | |
| Chloroform | ND | 0.25 | " | " | " | " | " | " | |
| 1,1,1-Trichloroethane | ND | 0.55 | " | " | " | " | " | " | |
| 1,2-Dichloroethane (EDC) | ND | 0.41 | " | " | " | " | " | " | |
| **Benzene** | **1.4** | 0.16 | " | " | " | " | " | " | |
| **Carbon tetrachloride** | **0.57** | 0.32 | " | " | " | " | " | " | |
| Trichloroethene | ND | 0.55 | " | " | " | " | " | " | |
| 1,2-Dichloropropane | ND | 0.47 | " | " | " | " | " | " | |
| Bromodichloromethane | ND | 0.68 | " | " | " | " | " | " | |
| cis-1,3-Dichloropropene | ND | 0.46 | " | " | " | " | " | " | |
| 4-Methyl-2-pentanone (MIBK) | ND | 0.83 | " | " | " | " | " | " | |
| trans-1,3-Dichloropropene | ND | 0.46 | " | " | " | " | " | " | |
| **Toluene** | **6.6** | 0.76 | " | " | " | " | " | " | |
| 1,1,2-Trichloroethane | ND | 0.55 | " | " | " | " | " | " | |
| 2-Hexanone (MBK) | ND | 0.83 | " | " | " | " | " | " | |
| Dibromochloromethane | ND | 1.7 | " | " | " | " | " | " | |
| **Tetrachloroethene** | **1.4** | 0.69 | " | " | " | " | " | " | |
| 1,2-Dibromoethane (EDB) | ND | 0.78 | " | " | " | " | " | " | |
| 1,1,1,2-Tetrachloroethane | ND | 0.70 | " | " | " | " | " | " | |
| Chlorobenzene | ND | 0.47 | " | " | " | " | " | " | |
| **Ethylbenzene** | **0.88** | 0.44 | " | " | " | " | " | " | |
| **m,p-Xylene** | **3.2** | 0.44 | " | " | " | " | " | " | |
| Styrene | ND | 0.43 | " | " | " | " | " | " | |
| **o-Xylene** | **1.3** | 0.44 | " | " | " | " | " | " | |

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| Thousand Oaks, CA 91361 | Project Manager: Ben Chevlen | 16-Feb-21 12:25 |

## Volatile Organic Compounds by EPA TO-15

## H&P Mobile Geochemistry, Inc.

| Analyte | Result | Reporting Limit | Units | Dilution Factor | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **IA-4 (E102028-05) Vapor Sampled: 05-Feb-21 Received: 05-Feb-21** | | | | | | | | | |
| Bromoform | ND | 1.0 | ug/m3 | 1 | EB11106 | 11-Feb-21 | 11-Feb-21 | EPA TO-15 | |
| 1,1,2,2-Tetrachloroethane | ND | 0.70 | " | " | " | " | " | " | |
| 4-Ethyltoluene | ND | 0.50 | " | " | " | " | " | " | |
| 1,3,5-Trimethylbenzene | ND | 0.50 | " | " | " | " | " | " | |
| **1,2,4-Trimethylbenzene** | **1.0** | 0.50 | " | " | " | " | " | " | |
| 1,3-Dichlorobenzene | ND | 0.61 | " | " | " | " | " | " | |
| 1,4-Dichlorobenzene | ND | 0.61 | " | " | " | " | " | " | |
| 1,2-Dichlorobenzene | ND | 0.61 | " | " | " | " | " | " | |
| 1,2,4-Trichlorobenzene | ND | 1.9 | " | " | " | " | " | " | |
| Hexachlorobutadiene | ND | 2.7 | " | " | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *95.3 %* | | *76-134* | " | " | " | " | |
| *Surrogate: Toluene-d8* | | *102 %* | | *78-125* | " | " | " | " | |
| *Surrogate: 4-Bromofluorobenzene* | | *88.1 %* | | *77-127* | " | " | " | " | |
| **IA-5 (E102028-06) Vapor Sampled: 05-Feb-21 Received: 05-Feb-21** | | | | | | | | | |
| Dichlorodifluoromethane (F12) | ND | 1.0 | ug/m3 | 1 | EB11106 | 11-Feb-21 | 11-Feb-21 | EPA TO-15 | |
| **Chloromethane** | **1.2** | 0.21 | " | " | " | " | " | " | |
| Dichlorotetrafluoroethane (F114) | ND | 0.71 | " | " | " | " | " | " | |
| Vinyl chloride | ND | 0.13 | " | " | " | " | " | " | |
| Bromomethane | ND | 0.39 | " | " | " | " | " | " | |
| Chloroethane | ND | 0.27 | " | " | " | " | " | " | |
| **Trichlorofluoromethane (F11)** | **1.1** | 0.56 | " | " | " | " | " | " | |
| 1,1-Dichloroethene | ND | 0.40 | " | " | " | " | " | " | |
| 1,1,2-Trichlorotrifluoroethane (F113) | ND | 0.77 | " | " | " | " | " | " | |
| **Methylene chloride (Dichloromethane)** | **0.88** | 0.35 | " | " | " | " | " | " | |
| Carbon disulfide | ND | 0.32 | " | " | " | " | " | " | |
| trans-1,2-Dichloroethene | ND | 0.40 | " | " | " | " | " | " | |
| 1,1-Dichloroethane | ND | 0.41 | " | " | " | " | " | " | |
| **2-Butanone (MEK)** | **4.1** | 0.60 | " | " | " | " | " | " | |
| cis-1,2-Dichloroethene | ND | 0.40 | " | " | " | " | " | " | |
| Chloroform | ND | 0.25 | " | " | " | " | " | " | |
| 1,1,1-Trichloroethane | ND | 0.55 | " | " | " | " | " | " | |
| 1,2-Dichloroethane (EDC) | ND | 0.41 | " | " | " | " | " | " | |
| **Benzene** | **1.2** | 0.16 | " | " | " | " | " | " | |
| **Carbon tetrachloride** | **0.57** | 0.32 | " | " | " | " | " | " | |
| Trichloroethene | ND | 0.55 | " | " | " | " | " | " | |
| 1,2-Dichloropropane | ND | 0.47 | " | " | " | " | " | " | |

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| Thousand Oaks, CA 91361 | Project Manager: Ben Chevlen | 16-Feb-21 12:25 |

## Volatile Organic Compounds by EPA TO-15

## H&P Mobile Geochemistry, Inc.

| Analyte | Result | Reporting Limit | Units | Dilution Factor | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **IA-5 (E102028-06) Vapor Sampled: 05-Feb-21 Received: 05-Feb-21** | | | | | | | | | |
| Bromodichloromethane | ND | 0.68 | ug/m3 | 1 | EB11106 | 11-Feb-21 | 11-Feb-21 | EPA TO-15 | |
| cis-1,3-Dichloropropene | ND | 0.46 | " | " | " | " | " | " | |
| 4-Methyl-2-pentanone (MIBK) | ND | 0.83 | " | " | " | " | " | " | |
| trans-1,3-Dichloropropene | ND | 0.46 | " | " | " | " | " | " | |
| **Toluene** | **7.8** | 0.76 | " | " | " | " | " | " | |
| 1,1,2-Trichloroethane | ND | 0.55 | " | " | " | " | " | " | |
| 2-Hexanone (MBK) | ND | 0.83 | " | " | " | " | " | " | |
| Dibromochloromethane | ND | 1.7 | " | " | " | " | " | " | |
| **Tetrachloroethene** | **1.2** | 0.69 | " | " | " | " | " | " | |
| 1,2-Dibromoethane (EDB) | ND | 0.78 | " | " | " | " | " | " | |
| 1,1,1,2-Tetrachloroethane | ND | 0.70 | " | " | " | " | " | " | |
| Chlorobenzene | ND | 0.47 | " | " | " | " | " | " | |
| **Ethylbenzene** | **0.92** | 0.44 | " | " | " | " | " | " | |
| **m,p-Xylene** | **3.4** | 0.44 | " | " | " | " | " | " | |
| Styrene | ND | 0.43 | " | " | " | " | " | " | |
| **o-Xylene** | **1.5** | 0.44 | " | " | " | " | " | " | |
| Bromoform | ND | 1.0 | " | " | " | " | " | " | |
| 1,1,2,2-Tetrachloroethane | ND | 0.70 | " | " | " | " | " | " | |
| **4-Ethyltoluene** | **0.50** | 0.50 | " | " | " | " | " | " | |
| 1,3,5-Trimethylbenzene | ND | 0.50 | " | " | " | " | " | " | |
| **1,2,4-Trimethylbenzene** | **1.4** | 0.50 | " | " | " | " | " | " | |
| 1,3-Dichlorobenzene | ND | 0.61 | " | " | " | " | " | " | |
| 1,4-Dichlorobenzene | ND | 0.61 | " | " | " | " | " | " | |
| 1,2-Dichlorobenzene | ND | 0.61 | " | " | " | " | " | " | |
| 1,2,4-Trichlorobenzene | ND | 1.9 | " | " | " | " | " | " | |
| Hexachlorobutadiene | ND | 2.7 | " | " | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *94.9 %* | | *76-134* | *"* | *"* | *"* | *"* | |
| *Surrogate: Toluene-d8* | | *101 %* | | *78-125* | *"* | *"* | *"* | *"* | |
| *Surrogate: 4-Bromofluorobenzene* | | *114 %* | | *77-127* | *"* | *"* | *"* | *"* | |

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## Volatile Organic Compounds by EPA TO-15

## H&P Mobile Geochemistry, Inc.

| Analyte | Result | Reporting Limit | Units | Dilution Factor | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **IA-6 (E102028-07) Vapor Sampled: 05-Feb-21 Received: 05-Feb-21** | | | | | | | | | |
| Dichlorodifluoromethane (F12) | ND | 1.0 | ug/m3 | 1 | EB11106 | 11-Feb-21 | 11-Feb-21 | EPA TO-15 | |
| **Chloromethane** | **1.2** | 0.21 | " | " | " | " | " | " | |
| Dichlorotetrafluoroethane (F114) | ND | 0.71 | " | " | " | " | " | " | |
| Vinyl chloride | ND | 0.13 | " | " | " | " | " | " | |
| Bromomethane | ND | 0.39 | " | " | " | " | " | " | |
| Chloroethane | ND | 0.27 | " | " | " | " | " | " | |
| **Trichlorofluoromethane (F11)** | **1.2** | 0.56 | " | " | " | " | " | " | |
| 1,1-Dichloroethene | ND | 0.40 | " | " | " | " | " | " | |
| 1,1,2-Trichlorotrifluoroethane (F113) | ND | 0.77 | " | " | " | " | " | " | |
| **Methylene chloride (Dichloromethane)** | **0.88** | 0.35 | " | " | " | " | " | " | |
| Carbon disulfide | ND | 0.32 | " | " | " | " | " | " | |
| trans-1,2-Dichloroethene | ND | 0.40 | " | " | " | " | " | " | |
| 1,1-Dichloroethane | ND | 0.41 | " | " | " | " | " | " | |
| **2-Butanone (MEK)** | **3.4** | 0.60 | " | " | " | " | " | " | |
| cis-1,2-Dichloroethene | ND | 0.40 | " | " | " | " | " | " | |
| Chloroform | ND | 0.25 | " | " | " | " | " | " | |
| 1,1,1-Trichloroethane | ND | 0.55 | " | " | " | " | " | " | |
| 1,2-Dichloroethane (EDC) | ND | 0.41 | " | " | " | " | " | " | |
| **Benzene** | **1.2** | 0.16 | " | " | " | " | " | " | |
| **Carbon tetrachloride** | **0.51** | 0.32 | " | " | " | " | " | " | |
| Trichloroethene | ND | 0.55 | " | " | " | " | " | " | |
| 1,2-Dichloropropane | ND | 0.47 | " | " | " | " | " | " | |
| Bromodichloromethane | ND | 0.68 | " | " | " | " | " | " | |
| cis-1,3-Dichloropropene | ND | 0.46 | " | " | " | " | " | " | |
| 4-Methyl-2-pentanone (MIBK) | ND | 0.83 | " | " | " | " | " | " | |
| trans-1,3-Dichloropropene | ND | 0.46 | " | " | " | " | " | " | |
| **Toluene** | **5.2** | 0.76 | " | " | " | " | " | " | |
| 1,1,2-Trichloroethane | ND | 0.55 | " | " | " | " | " | " | |
| 2-Hexanone (MBK) | ND | 0.83 | " | " | " | " | " | " | |
| Dibromochloromethane | ND | 1.7 | " | " | " | " | " | " | |
| **Tetrachloroethene** | **1.0** | 0.69 | " | " | " | " | " | " | |
| 1,2-Dibromoethane (EDB) | ND | 0.78 | " | " | " | " | " | " | |
| 1,1,1,2-Tetrachloroethane | ND | 0.70 | " | " | " | " | " | " | |
| Chlorobenzene | ND | 0.47 | " | " | " | " | " | " | |
| **Ethylbenzene** | **0.88** | 0.44 | " | " | " | " | " | " | |
| **m,p-Xylene** | **3.1** | 0.44 | " | " | " | " | " | " | |
| Styrene | ND | 0.43 | " | " | " | " | " | " | |
| **o-Xylene** | **1.4** | 0.44 | " | " | " | " | " | " | |

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## Volatile Organic Compounds by EPA TO-15

## H&P Mobile Geochemistry, Inc.

| Analyte | Result | Reporting Limit | Units | Dilution Factor | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **IA-6 (E102028-07) Vapor Sampled: 05-Feb-21 Received: 05-Feb-21** | | | | | | | | | |
| Bromoform | ND | 1.0 | ug/m3 | 1 | EB11106 | 11-Feb-21 | 11-Feb-21 | EPA TO-15 | |
| 1,1,2,2-Tetrachloroethane | ND | 0.70 | " | " | " | " | " | " | |
| 4-Ethyltoluene | ND | 0.50 | " | " | " | " | " | " | |
| 1,3,5-Trimethylbenzene | ND | 0.50 | " | " | " | " | " | " | |
| **1,2,4-Trimethylbenzene** | **1.3** | 0.50 | " | " | " | " | " | " | |
| 1,3-Dichlorobenzene | ND | 0.61 | " | " | " | " | " | " | |
| 1,4-Dichlorobenzene | ND | 0.61 | " | " | " | " | " | " | |
| 1,2-Dichlorobenzene | ND | 0.61 | " | " | " | " | " | " | |
| 1,2,4-Trichlorobenzene | ND | 1.9 | " | " | " | " | " | " | |
| Hexachlorobutadiene | ND | 2.7 | " | " | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *92.6 %* | | *76-134* | " | " | " | " | |
| *Surrogate: Toluene-d8* | | *101 %* | | *78-125* | " | " | " | " | |
| *Surrogate: 4-Bromofluorobenzene* | | *109 %* | | *77-127* | " | " | " | " | |
| **IA-7 (E102028-08) Vapor Sampled: 05-Feb-21 Received: 05-Feb-21** | | | | | | | | | |
| Dichlorodifluoromethane (F12) | ND | 1.0 | ug/m3 | 1 | EB11106 | 11-Feb-21 | 11-Feb-21 | EPA TO-15 | |
| **Chloromethane** | **1.2** | 0.21 | " | " | " | " | " | " | |
| Dichlorotetrafluoroethane (F114) | ND | 0.71 | " | " | " | " | " | " | |
| Vinyl chloride | ND | 0.13 | " | " | " | " | " | " | |
| Bromomethane | ND | 0.39 | " | " | " | " | " | " | |
| Chloroethane | ND | 0.27 | " | " | " | " | " | " | |
| **Trichlorofluoromethane (F11)** | **1.3** | 0.56 | " | " | " | " | " | " | |
| 1,1-Dichloroethene | ND | 0.40 | " | " | " | " | " | " | |
| 1,1,2-Trichlorotrifluoroethane (F113) | ND | 0.77 | " | " | " | " | " | " | |
| **Methylene chloride (Dichloromethane)** | **0.92** | 0.35 | " | " | " | " | " | " | |
| Carbon disulfide | ND | 0.32 | " | " | " | " | " | " | |
| trans-1,2-Dichloroethene | ND | 0.40 | " | " | " | " | " | " | |
| 1,1-Dichloroethane | ND | 0.41 | " | " | " | " | " | " | |
| **2-Butanone (MEK)** | **3.7** | 0.60 | " | " | " | " | " | " | |
| cis-1,2-Dichloroethene | ND | 0.40 | " | " | " | " | " | " | |
| Chloroform | ND | 0.25 | " | " | " | " | " | " | |
| 1,1,1-Trichloroethane | ND | 0.55 | " | " | " | " | " | " | |
| 1,2-Dichloroethane (EDC) | ND | 0.41 | " | " | " | " | " | " | |
| **Benzene** | **1.3** | 0.16 | " | " | " | " | " | " | |
| **Carbon tetrachloride** | **0.57** | 0.32 | " | " | " | " | " | " | |
| Trichloroethene | ND | 0.55 | " | " | " | " | " | " | |
| 1,2-Dichloropropane | ND | 0.47 | " | " | " | " | " | " | |

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| 290 Conejo Ridge Avenue, Suite 200 | Project Number: 185804979 / Skypark Dr | Reported: |
| Thousand Oaks, CA 91361 | Project Manager: Ben Chevlen | 16-Feb-21 12:25 |

## Volatile Organic Compounds by EPA TO-15

## H&P Mobile Geochemistry, Inc.

| Analyte | Result | Reporting Limit | Units | Dilution Factor | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **IA-7 (E102028-08) Vapor Sampled: 05-Feb-21 Received: 05-Feb-21** | | | | | | | | | |
| Bromodichloromethane | ND | 0.68 | ug/m3 | 1 | EB11106 | 11-Feb-21 | 11-Feb-21 | EPA TO-15 | |
| cis-1,3-Dichloropropene | ND | 0.46 | " | " | " | " | " | " | |
| 4-Methyl-2-pentanone (MIBK) | ND | 0.83 | " | " | " | " | " | " | |
| trans-1,3-Dichloropropene | ND | 0.46 | " | " | " | " | " | " | |
| **Toluene** | **5.6** | 0.76 | " | " | " | " | " | " | |
| 1,1,2-Trichloroethane | ND | 0.55 | " | " | " | " | " | " | |
| 2-Hexanone (MBK) | ND | 0.83 | " | " | " | " | " | " | |
| Dibromochloromethane | ND | 1.7 | " | " | " | " | " | " | |
| **Tetrachloroethene** | **0.90** | 0.69 | " | " | " | " | " | " | |
| 1,2-Dibromoethane (EDB) | ND | 0.78 | " | " | " | " | " | " | |
| 1,1,1,2-Tetrachloroethane | ND | 0.70 | " | " | " | " | " | " | |
| Chlorobenzene | ND | 0.47 | " | " | " | " | " | " | |
| **Ethylbenzene** | **0.92** | 0.44 | " | " | " | " | " | " | |
| **m,p-Xylene** | **3.2** | 0.44 | " | " | " | " | " | " | |
| Styrene | ND | 0.43 | " | " | " | " | " | " | |
| **o-Xylene** | **1.4** | 0.44 | " | " | " | " | " | " | |
| Bromoform | ND | 1.0 | " | " | " | " | " | " | |
| 1,1,2,2-Tetrachloroethane | ND | 0.70 | " | " | " | " | " | " | |
| 4-Ethyltoluene | ND | 0.50 | " | " | " | " | " | " | |
| 1,3,5-Trimethylbenzene | ND | 0.50 | " | " | " | " | " | " | |
| **1,2,4-Trimethylbenzene** | **1.3** | 0.50 | " | " | " | " | " | " | |
| 1,3-Dichlorobenzene | ND | 0.61 | " | " | " | " | " | " | |
| 1,4-Dichlorobenzene | ND | 0.61 | " | " | " | " | " | " | |
| 1,2-Dichlorobenzene | ND | 0.61 | " | " | " | " | " | " | |
| 1,2,4-Trichlorobenzene | ND | 1.9 | " | " | " | " | " | " | |
| Hexachlorobutadiene | ND | 2.7 | " | " | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *93.4 %* | | *76-134* | *"* | *"* | *"* | *"* | |
| *Surrogate: Toluene-d8* | | *101 %* | | *78-125* | *"* | *"* | *"* | *"* | |
| *Surrogate: 4-Bromofluorobenzene* | | *110 %* | | *77-127* | *"* | *"* | *"* | *"* | |

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| Thousand Oaks, CA 91361 | Project Manager: Ben Chevlen | 16-Feb-21 12:25 |

## Volatile Organic Compounds by EPA TO-15

## H&P Mobile Geochemistry, Inc.

| Analyte | Result | Reporting Limit | Units | Dilution Factor | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **IA-8 (E102028-09) Vapor Sampled: 05-Feb-21 Received: 05-Feb-21** | | | | | | | | | |
| Dichlorodifluoromethane (F12) | ND | 1.0 | ug/m3 | 1 | EB11106 | 11-Feb-21 | 11-Feb-21 | EPA TO-15 | |
| **Chloromethane** | **1.2** | 0.21 | " | " | " | " | " | " | |
| Dichlorotetrafluoroethane (F114) | ND | 0.71 | " | " | " | " | " | " | |
| Vinyl chloride | ND | 0.13 | " | " | " | " | " | " | |
| Bromomethane | ND | 0.39 | " | " | " | " | " | " | |
| Chloroethane | ND | 0.27 | " | " | " | " | " | " | |
| **Trichlorofluoromethane (F11)** | **1.3** | 0.56 | " | " | " | " | " | " | |
| 1,1-Dichloroethene | ND | 0.40 | " | " | " | " | " | " | |
| 1,1,2-Trichlorotrifluoroethane (F113) | ND | 0.77 | " | " | " | " | " | " | |
| **Methylene chloride (Dichloromethane)** | **0.92** | 0.35 | " | " | " | " | " | " | |
| Carbon disulfide | ND | 0.32 | " | " | " | " | " | " | |
| trans-1,2-Dichloroethene | ND | 0.40 | " | " | " | " | " | " | |
| 1,1-Dichloroethane | ND | 0.41 | " | " | " | " | " | " | |
| **2-Butanone (MEK)** | **3.9** | 0.60 | " | " | " | " | " | " | |
| cis-1,2-Dichloroethene | ND | 0.40 | " | " | " | " | " | " | |
| Chloroform | ND | 0.25 | " | " | " | " | " | " | |
| 1,1,1-Trichloroethane | ND | 0.55 | " | " | " | " | " | " | |
| 1,2-Dichloroethane (EDC) | ND | 0.41 | " | " | " | " | " | " | |
| **Benzene** | **1.3** | 0.16 | " | " | " | " | " | " | |
| **Carbon tetrachloride** | **0.51** | 0.32 | " | " | " | " | " | " | |
| Trichloroethene | ND | 0.55 | " | " | " | " | " | " | |
| 1,2-Dichloropropane | ND | 0.47 | " | " | " | " | " | " | |
| Bromodichloromethane | ND | 0.68 | " | " | " | " | " | " | |
| cis-1,3-Dichloropropene | ND | 0.46 | " | " | " | " | " | " | |
| 4-Methyl-2-pentanone (MIBK) | ND | 0.83 | " | " | " | " | " | " | |
| trans-1,3-Dichloropropene | ND | 0.46 | " | " | " | " | " | " | |
| **Toluene** | **7.6** | 0.76 | " | " | " | " | " | " | |
| 1,1,2-Trichloroethane | ND | 0.55 | " | " | " | " | " | " | |
| 2-Hexanone (MBK) | ND | 0.83 | " | " | " | " | " | " | |
| Dibromochloromethane | ND | 1.7 | " | " | " | " | " | " | |
| **Tetrachloroethene** | **1.0** | 0.69 | " | " | " | " | " | " | |
| 1,2-Dibromoethane (EDB) | ND | 0.78 | " | " | " | " | " | " | |
| 1,1,1,2-Tetrachloroethane | ND | 0.70 | " | " | " | " | " | " | |
| Chlorobenzene | ND | 0.47 | " | " | " | " | " | " | |
| **Ethylbenzene** | **1.1** | 0.44 | " | " | " | " | " | " | |
| **m,p-Xylene** | **4.1** | 0.44 | " | " | " | " | " | " | |
| Styrene | ND | 0.43 | " | " | " | " | " | " | |
| **o-Xylene** | **1.7** | 0.44 | " | " | " | " | " | " | |

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| Thousand Oaks, CA 91361 | Project Manager: Ben Chevlen | 16-Feb-21 12:25 |

## Volatile Organic Compounds by EPA TO-15

## H&P Mobile Geochemistry, Inc.

| Analyte | Result | Reporting Limit | Units | Dilution Factor | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **IA-8 (E102028-09) Vapor Sampled: 05-Feb-21 Received: 05-Feb-21** | | | | | | | | | |
| Bromoform | ND | 1.0 | ug/m3 | 1 | EB11106 | 11-Feb-21 | 11-Feb-21 | EPA TO-15 | |
| 1,1,2,2-Tetrachloroethane | ND | 0.70 | " | " | " | " | " | " | |
| 4-Ethyltoluene | ND | 0.50 | " | " | " | " | " | " | |
| 1,3,5-Trimethylbenzene | ND | 0.50 | " | " | " | " | " | " | |
| **1,2,4-Trimethylbenzene** | **1.5** | 0.50 | " | " | " | " | " | " | |
| 1,3-Dichlorobenzene | ND | 0.61 | " | " | " | " | " | " | |
| 1,4-Dichlorobenzene | ND | 0.61 | " | " | " | " | " | " | |
| 1,2-Dichlorobenzene | ND | 0.61 | " | " | " | " | " | " | |
| 1,2,4-Trichlorobenzene | ND | 1.9 | " | " | " | " | " | " | |
| Hexachlorobutadiene | ND | 2.7 | " | " | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *92.9 %* | | *76-134* | " | " | " | " | |
| *Surrogate: Toluene-d8* | | *100 %* | | *78-125* | " | " | " | " | |
| *Surrogate: 4-Bromofluorobenzene* | | *127 %* | | *77-127* | " | " | " | " | |
| **AA-1 (E102028-10) Vapor Sampled: 05-Feb-21 Received: 05-Feb-21** | | | | | | | | | |
| Dichlorodifluoromethane (F12) | ND | 1.0 | ug/m3 | 1 | EB11106 | 11-Feb-21 | 11-Feb-21 | EPA TO-15 | |
| **Chloromethane** | **1.3** | 0.21 | " | " | " | " | " | " | |
| Dichlorotetrafluoroethane (F114) | ND | 0.71 | " | " | " | " | " | " | |
| Vinyl chloride | ND | 0.13 | " | " | " | " | " | " | |
| Bromomethane | ND | 0.39 | " | " | " | " | " | " | |
| Chloroethane | ND | 0.27 | " | " | " | " | " | " | |
| **Trichlorofluoromethane (F11)** | **1.4** | 0.56 | " | " | " | " | " | " | |
| 1,1-Dichloroethene | ND | 0.40 | " | " | " | " | " | " | |
| 1,1,2-Trichlorotrifluoroethane (F113) | ND | 0.77 | " | " | " | " | " | " | |
| **Methylene chloride (Dichloromethane)** | **1.1** | 0.35 | " | " | " | " | " | " | |
| Carbon disulfide | ND | 0.32 | " | " | " | " | " | " | |
| trans-1,2-Dichloroethene | ND | 0.40 | " | " | " | " | " | " | |
| 1,1-Dichloroethane | ND | 0.41 | " | " | " | " | " | " | |
| **2-Butanone (MEK)** | **1.3** | 0.60 | " | " | " | " | " | " | |
| cis-1,2-Dichloroethene | ND | 0.40 | " | " | " | " | " | " | |
| Chloroform | ND | 0.25 | " | " | " | " | " | " | |
| 1,1,1-Trichloroethane | ND | 0.55 | " | " | " | " | " | " | |
| 1,2-Dichloroethane (EDC) | ND | 0.41 | " | " | " | " | " | " | |
| **Benzene** | **1.1** | 0.16 | " | " | " | " | " | " | |
| **Carbon tetrachloride** | **0.57** | 0.32 | " | " | " | " | " | " | |
| Trichloroethene | ND | 0.55 | " | " | " | " | " | " | |
| 1,2-Dichloropropane | ND | 0.47 | " | " | " | " | " | " | |

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## Volatile Organic Compounds by EPA TO-15

## H&P Mobile Geochemistry, Inc.

| Analyte | Result | Reporting Limit | Units | Dilution Factor | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **AA-1 (E102028-10) Vapor Sampled: 05-Feb-21 Received: 05-Feb-21** | | | | | | | | | |
| Bromodichloromethane | ND | 0.68 | ug/m3 | 1 | EB11106 | 11-Feb-21 | 11-Feb-21 | EPA TO-15 | |
| cis-1,3-Dichloropropene | ND | 0.46 | " | " | " | " | " | " | |
| 4-Methyl-2-pentanone (MIBK) | ND | 0.83 | " | " | " | " | " | " | |
| trans-1,3-Dichloropropene | ND | 0.46 | " | " | " | " | " | " | |
| **Toluene** | **2.3** | 0.76 | " | " | " | " | " | " | |
| 1,1,2-Trichloroethane | ND | 0.55 | " | " | " | " | " | " | |
| 2-Hexanone (MBK) | ND | 0.83 | " | " | " | " | " | " | |
| Dibromochloromethane | ND | 1.7 | " | " | " | " | " | " | |
| Tetrachloroethene | ND | 0.69 | " | " | " | " | " | " | |
| 1,2-Dibromoethane (EDB) | ND | 0.78 | " | " | " | " | " | " | |
| 1,1,1,2-Tetrachloroethane | ND | 0.70 | " | " | " | " | " | " | |
| Chlorobenzene | ND | 0.47 | " | " | " | " | " | " | |
| **Ethylbenzene** | **0.57** | 0.44 | " | " | " | " | " | " | |
| **m,p-Xylene** | **2.0** | 0.44 | " | " | " | " | " | " | |
| Styrene | ND | 0.43 | " | " | " | " | " | " | |
| **o-Xylene** | **0.88** | 0.44 | " | " | " | " | " | " | |
| Bromoform | ND | 1.0 | " | " | " | " | " | " | |
| 1,1,2,2-Tetrachloroethane | ND | 0.70 | " | " | " | " | " | " | |
| 4-Ethyltoluene | ND | 0.50 | " | " | " | " | " | " | |
| 1,3,5-Trimethylbenzene | ND | 0.50 | " | " | " | " | " | " | |
| **1,2,4-Trimethylbenzene** | **0.90** | 0.50 | " | " | " | " | " | " | |
| 1,3-Dichlorobenzene | ND | 0.61 | " | " | " | " | " | " | |
| 1,4-Dichlorobenzene | ND | 0.61 | " | " | " | " | " | " | |
| 1,2-Dichlorobenzene | ND | 0.61 | " | " | " | " | " | " | |
| 1,2,4-Trichlorobenzene | ND | 1.9 | " | " | " | " | " | " | |
| Hexachlorobutadiene | ND | 2.7 | " | " | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *93.9 %* | | *76-134* | " | " | " | " | |
| *Surrogate: Toluene-d8* | | *102 %* | | *78-125* | " | " | " | " | |
| *Surrogate: 4-Bromofluorobenzene* | | *110 %* | | *77-127* | " | " | " | " | |

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## Volatile Organic Compounds by EPA TO-15

## H&P Mobile Geochemistry, Inc.

| Analyte | Result | Reporting Limit | Units | Dilution Factor | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **AA-2 (E102028-11) Vapor Sampled: 05-Feb-21 Received: 05-Feb-21** | | | | | | | | | |
| Dichlorodifluoromethane (F12) | ND | 1.0 | ug/m3 | 1 | EB11106 | 11-Feb-21 | 11-Feb-21 | EPA TO-15 | |
| **Chloromethane** | **1.4** | 0.21 | " | " | " | " | " | " | |
| Dichlorotetrafluoroethane (F114) | ND | 0.71 | " | " | " | " | " | " | |
| Vinyl chloride | ND | 0.13 | " | " | " | " | " | " | |
| Bromomethane | ND | 0.39 | " | " | " | " | " | " | |
| Chloroethane | ND | 0.27 | " | " | " | " | " | " | |
| **Trichlorofluoromethane (F11)** | **1.4** | 0.56 | " | " | " | " | " | " | |
| 1,1-Dichloroethene | ND | 0.40 | " | " | " | " | " | " | |
| 1,1,2-Trichlorotrifluoroethane (F113) | ND | 0.77 | " | " | " | " | " | " | |
| **Methylene chloride (Dichloromethane)** | **0.78** | 0.35 | " | " | " | " | " | " | |
| Carbon disulfide | ND | 0.32 | " | " | " | " | " | " | |
| trans-1,2-Dichloroethene | ND | 0.40 | " | " | " | " | " | " | |
| 1,1-Dichloroethane | ND | 0.41 | " | " | " | " | " | " | |
| **2-Butanone (MEK)** | **3.0** | 0.60 | " | " | " | " | " | " | |
| cis-1,2-Dichloroethene | ND | 0.40 | " | " | " | " | " | " | |
| Chloroform | ND | 0.25 | " | " | " | " | " | " | |
| 1,1,1-Trichloroethane | ND | 0.55 | " | " | " | " | " | " | |
| 1,2-Dichloroethane (EDC) | ND | 0.41 | " | " | " | " | " | " | |
| **Benzene** | **0.81** | 0.16 | " | " | " | " | " | " | |
| **Carbon tetrachloride** | **0.57** | 0.32 | " | " | " | " | " | " | |
| Trichloroethene | ND | 0.55 | " | " | " | " | " | " | |
| 1,2-Dichloropropane | ND | 0.47 | " | " | " | " | " | " | |
| Bromodichloromethane | ND | 0.68 | " | " | " | " | " | " | |
| cis-1,3-Dichloropropene | ND | 0.46 | " | " | " | " | " | " | |
| 4-Methyl-2-pentanone (MIBK) | ND | 0.83 | " | " | " | " | " | " | |
| trans-1,3-Dichloropropene | ND | 0.46 | " | " | " | " | " | " | |
| **Toluene** | **1.7** | 0.76 | " | " | " | " | " | " | |
| 1,1,2-Trichloroethane | ND | 0.55 | " | " | " | " | " | " | |
| 2-Hexanone (MBK) | ND | 0.83 | " | " | " | " | " | " | |
| Dibromochloromethane | ND | 1.7 | " | " | " | " | " | " | |
| Tetrachloroethene | ND | 0.69 | " | " | " | " | " | " | |
| 1,2-Dibromoethane (EDB) | ND | 0.78 | " | " | " | " | " | " | |
| 1,1,1,2-Tetrachloroethane | ND | 0.70 | " | " | " | " | " | " | |
| Chlorobenzene | ND | 0.47 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 0.44 | " | " | " | " | " | " | |
| **m,p-Xylene** | **1.1** | 0.44 | " | " | " | " | " | " | |
| Styrene | ND | 0.43 | " | " | " | " | " | " | |
| **o-Xylene** | **0.48** | 0.44 | " | " | " | " | " | " | |

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| 290 Conejo Ridge Avenue, Suite 200 | Project Number: 185804979 / Skypark Dr | Reported: |
| Thousand Oaks, CA 91361 | Project Manager: Ben Chevlen | 16-Feb-21 12:25 |

## Volatile Organic Compounds by EPA TO-15

## H&P Mobile Geochemistry, Inc.

| Analyte | Result | Reporting Limit | Units | Dilution Factor | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **AA-2 (E102028-11) Vapor Sampled: 05-Feb-21 Received: 05-Feb-21** | | | | | | | | | |
| Bromoform | ND | 1.0 | ug/m3 | 1 | EB11106 | 11-Feb-21 | 11-Feb-21 | EPA TO-15 | |
| 1,1,2,2-Tetrachloroethane | ND | 0.70 | " | " | " | " | " | " | |
| 4-Ethyltoluene | ND | 0.50 | " | " | " | " | " | " | |
| 1,3,5-Trimethylbenzene | ND | 0.50 | " | " | " | " | " | " | |
| 1,2,4-Trimethylbenzene | ND | 0.50 | " | " | " | " | " | " | |
| 1,3-Dichlorobenzene | ND | 0.61 | " | " | " | " | " | " | |
| 1,4-Dichlorobenzene | ND | 0.61 | " | " | " | " | " | " | |
| 1,2-Dichlorobenzene | ND | 0.61 | " | " | " | " | " | " | |
| 1,2,4-Trichlorobenzene | ND | 1.9 | " | " | " | " | " | " | |
| Hexachlorobutadiene | ND | 2.7 | " | " | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *95.7 %* | | *76-134* | " | " | " | " | |
| *Surrogate: Toluene-d8* | | *101 %* | | *78-125* | " | " | " | " | |
| *Surrogate: 4-Bromofluorobenzene* | | *99.4 %* | | *77-127* | " | " | " | " | |
| **AA-3 (E102028-12) Vapor Sampled: 05-Feb-21 Received: 05-Feb-21** | | | | | | | | | |
| **Dichlorodifluoromethane (F12)** | **1.0** | 1.0 | ug/m3 | 1 | EB11106 | 11-Feb-21 | 12-Feb-21 | EPA TO-15 | |
| **Chloromethane** | **1.2** | 0.21 | " | " | " | " | " | " | |
| Dichlorotetrafluoroethane (F114) | ND | 0.71 | " | " | " | " | " | " | |
| Vinyl chloride | ND | 0.13 | " | " | " | " | " | " | |
| Bromomethane | ND | 0.39 | " | " | " | " | " | " | |
| Chloroethane | ND | 0.27 | " | " | " | " | " | " | |
| **Trichlorofluoromethane (F11)** | **1.3** | 0.56 | " | " | " | " | " | " | |
| 1,1-Dichloroethene | ND | 0.40 | " | " | " | " | " | " | |
| 1,1,2-Trichlorotrifluoroethane (F113) | ND | 0.77 | " | " | " | " | " | " | |
| **Methylene chloride (Dichloromethane)** | **0.88** | 0.35 | " | " | " | " | " | " | |
| Carbon disulfide | ND | 0.32 | " | " | " | " | " | " | |
| trans-1,2-Dichloroethene | ND | 0.40 | " | " | " | " | " | " | |
| 1,1-Dichloroethane | ND | 0.41 | " | " | " | " | " | " | |
| **2-Butanone (MEK)** | **2.6** | 0.60 | " | " | " | " | " | " | |
| cis-1,2-Dichloroethene | ND | 0.40 | " | " | " | " | " | " | |
| Chloroform | ND | 0.25 | " | " | " | " | " | " | |
| 1,1,1-Trichloroethane | ND | 0.55 | " | " | " | " | " | " | |
| 1,2-Dichloroethane (EDC) | ND | 0.41 | " | " | " | " | " | " | |
| **Benzene** | **0.74** | 0.16 | " | " | " | " | " | " | |
| **Carbon tetrachloride** | **0.51** | 0.32 | " | " | " | " | " | " | |
| Trichloroethene | ND | 0.55 | " | " | " | " | " | " | |
| 1,2-Dichloropropane | ND | 0.47 | " | " | " | " | " | " | |

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| | | |
|---|---|---|
| Stantec - Thousand Oaks | Project: ST020821-12 | |
| 290 Conejo Ridge Avenue, Suite 200 | Project Number: 185804979 / Skypark Dr | Reported: |
| Thousand Oaks, CA 91361 | Project Manager: Ben Chevlen | 16-Feb-21 12:25 |

## Volatile Organic Compounds by EPA TO-15

## H&P Mobile Geochemistry, Inc.

| Analyte | Result | Reporting Limit | Units | Dilution Factor | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **AA-3 (E102028-12) Vapor Sampled: 05-Feb-21 Received: 05-Feb-21** | | | | | | | | | |
| Bromodichloromethane | ND | 0.68 | ug/m3 | 1 | EB11106 | 11-Feb-21 | 12-Feb-21 | EPA TO-15 | |
| cis-1,3-Dichloropropene | ND | 0.46 | " | " | " | " | " | " | |
| 4-Methyl-2-pentanone (MIBK) | ND | 0.83 | " | " | " | " | " | " | |
| trans-1,3-Dichloropropene | ND | 0.46 | " | " | " | " | " | " | |
| **Toluene** | **1.8** | 0.76 | " | " | " | " | " | " | |
| 1,1,2-Trichloroethane | ND | 0.55 | " | " | " | " | " | " | |
| 2-Hexanone (MBK) | ND | 0.83 | " | " | " | " | " | " | |
| Dibromochloromethane | ND | 1.7 | " | " | " | " | " | " | |
| Tetrachloroethene | ND | 0.69 | " | " | " | " | " | " | |
| 1,2-Dibromoethane (EDB) | ND | 0.78 | " | " | " | " | " | " | |
| 1,1,1,2-Tetrachloroethane | ND | 0.70 | " | " | " | " | " | " | |
| Chlorobenzene | ND | 0.47 | " | " | " | " | " | " | |
| **Ethylbenzene** | **0.53** | 0.44 | " | " | " | " | " | " | |
| **m,p-Xylene** | **1.8** | 0.44 | " | " | " | " | " | " | |
| Styrene | ND | 0.43 | " | " | " | " | " | " | |
| **o-Xylene** | **0.75** | 0.44 | " | " | " | " | " | " | |
| Bromoform | ND | 1.0 | " | " | " | " | " | " | |
| 1,1,2,2-Tetrachloroethane | ND | 0.70 | " | " | " | " | " | " | |
| 4-Ethyltoluene | ND | 0.50 | " | " | " | " | " | " | |
| 1,3,5-Trimethylbenzene | ND | 0.50 | " | " | " | " | " | " | |
| **1,2,4-Trimethylbenzene** | **0.80** | 0.50 | " | " | " | " | " | " | |
| 1,3-Dichlorobenzene | ND | 0.61 | " | " | " | " | " | " | |
| 1,4-Dichlorobenzene | ND | 0.61 | " | " | " | " | " | " | |
| 1,2-Dichlorobenzene | ND | 0.61 | " | " | " | " | " | " | |
| 1,2,4-Trichlorobenzene | ND | 1.9 | " | " | " | " | " | " | |
| Hexachlorobutadiene | ND | 2.7 | " | " | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *96.6 %* | | *76-134* | " | " | " | " | |
| *Surrogate: Toluene-d8* | | *102 %* | | *78-125* | " | " | " | " | |
| *Surrogate: 4-Bromofluorobenzene* | | *132 %* | | *77-127* | " | " | " | " | *S-GC* |

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|---|---|---|
| Stantec - Thousand Oaks | Project: ST020821-12 | |
| 290 Conejo Ridge Avenue, Suite 200 | Project Number: 185804979 / Skypark Dr | Reported: |
| Thousand Oaks, CA 91361 | Project Manager: Ben Chevlen | 16-Feb-21 12:25 |

## Volatile Organic Compounds by EPA TO-15 - Quality Control

## H&P Mobile Geochemistry, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch EB11106 - TO-15** | | | | | | | | | | |
| **Blank (EB11106-BLK1)** | | | | Prepared & Analyzed: 11-Feb-21 | | | | | | |
| Dichlorodifluoromethane (F12) | ND | 1.0 | ug/m3 | | | | | | | |
| Chloromethane | ND | 0.21 | " | | | | | | | |
| Dichlorotetrafluoroethane (F114) | ND | 0.71 | " | | | | | | | |
| Vinyl chloride | ND | 0.13 | " | | | | | | | |
| Bromomethane | ND | 0.39 | " | | | | | | | |
| Chloroethane | ND | 0.27 | " | | | | | | | |
| Trichlorofluoromethane (F11) | ND | 0.56 | " | | | | | | | |
| 1,1-Dichloroethene | ND | 0.40 | " | | | | | | | |
| 1,1,2-Trichlorotrifluoroethane (F113) | ND | 0.77 | " | | | | | | | |
| Methylene chloride (Dichloromethane) | ND | 0.35 | " | | | | | | | |
| Carbon disulfide | ND | 0.32 | " | | | | | | | |
| trans-1,2-Dichloroethene | ND | 0.40 | " | | | | | | | |
| 1,1-Dichloroethane | ND | 0.41 | " | | | | | | | |
| 2-Butanone (MEK) | ND | 0.60 | " | | | | | | | |
| cis-1,2-Dichloroethene | ND | 0.40 | " | | | | | | | |
| Chloroform | ND | 0.25 | " | | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.55 | " | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 0.41 | " | | | | | | | |
| Benzene | ND | 0.16 | " | | | | | | | |
| Carbon tetrachloride | ND | 0.32 | " | | | | | | | |
| Trichloroethene | ND | 0.55 | " | | | | | | | |
| 1,2-Dichloropropane | ND | 0.47 | " | | | | | | | |
| Bromodichloromethane | ND | 0.68 | " | | | | | | | |
| cis-1,3-Dichloropropene | ND | 0.46 | " | | | | | | | |
| 4-Methyl-2-pentanone (MIBK) | ND | 0.83 | " | | | | | | | |
| trans-1,3-Dichloropropene | ND | 0.46 | " | | | | | | | |
| Toluene | ND | 0.76 | " | | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.55 | " | | | | | | | |
| 2-Hexanone (MBK) | ND | 0.83 | " | | | | | | | |
| Dibromochloromethane | ND | 1.7 | " | | | | | | | |
| Tetrachloroethene | ND | 0.69 | " | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | 0.78 | " | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.70 | " | | | | | | | |
| Chlorobenzene | ND | 0.47 | " | | | | | | | |

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| 290 Conejo Ridge Avenue, Suite 200 | Project Number: 185804979 / Skypark Dr | Reported: |
| Thousand Oaks, CA 91361 | Project Manager: Ben Chevlen | 16-Feb-21 12:25 |

## Volatile Organic Compounds by EPA TO-15 - Quality Control

## H&P Mobile Geochemistry, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch EB11106 - TO-15** | | | | | | | | | | |
| **Blank (EB11106-BLK1)** | | | | Prepared & Analyzed: 11-Feb-21 | | | | | | |
| Ethylbenzene | ND | 0.44 | ug/m3 | | | | | | | |
| m,p-Xylene | ND | 0.44 | " | | | | | | | |
| Styrene | ND | 0.43 | " | | | | | | | |
| o-Xylene | ND | 0.44 | " | | | | | | | |
| Bromoform | ND | 1.0 | " | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.70 | " | | | | | | | |
| 4-Ethyltoluene | ND | 0.50 | " | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 0.50 | " | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 0.50 | " | | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.61 | " | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.61 | " | | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.61 | " | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 1.9 | " | | | | | | | |
| Hexachlorobutadiene | ND | 2.7 | " | | | | | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *43.0* | | *"* | *42.7* | | *101* | *76-134* | | | |
| *Surrogate: Toluene-d8* | *43.5* | | *"* | *41.6* | | *105* | *78-125* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *65.1* | | *"* | *72.6* | | *89.7* | *77-127* | | | |
| **LCS (EB11106-BS1)** | | | | Prepared & Analyzed: 11-Feb-21 | | | | | | |
| Dichlorodifluoromethane (F12) | 17.9 | 1.0 | ug/m3 | 20.2 | | 88.6 | 59-128 | | | |
| Vinyl chloride | 9.5 | 0.13 | " | 10.4 | | 91.2 | 64-127 | | | |
| Chloroethane | 12.1 | 0.27 | " | 10.7 | | 113 | 63-127 | | | |
| Trichlorofluoromethane (F11) | 19.3 | 0.56 | " | 22.6 | | 85.2 | 62-126 | | | |
| 1,1-Dichloroethene | 13.3 | 0.40 | " | 16.2 | | 82.2 | 61-133 | | | |
| 1,1,2-Trichlorotrifluoroethane (F113) | 26.4 | 0.77 | " | 31.0 | | 85.0 | 66-126 | | | |
| Methylene chloride (Dichloromethane) | 10.5 | 0.35 | " | 14.2 | | 74.4 | 62-115 | | | |
| trans-1,2-Dichloroethene | 12.7 | 0.40 | " | 16.2 | | 78.7 | 67-124 | | | |
| 1,1-Dichloroethane | 13.1 | 0.41 | " | 16.5 | | 79.2 | 68-126 | | | |
| cis-1,2-Dichloroethene | 13.0 | 0.40 | " | 16.0 | | 81.2 | 70-121 | | | |
| Chloroform | 16.6 | 0.25 | " | 19.8 | | 83.8 | 68-123 | | | |
| 1,1,1-Trichloroethane | 19.0 | 0.55 | " | 22.2 | | 85.6 | 68-125 | | | |
| 1,2-Dichloroethane (EDC) | 13.8 | 0.41 | " | 16.5 | | 83.5 | 65-128 | | | |
| Benzene | 10.6 | 0.16 | " | 13.0 | | 81.6 | 69-119 | | | |

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|---|---|---|
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| 290 Conejo Ridge Avenue, Suite 200 | Project Number: 185804979 / Skypark Dr | Reported: |
| Thousand Oaks, CA 91361 | Project Manager: Ben Chevlen | 16-Feb-21 12:25 |

## Volatile Organic Compounds by EPA TO-15 - Quality Control

## H&P Mobile Geochemistry, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch EB11106 - TO-15** | | | | | | | | | | |
| **LCS (EB11106-BS1)** | | | | Prepared & Analyzed: 11-Feb-21 | | | | | | |
| Carbon tetrachloride | 21.9 | 0.32 | ug/m3 | 25.6 | | 85.6 | 68-132 | | | |
| Trichloroethene | 19.3 | 0.55 | " | 21.9 | | 88.0 | 71-123 | | | |
| Toluene | 13.1 | 0.76 | " | 15.4 | | 85.2 | 66-119 | | | |
| 1,1,2-Trichloroethane | 18.7 | 0.55 | " | 22.2 | | 84.1 | 73-119 | | | |
| Tetrachloroethene | 22.8 | 0.69 | " | 27.6 | | 82.6 | 66-124 | | | |
| 1,1,1,2-Tetrachloroethane | 24.8 | 0.70 | " | 28.0 | | 88.6 | 67-129 | | | |
| Ethylbenzene | 14.6 | 0.44 | " | 17.7 | | 82.3 | 70-124 | | | |
| m,p-Xylene | 13.2 | 0.44 | " | 17.7 | | 74.6 | 61-134 | | | |
| o-Xylene | 14.3 | 0.44 | " | 17.7 | | 80.8 | 67-125 | | | |
| 1,1,2,2-Tetrachloroethane | 18.6 | 0.70 | " | 28.0 | | 66.4 | 65-127 | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *44.1* | | *"* | *42.7* | | *103* | *76-134* | | | |
| *Surrogate: Toluene-d8* | *42.9* | | *"* | *41.6* | | *103* | *78-125* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *70.8* | | *"* | *72.6* | | *97.6* | *77-127* | | | |

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| | | |
|---|---|---|
| Stantec - Thousand Oaks | Project: ST020821-12 | |
| 290 Conejo Ridge Avenue, Suite 200 | Project Number: 185804979 / Skypark Dr | Reported: |
| Thousand Oaks, CA 91361 | Project Manager: Ben Chevlen | 16-Feb-21 12:25 |

## Notes and Definitions

| | |
|---|---|
| S-GC | Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate(s). |
| LCC | Leak Check Compound |
| ND | Analyte NOT DETECTED at or above the reporting limit |
| MDL | Method Detection Limit |
| %REC | Percent Recovery |
| RPD | Relative Percent Difference |

All soil results are reported in wet weight.

## Appendix

H&P Mobile Geochemistry, Inc. is approved as an Environmental Testing Laboratory and Mobile Laboratory in accordance with the DoD-ELAP Program and ISO/IEC 17025:2005 programs through PJLA, accreditation number 69070 for EPA Method TO-15, EPA Method 8260B and H&P 8260SV.

H&P is approved by the State of California as an Environmental Laboratory and Mobile Laboratory in conformance with the Environmental Laboratory Accreditation Program (ELAP) for the category of Volatile and Semi-Volatile Organic Chemistry of Hazardous Waste, certification numbers 2740, 2741, 2743 & 2745.

H&P is approved by the State of Louisiana Department of Environmental Quality under the National Environmental Laboratory Accreditation Conference (NELAC) certification number 04138

The complete list of stationary and mobile laboratory certifications along with the fields of testing (FOTs) and analyte lists are available at www.handpmg.com/about/certifications.

Mobile Geochemistry, Inc.
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& Field Office - Signal Hill, CA
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P 760.804.9678 F 760.804.9159

# VAPOR / AIR Chain of Custody

DATE: 02/05/21
Page 1 of 4

## Lab Client and Project Information

| | |
|---|---|
| Lab Client/Consultant: Stantec | Project Name / #: 185804979 |
| Lab Client Project Manager: Ben Chevlen | Project Location: 2530/2540 Skypark Dr. Torrance |
| Lab Client Address: 290 Conejo Ridge Ave | Report E-Mail(s): lewis.simons@stantec.com |
| Lab Client City, State, Zip: Thousand Oaks, CA 91361 | ben.chevlen@stantec.com |
| Phone Number: 562-799-9866 | |

## Sample Receipt (Lab Use Only)

| | |
|---|---|
| Date Rec'd: 2/8/21 | Control #: 210085.03 |
| H&P Project #: STD20821-12 | |
| Lab Work Order #: E102028 | |
| Sample Intact: ☒ Yes ☐ No ☐ See Notes Below | |
| Receipt Gauge ID: 60206 | Temp: RT |
| Outside Lab: | |
| Receipt Notes/Tracking #: | |
| Lab PM Initials: WB | |

## Reporting Requirements

☒ Standard Report ☐ Level III ☐ Level IV
☐ Excel EDD ☐ Other EDD:
☐ CA Geotracker Global ID:

## Turnaround Time

☒ **Standard** (7 days for preliminary report, 10 days for final report)
☐ **Rush** (specify):

## Sampler Information

Sampler(s): J.Arellano, B.Villa
Signature:
Date: 02/05/21

## Additional Instructions to Laboratory:

* *Preferred VOC units (please choose one):*
☐ µg/L ☒ µg/m³ ☐ ppbv ☐ ppmv

| SAMPLE NAME | FIELD POINT NAME (if applicable) | DATE mm/dd/yy | TIME 24hr clock | SAMPLE TYPE Indoor Air (IA), Ambient Air (AA), Subslab (SS), Soil Vapor (SV) | CONTAINER SIZE & TYPE 400mL/1L/6L Summa, Tedlar, Tube, etc. | CONTAINER ID (###) | Lab use only: Receipt Vac | VOCs Standard Full List ☐ 8260SV ☒ TO-15 | VOCs Short List / Project List ☐ 8260SV ☐ TO-15 | Oxygenates ☐ 8260SV ☐ TO-15 | Naphthalene ☐ 8260SV ☐ TO-15 | TPHv as Gas ☐ 8260SVm ☐ TO-15m | Aromatic/Aliphatic Fractions ☐ 8260SVm ☐ TO-15m | Leak Check Compound ☐ DFA ☐ IPA ☐ He | Methane by EPA 8015m | Fixed Gases by ASTM D1945 ☐ CO2 ☐ O2 ☐ N2 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IA-1 | | 02/05/21 | 1749 | IA | 6L | 490 | -2.05 | X | | | | | | | | | | | | |
| IA-1 REP | | | 1749 | IA | 6L | 486 | -2.21 | X | | | | | | | | | | | | |
| IA-2 | | | 1748 | IA | 6L | 502 | -3.35 | X | | | | | | | | | | | | |
| IA-3 | | | 1747 | IA | 6L | 489 | -3.64 | X | | | | | | | | | | | | |
| IA-4 | | | 1746 | IA | 6L | 485 | -5.42 | X | | | | | | | | | | | | |
| IA-5 | | | 1753 | IA | 6L | 488 | -4.46 | X | | | | | | | | | | | | |
| IA-6 | | | 1745 | IA | 6L | 487 | -3.86 | X | | | | | | | | | | | | |
| IA-7 | | | 1742 | IA | 6L | 504 | -2.24 | X | | | | | | | | | | | | |
| IA-8 | | | 1754 | IA | 6L | 501 | -5.22 | X | | | | | | | | | | | | |
| AA-1 | | " | 1818 | AA | 6L | 503 | -7.76 | X | | | | | | | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Approved/Relinquished by: Emily Medler | Company: Stantec | Date: 2/5/21 | Time: 1925 | Received by: | Company: H&P | Date: 02/05/21 | Time: 1925 |
| Approved/Relinquished by: | Company: | Date: | Time: | Received by: | Company: | Date: | Time: |
| Approved/Relinquished by: | Company: | Date: | Time: | Received by: | Company: | Date: | Time: |

*Approval constitutes as authorization to proceed with analysis and acceptance of conditions on back

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# VAPOR / AIR Chain of Custody

DATE: 02/05/21
Page 2 of 4

## Lab Client and Project Information

| | |
|---|---|
| Lab Client/Consultant: Stantec | Project Name / #: 185804979 |
| Lab Client Project Manager: Lewis Simons | Project Location: 2530/2540 Skypark Dr Torrance |
| Lab Client Address: 290 Conejo Ridge Ave | Report E-Mail(s): lewis.simons@stantec.com ben.chevlen@stantec.com |
| Lab Client City, State, Zip: Thousand Oaks, CA 91361 | |
| Phone Number: 562-799-9866 | |

**Reporting Requirements**
- [x] Standard Report ☐ Level III ☐ Level IV
- ☐ Excel EDD ☐ Other EDD:
- ☐ CA Geotracker Global ID:

**Turnaround Time**
- [x] **Standard** (7 days for preliminary report, 10 days for final report)
- ☐ **Rush** (specify):

**Sampler Information**
- Sampler(s): J. Arellano B. Villa
- Signature:
- Date: 02/05/21

## Sample Receipt (Lab Use Only)

| | |
|---|---|
| Date Rec'd: 2/8/21 | Control #: 210065.03 |
| H&P Project # STD20821-12 | |
| Lab Work Order # E102028 | |
| Sample Intact: [x] Yes ☐ No ☐ See Notes Below | |
| Receipt Gauge ID: 60204 | Temp: RT |
| Outside Lab: | |
| Receipt Notes/Tracking #: | |
| Lab PM Initials: VB | |

**Additional Instructions to Laboratory:**

** Preferred VOC units (please choose one):*
☐ µg/L [x] µg/m³ ☐ ppbv ☐ ppmv

| SAMPLE NAME | FIELD POINT NAME (if applicable) | DATE mm/dd/yy | TIME 24hr clock | SAMPLE TYPE Indoor Air (IA), Ambient Air (AA), Subslab (SS), Soil Vapor (SV) | CONTAINER SIZE & TYPE 400mL/1L/6L Summa, Tedlar, Tube, etc. | CONTAINER ID (###) | Lab use only: Receipt Vac | VOCs Standard Full List ☐ 8260SV [x] TO-15 | VOCs Short List / Project List ☐ 8260SV ☐ TO-15 | Oxygenates ☐ 8260SV ☐ TO-15 | Naphthalene ☐ 8260SV ☐ TO-15 | TPHv as Gas ☐ 8260SVm ☐ TO-15m | Aromatic/Aliphatic Fractions ☐ 8260SVm ☐ TO-15m | Leak Check Compound ☐ DFA ☐ IPA ☐ He | Methane by EPA 8015m | Fixed Gases by ASTM D1945 ☐ CO2 ☐ O2 ☐ N2 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AA-2 | | 02/05/21 | 1800 | AA | 6L | 505 | -3.80 | X | | | | | | | | | | | | |
| AA-3 | | 02/05/21 | 1812 | AA | 6L | 851 | -3.08 | X | | | | | | | | | | | | |
| | | | 2/8/21 | | | | | | | | | | | | | | | | | |
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|---|---|---|---|---|---|---|---|
| Approved/Relinquished by: Emily Medler | Company: Stantec | Date: 2/5/21 | Time: 1925 | Received by: | Company: H&P | Date: 02/05/21 | Time: 1925 |
| Approved/Relinquished by: | Company: | Date: | Time: | Received by: | Company: | Date: | Time: |
| Approved/Relinquished by: | Company: | Date: | Time: | Received by: | Company: | Date: | Time: |

**Approval constitutes as authorization to proceed with analysis and acceptance of conditions on back*

Mobile Geochemistry Inc.

# Log Sheet: Indoor/Ambient Air Sampling

H&P Project #: ST0205U-TECH
Site Address: 2530/2540 skypark Dr
Consultant: Stantec
Consultant Rep: Emily Medler
H&P Rep: J. Arellano, B. Villarreal
Reviewed: EC
Scanned: TMS

| | | SAMPLE ID: IA-1 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Summa ID #: | 490 | Start Date: | 02-05-21 | Check Date: | 02-05-21 | Check Date: | 02-05-21 | End Date: | 02-05-21 |
| Flow Cont ID #: | F242 | Start Time: | 0748 | Check Time: | 1117 | Check Time: | 1424 | End Time: | 1749 |
| Flow Rate (hrs or cc/min): | 10Hr | Start Vacuum ("Hg): | -30 | Check Vac ("Hg): | -27 | Check Vac ("Hg): | -14 | End Vac ("Hg): | -4 |

Summa Canister Height above Ground (ft): 5

Description of Summa Canister Placement:

DIAGRAM (and/or send photo to H&P PM):
Photo sent to pm

| | | | | |
|---|---|---|---|---|
| Outdoor Temp Hi (F): | 64 | Barometric Pressure: | 30 inHg | Weather Conditions: A.M. - Overcast P.M. - Sunny |
| Outdoor Temp Low (F): | 48 | Wind Speed: | 4 mph | |
| Indoor Temp Avg (F): | 70 | Wind Direction: | NW | |

PRODUCT INVENTORY (nearby products that may contain chemicals of concern; continue on back if needed):

| Name of Product | List of Chemicals |
|---|---|
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OUTDOOR SOURCES (possible sources of chemicals of concern from outdoor activities; continue on back if needed):

| Source | Location |
|---|---|
| | |
| | |

Mobile Geochemistry Inc.

# Log Sheet: Indoor/Ambient Air Sampling

H&P Project #: ST020521-TECH
Site Address: 2530/2540 Skyparke Dr
Consultant: Stantec
Consultant Rep: Emily Medler
H&P Rep: J. Arellano/L. Villarreal
Reviewed: EC
Scanned: 5/6/21

| | | SAMPLE ID: IA-1 Dup | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Summa ID #: | 486 | Start Date: | 02-05-21 | Check Date: | 02-05-21 | Check Date: | 02-05-21 | End Date: | 02-05-21 |
| Flow Cont ID #: | F222 | Start Time: | 0748 | Check Time: | 1117 | Check Time: | 1424 | End Time: | ~~1748~~ 1749 (BV) |
| Flow Rate (hrs or cc/min): | 10 Hr | Start Vacuum ("Hg): | -30 | Check Vac ("Hg): | -20 | Check Vac ("Hg): | -11 | End Vac ("Hg): | ~~-4~~ (BV) -2 |

Summa Canister Height above Ground (ft): 5

Description of Summa Canister Placement:

DIAGRAM (and/or send photo to H&P PM):
Photo sent to pm

| | | | | |
|---|---|---|---|---|
| Outdoor Temp Hi (F): | 64 | Barometric Pressure: | 30 in Hg | Weather Conditions: A.M. - Overcast P.M. - Sunny |
| Outdoor Temp Low (F): | 48 | Wind Speed: | 4 mph | |
| Indoor Temp Avg (F): | 70 | Wind Direction: | NW | |

PRODUCT INVENTORY (nearby products that may contain chemicals of concern; continue on back if needed):

| Name of Product | List of Chemicals |
|---|---|
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OUTDOOR SOURCES (possible sources of chemicals of concern from outdoor activities; continue on back if needed):

| Source | Location |
|---|---|
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| | |

H&P Mobile Geochemistry Inc.



# Log Sheet: Indoor/Ambient Air Sampling

H&P Project #: ST020521-TECH
Site Address: 2530/2540 Skypark Dr

Consultant: Stantec
Consultant Rep: Emily Medler
H&P Rep: J. Arellano, C. Villarreal

Reviewed: EC
Scanned:

| | | SAMPLE ID: IA-2 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Summa ID #: | 502 | Start Date: | 02-05-21 | Check Date: | 02-05-21 | Check Date: | 02-05-21 | End Date: | 02-05-21 |
| Flow Cont ID #: | F234 | Start Time: | 0747 | Check Time: | 1116 | Check Time: | 1423 | End Time: | 1748 |
| Flow Rate (hrs or cc/min): | 10 Hr | Start Vacuum ("Hg): | -30 | Check Vac ("Hg): | -22 | Check Vac ("Hg): | -14 | End Vac ("Hg): | -4 |

Summa Canister Height above Ground (ft): 5'

Description of Summa Canister Placement:

DIAGRAM (and/or send photo to H&P PM):
Photo sent to pm

| | | | | Weather Conditions: |
|---|---|---|---|---|
| Outdoor Temp Hi (F): | 64 | Barometric Pressure: | 30 in Hg | A.M. - Overcast |
| Outdoor Temp Low (F): | 48 | Wind Speed: | 4mph | P.M. - Sunny |
| Indoor Temp Avg (F): | 70 | Wind Direction: | NW | |

PRODUCT INVENTORY (nearby products that may contain chemicals of concern; continue on back if needed):

| Name of Product | List of Chemicals |
|---|---|
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OUTDOOR SOURCES (possible sources of chemicals of concern from outdoor activities; continue on back if needed):

| Source | Location |
|---|---|
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| | |

H&P Mobile Geochemistry Inc.



# Log Sheet: Indoor/Ambient Air Sampling

H&P Project #: STO2021-TECH
Site Address: 2530/2540 Skypark Dr
Consultant: Stantec
Consultant Rep: Emily Medler
H&P Rep: J. Arellano, B. Villarosa
Reviewed: EC
Scanned: [illegible]

| | | SAMPLE ID: IA-3 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Summa ID #: | 489 | Start Date: | 02-05-21 | Check Date: | 02-05-21 | Check Date: | 02-05-21 | End Date: | 02-05-21 |
| Flow Cont ID #: | F235 | Start Time: | 0752 | Check Time: | 1120 | Check Time: | 1425 | End Time: | 1747 |
| Flow Rate (hrs or cc/min): | 10 Hr | Start Vacuum ("Hg): | -30 | Check Vac ("Hg): | -22 | Check Vac ("Hg): | -14 | End Vac ("Hg): | -5 |

Summa Canister Height above Ground (ft): 5'

Description of Summa Canister Placement:

DIAGRAM (and/or send photo to H&P PM):
Photo sent to pm

| | | | | Weather Conditions: |
|---|---|---|---|---|
| Outdoor Temp Hi (F): | 64 | Barometric Pressure: | 30.1 inHg | A.M. - Overcast |
| Outdoor Temp Low (F): | 48 | Wind Speed: | 4 mph | P.M. - Sunny |
| Indoor Temp Avg (F): | 70 | Wind Direction: | NW | |

PRODUCT INVENTORY (nearby products that may contain chemicals of concern; continue on back if needed):

| Name of Product | List of Chemicals |
|---|---|
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OUTDOOR SOURCES (possible sources of chemicals of concern from outdoor activities; continue on back if needed):

| Source | Location |
|---|---|
| | |
| | |

H&P Mobile Geochemistry Inc.

# Log Sheet: Indoor/Ambient Air Sampling

H&P Project #: STO20C21-TECH
Site Address: 2530/2540 Skyparke Dr
Consultant: Stantec
Consultant Rep: Emily Medler
H&P Rep: J. Arellano, B. Villarreal
Reviewed: EC
Scanned: Flows

| | | SAMPLE ID: | EA-7 (4) IA-4 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Summa ID #: | 485 | Start Date: | 02-05-21 | Check Date: | 02-05-21 | Check Date: | 02-05-21 | End Date: | 02-09-21 |
| Flow Cont ID #: | F213 | Start Time: | 0746 | Check Time: | 1114 | Check Time: | 1423 | End Time: | 1746 |
| Flow Rate (hrs or cc/min): | 10 Hr | Start Vacuum ("Hg): | -30 | Check Vac ("Hg): | -22 | Check Vac ("Hg): | -14 | End Vac ("Hg): | -6 |

Summa Canister Height above Ground (ft): 5'

Description of Summa Canister Placement:

DIAGRAM (and/or send photo to H&P PM):
Photo sent to pm

| | | | | Weather Conditions: |
|---|---|---|---|---|
| Outdoor Temp Hi (F): | 64 | Barometric Pressure: | 30 inHg | AM. - overcast |
| Outdoor Temp Low (F): | 48 | Wind Speed: | 4 mph | P.M. - sunny |
| Indoor Temp Avg (F): | 70 | Wind Direction: | NW | |

PRODUCT INVENTORY (nearby products that may contain chemicals of concern; continue on back if needed):

| Name of Product | List of Chemicals |
|---|---|
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| | |

OUTDOOR SOURCES (possible sources of chemicals of concern from outdoor activities; continue on back if needed):

| Source | Location |
|---|---|
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| | |

H&P Mobile Geochemistry Inc.

FMS008
Revision: 1
Revised: 10/23/14
Effective: 12/9/14
Page 1 of 1

# Log Sheet: Indoor/Ambient Air Sampling

H&P Project #: ST02021-TECH
Site Address: 2520/2540 Skyparks Dr
Consultant: Stantec
Consultant Rep: Emily Medler
H&P Rep: J. Arellano, B. Villarosa
Reviewed: EC
Scanned: Yes

| | | SAMPLE ID: IA-5 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Summa ID #: | 488 | Start Date: | 02-05-21 | Check Date: | 02-05-21 | Check Date: | 02-05-21 | End Date: | 02-05-21 |
| Flow Cont ID #: | F227 | Start Time: | 0756 | Check Time: | 1120 | Check Time: | 1426 | End Time: | 1753 |
| Flow Rate (hrs or cc/min): | 10Hr | Start Vacuum ("Hg): | -30+ | Check Vac ("Hg): | -27 | Check Vac ("Hg): | -15 | End Vac ("Hg): | -6 |

Summa Canister Height above Ground (ft): 5

Description of Summa Canister Placement:

DIAGRAM (and/or send photo to H&P PM):
Photo sent to pm

| | | | | |
|---|---|---|---|---|
| Outdoor Temp Hi (F): | 64 | Barometric Pressure: | 30in Hg | Weather Conditions: A.M. - overcast P.M. - Sunny |
| Outdoor Temp Low (F): | 48 | Wind Speed: | 4mph | |
| Indoor Temp Avg (F): | 70 | Wind Direction: | NW | |

PRODUCT INVENTORY (nearby products that may contain chemicals of concern; continue on back if needed):

| Name of Product | List of Chemicals |
|---|---|
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OUTDOOR SOURCES (possible sources of chemicals of concern from outdoor activities; continue on back if needed):

| Source | Location |
|---|---|
| | |
| | |

Mobile Geochemistry Inc.

# Log Sheet: Indoor/Ambient Air Sampling

H&P Project #: STO20521-TECH
Site Address: 2570/2540 Skypark Dr
Consultant: Stantec
Consultant Rep: Emily Medlar
H&P Rep: J. Arellano, B. Villarreal
Reviewed: EC
Scanned: MS

| | | SAMPLE ID: IA-6 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Summa ID #: | 487 | Start Date: | 02-05-21 | Check Date: | 02-05-21 | Check Date: | 02-05-21 | End Date: | 02-05-21 |
| Flow Cont ID #: | F227 | Start Time: | 0744 | Check Time: | 1113 | Check Time: | 1422 | End Time: | 1745 |
| Flow Rate (hrs or cc/min): | 10 Hr | Start Vacuum ("Hg): | -30 | Check Vac ("Hg): | -24 | Check Vac ("Hg): | -16 | End Vac ("Hg): | -4 |

Summa Canister Height above Ground (ft): 5'

Description of Summa Canister Placement:

DIAGRAM (and/or send photo to H&P PM):
Photo sent to pm

| | | | | |
|---|---|---|---|---|
| Outdoor Temp Hi (F): | 64 | Barometric Pressure: | 30in Hg | Weather Conditions: A.M. - Overcast |
| Outdoor Temp Low (F): | 48 | Wind Speed: | 4mph | P.M - Sunny |
| Indoor Temp Avg (F): | 70 | Wind Direction: | NW | |

PRODUCT INVENTORY (nearby products that may contain chemicals of concern; continue on back if needed):

| Name of Product | List of Chemicals |
|---|---|
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OUTDOOR SOURCES (possible sources of chemicals of concern from outdoor activities; continue on back if needed):

| Source | Location |
|---|---|
| | |
| | |

H&P Mobile Geochemistry Inc.

FMS008
Revision: 1
Revised: 10/23/14
Effective: 12/9/14
Page 1 of 1

# Log Sheet: Indoor/Ambient Air Sampling

H&P Project #: STO20521-TECH
Site Address: 2530/2540 Skyparks Dr

Consultant: Stantec
Consultant Rep: Emily Medler
H&P Rep: J. Arellano, B. Villanueva

Reviewed: EC
Scanned: 11-6-21

| | | SAMPLE ID: IA-7 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Summa ID #: | 504 | Start Date: | 02-05-21 | Check Date: | 02-05-21 | Check Date: | 02-05-21 | End Date: | 02-05-21 |
| Flow Cont ID #: | F245 | Start Time: | 0743 | Check Time: | 1113 | Check Time: | 1421 | End Time: | 1742 |
| Flow Rate (hrs or cc/min): | 10 Hr | Start Vacuum ("Hg): | -30 | Check Vac ("Hg): | -23 | Check Vac ("Hg): | -13 | End Vac ("Hg): | -4 |

Summa Canister Height above Ground (ft): 5'

Description of Summa Canister Placement:

DIAGRAM (and/or send photo to H&P PM):
Photo sent to pm

| | | | | Weather Conditions: |
|---|---|---|---|---|
| Outdoor Temp Hi (F): | 64 | Barometric Pressure: | 30 in Hg | A.M. - Overcast |
| Outdoor Temp Low (F): | 48 | Wind Speed: | 4 mph | P.M. - Sunny |
| Indoor Temp Avg (F): | 70 | Wind Direction: | NW | |

PRODUCT INVENTORY (nearby products that may contain chemicals of concern; continue on back if needed):

| Name of Product | List of Chemicals |
|---|---|
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OUTDOOR SOURCES (possible sources of chemicals of concern from outdoor activities; continue on back if needed):

| Source | Location |
|---|---|
| | |
| | |

Mobile Geochemistry Inc.

FMS008
Revision: 1
Revised: 10/23/14
Effective: 12/9/14
Page 1 of 1

# Log Sheet: Indoor/Ambient Air Sampling

H&P Project #: STO2052I-TECH
Site Address: 2570/2540 Skypark Dr
Consultant: Stantec
Consultant Rep: Emily Medler
H&P Rep: J. Arellano/D. Villarreal
Reviewed: EC
Scanned:

| | | SAMPLE ID: IA-8 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Summa ID #: | 501 | Start Date: | 02-05-21 | Check Date: | 02-05-21 | Check Date: | 02-05-21 | End Date: | 02-05-21 |
| Flow Cont ID #: | F231 | Start Time: | 0754 | Check Time: | 1121 | Check Time: | 1426 | End Time: | 1754 |
| Flow Rate (hrs or cc/min): | 10Hr | Start Vacuum ("Hg): | -26 | Check Vac ("Hg): | -18 | Check Vac ("Hg): | -10 | End Vac ("Hg): | -4 |

Summa Canister Height above Ground (ft): 5

Description of Summa Canister Placement:

DIAGRAM (and/or send photo to H&P PM):
Photo sent to PM

| | | | | Weather Conditions: |
|---|---|---|---|---|
| Outdoor Temp Hi (F): | 64 | Barometric Pressure: | 30 inHg | A.M.- overcast |
| Outdoor Temp Low (F): | 48 | Wind Speed: | 4 mph | P.M. - sunny |
| Indoor Temp Avg (F): | 70 | Wind Direction: | NW | |

PRODUCT INVENTORY (nearby products that may contain chemicals of concern; continue on back if needed):

| Name of Product | List of Chemicals |
|---|---|
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| | |

OUTDOOR SOURCES (possible sources of chemicals of concern from outdoor activities; continue on back if needed):

| Source | Location |
|---|---|
| | |
| | |

Mobile Geochemistry Inc.

# Log Sheet: Indoor/Ambient Air Sampling

H&P Project #: STO20521-TECH
Site Address: 2530/2540 Skyparke Dr
Consultant: Stantec
Consultant Rep: Emily Medler
H&P Rep: J. Arellano, B. Villarreal
Reviewed: EC
Scanned: Mos

| | | SAMPLE ID: AA-1 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Summa ID #: | 503 | Start Date: | 02-05-21 | Check Date: | 02-05-21 | Check Date: | 02-05-21 | End Date: | 02-05-21 |
| Flow Cont ID #: | F215 | Start Time: | 0813 | Check Time: | 1126 | Check Time: | 1439 | End Time: | 1818 |
| Flow Rate (hrs or cc/min): | 10 Hr | Start Vacuum ("Hg): | -30 | Check Vac ("Hg): | -23 | Check Vac ("Hg): | -15 | End Vac ("Hg): | -9 |

Summa Canister Height above Ground (ft): 5.5

Description of Summa Canister Placement:

DIAGRAM (and/or send photo to H&P PM):
Photo sent to pm

| | | | | Weather Conditions: |
|---|---|---|---|---|
| Outdoor Temp Hi (F): | 64 | Barometric Pressure: | 30 in Hg | A.M. - overcast |
| Outdoor Temp Low (F): | 48 | Wind Speed: | 4 mph | P.M. - Sunny |
| Indoor Temp Avg (F): | 70 | Wind Direction: | NW | |

PRODUCT INVENTORY (nearby products that may contain chemicals of concern; continue on back if needed):

| Name of Product | List of Chemicals |
|---|---|
| | |
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| | |

OUTDOOR SOURCES (possible sources of chemicals of concern from outdoor activities; continue on back if needed):

| Source | Location |
|---|---|
| | |
| | |

Mobile Geochemistry Inc.

FMS008
Revision: 1
Revised: 10/23/14
Effective: 12/9/14
Page 1 of 1

# Log Sheet: Indoor/Ambient Air Sampling

H&P Project #: STO205H-TECH
Site Address: 2520/2540 Skypark Dr
Consultant: Stantec
Consultant Rep: Emily Medler
H&P Rep: J. Arellano, B. Villarreal
Reviewed: EC
Scanned: TM-S

| | | SAMPLE ID: AA-2 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Summa ID #: | 505 | Start Date: | 02-05-21 | Check Date: | 02-05-21 | Check Date: | 02-05-21 | End Date: | 02-05-21 |
| Flow Cont ID #: | F214 | Start Time: | 0803 | Check Time: | 1108 | Check Time: | 1434 | End Time: | 1800 |
| Flow Rate (hrs or cc/min): | 10 Hr | Start Vacuum ("Hg): | -30+ | Check Vac ("Hg): | -24 | Check Vac ("Hg): | -14 | End Vac ("Hg): | -7 |

Summa Canister Height above Ground (ft): 5

Description of Summa Canister Placement:

DIAGRAM (and/or send photo to H&P PM):
Photo sent to pm

| | | | | Weather Conditions: |
|---|---|---|---|---|
| Outdoor Temp Hi (F): | 64 | Barometric Pressure: | 30 in Hg | A.M. - overcast |
| Outdoor Temp Low (F): | 48 | Wind Speed: | 4 mph | P.M. - sunny |
| Indoor Temp Avg (F): | 70 | Wind Direction: | NW | |

PRODUCT INVENTORY (nearby products that may contain chemicals of concern; continue on back if needed):

| Name of Product | List of Chemicals |
|---|---|
| N/A | No know |
| | |
| | |
| | |
| | |
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| | |
| | |
| | |
| | |

OUTDOOR SOURCES (possible sources of chemicals of concern from outdoor activities; continue on back if needed):

| Source | Location |
|---|---|
| Traffic | Parking lot |
| | |

Mobile Geochemistry Inc.

# Log Sheet: Indoor/Ambient Air Sampling

H&P Project #: ST02021-TECH
Site Address: 25701/2540 Skypark Dr
Consultant: Stantec
Consultant Rep: Emily Medler
H&P Rep: J. Arellano, D. Villarreal
Reviewed: EC
Scanned: ✓

| | | SAMPLE ID: AA-3 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Summa ID #: | 851 | Start Date: | 02-05-21 | Check Date: | 02-05-21 | Check Date: | 02-05-21 | End Date: | 02-05-21 |
| Flow Cont ID #: | F224 | Start Time: | 0808 | Check Time: | 1110 | Check Time: | 1435 | End Time: | 1812 |
| Flow Rate (hrs or cc/min): | 10 Hr | Start Vacuum ("Hg): | -30+ | Check Vac ("Hg): | -25 | Check Vac ("Hg): | -14 | End Vac ("Hg): | -5 |

Summa Canister Height above Ground (ft): 5

Description of Summa Canister Placement:

DIAGRAM (and/or send photo to H&P PM):
Photo sent to pm

| | | | | Weather Conditions: |
|---|---|---|---|---|
| Outdoor Temp Hi (F): | 64 | Barometric Pressure: | 30 in Hg | A.M - overcast |
| Outdoor Temp Low (F): | 48 | Wind Speed: | 4 mph | P.M - Sunny |
| Indoor Temp Avg (F): | 70 | Wind Direction: | NW | |

PRODUCT INVENTORY (nearby products that may contain chemicals of concern; continue on back if needed):

| Name of Product | List of Chemicals |
|---|---|
| | |
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OUTDOOR SOURCES (possible sources of chemicals of concern from outdoor activities; continue on back if needed):

| Source | Location |
|---|---|
| | |
| | |

Mobile Geochemistry Inc.

24 February 2021

Lewis Simons
Stantec - Thousand Oaks
290 Conejo Ridge Avenue, Suite 200
Thousand Oaks, CA 91361

H&P Project: ST021221-12
Client Project: 185804979 / Skypark Dr

Dear Lewis Simons:

Enclosed is the analytical report for the above referenced project. The data herein applies to samples as received by H&P Mobile Geochemistry, Inc. on 10-Feb-21 which were analyzed in accordance with the attached Chain of Custody record(s).

The results for all sample analyses and required QA/QC analyses are presented in the following sections and summarized in the documents:

- Sample Summary
- Case Narrative (if applicable)
- Sample Results
- Quality Control Summary
- Notes and Definitions / Appendix
- Chain of Custody
- Sampling Logs (if applicable)

Unless otherwise noted, I certify that all analyses were performed and reviewed in compliance with our Quality Systems Manual and Standard Operating Procedures. This report shall not be reproduced, except in full, without the written approval of H&P Mobile Geochemistry, Inc.

We at H&P Mobile Geochemistry, Inc. sincerely appreciate the opportunity to provide analytical services to you on this project. If you have any questions or concerns regarding this analytical report, please contact me at your convenience at 760-804-9678.

Sincerely,

Lisa Eminhizer
Laboratory Director

H&P Mobile Geochemistry, Inc. is certified under the California ELAP and the National Environmental Laboratory Accreditation Conference (NELAC) for the fields of proficiency and analytes listed on those certificates. H& P is approved as an Environmental Testing Laboratory in accordance with the DoD-ELAP Program and ISO/IEC 17025:2005 programs for the fields of proficiency and analytes included in the certification process and to the extent offered by the accreditation agency . Unless otherwise noted, accreditation certificate numbers, expiration of certificates, and scope of accreditation can be found at: www.handpmg.com/about/certifications. Fields of services and analytes contained in this report that are not listed on the certificates should be considered uncertified or unavailable for certification.

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**ANALYTICAL REPORT FOR SAMPLES**

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|
| VP-7 | E102047-01 | Vapor | 10-Feb-21 | 10-Feb-21 |
| VP-6 | E102047-02 | Vapor | 10-Feb-21 | 10-Feb-21 |
| VP-4 | E102047-03 | Vapor | 10-Feb-21 | 10-Feb-21 |
| VP-2 | E102047-04 | Vapor | 10-Feb-21 | 10-Feb-21 |
| VP-1 | E102047-05 | Vapor | 10-Feb-21 | 10-Feb-21 |
| VP-1 Dup | E102047-06 | Vapor | 10-Feb-21 | 10-Feb-21 |
| VP-3 | E102047-07 | Vapor | 10-Feb-21 | 10-Feb-21 |
| VP-5 | E102047-08 | Vapor | 10-Feb-21 | 10-Feb-21 |
| VP-8 | E102047-09 | Vapor | 10-Feb-21 | 10-Feb-21 |

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## DETECTIONS SUMMARY

Sample ID: **VP-7** Laboratory ID: **E102047-01**

| Analyte | Result | Reporting Limit | Units | Method | Notes |
|---|---|---|---|---|---|
| **1,1,2-Trichlorotrifluoroethane (F113)** | **180** | 15 | ug/m3 | EPA TO-15 | |
| **Toluene** | **18** | 7.6 | ug/m3 | EPA TO-15 | |
| **Tetrachloroethene** | **3600** | 14 | ug/m3 | EPA TO-15 | |

Sample ID: **VP-6** Laboratory ID: **E102047-02**

| Analyte | Result | Reporting Limit | Units | Method | Notes |
|---|---|---|---|---|---|
| **1,1,2-Trichlorotrifluoroethane (F113)** | **240** | 39 | ug/m3 | EPA TO-15 | |
| **Toluene** | **23** | 19 | ug/m3 | EPA TO-15 | |
| **Tetrachloroethene** | **8500** | 34 | ug/m3 | EPA TO-15 | |

Sample ID: **VP-4** Laboratory ID: **E102047-03**

| Analyte | Result | Reporting Limit | Units | Method | Notes |
|---|---|---|---|---|---|
| **1,1,2-Trichlorotrifluoroethane (F113)** | **220** | 150 | ug/m3 | EPA TO-15 | |
| **Tetrachloroethene** | **43000** | 140 | ug/m3 | EPA TO-15 | |

Sample ID: **VP-2** Laboratory ID: **E102047-04**

| Analyte | Result | Reporting Limit | Units | Method | Notes |
|---|---|---|---|---|---|
| **1,1,2-Trichlorotrifluoroethane (F113)** | **340** | 77 | ug/m3 | EPA TO-15 | |
| **Toluene** | **63** | 38 | ug/m3 | EPA TO-15 | |
| **Tetrachloroethene** | **26000** | 69 | ug/m3 | EPA TO-15 | |

Sample ID: **VP-1** Laboratory ID: **E102047-05**

| Analyte | Result | Reporting Limit | Units | Method | Notes |
|---|---|---|---|---|---|
| **1,1,2-Trichlorotrifluoroethane (F113)** | **750** | 39 | ug/m3 | EPA TO-15 | |
| **Trichloroethene** | **75** | 27 | ug/m3 | EPA TO-15 | |
| **Toluene** | **19** | 19 | ug/m3 | EPA TO-15 | |
| **Tetrachloroethene** | **5700** | 34 | ug/m3 | EPA TO-15 | |

Sample ID: **VP-1 Dup** Laboratory ID: **E102047-06**

| Analyte | Result | Reporting Limit | Units | Method | Notes |
|---|---|---|---|---|---|
| **1,1,2-Trichlorotrifluoroethane (F113)** | **810** | 39 | ug/m3 | EPA TO-15 | |
| **Trichloroethene** | **77** | 27 | ug/m3 | EPA TO-15 | |

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Sample ID: **VP-1 Dup** Laboratory ID: **E102047-06**

| Analyte | Result | Reporting Limit | Units | Method | Notes |
|---|---|---|---|---|---|
| **Tetrachloroethene** | **6000** | 34 | ug/m3 | EPA TO-15 | |

Sample ID: **VP-3** Laboratory ID: **E102047-07**

| Analyte | Result | Reporting Limit | Units | Method | Notes |
|---|---|---|---|---|---|
| **1,1,2-Trichlorotrifluoroethane (F113)** | **360** | 39 | ug/m3 | EPA TO-15 | |
| **Toluene** | **21** | 19 | ug/m3 | EPA TO-15 | |
| **Tetrachloroethene** | **13000** | 34 | ug/m3 | EPA TO-15 | |

Sample ID: **VP-5** Laboratory ID: **E102047-08**

| Analyte | Result | Reporting Limit | Units | Method | Notes |
|---|---|---|---|---|---|
| **1,1,2-Trichlorotrifluoroethane (F113)** | **260** | 15 | ug/m3 | EPA TO-15 | |
| **Toluene** | **21** | 7.6 | ug/m3 | EPA TO-15 | |
| **Tetrachloroethene** | **3200** | 14 | ug/m3 | EPA TO-15 | |

Sample ID: **VP-8** Laboratory ID: **E102047-09**

| Analyte | Result | Reporting Limit | Units | Method | Notes |
|---|---|---|---|---|---|
| **1,1,2-Trichlorotrifluoroethane (F113)** | **160** | 7.7 | ug/m3 | EPA TO-15 | |
| **Benzene** | **4.8** | 3.2 | ug/m3 | EPA TO-15 | |
| **Toluene** | **14** | 3.8 | ug/m3 | EPA TO-15 | |
| **Tetrachloroethene** | **670** | 6.9 | ug/m3 | EPA TO-15 | |

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## Soil Vapor/Air Analysis by ASTM D1945M

## H&P Mobile Geochemistry, Inc.

| Analyte | Result | Reporting Limit | Units | Dilution Factor | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **VP-7 (E102047-01) Vapor Sampled: 10-Feb-21 Received: 10-Feb-21** | | | | | | | | | |
| Helium (LCC) | ND | 0.10 | % | 1 | EB11714 | 17-Feb-21 | 17-Feb-21 | ASTM D1945M | |
| **VP-6 (E102047-02) Vapor Sampled: 10-Feb-21 Received: 10-Feb-21** | | | | | | | | | |
| Helium (LCC) | ND | 0.10 | % | 1 | EB11714 | 17-Feb-21 | 17-Feb-21 | ASTM D1945M | |
| **VP-4 (E102047-03) Vapor Sampled: 10-Feb-21 Received: 10-Feb-21** | | | | | | | | | |
| Helium (LCC) | ND | 0.10 | % | 1 | EB11714 | 17-Feb-21 | 17-Feb-21 | ASTM D1945M | |
| **VP-2 (E102047-04) Vapor Sampled: 10-Feb-21 Received: 10-Feb-21** | | | | | | | | | |
| Helium (LCC) | ND | 0.10 | % | 1 | EB11714 | 17-Feb-21 | 17-Feb-21 | ASTM D1945M | |
| **VP-1 (E102047-05) Vapor Sampled: 10-Feb-21 Received: 10-Feb-21** | | | | | | | | | |
| Helium (LCC) | ND | 0.10 | % | 1 | EB11714 | 17-Feb-21 | 17-Feb-21 | ASTM D1945M | |
| **VP-1 Dup (E102047-06) Vapor Sampled: 10-Feb-21 Received: 10-Feb-21** | | | | | | | | | |
| Helium (LCC) | ND | 0.10 | % | 1 | EB11714 | 17-Feb-21 | 17-Feb-21 | ASTM D1945M | |
| **VP-3 (E102047-07) Vapor Sampled: 10-Feb-21 Received: 10-Feb-21** | | | | | | | | | |
| Helium (LCC) | ND | 0.10 | % | 1 | EB11714 | 17-Feb-21 | 17-Feb-21 | ASTM D1945M | |
| **VP-5 (E102047-08) Vapor Sampled: 10-Feb-21 Received: 10-Feb-21** | | | | | | | | | |
| Helium (LCC) | ND | 0.10 | % | 1 | EB11714 | 17-Feb-21 | 17-Feb-21 | ASTM D1945M | |
| **VP-8 (E102047-09) Vapor Sampled: 10-Feb-21 Received: 10-Feb-21** | | | | | | | | | |
| Helium (LCC) | ND | 0.10 | % | 1 | EB11714 | 17-Feb-21 | 17-Feb-21 | ASTM D1945M | |

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## Volatile Organic Compounds by EPA TO-15

## H&P Mobile Geochemistry, Inc.

| Analyte | Result | Reporting Limit | Units | Dilution Factor | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **VP-7 (E102047-01) Vapor Sampled: 10-Feb-21 Received: 10-Feb-21** | | | | | | | | | |
| Dichlorodifluoromethane (F12) | ND | 10 | ug/m3 | 2 | EB12316 | 23-Feb-21 | 23-Feb-21 | EPA TO-15 | |
| Chloromethane | ND | 4.1 | " | " | " | " | " | " | |
| Dichlorotetrafluoroethane (F114) | ND | 14 | " | " | " | " | " | " | |
| Vinyl chloride | ND | 5.2 | " | " | " | " | " | " | |
| Bromomethane | ND | 32 | " | " | " | " | " | " | |
| Chloroethane | ND | 16 | " | " | " | " | " | " | |
| Trichlorofluoromethane (F11) | ND | 11 | " | " | " | " | " | " | |
| 1,1-Dichloroethene | ND | 8.0 | " | " | " | " | " | " | |
| **1,1,2-Trichlorotrifluoroethane (F113)** | **180** | 15 | " | " | " | " | " | " | |
| Methylene chloride (Dichloromethane) | ND | 7.1 | " | " | " | " | " | " | |
| Carbon disulfide | ND | 13 | " | " | " | " | " | " | |
| trans-1,2-Dichloroethene | ND | 16 | " | " | " | " | " | " | |
| 1,1-Dichloroethane | ND | 8.2 | " | " | " | " | " | " | |
| 2-Butanone (MEK) | ND | 60 | " | " | " | " | " | " | |
| cis-1,2-Dichloroethene | ND | 8.0 | " | " | " | " | " | " | |
| Chloroform | ND | 9.9 | " | " | " | " | " | " | |
| 1,1,1-Trichloroethane | ND | 11 | " | " | " | " | " | " | |
| 1,2-Dichloroethane (EDC) | ND | 8.2 | " | " | " | " | " | " | |
| Benzene | ND | 6.5 | " | " | " | " | " | " | |
| Carbon tetrachloride | ND | 13 | " | " | " | " | " | " | |
| Trichloroethene | ND | 11 | " | " | " | " | " | " | |
| 1,2-Dichloropropane | ND | 19 | " | " | " | " | " | " | |
| Bromodichloromethane | ND | 14 | " | " | " | " | " | " | |
| cis-1,3-Dichloropropene | ND | 9.2 | " | " | " | " | " | " | |
| 4-Methyl-2-pentanone (MIBK) | ND | 17 | " | " | " | " | " | " | |
| trans-1,3-Dichloropropene | ND | 9.2 | " | " | " | " | " | " | |
| **Toluene** | **18** | 7.6 | " | " | " | " | " | " | |
| 1,1,2-Trichloroethane | ND | 11 | " | " | " | " | " | " | |
| 2-Hexanone (MBK) | ND | 17 | " | " | " | " | " | " | |
| Dibromochloromethane | ND | 17 | " | " | " | " | " | " | |
| **Tetrachloroethene** | **3600** | 14 | " | " | " | " | " | " | |
| 1,2-Dibromoethane (EDB) | ND | 16 | " | " | " | " | " | " | |
| 1,1,1,2-Tetrachloroethane | ND | 14 | " | " | " | " | " | " | |
| Chlorobenzene | ND | 9.4 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 8.8 | " | " | " | " | " | " | |
| m,p-Xylene | ND | 18 | " | " | " | " | " | " | |
| Styrene | ND | 8.6 | " | " | " | " | " | " | |
| o-Xylene | ND | 8.8 | " | " | " | " | " | " | |

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## Volatile Organic Compounds by EPA TO-15

## H&P Mobile Geochemistry, Inc.

| Analyte | Result | Reporting Limit | Units | Dilution Factor | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **VP-7 (E102047-01) Vapor Sampled: 10-Feb-21 Received: 10-Feb-21** | | | | | | | | | |
| Bromoform | ND | 21 | ug/m3 | 2 | EB12316 | 23-Feb-21 | 23-Feb-21 | EPA TO-15 | |
| 1,1,2,2-Tetrachloroethane | ND | 14 | " | " | " | " | " | " | |
| 4-Ethyltoluene | ND | 10 | " | " | " | " | " | " | |
| 1,3,5-Trimethylbenzene | ND | 10 | " | " | " | " | " | " | |
| 1,2,4-Trimethylbenzene | ND | 10 | " | " | " | " | " | " | |
| 1,3-Dichlorobenzene | ND | 24 | " | " | " | " | " | " | |
| 1,4-Dichlorobenzene | ND | 24 | " | " | " | " | " | " | |
| 1,2-Dichlorobenzene | ND | 24 | " | " | " | " | " | " | |
| 1,2,4-Trichlorobenzene | ND | 75 | " | " | " | " | " | " | |
| Hexachlorobutadiene | ND | 110 | " | " | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *105 %* | | *76-134* | " | " | " | " | |
| *Surrogate: Toluene-d8* | | *105 %* | | *78-125* | " | " | " | " | |
| *Surrogate: 4-Bromofluorobenzene* | | *88.7 %* | | *77-127* | " | " | " | " | |
| **VP-6 (E102047-02) Vapor Sampled: 10-Feb-21 Received: 10-Feb-21** | | | | | | | | | |
| Dichlorodifluoromethane (F12) | ND | 25 | ug/m3 | 5 | EB12316 | 23-Feb-21 | 23-Feb-21 | EPA TO-15 | |
| Chloromethane | ND | 10 | " | " | " | " | " | " | |
| Dichlorotetrafluoroethane (F114) | ND | 35 | " | " | " | " | " | " | |
| Vinyl chloride | ND | 13 | " | " | " | " | " | " | |
| Bromomethane | ND | 79 | " | " | " | " | " | " | |
| Chloroethane | ND | 40 | " | " | " | " | " | " | |
| Trichlorofluoromethane (F11) | ND | 28 | " | " | " | " | " | " | |
| 1,1-Dichloroethene | ND | 20 | " | " | " | " | " | " | |
| **1,1,2-Trichlorotrifluoroethane (F113)** | **240** | 39 | " | " | " | " | " | " | |
| Methylene chloride (Dichloromethane) | ND | 18 | " | " | " | " | " | " | |
| Carbon disulfide | ND | 32 | " | " | " | " | " | " | |
| trans-1,2-Dichloroethene | ND | 40 | " | " | " | " | " | " | |
| 1,1-Dichloroethane | ND | 21 | " | " | " | " | " | " | |
| 2-Butanone (MEK) | ND | 150 | " | " | " | " | " | " | |
| cis-1,2-Dichloroethene | ND | 20 | " | " | " | " | " | " | |
| Chloroform | ND | 25 | " | " | " | " | " | " | |
| 1,1,1-Trichloroethane | ND | 28 | " | " | " | " | " | " | |
| 1,2-Dichloroethane (EDC) | ND | 21 | " | " | " | " | " | " | |
| Benzene | ND | 16 | " | " | " | " | " | " | |
| Carbon tetrachloride | ND | 32 | " | " | " | " | " | " | |
| Trichloroethene | ND | 27 | " | " | " | " | " | " | |
| 1,2-Dichloropropane | ND | 47 | " | " | " | " | " | " | |

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## Volatile Organic Compounds by EPA TO-15

## H&P Mobile Geochemistry, Inc.

| Analyte | Result | Reporting Limit | Units | Dilution Factor | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **VP-6 (E102047-02) Vapor Sampled: 10-Feb-21 Received: 10-Feb-21** | | | | | | | | | |
| Bromodichloromethane | ND | 34 | ug/m3 | 5 | EB12316 | 23-Feb-21 | 23-Feb-21 | EPA TO-15 | |
| cis-1,3-Dichloropropene | ND | 23 | " | " | " | " | " | " | |
| 4-Methyl-2-pentanone (MIBK) | ND | 41 | " | " | " | " | " | " | |
| trans-1,3-Dichloropropene | ND | 23 | " | " | " | " | " | " | |
| **Toluene** | **23** | 19 | " | " | " | " | " | " | |
| 1,1,2-Trichloroethane | ND | 28 | " | " | " | " | " | " | |
| 2-Hexanone (MBK) | ND | 41 | " | " | " | " | " | " | |
| Dibromochloromethane | ND | 43 | " | " | " | " | " | " | |
| **Tetrachloroethene** | **8500** | 34 | " | " | " | " | " | " | |
| 1,2-Dibromoethane (EDB) | ND | 39 | " | " | " | " | " | " | |
| 1,1,1,2-Tetrachloroethane | ND | 35 | " | " | " | " | " | " | |
| Chlorobenzene | ND | 23 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 22 | " | " | " | " | " | " | |
| m,p-Xylene | ND | 44 | " | " | " | " | " | " | |
| Styrene | ND | 22 | " | " | " | " | " | " | |
| o-Xylene | ND | 22 | " | " | " | " | " | " | |
| Bromoform | ND | 52 | " | " | " | " | " | " | |
| 1,1,2,2-Tetrachloroethane | ND | 35 | " | " | " | " | " | " | |
| 4-Ethyltoluene | ND | 25 | " | " | " | " | " | " | |
| 1,3,5-Trimethylbenzene | ND | 25 | " | " | " | " | " | " | |
| 1,2,4-Trimethylbenzene | ND | 25 | " | " | " | " | " | " | |
| 1,3-Dichlorobenzene | ND | 61 | " | " | " | " | " | " | |
| 1,4-Dichlorobenzene | ND | 61 | " | " | " | " | " | " | |
| 1,2-Dichlorobenzene | ND | 61 | " | " | " | " | " | " | |
| 1,2,4-Trichlorobenzene | ND | 190 | " | " | " | " | " | " | |
| Hexachlorobutadiene | ND | 270 | " | " | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *106 %* | | *76-134* | " | " | " | " | |
| *Surrogate: Toluene-d8* | | *104 %* | | *78-125* | " | " | " | " | |
| *Surrogate: 4-Bromofluorobenzene* | | *85.4 %* | | *77-127* | " | " | " | " | |

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## Volatile Organic Compounds by EPA TO-15

## H&P Mobile Geochemistry, Inc.

| Analyte | Result | Reporting Limit | Units | Dilution Factor | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **VP-4 (E102047-03) Vapor Sampled: 10-Feb-21 Received: 10-Feb-21** | | | | | | | | | |
| Dichlorodifluoromethane (F12) | ND | 100 | ug/m3 | 20 | EB12316 | 23-Feb-21 | 23-Feb-21 | EPA TO-15 | |
| Chloromethane | ND | 41 | " | " | " | " | " | " | |
| Dichlorotetrafluoroethane (F114) | ND | 140 | " | " | " | " | " | " | |
| Vinyl chloride | ND | 52 | " | " | " | " | " | " | |
| Bromomethane | ND | 320 | " | " | " | " | " | " | |
| Chloroethane | ND | 160 | " | " | " | " | " | " | |
| Trichlorofluoromethane (F11) | ND | 110 | " | " | " | " | " | " | |
| 1,1-Dichloroethene | ND | 80 | " | " | " | " | " | " | |
| **1,1,2-Trichlorotrifluoroethane (F113)** | **220** | 150 | " | " | " | " | " | " | |
| Methylene chloride (Dichloromethane) | ND | 71 | " | " | " | " | " | " | |
| Carbon disulfide | ND | 130 | " | " | " | " | " | " | |
| trans-1,2-Dichloroethene | ND | 160 | " | " | " | " | " | " | |
| 1,1-Dichloroethane | ND | 82 | " | " | " | " | " | " | |
| 2-Butanone (MEK) | ND | 600 | " | " | " | " | " | " | |
| cis-1,2-Dichloroethene | ND | 80 | " | " | " | " | " | " | |
| Chloroform | ND | 99 | " | " | " | " | " | " | |
| 1,1,1-Trichloroethane | ND | 110 | " | " | " | " | " | " | |
| 1,2-Dichloroethane (EDC) | ND | 82 | " | " | " | " | " | " | |
| Benzene | ND | 65 | " | " | " | " | " | " | |
| Carbon tetrachloride | ND | 130 | " | " | " | " | " | " | |
| Trichloroethene | ND | 110 | " | " | " | " | " | " | |
| 1,2-Dichloropropane | ND | 190 | " | " | " | " | " | " | |
| Bromodichloromethane | ND | 140 | " | " | " | " | " | " | |
| cis-1,3-Dichloropropene | ND | 92 | " | " | " | " | " | " | |
| 4-Methyl-2-pentanone (MIBK) | ND | 170 | " | " | " | " | " | " | |
| trans-1,3-Dichloropropene | ND | 92 | " | " | " | " | " | " | |
| Toluene | ND | 76 | " | " | " | " | " | " | |
| 1,1,2-Trichloroethane | ND | 110 | " | " | " | " | " | " | |
| 2-Hexanone (MBK) | ND | 170 | " | " | " | " | " | " | |
| Dibromochloromethane | ND | 170 | " | " | " | " | " | " | |
| **Tetrachloroethene** | **43000** | 140 | " | " | " | " | " | " | |
| 1,2-Dibromoethane (EDB) | ND | 160 | " | " | " | " | " | " | |
| 1,1,1,2-Tetrachloroethane | ND | 140 | " | " | " | " | " | " | |
| Chlorobenzene | ND | 94 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 88 | " | " | " | " | " | " | |
| m,p-Xylene | ND | 180 | " | " | " | " | " | " | |
| Styrene | ND | 86 | " | " | " | " | " | " | |
| o-Xylene | ND | 88 | " | " | " | " | " | " | |

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| 290 Conejo Ridge Avenue, Suite 200 | Project Number: 185804979 / Skypark Dr | Reported: |
| Thousand Oaks, CA 91361 | Project Manager: Lewis Simons | 24-Feb-21 12:00 |

## Volatile Organic Compounds by EPA TO-15

## H&P Mobile Geochemistry, Inc.

| Analyte | Result | Reporting Limit | Units | Dilution Factor | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **VP-4 (E102047-03) Vapor Sampled: 10-Feb-21 Received: 10-Feb-21** | | | | | | | | | |
| Bromoform | ND | 210 | ug/m3 | 20 | EB12316 | 23-Feb-21 | 23-Feb-21 | EPA TO-15 | |
| 1,1,2,2-Tetrachloroethane | ND | 140 | " | " | " | " | " | " | |
| 4-Ethyltoluene | ND | 100 | " | " | " | " | " | " | |
| 1,3,5-Trimethylbenzene | ND | 100 | " | " | " | " | " | " | |
| 1,2,4-Trimethylbenzene | ND | 100 | " | " | " | " | " | " | |
| 1,3-Dichlorobenzene | ND | 240 | " | " | " | " | " | " | |
| 1,4-Dichlorobenzene | ND | 240 | " | " | " | " | " | " | |
| 1,2-Dichlorobenzene | ND | 240 | " | " | " | " | " | " | |
| 1,2,4-Trichlorobenzene | ND | 750 | " | " | " | " | " | " | |
| Hexachlorobutadiene | ND | 1100 | " | " | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *108 %* | | *76-134* | " | " | " | " | |
| *Surrogate: Toluene-d8* | | *105 %* | | *78-125* | " | " | " | " | |
| *Surrogate: 4-Bromofluorobenzene* | | *86.3 %* | | *77-127* | " | " | " | " | |
| **VP-2 (E102047-04) Vapor Sampled: 10-Feb-21 Received: 10-Feb-21** | | | | | | | | | |
| Dichlorodifluoromethane (F12) | ND | 50 | ug/m3 | 10 | EB12316 | 23-Feb-21 | 23-Feb-21 | EPA TO-15 | |
| Chloromethane | ND | 21 | " | " | " | " | " | " | |
| Dichlorotetrafluoroethane (F114) | ND | 71 | " | " | " | " | " | " | |
| Vinyl chloride | ND | 26 | " | " | " | " | " | " | |
| Bromomethane | ND | 160 | " | " | " | " | " | " | |
| Chloroethane | ND | 80 | " | " | " | " | " | " | |
| Trichlorofluoromethane (F11) | ND | 56 | " | " | " | " | " | " | |
| 1,1-Dichloroethene | ND | 40 | " | " | " | " | " | " | |
| **1,1,2-Trichlorotrifluoroethane (F113)** | **340** | 77 | " | " | " | " | " | " | |
| Methylene chloride (Dichloromethane) | ND | 35 | " | " | " | " | " | " | |
| Carbon disulfide | ND | 63 | " | " | " | " | " | " | |
| trans-1,2-Dichloroethene | ND | 80 | " | " | " | " | " | " | |
| 1,1-Dichloroethane | ND | 41 | " | " | " | " | " | " | |
| 2-Butanone (MEK) | ND | 300 | " | " | " | " | " | " | |
| cis-1,2-Dichloroethene | ND | 40 | " | " | " | " | " | " | |
| Chloroform | ND | 49 | " | " | " | " | " | " | |
| 1,1,1-Trichloroethane | ND | 55 | " | " | " | " | " | " | |
| 1,2-Dichloroethane (EDC) | ND | 41 | " | " | " | " | " | " | |
| Benzene | ND | 32 | " | " | " | " | " | " | |
| Carbon tetrachloride | ND | 64 | " | " | " | " | " | " | |
| Trichloroethene | ND | 55 | " | " | " | " | " | " | |
| 1,2-Dichloropropane | ND | 94 | " | " | " | " | " | " | |

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| Thousand Oaks, CA 91361 | Project Manager: Lewis Simons | 24-Feb-21 12:00 |

## Volatile Organic Compounds by EPA TO-15

## H&P Mobile Geochemistry, Inc.

| Analyte | Result | Reporting Limit | Units | Dilution Factor | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **VP-2 (E102047-04) Vapor Sampled: 10-Feb-21 Received: 10-Feb-21** | | | | | | | | | |
| Bromodichloromethane | ND | 68 | ug/m3 | 10 | EB12316 | 23-Feb-21 | 23-Feb-21 | EPA TO-15 | |
| cis-1,3-Dichloropropene | ND | 46 | " | " | " | " | " | " | |
| 4-Methyl-2-pentanone (MIBK) | ND | 83 | " | " | " | " | " | " | |
| trans-1,3-Dichloropropene | ND | 46 | " | " | " | " | " | " | |
| **Toluene** | **63** | 38 | " | " | " | " | " | " | |
| 1,1,2-Trichloroethane | ND | 55 | " | " | " | " | " | " | |
| 2-Hexanone (MBK) | ND | 83 | " | " | " | " | " | " | |
| Dibromochloromethane | ND | 86 | " | " | " | " | " | " | |
| **Tetrachloroethene** | **26000** | 69 | " | " | " | " | " | " | |
| 1,2-Dibromoethane (EDB) | ND | 78 | " | " | " | " | " | " | |
| 1,1,1,2-Tetrachloroethane | ND | 70 | " | " | " | " | " | " | |
| Chlorobenzene | ND | 47 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 44 | " | " | " | " | " | " | |
| m,p-Xylene | ND | 88 | " | " | " | " | " | " | |
| Styrene | ND | 43 | " | " | " | " | " | " | |
| o-Xylene | ND | 44 | " | " | " | " | " | " | |
| Bromoform | ND | 100 | " | " | " | " | " | " | |
| 1,1,2,2-Tetrachloroethane | ND | 70 | " | " | " | " | " | " | |
| 4-Ethyltoluene | ND | 50 | " | " | " | " | " | " | |
| 1,3,5-Trimethylbenzene | ND | 50 | " | " | " | " | " | " | |
| 1,2,4-Trimethylbenzene | ND | 50 | " | " | " | " | " | " | |
| 1,3-Dichlorobenzene | ND | 120 | " | " | " | " | " | " | |
| 1,4-Dichlorobenzene | ND | 120 | " | " | " | " | " | " | |
| 1,2-Dichlorobenzene | ND | 120 | " | " | " | " | " | " | |
| 1,2,4-Trichlorobenzene | ND | 380 | " | " | " | " | " | " | |
| Hexachlorobutadiene | ND | 540 | " | " | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *107 %* | | *76-134* | " | " | " | " | |
| *Surrogate: Toluene-d8* | | *102 %* | | *78-125* | " | " | " | " | |
| *Surrogate: 4-Bromofluorobenzene* | | *89.0 %* | | *77-127* | " | " | " | " | |

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## Volatile Organic Compounds by EPA TO-15

## H&P Mobile Geochemistry, Inc.

**VP-1 (E102047-05) Vapor Sampled: 10-Feb-21 Received: 10-Feb-21**

| Analyte | Result | Reporting Limit | Units | Dilution Factor | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane (F12) | ND | 25 | ug/m3 | 5 | EB12316 | 23-Feb-21 | 23-Feb-21 | EPA TO-15 | |
| Chloromethane | ND | 10 | " | " | " | " | " | " | |
| Dichlorotetrafluoroethane (F114) | ND | 35 | " | " | " | " | " | " | |
| Vinyl chloride | ND | 13 | " | " | " | " | " | " | |
| Bromomethane | ND | 79 | " | " | " | " | " | " | |
| Chloroethane | ND | 40 | " | " | " | " | " | " | |
| Trichlorofluoromethane (F11) | ND | 28 | " | " | " | " | " | " | |
| 1,1-Dichloroethene | ND | 20 | " | " | " | " | " | " | |
| **1,1,2-Trichlorotrifluoroethane (F113)** | **750** | 39 | " | " | " | " | " | " | |
| Methylene chloride (Dichloromethane) | ND | 18 | " | " | " | " | " | " | |
| Carbon disulfide | ND | 32 | " | " | " | " | " | " | |
| trans-1,2-Dichloroethene | ND | 40 | " | " | " | " | " | " | |
| 1,1-Dichloroethane | ND | 21 | " | " | " | " | " | " | |
| 2-Butanone (MEK) | ND | 150 | " | " | " | " | " | " | |
| cis-1,2-Dichloroethene | ND | 20 | " | " | " | " | " | " | |
| Chloroform | ND | 25 | " | " | " | " | " | " | |
| 1,1,1-Trichloroethane | ND | 28 | " | " | " | " | " | " | |
| 1,2-Dichloroethane (EDC) | ND | 21 | " | " | " | " | " | " | |
| Benzene | ND | 16 | " | " | " | " | " | " | |
| Carbon tetrachloride | ND | 32 | " | " | " | " | " | " | |
| **Trichloroethene** | **75** | 27 | " | " | " | " | " | " | |
| 1,2-Dichloropropane | ND | 47 | " | " | " | " | " | " | |
| Bromodichloromethane | ND | 34 | " | " | " | " | " | " | |
| cis-1,3-Dichloropropene | ND | 23 | " | " | " | " | " | " | |
| 4-Methyl-2-pentanone (MIBK) | ND | 41 | " | " | " | " | " | " | |
| trans-1,3-Dichloropropene | ND | 23 | " | " | " | " | " | " | |
| **Toluene** | **19** | 19 | " | " | " | " | " | " | |
| 1,1,2-Trichloroethane | ND | 28 | " | " | " | " | " | " | |
| 2-Hexanone (MBK) | ND | 41 | " | " | " | " | " | " | |
| Dibromochloromethane | ND | 43 | " | " | " | " | " | " | |
| **Tetrachloroethene** | **5700** | 34 | " | " | " | " | " | " | |
| 1,2-Dibromoethane (EDB) | ND | 39 | " | " | " | " | " | " | |
| 1,1,1,2-Tetrachloroethane | ND | 35 | " | " | " | " | " | " | |
| Chlorobenzene | ND | 23 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 22 | " | " | " | " | " | " | |
| m,p-Xylene | ND | 44 | " | " | " | " | " | " | |
| Styrene | ND | 22 | " | " | " | " | " | " | |
| o-Xylene | ND | 22 | " | " | " | " | " | " | |

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## Volatile Organic Compounds by EPA TO-15

## H&P Mobile Geochemistry, Inc.

| Analyte | Result | Reporting Limit | Units | Dilution Factor | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **VP-1 (E102047-05) Vapor Sampled: 10-Feb-21 Received: 10-Feb-21** | | | | | | | | | |
| Bromoform | ND | 52 | ug/m3 | 5 | EB12316 | 23-Feb-21 | 23-Feb-21 | EPA TO-15 | |
| 1,1,2,2-Tetrachloroethane | ND | 35 | " | " | " | " | " | " | |
| 4-Ethyltoluene | ND | 25 | " | " | " | " | " | " | |
| 1,3,5-Trimethylbenzene | ND | 25 | " | " | " | " | " | " | |
| 1,2,4-Trimethylbenzene | ND | 25 | " | " | " | " | " | " | |
| 1,3-Dichlorobenzene | ND | 61 | " | " | " | " | " | " | |
| 1,4-Dichlorobenzene | ND | 61 | " | " | " | " | " | " | |
| 1,2-Dichlorobenzene | ND | 61 | " | " | " | " | " | " | |
| 1,2,4-Trichlorobenzene | ND | 190 | " | " | " | " | " | " | |
| Hexachlorobutadiene | ND | 270 | " | " | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *106 %* | | *76-134* | " | " | " | " | |
| *Surrogate: Toluene-d8* | | *104 %* | | *78-125* | " | " | " | " | |
| *Surrogate: 4-Bromofluorobenzene* | | *87.8 %* | | *77-127* | " | " | " | " | |
| **VP-1 Dup (E102047-06) Vapor Sampled: 10-Feb-21 Received: 10-Feb-21** | | | | | | | | | |
| Dichlorodifluoromethane (F12) | ND | 25 | ug/m3 | 5 | EB12316 | 23-Feb-21 | 23-Feb-21 | EPA TO-15 | |
| Chloromethane | ND | 10 | " | " | " | " | " | " | |
| Dichlorotetrafluoroethane (F114) | ND | 35 | " | " | " | " | " | " | |
| Vinyl chloride | ND | 13 | " | " | " | " | " | " | |
| Bromomethane | ND | 79 | " | " | " | " | " | " | |
| Chloroethane | ND | 40 | " | " | " | " | " | " | |
| Trichlorofluoromethane (F11) | ND | 28 | " | " | " | " | " | " | |
| 1,1-Dichloroethene | ND | 20 | " | " | " | " | " | " | |
| **1,1,2-Trichlorotrifluoroethane (F113)** | **810** | 39 | " | " | " | " | " | " | |
| Methylene chloride (Dichloromethane) | ND | 18 | " | " | " | " | " | " | |
| Carbon disulfide | ND | 32 | " | " | " | " | " | " | |
| trans-1,2-Dichloroethene | ND | 40 | " | " | " | " | " | " | |
| 1,1-Dichloroethane | ND | 21 | " | " | " | " | " | " | |
| 2-Butanone (MEK) | ND | 150 | " | " | " | " | " | " | |
| cis-1,2-Dichloroethene | ND | 20 | " | " | " | " | " | " | |
| Chloroform | ND | 25 | " | " | " | " | " | " | |
| 1,1,1-Trichloroethane | ND | 28 | " | " | " | " | " | " | |
| 1,2-Dichloroethane (EDC) | ND | 21 | " | " | " | " | " | " | |
| Benzene | ND | 16 | " | " | " | " | " | " | |
| Carbon tetrachloride | ND | 32 | " | " | " | " | " | " | |
| **Trichloroethene** | **77** | 27 | " | " | " | " | " | " | |
| 1,2-Dichloropropane | ND | 47 | " | " | " | " | " | " | |

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## Volatile Organic Compounds by EPA TO-15

## H&P Mobile Geochemistry, Inc.

| Analyte | Result | Reporting Limit | Units | Dilution Factor | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **VP-1 Dup (E102047-06) Vapor Sampled: 10-Feb-21 Received: 10-Feb-21** | | | | | | | | | |
| Bromodichloromethane | ND | 34 | ug/m3 | 5 | EB12316 | 23-Feb-21 | 23-Feb-21 | EPA TO-15 | |
| cis-1,3-Dichloropropene | ND | 23 | " | " | " | " | " | " | |
| 4-Methyl-2-pentanone (MIBK) | ND | 41 | " | " | " | " | " | " | |
| trans-1,3-Dichloropropene | ND | 23 | " | " | " | " | " | " | |
| Toluene | ND | 19 | " | " | " | " | " | " | |
| 1,1,2-Trichloroethane | ND | 28 | " | " | " | " | " | " | |
| 2-Hexanone (MBK) | ND | 41 | " | " | " | " | " | " | |
| Dibromochloromethane | ND | 43 | " | " | " | " | " | " | |
| **Tetrachloroethene** | **6000** | 34 | " | " | " | " | " | " | |
| 1,2-Dibromoethane (EDB) | ND | 39 | " | " | " | " | " | " | |
| 1,1,1,2-Tetrachloroethane | ND | 35 | " | " | " | " | " | " | |
| Chlorobenzene | ND | 23 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 22 | " | " | " | " | " | " | |
| m,p-Xylene | ND | 44 | " | " | " | " | " | " | |
| Styrene | ND | 22 | " | " | " | " | " | " | |
| o-Xylene | ND | 22 | " | " | " | " | " | " | |
| Bromoform | ND | 52 | " | " | " | " | " | " | |
| 1,1,2,2-Tetrachloroethane | ND | 35 | " | " | " | " | " | " | |
| 4-Ethyltoluene | ND | 25 | " | " | " | " | " | " | |
| 1,3,5-Trimethylbenzene | ND | 25 | " | " | " | " | " | " | |
| 1,2,4-Trimethylbenzene | ND | 25 | " | " | " | " | " | " | |
| 1,3-Dichlorobenzene | ND | 61 | " | " | " | " | " | " | |
| 1,4-Dichlorobenzene | ND | 61 | " | " | " | " | " | " | |
| 1,2-Dichlorobenzene | ND | 61 | " | " | " | " | " | " | |
| 1,2,4-Trichlorobenzene | ND | 190 | " | " | " | " | " | " | |
| Hexachlorobutadiene | ND | 270 | " | " | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *107 %* | | *76-134* | " | " | " | " | |
| *Surrogate: Toluene-d8* | | *103 %* | | *78-125* | " | " | " | " | |
| *Surrogate: 4-Bromofluorobenzene* | | *78.9 %* | | *77-127* | " | " | " | " | |

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## Volatile Organic Compounds by EPA TO-15

## H&P Mobile Geochemistry, Inc.

| Analyte | Result | Reporting Limit | Units | Dilution Factor | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **VP-3 (E102047-07) Vapor Sampled: 10-Feb-21 Received: 10-Feb-21** | | | | | | | | | |
| Dichlorodifluoromethane (F12) | ND | 25 | ug/m3 | 5 | EB12316 | 23-Feb-21 | 23-Feb-21 | EPA TO-15 | |
| Chloromethane | ND | 10 | " | " | " | " | " | " | |
| Dichlorotetrafluoroethane (F114) | ND | 35 | " | " | " | " | " | " | |
| Vinyl chloride | ND | 13 | " | " | " | " | " | " | |
| Bromomethane | ND | 79 | " | " | " | " | " | " | |
| Chloroethane | ND | 40 | " | " | " | " | " | " | |
| Trichlorofluoromethane (F11) | ND | 28 | " | " | " | " | " | " | |
| 1,1-Dichloroethene | ND | 20 | " | " | " | " | " | " | |
| **1,1,2-Trichlorotrifluoroethane (F113)** | **360** | 39 | " | " | " | " | " | " | |
| Methylene chloride (Dichloromethane) | ND | 18 | " | " | " | " | " | " | |
| Carbon disulfide | ND | 32 | " | " | " | " | " | " | |
| trans-1,2-Dichloroethene | ND | 40 | " | " | " | " | " | " | |
| 1,1-Dichloroethane | ND | 21 | " | " | " | " | " | " | |
| 2-Butanone (MEK) | ND | 150 | " | " | " | " | " | " | |
| cis-1,2-Dichloroethene | ND | 20 | " | " | " | " | " | " | |
| Chloroform | ND | 25 | " | " | " | " | " | " | |
| 1,1,1-Trichloroethane | ND | 28 | " | " | " | " | " | " | |
| 1,2-Dichloroethane (EDC) | ND | 21 | " | " | " | " | " | " | |
| Benzene | ND | 16 | " | " | " | " | " | " | |
| Carbon tetrachloride | ND | 32 | " | " | " | " | " | " | |
| Trichloroethene | ND | 27 | " | " | " | " | " | " | |
| 1,2-Dichloropropane | ND | 47 | " | " | " | " | " | " | |
| Bromodichloromethane | ND | 34 | " | " | " | " | " | " | |
| cis-1,3-Dichloropropene | ND | 23 | " | " | " | " | " | " | |
| 4-Methyl-2-pentanone (MIBK) | ND | 41 | " | " | " | " | " | " | |
| trans-1,3-Dichloropropene | ND | 23 | " | " | " | " | " | " | |
| **Toluene** | **21** | 19 | " | " | " | " | " | " | |
| 1,1,2-Trichloroethane | ND | 28 | " | " | " | " | " | " | |
| 2-Hexanone (MBK) | ND | 41 | " | " | " | " | " | " | |
| Dibromochloromethane | ND | 43 | " | " | " | " | " | " | |
| **Tetrachloroethene** | **13000** | 34 | " | " | " | " | " | " | |
| 1,2-Dibromoethane (EDB) | ND | 39 | " | " | " | " | " | " | |
| 1,1,1,2-Tetrachloroethane | ND | 35 | " | " | " | " | " | " | |
| Chlorobenzene | ND | 23 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 22 | " | " | " | " | " | " | |
| m,p-Xylene | ND | 44 | " | " | " | " | " | " | |
| Styrene | ND | 22 | " | " | " | " | " | " | |
| o-Xylene | ND | 22 | " | " | " | " | " | " | |

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| 290 Conejo Ridge Avenue, Suite 200 | Project Number: 185804979 / Skypark Dr | Reported: |
| Thousand Oaks, CA 91361 | Project Manager: Lewis Simons | 24-Feb-21 12:00 |

## Volatile Organic Compounds by EPA TO-15

## H&P Mobile Geochemistry, Inc.

| Analyte | Result | Reporting Limit | Units | Dilution Factor | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **VP-3 (E102047-07) Vapor Sampled: 10-Feb-21 Received: 10-Feb-21** | | | | | | | | | |
| Bromoform | ND | 52 | ug/m3 | 5 | EB12316 | 23-Feb-21 | 23-Feb-21 | EPA TO-15 | |
| 1,1,2,2-Tetrachloroethane | ND | 35 | " | " | " | " | " | " | |
| 4-Ethyltoluene | ND | 25 | " | " | " | " | " | " | |
| 1,3,5-Trimethylbenzene | ND | 25 | " | " | " | " | " | " | |
| 1,2,4-Trimethylbenzene | ND | 25 | " | " | " | " | " | " | |
| 1,3-Dichlorobenzene | ND | 61 | " | " | " | " | " | " | |
| 1,4-Dichlorobenzene | ND | 61 | " | " | " | " | " | " | |
| 1,2-Dichlorobenzene | ND | 61 | " | " | " | " | " | " | |
| 1,2,4-Trichlorobenzene | ND | 190 | " | " | " | " | " | " | |
| Hexachlorobutadiene | ND | 270 | " | " | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *108 %* | | *76-134* | " | " | " | " | |
| *Surrogate: Toluene-d8* | | *102 %* | | *78-125* | " | " | " | " | |
| *Surrogate: 4-Bromofluorobenzene* | | *86.5 %* | | *77-127* | " | " | " | " | |
| **VP-5 (E102047-08) Vapor Sampled: 10-Feb-21 Received: 10-Feb-21** | | | | | | | | | |
| Dichlorodifluoromethane (F12) | ND | 10 | ug/m3 | 2 | EB12316 | 23-Feb-21 | 23-Feb-21 | EPA TO-15 | |
| Chloromethane | ND | 4.1 | " | " | " | " | " | " | |
| Dichlorotetrafluoroethane (F114) | ND | 14 | " | " | " | " | " | " | |
| Vinyl chloride | ND | 5.2 | " | " | " | " | " | " | |
| Bromomethane | ND | 32 | " | " | " | " | " | " | |
| Chloroethane | ND | 16 | " | " | " | " | " | " | |
| Trichlorofluoromethane (F11) | ND | 11 | " | " | " | " | " | " | |
| 1,1-Dichloroethene | ND | 8.0 | " | " | " | " | " | " | |
| **1,1,2-Trichlorotrifluoroethane (F113)** | **260** | 15 | " | " | " | " | " | " | |
| Methylene chloride (Dichloromethane) | ND | 7.1 | " | " | " | " | " | " | |
| Carbon disulfide | ND | 13 | " | " | " | " | " | " | |
| trans-1,2-Dichloroethene | ND | 16 | " | " | " | " | " | " | |
| 1,1-Dichloroethane | ND | 8.2 | " | " | " | " | " | " | |
| 2-Butanone (MEK) | ND | 60 | " | " | " | " | " | " | |
| cis-1,2-Dichloroethene | ND | 8.0 | " | " | " | " | " | " | |
| Chloroform | ND | 9.9 | " | " | " | " | " | " | |
| 1,1,1-Trichloroethane | ND | 11 | " | " | " | " | " | " | |
| 1,2-Dichloroethane (EDC) | ND | 8.2 | " | " | " | " | " | " | |
| Benzene | ND | 6.5 | " | " | " | " | " | " | |
| Carbon tetrachloride | ND | 13 | " | " | " | " | " | " | |
| Trichloroethene | ND | 11 | " | " | " | " | " | " | |
| 1,2-Dichloropropane | ND | 19 | " | " | " | " | " | " | |

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| Thousand Oaks, CA 91361 | Project Manager: Lewis Simons | 24-Feb-21 12:00 |

## Volatile Organic Compounds by EPA TO-15

## H&P Mobile Geochemistry, Inc.

| Analyte | Result | Reporting Limit | Units | Dilution Factor | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **VP-5 (E102047-08) Vapor Sampled: 10-Feb-21 Received: 10-Feb-21** | | | | | | | | | |
| Bromodichloromethane | ND | 14 | ug/m3 | 2 | EB12316 | 23-Feb-21 | 23-Feb-21 | EPA TO-15 | |
| cis-1,3-Dichloropropene | ND | 9.2 | " | " | " | " | " | " | |
| 4-Methyl-2-pentanone (MIBK) | ND | 17 | " | " | " | " | " | " | |
| trans-1,3-Dichloropropene | ND | 9.2 | " | " | " | " | " | " | |
| **Toluene** | **21** | 7.6 | " | " | " | " | " | " | |
| 1,1,2-Trichloroethane | ND | 11 | " | " | " | " | " | " | |
| 2-Hexanone (MBK) | ND | 17 | " | " | " | " | " | " | |
| Dibromochloromethane | ND | 17 | " | " | " | " | " | " | |
| **Tetrachloroethene** | **3200** | 14 | " | " | " | " | " | " | |
| 1,2-Dibromoethane (EDB) | ND | 16 | " | " | " | " | " | " | |
| 1,1,1,2-Tetrachloroethane | ND | 14 | " | " | " | " | " | " | |
| Chlorobenzene | ND | 9.4 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 8.8 | " | " | " | " | " | " | |
| m,p-Xylene | ND | 18 | " | " | " | " | " | " | |
| Styrene | ND | 8.6 | " | " | " | " | " | " | |
| o-Xylene | ND | 8.8 | " | " | " | " | " | " | |
| Bromoform | ND | 21 | " | " | " | " | " | " | |
| 1,1,2,2-Tetrachloroethane | ND | 14 | " | " | " | " | " | " | |
| 4-Ethyltoluene | ND | 10 | " | " | " | " | " | " | |
| 1,3,5-Trimethylbenzene | ND | 10 | " | " | " | " | " | " | |
| 1,2,4-Trimethylbenzene | ND | 10 | " | " | " | " | " | " | |
| 1,3-Dichlorobenzene | ND | 24 | " | " | " | " | " | " | |
| 1,4-Dichlorobenzene | ND | 24 | " | " | " | " | " | " | |
| 1,2-Dichlorobenzene | ND | 24 | " | " | " | " | " | " | |
| 1,2,4-Trichlorobenzene | ND | 75 | " | " | " | " | " | " | |
| Hexachlorobutadiene | ND | 110 | " | " | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *107 %* | | *76-134* | " | " | " | " | |
| *Surrogate: Toluene-d8* | | *105 %* | | *78-125* | " | " | " | " | |
| *Surrogate: 4-Bromofluorobenzene* | | *89.4 %* | | *77-127* | " | " | " | " | |

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## Volatile Organic Compounds by EPA TO-15

## H&P Mobile Geochemistry, Inc.

| Analyte | Result | Reporting Limit | Units | Dilution Factor | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **VP-8 (E102047-09) Vapor Sampled: 10-Feb-21 Received: 10-Feb-21** | | | | | | | | | |
| Dichlorodifluoromethane (F12) | ND | 5.0 | ug/m3 | 1 | EB12316 | 23-Feb-21 | 23-Feb-21 | EPA TO-15 | |
| Chloromethane | ND | 2.1 | " | " | " | " | " | " | |
| Dichlorotetrafluoroethane (F114) | ND | 7.1 | " | " | " | " | " | " | |
| Vinyl chloride | ND | 2.6 | " | " | " | " | " | " | |
| Bromomethane | ND | 16 | " | " | " | " | " | " | |
| Chloroethane | ND | 8.0 | " | " | " | " | " | " | |
| Trichlorofluoromethane (F11) | ND | 5.6 | " | " | " | " | " | " | |
| 1,1-Dichloroethene | ND | 4.0 | " | " | " | " | " | " | |
| **1,1,2-Trichlorotrifluoroethane (F113)** | **160** | 7.7 | " | " | " | " | " | " | |
| Methylene chloride (Dichloromethane) | ND | 3.5 | " | " | " | " | " | " | |
| Carbon disulfide | ND | 6.3 | " | " | " | " | " | " | |
| trans-1,2-Dichloroethene | ND | 8.0 | " | " | " | " | " | " | |
| 1,1-Dichloroethane | ND | 4.1 | " | " | " | " | " | " | |
| 2-Butanone (MEK) | ND | 30 | " | " | " | " | " | " | |
| cis-1,2-Dichloroethene | ND | 4.0 | " | " | " | " | " | " | |
| Chloroform | ND | 4.9 | " | " | " | " | " | " | |
| 1,1,1-Trichloroethane | ND | 5.5 | " | " | " | " | " | " | |
| 1,2-Dichloroethane (EDC) | ND | 4.1 | " | " | " | " | " | " | |
| **Benzene** | **4.8** | 3.2 | " | " | " | " | " | " | |
| Carbon tetrachloride | ND | 6.4 | " | " | " | " | " | " | |
| Trichloroethene | ND | 5.5 | " | " | " | " | " | " | |
| 1,2-Dichloropropane | ND | 9.4 | " | " | " | " | " | " | |
| Bromodichloromethane | ND | 6.8 | " | " | " | " | " | " | |
| cis-1,3-Dichloropropene | ND | 4.6 | " | " | " | " | " | " | |
| 4-Methyl-2-pentanone (MIBK) | ND | 8.3 | " | " | " | " | " | " | |
| trans-1,3-Dichloropropene | ND | 4.6 | " | " | " | " | " | " | |
| **Toluene** | **14** | 3.8 | " | " | " | " | " | " | |
| 1,1,2-Trichloroethane | ND | 5.5 | " | " | " | " | " | " | |
| 2-Hexanone (MBK) | ND | 8.3 | " | " | " | " | " | " | |
| Dibromochloromethane | ND | 8.6 | " | " | " | " | " | " | |
| **Tetrachloroethene** | **670** | 6.9 | " | " | " | " | " | " | |
| 1,2-Dibromoethane (EDB) | ND | 7.8 | " | " | " | " | " | " | |
| 1,1,1,2-Tetrachloroethane | ND | 7.0 | " | " | " | " | " | " | |
| Chlorobenzene | ND | 4.7 | " | " | " | " | " | " | |
| Ethylbenzene | ND | 4.4 | " | " | " | " | " | " | |
| m,p-Xylene | ND | 8.8 | " | " | " | " | " | " | |
| Styrene | ND | 4.3 | " | " | " | " | " | " | |
| o-Xylene | ND | 4.4 | " | " | " | " | " | " | |

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## Volatile Organic Compounds by EPA TO-15

## H&P Mobile Geochemistry, Inc.

| Analyte | Result | Reporting Limit | Units | Dilution Factor | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **VP-8 (E102047-09) Vapor Sampled: 10-Feb-21 Received: 10-Feb-21** | | | | | | | | | |
| Bromoform | ND | 10 | ug/m3 | 1 | EB12316 | 23-Feb-21 | 23-Feb-21 | EPA TO-15 | |
| 1,1,2,2-Tetrachloroethane | ND | 7.0 | " | " | " | " | " | " | |
| 4-Ethyltoluene | ND | 5.0 | " | " | " | " | " | " | |
| 1,3,5-Trimethylbenzene | ND | 5.0 | " | " | " | " | " | " | |
| 1,2,4-Trimethylbenzene | ND | 5.0 | " | " | " | " | " | " | |
| 1,3-Dichlorobenzene | ND | 12 | " | " | " | " | " | " | |
| 1,4-Dichlorobenzene | ND | 12 | " | " | " | " | " | " | |
| 1,2-Dichlorobenzene | ND | 12 | " | " | " | " | " | " | |
| 1,2,4-Trichlorobenzene | ND | 38 | " | " | " | " | " | " | |
| Hexachlorobutadiene | ND | 54 | " | " | " | " | " | " | |
| *Surrogate: 1,2-Dichloroethane-d4* | | *108 %* | | *76-134* | " | " | " | " | |
| *Surrogate: Toluene-d8* | | *104 %* | | *78-125* | " | " | " | " | |
| *Surrogate: 4-Bromofluorobenzene* | | *90.4 %* | | *77-127* | " | " | " | " | |

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## Soil Vapor/Air Analysis by ASTM D1945M - Quality Control

## H&P Mobile Geochemistry, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch EB11714 - GC** | | | | | | | | | | |
| **Blank (EB11714-BLK1)** | | | | Prepared & Analyzed: 17-Feb-21 | | | | | | |
| Helium (LCC) | ND | 0.10 | % | | | | | | | |

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## Volatile Organic Compounds by EPA TO-15 - Quality Control

## H&P Mobile Geochemistry, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch EB12316 - TO-15** | | | | | | | | | | |
| **Blank (EB12316-BLK1)** | | | | Prepared & Analyzed: 23-Feb-21 | | | | | | |
| Dichlorodifluoromethane (F12) | ND | 5.0 | ug/m3 | | | | | | | |
| Chloromethane | ND | 2.1 | " | | | | | | | |
| Dichlorotetrafluoroethane (F114) | ND | 7.1 | " | | | | | | | |
| Vinyl chloride | ND | 2.6 | " | | | | | | | |
| Bromomethane | ND | 16 | " | | | | | | | |
| Chloroethane | ND | 8.0 | " | | | | | | | |
| Trichlorofluoromethane (F11) | ND | 5.6 | " | | | | | | | |
| 1,1-Dichloroethene | ND | 4.0 | " | | | | | | | |
| 1,1,2-Trichlorotrifluoroethane (F113) | ND | 7.7 | " | | | | | | | |
| Methylene chloride (Dichloromethane) | ND | 3.5 | " | | | | | | | |
| Carbon disulfide | ND | 6.3 | " | | | | | | | |
| trans-1,2-Dichloroethene | ND | 8.0 | " | | | | | | | |
| 1,1-Dichloroethane | ND | 4.1 | " | | | | | | | |
| 2-Butanone (MEK) | ND | 30 | " | | | | | | | |
| cis-1,2-Dichloroethene | ND | 4.0 | " | | | | | | | |
| Chloroform | ND | 4.9 | " | | | | | | | |
| 1,1,1-Trichloroethane | ND | 5.5 | " | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 4.1 | " | | | | | | | |
| Benzene | ND | 3.2 | " | | | | | | | |
| Carbon tetrachloride | ND | 6.4 | " | | | | | | | |
| Trichloroethene | ND | 5.5 | " | | | | | | | |
| 1,2-Dichloropropane | ND | 9.4 | " | | | | | | | |
| Bromodichloromethane | ND | 6.8 | " | | | | | | | |
| cis-1,3-Dichloropropene | ND | 4.6 | " | | | | | | | |
| 4-Methyl-2-pentanone (MIBK) | ND | 8.3 | " | | | | | | | |
| trans-1,3-Dichloropropene | ND | 4.6 | " | | | | | | | |
| Toluene | ND | 3.8 | " | | | | | | | |
| 1,1,2-Trichloroethane | ND | 5.5 | " | | | | | | | |
| 2-Hexanone (MBK) | ND | 8.3 | " | | | | | | | |
| Dibromochloromethane | ND | 8.6 | " | | | | | | | |
| Tetrachloroethene | ND | 6.9 | " | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | 7.8 | " | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 7.0 | " | | | | | | | |
| Chlorobenzene | ND | 4.7 | " | | | | | | | |

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## Volatile Organic Compounds by EPA TO-15 - Quality Control

## H&P Mobile Geochemistry, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch EB12316 - TO-15** | | | | | | | | | | |
| **Blank (EB12316-BLK1)** | | | | Prepared & Analyzed: 23-Feb-21 | | | | | | |
| Ethylbenzene | ND | 4.4 | ug/m3 | | | | | | | |
| m,p-Xylene | ND | 8.8 | " | | | | | | | |
| Styrene | ND | 4.3 | " | | | | | | | |
| o-Xylene | ND | 4.4 | " | | | | | | | |
| Bromoform | ND | 10 | " | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 7.0 | " | | | | | | | |
| 4-Ethyltoluene | ND | 5.0 | " | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 5.0 | " | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 5.0 | " | | | | | | | |
| 1,3-Dichlorobenzene | ND | 12 | " | | | | | | | |
| 1,4-Dichlorobenzene | ND | 12 | " | | | | | | | |
| 1,2-Dichlorobenzene | ND | 12 | " | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 38 | " | | | | | | | |
| Hexachlorobutadiene | ND | 54 | " | | | | | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *43.0* | | *"* | *42.7* | | *101* | *76-134* | | | |
| *Surrogate: Toluene-d8* | *42.8* | | *"* | *41.6* | | *103* | *78-125* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *61.8* | | *"* | *72.6* | | *85.2* | *77-127* | | | |
| **LCS (EB12316-BS1)** | | | | Prepared & Analyzed: 23-Feb-21 | | | | | | |
| Dichlorodifluoromethane (F12) | 100 | 5.0 | ug/m3 | 101 | | 100 | 59-128 | | | |
| Vinyl chloride | 59 | 2.6 | " | 52.0 | | 114 | 64-127 | | | |
| Chloroethane | 58 | 8.0 | " | 53.6 | | 109 | 63-127 | | | |
| Trichlorofluoromethane (F11) | 110 | 5.6 | " | 113 | | 96.6 | 62-126 | | | |
| 1,1-Dichloroethene | 73 | 4.0 | " | 80.8 | | 90.4 | 61-133 | | | |
| 1,1,2-Trichlorotrifluoroethane (F113) | 140 | 7.7 | " | 155 | | 91.6 | 66-126 | | | |
| Methylene chloride (Dichloromethane) | 58 | 3.5 | " | 70.8 | | 81.5 | 62-115 | | | |
| trans-1,2-Dichloroethene | 68 | 8.0 | " | 80.8 | | 84.0 | 67-124 | | | |
| 1,1-Dichloroethane | 69 | 4.1 | " | 82.4 | | 83.8 | 68-126 | | | |
| cis-1,2-Dichloroethene | 70 | 4.0 | " | 80.0 | | 87.6 | 70-121 | | | |
| Chloroform | 92 | 4.9 | " | 99.2 | | 92.4 | 68-123 | | | |
| 1,1,1-Trichloroethane | 110 | 5.5 | " | 111 | | 98.1 | 68-125 | | | |
| 1,2-Dichloroethane (EDC) | 78 | 4.1 | " | 82.4 | | 94.7 | 65-128 | | | |
| Benzene | 57 | 3.2 | " | 64.8 | | 87.5 | 69-119 | | | |

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## Volatile Organic Compounds by EPA TO-15 - Quality Control

## H&P Mobile Geochemistry, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch EB12316 - TO-15** | | | | | | | | | | |
| **LCS (EB12316-BS1)** | | | | Prepared & Analyzed: 23-Feb-21 | | | | | | |
| Carbon tetrachloride | 130 | 6.4 | ug/m3 | 128 | | 98.5 | 68-132 | | | |
| Trichloroethene | 110 | 5.5 | " | 110 | | 97.7 | 71-123 | | | |
| Toluene | 70 | 3.8 | " | 76.8 | | 90.8 | 66-119 | | | |
| 1,1,2-Trichloroethane | 100 | 5.5 | " | 111 | | 90.8 | 73-119 | | | |
| Tetrachloroethene | 130 | 6.9 | " | 138 | | 93.8 | 66-124 | | | |
| 1,1,1,2-Tetrachloroethane | 140 | 7.0 | " | 140 | | 97.0 | 67-129 | | | |
| Ethylbenzene | 81 | 4.4 | " | 88.4 | | 92.1 | 70-124 | | | |
| m,p-Xylene | 76 | 8.8 | " | 88.4 | | 85.6 | 61-134 | | | |
| o-Xylene | 82 | 4.4 | " | 88.4 | | 92.6 | 67-125 | | | |
| 1,1,2,2-Tetrachloroethane | 110 | 7.0 | " | 140 | | 79.7 | 65-127 | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *46.4* | | *"* | *42.7* | | *109* | *76-134* | | | |
| *Surrogate: Toluene-d8* | *41.5* | | *"* | *41.6* | | *99.8* | *78-125* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *69.2* | | *"* | *72.6* | | *95.4* | *77-127* | | | |

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

| | | |
|---|---|---|
| Stantec - Thousand Oaks | Project: ST021221-12 | |
| 290 Conejo Ridge Avenue, Suite 200 | Project Number: 185804979 / Skypark Dr | Reported: |
| Thousand Oaks, CA 91361 | Project Manager: Lewis Simons | 24-Feb-21 12:00 |

## Notes and Definitions

| | |
|---|---|
| LCC | Leak Check Compound |
| ND | Analyte NOT DETECTED at or above the reporting limit |
| MDL | Method Detection Limit |
| %REC | Percent Recovery |
| RPD | Relative Percent Difference |

All soil results are reported in wet weight.

## Appendix

H&P Mobile Geochemistry, Inc. is approved as an Environmental Testing Laboratory and Mobile Laboratory in accordance with the DoD-ELAP Program and ISO/IEC 17025:2005 programs through PJLA, accreditation number 69070 for EPA Method TO-15, EPA Method 8260B and H&P 8260SV.

H&P is approved by the State of California as an Environmental Laboratory and Mobile Laboratory in conformance with the Environmental Laboratory Accreditation Program (ELAP) for the category of Volatile and Semi-Volatile Organic Chemistry of Hazardous Waste, certification numbers 2740, 2741, 2743 & 2745.

H&P is approved by the State of Louisiana Department of Environmental Quality under the National Environmental Laboratory Accreditation Conference (NELAC) certification number 04138

The complete list of stationary and mobile laboratory certifications along with the fields of testing (FOTs) and analyte lists are available at www.handpmg.com/about/certifications.

Mobile Geochemistry, Inc.

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& Field Office - Signal Hill, CA
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# VAPOR / AIR Chain of Custody

DATE: 02-10-21
Page 1 of 1

## Lab Client and Project Information

| | |
|---|---|
| Lab Client/Consultant: Stantec | Project Name / #: 185804979 |
| Lab Client Project Manager: Lewis Simons | Project Location: 2530/2540 Skypark Dr. |
| Lab Client Address: 290 Conejo Ridge Ave | Report E-Mail(s): Lewis.simons@stantec.com ben.chevlen@stantec.com |
| Lab Client City, State, Zip: Thousand Oaks, CA 91361 | |
| Phone Number: (562) 799-9866 | |

| Reporting Requirements | Turnaround Time | Sampler Information |
|---|---|---|
| ☑ Standard Report ☐ Level III ☐ Level IV | ☑ **Standard** (7 days for preliminary report, 10 days for final report) | Sampler(s): J. Arellano |
| ☐ Excel EDD ☐ Other EDD: | ☐ **Rush** (specify): | Signature: |
| ☐ CA Geotracker Global ID: | | Date: 02-10-21 |

## Sample Receipt (Lab Use Only)

| | |
|---|---|
| Date Rec'd: 2/12 | Control #: 210085.07 |
| H&P Project # | STO21221-10 12 |
| Lab Work Order # | E01 E102047 |
| Sample Intact: ☑ Yes ☐ No ☐ See Notes Below | |
| Receipt Gauge ID: 60206 | Temp: RT |
| Outside Lab: | |
| Receipt Notes/Tracking #: | Lab PM Initials: MB |

**Additional Instructions to Laboratory:**

* **Preferred VOC units (please choose one):** verify with ben chevlen per client
☐ µg/L ☑ µg/m³ ☐ ppbv ☐ ppmv

| SAMPLE NAME | FIELD POINT NAME (if applicable) | DATE mm/dd/yy | TIME 24hr clock | SAMPLE TYPE Indoor Air (IA), Ambient Air (AA), Subslab (SS), Soil Vapor (SV) | CONTAINER SIZE & TYPE 400mL/1L/6L Summa, Tedlar, Tube, etc. | CONTAINER ID (###) | Lab use only: Receipt Vac | VOCs Standard Full List ☐ 8260SV ☒ TO-15 | VOCs Short List / Project List ☐ 8260SV ☐ TO-15 | Oxygenates ☐ 8260SV ☐ TO-15 | Naphthalene ☐ 8260SV ☐ TO-15 | TPHv as Gas ☐ 8260SVm ☐ TO-15m | Aromatic/Aliphatic Fractions ☐ 8260SVm ☐ TO-15m | Leak Check Compound ☐ DFA ☐ IPA ☒ He | Methane by EPA 8015m | Fixed Gases by ASTM D1945 ☐ CO2 ☐ O2 ☐ N2 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VP-7 | | 02-10-21 | 1115 | SV | 450 mL | 624 | 0.25 | ✓ | | | | | | ✓ | | | | | |
| VP-6 | | | 1127 | | | 602 | 0.30 | ✓ | | | | | | ✓ | | | | | |
| VP-4 | | | 1141 | | | 608 | 0.33 | ✓ | | | | | | ✓ | | | | | |
| VP-2 | | | 1155 | | | 629 | 0.41 | ✓ | | | | | | ✓ | | | | | |
| VP-1 | | | 1207 | | | 630 | 0.35 | ✓ | | | | | | ✓ | | | | | |
| VP-1 Dup | | | 1207 | | | 603 | 0.38 | ✓ | | | | | | ✓ | | | | | |
| VP-3 | | | 1222 | | | 633 | 0.36 | ✓ | | | | | | ✓ | | | | | |
| VP-5 | | | 1243 | | | 631 | 0.39 | ✓ | | | | | | ✓ | | | | | |
| VP-8 | | " | 1304 | " | " | 635 | 0.26 | ✓ | | | | | | ✓ | | | | | |
| | | | | | | | | | | | | | | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Approved/Relinquished by: | Company: STANTEC | Date: 2/10/21 | Time: 1415 | Received by: J. Arellano | Company: H&P | Date: 02-10-21 | Time: 1415 |
| Approved/Relinquished by: | Company: | Date: | Time: | Received by: | Company: | Date: | Time: |
| Approved/Relinquished by: | Company: | Date: | Time: | Received by: | Company: | Date: | Time: |

*Approval constitutes as authorization to proceed with analysis and acceptance of conditions on back

H&P Mobile Geochemistry Inc.

FMS006
Revision: 3
Revised: 1/15/2016
Effective: 1/25/2016
Page 1 of 1

# Log Sheet: Soil Vapor Sampling with Helium Shroud

H&P Project #: STO21021 - TECH/He
Date: 02-10-21
Site Address: 2570/2540 Skypark Dr (Robinson building)
Page: 1 of 1
Consultant: Stantec
H&P Rep(s): J. Arellano
Reviewed: EC
Consultant Rep(s): Ron
Scanned: MonS

| Equipment Info | |
|---|---|
| Inline Gauge ID#: | TOS |
| Pump ID#: | |
| He Meter ID#: | 017 |
| Shroud ID#: | 047 |

| Purge Volume | |
|---|---|
| PV Amount: | 3 L |
| PV Includes: | |
| ☒ Tubing | |
| ☐ Sand 40% | |
| ☐ Dry Bent 50% | |

| MGD 2002 Helium Detector Calibration | | |
|---|---|---|
| | Time | Helium (%) |
| Calibration Standard | n/a | 2.5 |
| Opening Calibration | 1050 | 2.7 |
| Closing Calibration | 1330 | 2.4 |
| Acceptable Range | n/a | 2.1 - 2.9 |

**Shroud Procedure:** H&P SOP

| | Sample and Summa Information | | | | | | | Probe Specs | | | | | | | Purge & Collection Information | | | | | | Shroud Info | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Point ID | Summa ID # | Sample Kit ID # | Start Time | Initial Vac ("Hg) | End / Sample Time | End Vac ("Hg) | Probe Depth (ft) | Tube Length (ft) | Tube OD (in.) | Sand Ht (in.) | Sand Dia (in.) | Dry Bent. Ht (in.) | Dry Bent. Dia (in.) | Shut In Test 60 sec (✓) | Purge Vol (mL) | Purge Flow Rate (mL/min) | Pump Time (min: sec) | Sample Flow Rate (mL/min) | ProbeVac ☐ Hg ☒ $H_2O$ | He % Before | He % After | Probe ppmv | Probe Pressure |
| 1 | VP-7 | 624 | 259 | 1111 | -27 | 1115 | 0 | VP | 2' | | | | | | ✓ | 300 | <200 | - | <200 | 0 | 57.3 | 55.2 | 0 | 0 |
| 2 | VP-6 | 602 | 342 | 1123 | -28 | 1127 | 0 | VP | 2' | | | | | | ✓ | 300 | <200 | - | <200 | 0 | 58.7 | 52.9 | 0 | 0 |
| 3 | VP-4 | 608 | 188 | 1137 | -25.5 | 1141 | 0 | VP | 2 | | | | | | ✓ | 300 | <200 | - | <200 | 0 | 61.8 | 57.0 | 0 | 0 |
| 4 | VP-2 | 629 | 334 | 1151 | -27 | 1155 | 0 | VP | 2 | | | | | | ✓ | 300 | <200 | - | <200 | 0 | 57.4 | 54.2 | 1350 | 0 |
| 5 | VP-1 | 630 | 341 | 1204 | -28 | 1207 | 0 | VP | 2 | | | | | | ✓ | 300 | <200 | - | <200 | 0 | 56.5 | 51.7 | 50 | 0 |
| 6 | VP-1 Dup | 603 | 282 | 1204 | -27.5 | 1207 | 0 | VP | 2 | | | | | | ✓ | 300 | <200 | - | <200 | 0 | 56.5 | 51.7 | 50 | 0 |
| 7 | VP-3 | 633 | 096 | 1218 | -29 | 1222 | 0 | VP | 2 | | | | | | ✓ | 300 | <200 | - | <200 | 0 | 66.2 | 59.8 | 0 | 0 |
| 8 | VP-5 | 631 | 131 | 1239 | -28 | 1243 | 0 | VP | 2 | | | | | | ✓ | 300 | <200 | - | <200 | 0 | 64.7 | 61.2 | 0 | 0 |
| 9 | VP-8 | 635 | 345 | 1301 | -27 | 1304 | 0 | VP | 2 | | | | | | ✓ | 300 | <200 | - | <200 | 0 | 61.3 | 57.4 | 750 | 0 |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | |

Site Notes such as weather, visitors, scope deviations, health & safety issues, etc. (When making sample specific notes, reference the line number above):
AVP = Vapor Pin
*Client requested probe pressure reading before purge
*Attached 2' of nylaflow with 1-way valve termination to vapor pin