

Draft Preliminary Environmental Assessment Report Juan Cabrillo Elementary School and Malibu High School 30237 and 30215 Morning View Drive Malibu, California

Prepared for: Santa Monica-Malibu United School District Santa Monica, California

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List of Acronyms

Acronym	Definition
amsl	above mean sea level
AOI	Area of Interest
APN	Assessor's Parcel Number
BTEX	benzene, toluene, ethylbenzene, and xylene
CalEPA	California Environmental Protection Agency
COPC	Chemical of Potential Concern
DOGGR	Department of Oil, Gas, and Geothermal Resources
DOT	Department of Transportation
DQO	data quality objective
DTSC	Department of Toxic Substances Control
EDR	Environmental Data Resources
EPC	Exposure Point Concentration
ESA	Environmental Site Assessment
ESHA	Ecologically Sensitive Habitat Area
FUDs	formerly used defense sites
HASP	Health and Safety Plan
HHRA	Human Health Risk Assessment
HHSRE	Human Health Screening Risk Evaluation
HI	hazard index
JCES	Juan Cabrillo Elementary School
LACDPW	Los Angeles County Department of Public Works
LACFD	Los Angeles County Fire Department
LACSD	Los Angeles County Sanitation District
LARWQCB	Los Angeles Regional Water Quality Control Board
LBP	Lead-based paint
MCL	maximum contaminant level
mg/kg	milligrams per kilogram
MHS	Malibu Middle/High School
MS	matrix spike
MSDS	Material Safety Data Sheet
MWDSC	Metropolitan Water District of Southern California
MSD	matrix spike duplicate

Acronym	Definition
MU	Malibu Unites
pCi/L	picoCuries per liter
PCB	polychlorinated biphenyl
PCG	Preliminary Cleanup Goal
PCH	Pacific Coast Highway
PE	Professional Engineer
PEA	Preliminary Environmental Assessment
PG	Professional Geologist
PHI	Public Health Investigation
PLS	Professional Licensed Surveyor
QA/QC	Quality Assurance/Quality Control
RCHHSL	Residential California Human Health Screening Level
REC	recognized environmental condition
RSL	Regional Screening Level
SCAQMD	South Coast Air Quality Management District
SOPs	Standard Operating Procedures
SVOC	Semi-Volatile Organic Compound
TPH	total petroleum hydrocarbons
TPH-d	total petroleum hydrocarbons-diesel
UCL	Upper Confidence Limit
US	United States
USEPA	United States Environmental Protection Agency
USGS	United States Geologic Society
UST	Underground Storage Tank
VOC	Volatile Organic Compound
WDR	Waste Discharge Requirement
μg/kg	micrograms per kilogram
μg/l	micrograms per liter
µg/m³	micrograms per cubic meter

Executive Summary

Ramboll Environ US Corporation (Ramboll Environ), formerly ENVIRON International Corporation (ENVIRON¹), on behalf of the Santa Monica/Malibu School District (the District), has prepared this Preliminary Environmental Assessment Report (PEA Report) and data analysis for Juan Cabrillo Elementary School (JCES) and Malibu Middle/High School (MHS; the middle and high schools are on the same property, which comprises MHS), located at 30237 and 30215 Morning View Drive, respectively, in the City of Malibu, Los Angeles County, California (collectively, "the site," Figures 1 and 2). The work described in this PEA Report was conducted in accordance with ENVIRON's *Draft Preliminary Environmental Assessment Work Plan* for JCES and MHS, dated May 23, 2014 (Draft PEA Work Plan [ENVIRON, 2014a])², as conditionally approved by the Department of Toxic Substances Control (DTSC) in a letter entitled "*Conditional Approval of Draft Preliminary Environmental Assessment Work Plan, Santa Monica-Malibu Unified School District, Santa Monica, California*," dated June 27, 2014. ENVIRON submitted the Final PEA Work Plan to DTSC on October 13, 2014 (PEA Work Plan [ENVIRON, 2014e]).

The PEA Work Plan was prepared in response to the Voluntary Investigation Agreement (the Agreement) between DTSC and the District, which was executed on March 13, 2014. The Agreement addresses JCES and MHS and was executed with the express purpose of conducting a PEA to evaluate the environmental condition of soil, soil vapor, and groundwater at the site and the potential need for further remediation to allow for future anticipated use of the site. In the event that DTSC determined that additional site characterization and/or remediation of the site was required, such activities were conducted pursuant to the Agreement.

Based on historical and current information obtained and site visits conducted as part of the PEA Work Plan preparation, 18 Areas of Interest (AOIs) were identified at the site. AOI-1 through AOI-4 are located on JCES and AOI-5 through AOI-18 are located on MHS. Depending on historical and current activities identified in each AOI, soil, soil vapor, and groundwater samples were collected and were selectively analyzed for polychlorinated biphenyls (PCBs), pesticides, herbicides, total petroleum hydrocarbons (TPH), metals (including lead), semi-volatile organic compounds (SVOCs), and volatile organic compounds (VOCs).

PEA field activities commenced on June 30, 2014, under DTSC's oversight and in accordance with the DTSC-approved PEA Work Plan. Field activities were conducted during summer break and coordinated so that students attending summer school were not in areas undergoing testing. Soil, soil vapor, and groundwater sampling results were previously submitted in a series of data transmittals as validated data became available. Sampling results at JCES indicated no issues of concern were identified for soil, soil vapor, and groundwater samples collected from AOI-1 through AOI-4. Sampling results at MHS indicated no significant issues of concern were identified in soil, soil vapor, and groundwater samples collected at MHS and identified three areas for further evaluation. These areas are located in AOI-5 (Buildings Constructed Prior to

¹ ENVIRON and Ramboll Environ are used interchangeably in this report.

² Soil step out sampling was conducted in accordance with ENVIRON's letter entitled "Soil Step-Out Sampling, Malibu High School (MHS), 30215 Morning View Drive, Malibu, California," dated October, 3, 2014 (Soil Step-Out Letter).

1981), AOI-7 (Open Areas Around and in Between Older Buildings Within AOI-5), and AOI-15 (Cornucopia). Therefore, at DTSC's request, soil step-out sampling was conducted in small portions of AOI-5, AOI-7, and AOI-15 in accordance with ENVIRON's Soil Step-Out Sampling Letter (ENVIRON, 2014d).

The final data transmittals for JCES entitled "*Final Summary of Soil, Soil Vapor, and Groundwater Sampling Results Juan Cabrillo Elementary School, 30237 Morning View Drive, Malibu, California,*" (ENVIRON, 2014b) and MHS entitled "*Final Summary of Soil, Soil Vapor, and Groundwater Sampling Results Malibu High School, 30215 Morning View Drive, Malibu, California,*" (ENVIRON, 2014c) were submitted to the DTSC on September 12 and 23, 2014, respectively. On October 14, 2014, in a letter entitled "*Further Action Determination and Approval of Preliminary Environmental Assessment Equivalent Report, Juan Cabrillo Elementary School and the Malibu Middle and High School 30237 and 30215 Morning View Drive, Malibu,*" DTSC determined that the afore- mentioned data transmittals constituted a PEA Equivalent Report and based on discussions with the District, confirmed that a focused response action would be conducted in a small planter area east of Building G at MHS to allow that land to be used for any purpose in the future.

At DTSC's request, ENVIRON prepared a Removal Action Work Plan (RAW) (ENVIRON, 2014) to perform a focused removal action east of the Building G Area. As part of the RAW, ENVIRON conducted a human health screening risk evaluation (HHSRE) of the Building G Area considering the current school use and potential future residential use. Under a school scenario, the estimated excess lifetime cancer risks before and after excavation were below 1x10⁻⁶. Therefore, although no remediation was necessary or recommended under the school scenario, because the District desired to be able to use the Building G Area for any purpose in the future (i.e., unrestricted use), the District and DTSC agreed that the soil containing the highest Aroclor 1254 concentrations in the Building G Area would be excavated. For the after excavation residential scenario (after excavating the two highest Aroclor 1254 detections exceeding 1,000 micrograms per kilogram [µg/kg]), the estimated excess lifetime cancer risk for hypothetical future on-site residents was at 1x10⁻⁶. The purpose of the RAW was to provide for limited excavation of Aroclor-1254 impacted shallow soil in the Building G Area of MHS, to conditions that allow for future unrestricted (i.e., residential) use. The Draft RAW (ENVIRON, 2014f) was submitted to DTSC on November 6, 2014. DTSC approved the Draft RAW with no modifications in a letter dated December 15, 2014, after which the Final RAW (ENVIRON, 2014g) was submitted to DTSC on December 17, 2014.

Pre-excavation and excavation activities at the Building G Area occurred between December 21 and December 30, 2014, during MHS Winter Break, where approximately 15 cubic yards of soil was excavated, determined to be non-hazardous, and transported off site for disposal at the Waste Connections - Chiquita Landfill, located in Castaic, California. Excavation activities were documented in a Draft Removal Action Completion Report (RACR), dated February 27, 2015 (ENVIRON, 2015a). The DTSC approved the RACR without modification in a letter entitled "Approval of the Removal Action Completion Report and Issuance of a No Further Action Determination For the Malibu High School, Building G Area, 30215 Morning View Drive, Malibu, Los Angeles County, California," dated March 26, 2015 (Letter). In its Letter, DTSC determined that the removal action objectives had been met and that the MHS Building G Area is suitable for future unrestricted use. ENVIRON submitted the Final RACR on April 6, 2015 (ENVIRON, 2015b).

A site wide HHSRE was prepared to evaluate potential health risks to school receptors and hypothetical future on-site residents due to exposure to chemicals detected in soil and soil vapor at the site.

Based on this site wide HHSRE, no significant risks due to exposure to chemicals in soil (direct contact) and soil vapor (vapor migration) are expected for current or future school students and teachers/staff.

Similarly, based on this site wide HHSRE, no significant risks due to exposure to chemicals in soil (direct contact) or soil vapor (vapor migration) are expected for hypothetical future on-site residents in all AOIs, except for AOI-9 (Bus Barn). If land use in AOI-9 (Bus Barn) should ever change to residential in the future, soil vapor adjacent to the former USTs may need to be re-evaluated at that time.

Based on the results of the PEA investigations and the site wide HHSRE, as described herein, the District respectfully requests that DTSC issue a "No Further Action" for the site.

1 Introduction

Ramboll Environ US Corporation (Ramboll Environ), formerly ENVIRON International Corporation (ENVIRON³), has prepared this Preliminary Environmental Assessment Report (PEA Report) on behalf of the Santa Monica/Malibu Unified School District (The District), in response to the State of California Department of Toxic Substances Control (DTSC) Voluntary Investigation Agreement (the Agreement) between DTSC and the District, which was executed on March 13, 2014. The Agreement addresses Juan Cabrillo Elementary School (JCES) and Malibu Middle/High School (MHS: the middle and high schools are on the same property, which comprises MHS), located at 30237 and 30215 Morning View Drive, respectively, in the City of Malibu, Los Angeles County, California (collectively, "the site," Figures 1 and 2). The Agreement was executed with the express purpose of conducting a PEA at JCES and MHS to evaluate the environmental condition of soil, soil vapor, and groundwater at the site and the potential need for further remediation to allow for future anticipated use of the site. In the event that DTSC determined that additional site characterization and/or remediation of the site was required. such activities were conducted pursuant to the Agreement. The scope of the PEA investigation was initially documented in ENVIRON's Draft Preliminary Environmental Assessment Work Plan for JCES and MHS, dated May 23, 2014 (Draft PEA Work Plan [ENVIRON, 2014a]). DTSC conditionally approved the Draft PEA Work Plan in a letter entitled "Conditional Approval of Draft Preliminary Environmental Assessment Work Plan, Santa Monica-Malibu Unified School District, Santa Monica, California," dated June 27, 2014. ENVIRON submitted the Final PEA Work Plan to DTSC on October 13, 2014 (PEA Work Plan [ENVIRON, 2014e]).

PEA field activities were conducted under DTSC's oversight and in accordance with the DTSC-approved PEA Work Plan. Field activities commenced on June 30, 2014 during summer break and were coordinated so that students attending summer school were not in areas undergoing testing. Soil, soil vapor, and groundwater sampling results were submitted to DTSC in a series of data transmittals as validated data became available. The final data transmittals for JCES entitled "Final Summary of Soil, Soil Vapor, and Groundwater Sampling Results Juan Cabrillo Elementary School, 30237 Morning View Drive, Malibu, California," (ENVIRON, 2014b) and MHS entitled "Final Summary of Soil, Soil Vapor, and Groundwater Sampling Results Malibu High School, 30215 Morning View Drive, Malibu, California," (ENVIRON, 2014c) were submitted to the DTSC on September 12 and 23, 2014, respectively. On October 14, 2014, DTSC approved the PEA Work Plan (ENVIRON, 2014) and the data transmittals in a letter entitled "Further Action Determination and Approval of Preliminary Environmental Assessment Equivalent Report, Juan Cabrillo Elementary School and the Malibu Middle and High School 30237 and 30215 Morning View Drive, Malibu," in which it determined that the afore-mentioned data transmittals collectively constituted a PEA Equivalent Report and based on discussions with the District, confirmed that a focused response action would be conducted in a small planter area east of Building G at MHS to allow that land to be used for any purpose in the future.

This PEA Report has been prepared to document PEA field activities, summarize soil, soil vapor, and groundwater sampling results, including discrete and incremental soil step-out sampling results, and present the results of the site wide human health screening risk evaluation

³ ENVIRON and Ramboll Environ are used interchangeably in this report.

(HHSRE). The PEA Report was prepared in accordance with DTSC's *Preliminary Endangerment Assessment Guidance Manual*, dated January 1994 and revised as Interim Final in October 2013 (*PEA Guidance Manual*).

1.1 Purpose and Objectives

The main objectives of the PEA investigation conducted at JCES and MHS were to:

- Assess the potential for the presence of hazardous substances in areas at the site related to current and historical known and/or suspected site uses, including areas previously identified by ARCADIS;
- Identify and evaluate potential "Areas of Interest" (AOIs), including those identified by ARCADIS, and areas where future planned redevelopment may temporarily disturb soils;
- Evaluate groundwater characteristics using data from existing groundwater monitoring wells, including depth to groundwater, groundwater elevations, and gradient;
- Evaluate groundwater quality in proximity to Septic Systems 1, 3, 5, and 8, and in the area of the former underground storage tanks (USTs) at the MHS Bus Barn;
- Estimate the potential health risks associated with exposure to chemicals detected in the subsurface at the site; and
- Evaluate the need for further investigation and, if necessary, remediation to reduce an existing or potential risk to public health and/or the environment.

1.2 Scope of Work

ENVIRON conducted the following under the Agreement to prepare this PEA Report (as specified in Exhibit C of the Agreement):

- Participated in a scoping meeting with DTSC on March 13, 2014;
- Reviewed existing data and prior site investigation and remediation reports;
- Prepared the PEA Work Plan;
- Implemented the PEA Work Plan, including field investigations, laboratory data collection, analysis and validation, and evaluation of site conditions;
- Prepared data transmittals as validated data became available;
- Conducted step-out sampling in small portions of AOI-5 (Buildings Constructed Prior to 1981), AOI-7 (Open Areas Around and in Between Older Buildings), and AOI-15 (Cornucopia);
- Conducted a focused remedial action in a small area east of Building G of AOI-5;
- Conduct a screening evaluation followed by a preparation of HHSRE;
- Facilitated public participation throughout the PEA process, including a community survey, community interviews, fact sheets, work notices, and meetings; and
- Prepared this PEA Report.

1.3 PEA Report Organization

This PEA report has been prepared in general accordance the *PEA Guidance Manual*, and is comprised of the following sections:

Section 1:	Introduction
Section 2:	Site Description
Section 3:	Background
Section 4:	Consultation with DTSC and Public Participation
Section 5:	Investigative Approach
Section 6:	Summary of Sampling Activities
Section 7:	Sampling Results
Section 8:	Environmental Setting
Section 9:	Human Health Screening Risk Evaluation
Section 10:	Conclusions and Recommendations
Section 11:	References

2 Site Description

The site, which is comprised of JCES and MHS, is located in the Zuma Beach Area, in the City of Malibu, on the southern flank of the western portion of the Santa Monica Mountains. JCES is located at 30237 Morning View Drive and MHS is located at 30215 Morning View Drive (Figure 2), 0.2 miles north of Pacific Coast Highway (PCH). The terrain generally consists of rolling hills with a maximum topographic relief of approximately 90 feet and elevations ranging from approximately 80 to 170 feet above mean sea level (amsl). The topography at the site and its vicinity slopes gently southwesterly toward the Pacific Ocean. Land in the vicinity of the site consists of rural residential and recreational properties. Detailed descriptions of JCES and MHS are presented in the ensuing sections.

2.1 Site Identification

2.1.1 Juan Cabrillo Elementary School

JCES is comprised of approximately 6.4 acres, consisting of seven buildings (Buildings A through G), and two trailers used for childcare (Figure 2). Most of JCES was built between the late 1950s and the early 1960s, except for the childcare trailers and Building G (the Multipurpose Room/Cafeteria), which were built in 1992 and 1995, respectively. The main playground located in the northern portion of JCES consists of asphalted areas, a grassy field, one rubberized play area, and two sandboxes. A smaller playground located south of the childcare trailers consists of a grassy field, two sandboxes, and one rubberized play area.

The drop-off area is located along Morning View Drive, south of the buildings. Staff parking is located on the west side of JCES, west of Building A (Office) and Building G (the Multi-Purpose Room/Cafeteria). Most areas around the buildings are bordered with an approximate 8- to 10-foot wide concrete walkway and a concrete and/or vinyl siding overhang. Buildings A, D, and F are bordered by a planter to the south, north, and west, respectively. Buildings B, C, and D are separated by planter/garden areas that are used by students and staff for outdoor education.

2.1.2 Malibu Middle/High School

MHS is comprised of approximately 80 acres (including areas leased to others) and is currently improved with multiple permanent and temporary structures and various recreational facilities, including a pool and several sports fields (Figure 2). MHS consists of many buildings (Buildings A through K, and New Gymnasium). Construction of most of the buildings occurred in the 1960s, except for Building K and the New Gymnasium, which were built in 2002. Similarly to JCES, most buildings at MHS are bordered by an approximately 8- to 10-foot wide concrete walkway and a concrete and/or vinyl siding overhang. Two large metal barn-like structures that are used for equipment storage and vehicle maintenance, including a bus washing station ("Bus Barn"), are located in the northwestern portion of MHS. An outdoor concrete amphitheater is located north of Building I and east of Building G.

The swimming pool and athletic fields are located on the north and northeastern half of MHS. The area east of the athletic fields is mostly undeveloped. The District owns and leases three areas to other parties: 1) a green house and garden area located in the northwestern portion of MHS, which is referred to as Cornucopia, 2) The Boys and Girls Club located adjacent and north/northeast of the swimming pool, and 3) a portion of the Malibu Equestrian Center, located southeast of the MHS buildings (Figure 2).

2.1.3 General Use/Ownership

The site is owned by the District and is used for educational purposes.

2.1.4 Location

The site is located in the Zuma Beach Area, in the City of Malibu, California and is zoned for institutional use. JCES incorporates 6.4 acres of Assessor's Parcel Number (APN) 4469-017-900. MHS is comprised of approximately 80-acres with APNs 4469-017-900 (out of which 6.4 acres are shared with JCES), 4469-017-901, 4469-017-902, and 4469-017-903.

The following are located in the general vicinity of the site (Figure 2):

- To the north and west: residential properties;
- To the south: across from Mountain View Drive, is the Malibu United Church and Nursery School. Zuma Beach and the Pacific Coast Highway are located approximately 1,000 feet and 1,500 feet south of the Site, respectively; and
- To the east: residential properties and the Malibu Equestrian Center.⁴

2.1.5 Climate

The site is located within California Climate Zone 9. Average high temperatures in January and July in Malibu are 64 degrees Fahrenheit (°F) and 70°F, respectively. Average low temperatures in January and July are 51°F and 63°F, respectively. The majority of the area's precipitation occurs in the winter, during the months of January and February, with an average of 11.9 inches per year (<u>www.weather.com</u>).

2.2 Regional Geology and Hydrogeology

According to the Environmental Impact Report developed for the site (Atkins, formerly PBS&J, 2011), the site is located in the narrow, terraced coastal strip separating the present day beach from the Santa Monica Mountains within the Transverse Ranges province. Several north-dipping active thrust faults are located in the vicinity of the site including the Malibu Coast and Anacapa Dume Faults. The Anacapa Dume Fault marks the structural boundary of the Transverse Ranges province approximately three miles offshore from Point Dume. Both faults consist of slanted, north-dipping shear planes, accommodating north-over-south crustal shortening (compressional stresses). The main faults that intersect the site are illustrated on Figure 3.

The Santa Monica Mountains expose a thick sequence of Cretaceous-age (approximately 166 to 65 million years old) and younger sedimentary and extrusive igneous rocks. The sedimentary rocks include sandstones, siltstones, and mudstones. The volcanic rocks include sub-aerial and sub-aqueous flows, breccias, and tuff. In the vicinity of the site, at least 4,500 to

⁴ The Malibu Equestrian Center leases property from the District.

5,000 feet of mostly marine sediments overlie crystalline metamorphic basement rock. There are three marine terraces in this area of the coastal strip with variable elevations ranging from 100 to 250 feet amsl. These terraces represent wave-cut platforms incised into bedrock or older surficial deposits and are capped with marine shore deposits and non-marine stream terrace and debris flow deposits. The site is located on the middle of these three terraces, where most of the terrace surface has been dissected by erosion with subsequent deposition of gravel, sand, silt, and clay within the eroded channel.

2.3 Local Geology and Hydrogeology

2.3.1 Local Geology

Based on the subsurface investigations conducted at the site and the United States Geologic Society (USGS) Geologic Map (Yerkes and Campbell, 2005), the geology beneath the site consists of two main units: the Young Non-Marine Terrace Deposits (Qyd) and the Monterey Shale (Tmt). These geologic units are illustrated on Figure 4 and are further described below:

Young Non-Marine Terrace Deposits

This unit consists primarily of very stiff to stiff silty to sandy clay, interbedded with bedrock clasts. Non-marine terrace deposits are encountered from the surface or below surface fill to a maximum depth of 20 feet below ground surface (bgs) (Leighton, 2009).

Monterey Shale

Interbedded claystone and siltstone of the Monterey Shale formation are encountered at depths ranging from 10 to 20 feet bgs (Leighton, 2009). The unit is described as light brown, moderately hard to hard, fractured, oxidized, and weathered, with calcite staining.

Three other geologic units are exposed at the site: the Trancas Formation (Tr), Zuma Volcanics (Tz), and the Young Marine Terrace Deposits (Qym). The Trancas Formation is areally limited to two small portions in the northwest corner and center of the site. The Zuma Volcanics geological unit is sporadically exposed in the north-northeastern half of the site and appears to contact with the Young Non-Marine Terrace and the Monterey Shale in the center of the site.

2.3.2 Local Hydrogeology

The site is within the Malibu Hydrological Unit and the Trancas Canyon Hydrologic Sub-Area (Los Angeles Regional Water Quality Control Board [LARWQCB], Basin Plan). There is no groundwater basin designated in the area of the site and groundwater is not assigned any beneficial uses according to the Basin Plan. The site is bounded to the northwest by an ephemeral stream, designated by the City of Malibu as an Endangered Species Habitat Area (ESHA).

2.4 Site Geology and Hydrogeology

2.4.1 Site Geology

The geology beneath the site consists of several geologic units, as described above. As part of the PEA field investigation, 10 soil borings, JC-SB-59, JC-SB-60, JC-SB-62, MH-SB-96, MH-SB-100, MH-SB-104, MH-SB-105, MH-SB-108, MH-SB-110, and MH-SB-113, were continuously logged and completed to depths ranging from 10 to 65 feet bgs; soil logging was

performed using the Unified Soil Classification System (USCS). Boring logs are presented in Appendix A. Cross sections are presented on Figures 5a and 5b.

Based on observations during drilling and sampling activities, the site is primarily underlain by interbedded lenses of clay, silty clay, and silt that coarsen downward to predominately sand at approximately 80 to 90 feet amsl beneath the southern portion of the site (by Building H) and at approximately 110 to 129 feet amsl beneath the eastern portion of the site (by the basketball courts). Logged soils were slightly moist and predominantly brown to dark brown with occasional greenish and yellowish hues. Beneath JCES, the subsurface lithology is predominantly silt and fines with thinner layers of sand encountered at depths ranging from 89 to 91 feet amsl, 93.5 to 95.5 feet amsl, and 98 to 100 feet amsl. To the east, beneath Buildings I and F of MHS, the silt pinches out and the sand thickens at depths ranging from 110 to 120 feet amsl and from 95 to 107 feet amsl. Both sandy layers are separated by fine-grained zones (see Figure 5a). The subsurface lithology farther north (in the vicinity of the Bus Barn, see Figure 5b) is comprised of alternating layers of silts, clays, and sands that extend from the ground surface to the maximum depth investigated of approximately 65 feet bgs. Beneath the Bus Barn, at boring MH-SB-96, the upper 35 feet is composed primarily of fines (e.g., silty clay to clayey silt). At approximately 85 feet amsl (or 58 feet bgs), the silty layer coarsens into a 13-foot thick sandy layer, underlain by silt. At boring MH-SB-96, groundwater was encountered at 69 feet amsl (64 feet bgs).

2.4.2 Site Hydrogeology

The site is not served by any public sanitary sewer systems and uses septic systems. Eleven monitoring wells currently are present at the site (MW1 through MW-11; see Figure 6) to monitor the septic systems as part of the site's Waste Discharge Requirement (WDR) permit, authorized by the LARWQCB. ENVIRON measured depth to groundwater in these wells on July 31, 2014 as part of this PEA scope; groundwater at the site was encountered at depths ranging from approximately 51.38 to 65.00 feet bgs. The first encountered groundwater at the site is likely perched.

Measured depth to water and calculated groundwater elevations are presented in Table 1a. Groundwater beneath the site flows to the southwest, toward the Pacific Ocean (Figure 6). There is no groundwater basin designated in the area of the site, groundwater is not assigned any beneficial uses according to the Basin Plan, and groundwater underlying the site is not used for drinking water. Drinking water at the site is supplied by the Metropolitan Water District of Southern California (MWDSC).

3 Background

The following sections present the steps taken to obtain historical and site operational information to preliminarily assess environmental conditions at the site and to identify AOIs for further evaluation. ENVIRON performed the following:

- Conducted site visits and District employee interviews to assess site conditions;
- Reviewed topographic maps, aerial photographs, and agency files to evaluate historical activities conducted at the site; and
- Reviewed reports prepared by other consultants to evaluate previous investigations conducted at the site.

3.1 Information Sources

ENVIRON visited and/or reviewed the following sources to identify current and historical site uses and operations:

- Reconnaissance visits to the site were conducted on March 6, April 1, and May 7, 2014 to
 observe the exterior and interior features of the site, to locate areas reported as Recognized
 Environmental Conditions (RECs) in the Phase I Environmental Site Assessment (ESA)
 prepared for MHS by LFR (an ARCADIS Company) (LFR, 2009), and to observe planned
 future redevelopment areas. Photographs taken during the site visits are included in
 Appendix B of the PEA Work Plan. ENVIRON conducted an additional site visit on August
 18, 2014 to evaluate access and document historical and current uses at Cornucopia.
- Interviews were conducted during the site visits with the following employees: Mr. Terry Kamibayashi, Manager of Maintenance and Construction; Mr. Terance Venable, Manager of Operations and Grounds; and Ms. Pamela Herkner, Principal of JCES. Ms. Herkner was interviewed specifically to obtain information regarding JCES's use of the Cornucopia area. The afore-mentioned employees are referred to herein as "facility personnel." The facility personnel interviewed by ENVIRON were identified by the District as having knowledge of the current uses and physical characteristics of the site.
- Interviews conducted with JCES and MHS employees on May 21, 2014.
- A review of information contained in federal and state environmental databases, as obtained from a radius report prepared by Environmental Data Resources, Inc. (EDR, see Appendix C of the PEA Work Plan), which presents the results of searches of federal and state databases for the site, as well as properties near the site.
- A review of standard historical sources to develop a history of previous uses at the site and surrounding area. The following resources were reviewed: historical topographic maps, aerial photographs, and Sanborn Maps. Historical topographic maps and Sanborn Maps were requested from EDR. Historical aerial photographs and historical photographs and other historical information were inquired and obtained from the following sources:
 - EDR;
 - DTSC's discussions with community members;

- United States Army Corps of Engineers;
- Department of Oil, Gas, and Geothermal Resources (DOGGR);
- Los Angeles Public Library;
- University of California, Los Angeles Spence & Fairchild Collections;
- Malibu Public Library;
- Pepperdine University;
- Los Angeles City Archives;
- City of Malibu;
- Former Malibu Historical Society;
- Malibu Lagoon Museum;
- United States Department of Agriculture; and
- National Archives.
- A review of local agency files to evaluate historical subsurface investigations and potential environmental concerns. The following agencies were contacted:
 - Los Angeles County Public Health Investigator (PHI);
 - DTSC Cypress and Chatsworth Offices;
 - Los Angeles County Fire Department (LACFD);
 - Los Angeles County Department of Public Works (LACDPW);
 - Los Angeles County Sanitation District (LACSD);
 - City of Malibu Environmental Programs (City);
 - City of Malibu Building Department (City Building);
 - State of California Division of State Architects (State);
 - LARWQCB; and
 - South Coast Air Quality Management District (SCAQMD).
- A review of information received at ENVIRON's SMMUSDEnvironmentalInput email address, including a summary of interviews conducted by Ms. Cindy Vandor. ENVIRON also spoke with Mr. David Solinger regarding his experience at army depots and Mr. Ron Fleishman of the World War II Museum in Oxnard. Neither of these individuals reported knowledge of historical military uses of the Malibu area, and specifically the land comprising the site.
- A review of documents provided to ENVIRON by the District including facility prepared plans and procedures and material safety data sheets (MSDSs) for products (e.g. maintenance chemicals, pesticides, rodenticides, herbicides) used at the site. In addition, ENVIRON reviewed the following environmental assessment reports and other documents:

- SMMUSD ES Reconstruction Program, Report of Additional Site Assessment Activities, by Cape Environmental Management, dated February 18, 1993.
- Workplan to Assess Malibu Park High Site Closure Permit No 9285B, by Cape Environmental Management, August 2, 1993.
- Additional Data Regarding Water Depth in the Vicinity of Malibu Park School, Malibu, California, by Ocean Blue Engineers, Inc., August 4, 1993.
- Subsurface Investigation by Drilling Four Borings and Soil Sampling, and Possible Installation, Development and Sampling of Four Groundwater Monitoring Wells at Malibu Park School, Malibu, by Ocean Blue Engineers, Inc. California, dated April 4, 1994.
- Background Information and Specifications for Subsurface Investigation by Drilling Four Borings and Soil Sampling, and Possible Installation, Development and Sampling of Four Groundwater Monitoring Wells at Malibu Park School, Malibu, California, by Ocean Blue Engineers, Inc., dated July 27, 1994.
- Interim Report of Groundwater Monitoring Well Installation and Site Assessment Report at 30215 Morning View Drive, Malibu, California, by Vector Three Environmental, Inc., dated December 7, 1995.
- Summary Report of Previous Site Investigations and Closure Requests for Malibu Park School Located at 30215 Morning View Drive, Malibu, California, Ocean Blue Engineers, Inc., dated August 21, 1996.
- Destruction of Four Groundwater Monitoring Wells at Malibu Park School Located at 30215 Morning View Drive, Malibu, California, by Ocean Blue Engineers, Inc., dated November 5, 1996.
- Consultation Regarding Floor Slab Moisture, Existing Building E, Malibu High School, 30215 Morning View Drive, Malibu, California, by Law/Crandall, Inc., dated 1994.
- Facilities Area Survey, Malibu High School, and Juan Cabrillo Elementary School, by Malibu High School, dated March 1, 1999.
- Award of Bid #3.05 Energy Efficiency Lighting Retrofit Project Phase III Malibu High School, by Santa Monica Malibu Schools, dated October 28, 2005.
- Building Sewers to Septic System, Malibu High School and Juan Cabrillo Elementary School, by D. Lewis Company, dated January 28, 2009.
- Scope of Work, Seepage Pit Backfill, by Topanga Underground, dated July 30, 2009.
- Final Percolation Test Data Seepage Pits, Revised Seepage Pit Depths, by Topanga Underground, August 25, 2009.
- Draft Phase I Environmental Site Assessment, Malibu Middle and High School Campus, 30215 Morning View Drive, Malibu, California, prepared by LFR (an ARCADIS Company), dated September 17, 2009.
- Preliminary Environmental Assessment Report, Malibu Middle and High School Campus Improvement Project, 30215 Morning View Drive, Malibu California, prepared by ARCADIS, dated June 14, 2010.

- Removal Action Work Plan, Malibu Middle and High School Campus Improvement Project, 30215 Morning View Drive, Malibu, California, prepared by ARCADIS, dated August 5, 2010.
- Santa Monica Malibu Unified School District, Malibu Middle and High School Campus Improvement Project, Environmental Impact Report, prepared by Atkins, formerly PBS&J, July 2011.
- Removal Action Completion Report, Malibu Middle and High School Campus Improvement Project, 30215 Morning View Drive, Malibu, California, prepared by ARCADIS, dated June 12, 2012.
- Summary of Indoor Environmental Quality, Electromagnetic Fields, and Radon Monitoring Results, Malibu High School, Malibu Middle School, and Juan Cabrillo Elementary School, dated November 2013.
- 4th Quarter 2013 Monitoring Report for Malibu High School, Malibu Middle School, and Juan Cabrillo Elementary School," by Ashirt Engineering Inc., dated January 14, 2014.

3.2 Current Site Information

The site currently is occupied by JCES and MHS (Figure 2). JCES is the smaller of the two schools and is located west of MHS. Construction of JCES was initiated in late 1950s and the school was completed in its current configuration in 1995. Construction of MHS was initiated in the early 1960s and the school was completed in its current configuration in 2002. Since construction, the site has been used for educational purposes. The District leases three areas at the site to various entities: a green house and garden area located in the northwestern portion of the property that is referred to as Cornucopia; The Boys and Girls Club located in the central portion of MHS, north/northeast of the swimming pool; and the Equestrian Center, located in the southeastern portion MHS. Fencing separates the Equestrian Center from MHS. School layouts are presented on Figure 2.

Groundwater underlying the site is not used for drinking water. Drinking water at the site is supplied by MWDSC. The site is not served by any public sanitary sewer systems and uses septic systems.

3.2.1 Site Visit Observations

Site visits were conducted on March 6, April 1, May 7, and August 18, 2014. During these site visits, ENVIRON observed the following:

JCES

ENVIRON walked the entire school and observed both the exteriors and interiors of the buildings. Areas around the buildings typically are bordered with an approximate 8- to 10-foot wide concrete walkway and a concrete and/or vinyl siding overhang. Buildings A, D, and F are bordered by a planter to the south, north, and west, respectively. ENVIRON observed the playgrounds (grassy play area and adjacent sandbox playground) and the interior garden areas that are located between Buildings B, C, and D, as depicted on Figure 7.

In Building F, ENVIRON observed the interior of Room 21 and Room 22 (Art Room), which contained paint, glue, collage materials, and aerosol fixative. In Room 23, the Science Laboratory, ENVIRON observed aquariums, desks, televisions, and microscopes. There was no obvious visual evidence of chemical use.

Three septic tank areas that service JCES (Septic Tanks 7, 8, and 9) were observed (see Figure 7). Septic Tank 7 is located in the northern end of the staff parking lot and is connected to three leach pits; Septic Tank 8 is located south of Building F and is connected to a leach field; and Septic Tank 9 is located south of the childcare trailer and is connected to one leach pit. Four monitoring wells (MW-1 through MW-4) are located in the vicinity of the septic systems. These monitoring wells were installed between March 28 and April 6, 2009 during an evaluation and upgrade of the existing septic system (GeoConcepts, 2009) as part of the WDR permit, and are monitored quarterly under oversight of the LARWQCB.

One electrical transformer was observed west of Building A. The transformer is situated on a concrete pad on soil/grass. The transformer was manufactured in 2010 and replaced an older transformer. The transformer appeared to be in good condition with no obvious visual evidence of releases (e.g. staining) on the adjacent concrete.

MHS

ENVIRON walked the entire school and observed both the exteriors and interiors of the buildings. Similarly to JCES, most buildings at MHS are bordered by an approximately 8- to 10-foot wide concrete walkway and a concrete and/or vinyl siding overhang. There are two main grassy areas: the Middle School Quad and the High School Quad, which are separated by Building D. An outdoor concrete amphitheater is located north of Building I and east of Building G. The basketball courts and the swimming pool are located north of the amphitheater, beyond which are the athletic fields (see Figure 8).

In Building D, the Biology Laboratory (Room 105) appeared orderly with no obvious visual evidence of significant chemical storage. In Building G, in the Art Room, ENVIRON observed stored glazes and powders containing silica and one sink with a drain. In the Ceramic Room and the Woodshop, ENVIRON observed two kilns; one electric and one gas, both vented to the outside, with floor drains that reportedly discharge into Septic Tank 1. Inside the Woodshop (Room 506), ENVIRON observed electrical saws and lathes and a spray booth manufactured by Spray King (Room 506D). All equipment appeared to be in good condition. Significant staining was not observed around any equipment.

Adjacent to Building K, the Science Building, ENVIRON observed an in-ground chemical neutralization tank that holds waste discharged from the chemistry laboratories in the Science Building. In Building I, ENVIRON observed the Photo Laboratory (Room 402), with a dark room and a sink with floor drain that reportedly discharges to Septic Tank 5. Overall, ENVIRON did not observe obvious visual evidence of spills or leaks of stored chemicals.

Building H, the food service (kitchen) is located south of Building K. ENVIRON observed several sinks and two drains that reportedly discharge to Septic System 4. Inside the kitchen in Building H are two large freezers that use Freon. During the site visit, the kitchen was observed to be

clean and well maintained. West of the food service/kitchen building, ENVIRON observed one emergency generator situated on a concrete pad on asphalt within a concrete blockwall enclosure and two electrical transformers, manufactured in 2000, situated on concrete pads on soil/grass. The emergency generator and transformers appeared to be in good condition, with no obvious visual evidence of releases (e.g. staining) on adjacent concrete or soil.

In the swimming pool area, two portable storage units were observed for utility cart storage. The swimming pool's pump room stores containers of hydrochloric acid, sodium hypo-chlorite, and chlorine, on concrete. ENVIRON observed some etching of the concrete outside the pump room. An 8,000-gallon poly tank, which is used to collect backwash, is located in an underground vault adjacent to the pump room.

ENVIRON observed the football field, baseball field, softball field, tennis courts, and soccer fields, which are all located on the eastern portion of MHS. Northwest of the basketball courts, ENVIRON observed the Boys and Girls Club. North of the Boys and Girls Club, ENVIRON observed one electrical transformer manufactured in 1994. The transformer is situated on a concrete pad on soil/grass. The transformer appeared to be in good condition with no obvious visual evidence of releases (e.g. staining) on adjacent concrete.

In the northern parking lot, ENVIRON observed an infiltration/retention basin, constructed in approximately 2008 by the California Conservation Corps. Stormwater and runoff from the parking lot drain to the infiltration/retention basin. During the site visit, ENVIRON observed water in the infiltration/retention basin.

In the Bus Barn and Grounds Shop area located on the northwest portion of MHS, ENVIRON observed asphalt patches associated with two former diesel 10,000-gallon USTs, which were removed in August 1992. According to facility personnel, the Bus Barn is used to store cleaning supplies for bus cleaning. The Grounds Shop is used to store gasoline, small quantities of herbicides, such as RoundUp, and other grounds use equipment. This building was locked during all of ENVIRON's site visits and therefore ENVIRON was unable to view the interior of the building. The Bus Barn is used by school bus drivers and maintenance staff on an asneeded basis, to get the school buses ready, store, and retrieve equipment. The area is generally occupied by the maintenance crew intermittently for up to a few hours a day during weekdays.

ENVIRON observed the septic systems and leach pits that service MHS. The septic tanks, which are illustrated on Figure 3, are located in the southernmost parking lot (Septic Tank 1), west of the Administration Building (Septic Tank 3), south of Building H (Septic Tank 4), north of Building D (Septic Tank 5), at the basketball courts (Septic Tank 6), and north of the "Bus Barn" (Septic Tank 11). Seven monitoring wells (MW-5, 6, 7, 8, 9, 10, and 11) were observed on MHS. These monitoring wells were installed between March 28 and April 6, 2009 as part of an evaluation of and upgrade to the existing septic system under the WDR permit. The wells are monitored in compliance with the WDRs on a quarterly basis under oversight of the LARWQCB (GeoConcepts, 2009).

During the site walk, ENVIRON visited Cornucopia located in the northern portion of MHS. The operator of Cornucopia provided an educational program for JCES and MHS consisting of lessons in organic farming and landscaping, however such programs have not been conducted since early 2014. The Cornucopia area measures approximately 0.5 acres (see Figure 9). It consists of two areas of planting beds, each surrounded by a wooden picket fence. The first planting bed area, located along the eastern end of Cornucopia, is composed of two planting beds. The second area of planting beds, located along the south side of Cornucopia, is composed of 12 planting beds. Each planting bed is bordered by wooden planks. There are two areas with a canopy overhang. ENVIRON observed picnic tables and wooden benches made of tree stumps. Cornucopia is bounded to the west by the ESHA.

Based on aerial photographs of the Cornucopia area, available via GoogleEarth, and information available on Cornucopia's website (www.cornucopiafoundation.org), the area appeared vegetated and undeveloped through early 2000s. Between 2002 and 2007, the area appears to have been used as a parking lot. Cornucopia reported that during development, it removed asphalt from the area "ultimately filling 15 semi-trailer trucks." Cornucopia reported that it brought in two semi-trailer truckloads of organic soil in 2006, prior to planting. Post 2007, some of Cornucopia's current features were observed in the aerial photographs such as the planting beds and the canopies. Cornucopia appears to have attained its current configuration beginning in 2011. According to the Cornucopia website, wood chips are continuously added to the area to help renew and build healthy topsoil.

3.3 Site History

ENVIRON reviewed a variety of historical sources to understand the historical uses of the site, including a search of formerly used defense sites (FUDs) provided by DTSC, topographic maps, aerial photographs, and a search for Sanborn Maps. A detailed list of reference material is found in the PEA Work Plan; a summary of the review is presented below.

In recognition of the community's concerns regarding potential historical use of the site for unspecified military purposes, in addition to reviewing historical aerial photographs, ENVIRON also obtained a search of FUDs provided by DTSC, contacted the World War II Museum in Oxnard (Mr. Ron Fleishman), and visited the Malibu Library to research historical documentation of the military use in the area.

According to a book by Ronald Rindge entitled "*WWII Homeland Defense: US Coast Guard Beach Patrol, in Malibu 1942 – 1944,*" during World War II several military stations were established along the Malibu coast. Based on information contained in this book, the closest United States Guard Service Station (Station N-7) to the site was located near Point Dume, approximately 3 miles southeast of the site. Shortly after Station N-7 was established in August 1942, World War II (WWII) broke out and the army occupied Point Dume because of its strategic location. A target was mounted on rails that extended east – west from Grasswood Avenue running easterly downslope north of Cliffside Drive, with the east end located east of Fernhill Drive (approximately 3 miles southeast from the site). According to the author, "*Machine guns and cannons would fire at the target moving slowly from west to east, with the projectile falling harmlessly into the ocean.*" Based on the description provided, the target on rails was not

located within the site boundaries. In addition, ENVIRON's review of aerial photographs and the FUDs search did not indicate any historical military uses of the site.

3.3.1 Topographic Maps and Aerial Photographs

A review of topographic maps and aerial photographs (included as Appendix E and F, respectively, in the PEA Work Plan) shows that the site remained undeveloped land until at least 1932. The first paved road was depicted on a map dated 1947. The first buildings on the site appeared on maps dated 1967, 1981, 1994, and 1995.

A detailed discussion of reviewed aerial photography is also found in the PEA Work Plan. In summary, the site remained largely undeveloped and covered with natural vegetation through the 1940s. The site may have been used for activities related to dry land farming in the late 1940s and the 1950s. The first residences near the site appear to the northwest in a 1952 photograph. A 1959 aerial photograph depicts buildings that are in the same configurations as JCES school buildings A (administration), B (classrooms 1 through 5), C (classrooms 8 through 11), and D (classrooms 12 through 15). MHS remains undeveloped.

The western portion of JCES Building F is depicted in a 1964 photograph, which also shows MHS developed with Building H (the Auditorium and Kitchen), Building E (Middle School/Blue Building), Building F (Music), Building I (Graphic Arts), and the Bus Barn. Residences are visible northwest and south of the site. JCES Building E is apparent in a 1966 photograph. By 1976, MHS includes Buildings A (Library), B/C (Administration), D (Science), G (Art, Woodshop), and the Old Gymnasium. The swimming pool and the athletic fields (football and baseball) also are visible on the 1976 aerial photograph. A 1994 aerial photograph depicts JCES in its current configuration including Building G (Multipurpose room) and the trailers used for after school childcare. MHS is depicted in its current configuration in a 2005 aerial photograph, with Building K and the New Gymnasium.

3.3.2 Agency File Review

Los Angeles County Fire Department

ENVIRON requested information pertaining to the site from the LACFD. The LACFD referred to PHI as custodian of records.

Los Angeles County Department of Environmental Health, Public Health Investigations

ENVIRON reviewed records pertaining to the site from the PHI. Reviewed files included inspection field notes from the LACFD. The inspection forms dated May 4, 2007 and July 27, 2012 indicate that MHS is a small quantity waste generator due to waste generated in the chemistry laboratory located in Building D and chemicals used at the swimming pool.

Department of Toxic Substances Control, Cypress and Chatsworth Offices

ENVIRON requested information pertaining to the site from the DTSC. According to the DTSC's EnviroStor website, a Phase I ESA (Phase I) was performed at MHS in March 2000 by CTL Environmental Services (CTL). The purpose of the Phase I was to identify potential environmental concerns associated with current and previous uses of the site and adjacent properties. CTL concluded that there were no potential environmental concerns associated with

current and previous uses at MHS. In a letter dated May 9, 2000, the DTSC indicated that "Based on DTSC's review of the information presented and discussed in the Phase I and a site visit conducted May 1, 2000, no actual or potential hazardous substance release was indicated which would pose a threat to human health or the environment under any land use. Therefore DTSC determines that no action is necessary with respect to investigation and remediation at the site."

Los Angeles County Department of Public Works

ENVIRON reviewed records at the LACDPW regarding the two former 10,000-gallon diesel USTs located in the Bus Barn area in the northwest portion of MHS.

In a letter dated May 15, 1986, Dames and Moore reported the results of integrity testing conducted on the former diesel USTs, which indicated a "slight leak somewhere within the system and arrangements are being made to have the systems checked and repaired." On August 27, 1987, the LACDPW issued a letter regarding the USTs integrity test failure and requested a written report to document the lateral and vertical extent of the potential impact of the leaking USTs. The USTs were removed in August 1992 under the oversight of the LACDPW. In early 1993, the UST case was transferred to the LARWQCB (see below).

Regional Water Quality Control Board– Los Angeles Region

ENVIRON reviewed files obtained from the LARWQCB related to two former 10,000-gallon diesel USTs located in the Bus Barn area in the northwest portion of MHS. The former USTs were removed under the oversight of the LACDPW in August 1992.

Soil sampling conducted beneath the USTs indicated that the soil was impacted with diesel, toluene, ethylbenzene, and xylenes at maximum concentrations of 5,800 μ g/kg, 10,000 μ g/kg, 15,000 μ g/kg, and 130,000 μ g/kg, respectively. Stockpiled soil was taken offsite for disposal at a permitted facility. Two additional subsurface investigations conducted in October 1992 and January 1993 indicated that diesel, benzene, toluene, ethylbenzene, and xylenes (collectively known as BTEX) were detected at depths ranging from 14 to 40 feet bgs. Additionally, a grab groundwater sample collected from perched groundwater encountered at a depth of approximately 40 feet bgs indicated the presence of BTEX at concentrations of 1,500 micrograms per liter (μ g/l), 19,000 μ g/l, 2,300 μ g/l, and 15,000 μ g/l, respectively.

At the request of LARWQCB, four monitoring wells were advanced in the vicinity of the former USTs; two upgradient (MW-1 and MW-2) and two downgradient (MW-3 and MW-4; see Figure 10). Three rounds of groundwater monitoring confirmed that total petroleum hydrocarbons (TPH) and BTEX were not detected in the up-gradient wells MW-1 and MW-2 (The Reynolds Group, 1996). TPH was not detected in the down-gradient wells MW-3 and MW-4. Toluene, ethylbenzene, and xylenes also were not detected above their respective maximum contaminant levels (MCLs) for drinking water in these wells. During the last groundwater monitoring event conducted in July 18, 1996, benzene and ethylbenzene were detected at concentrations of $33.4 \,\mu$ g/l (exceeding its MCL of $1 \,\mu$ g/l), and $34.7 \,\mu$ g/l (below its MCL of 700 μ g/l), respectively. Based on the groundwater monitoring results, Ocean Blue Engineers concluded that concentrations of BTEX had generally been declining, and therefore

requested closure from the LARWQCB on August 21, 1996. On September 11, 1996, the LARWQCB granted closure for the former USTs. Monitoring wells MW-1 through MW-4 were abandoned on November 6, 1996.

Los Angeles County Sanitation District

ENVIRON requested information pertaining to the site from the LACSD. According to the LACSD there were no records pertaining to the site, as the site is not connected to the LACSD sewer system.

City of Malibu Environmental Programs

ENVIRON requested information pertaining to the site from the City. According to the City, there were no records pertaining to the site.

City of Malibu Building Department

ENVIRON requested information pertaining to the site from the City Building Department. According to the City Building Department, no records were found pertaining to the site. The City Building Department indicated that permits would be issued by the State.

State of California – Division of State Architects

ENVIRON requested information pertaining to the site from the State regarding building permits. According to the State, no building permits were found pertaining to the site.

South Coast Air Quality Management District

ENVIRON reviewed files obtained from the SCAQMD. The files contained two permits for MHS: 1) a permit dated March 19, 1996, to construct/operate an emergency electrical generator for MHS and 2) a permit dated August 7, 2013, for a boiler/water heater for the swimming pool.

3.3.3 Interviews

ENVIRON interviewed Mr. Terry Kamibayashi, Manager of Maintenance and Construction, and Mr. Terance Venable, Manager of Operations and Grounds. According to these facility personnel, no chemical spills are known to have occurred at JCES. The District reported one environmental release at MHS related to two former 10,000-gallon diesel USTs in the Bus Barn area. Subsurface investigations related to the former USTs and their subsequent removal are documented in detail in Section 3.5.1.1.

According to Mr. Terance Venable, the Los Angeles County Health Department mandates management of ground squirrels and gophers. Rodenticides are not currently used at the site and use of such chemicals ceased in November/December 2013. Previous to this time, squirrels were controlled through use of bait boxes containing Diphacinone, which were placed on the ground on hillsides and slopes. Gophers were controlled by localized placement of Diphacinone or strychnine pellets in gopher burrows. Rodent abatement services were conducted bi-weekly by Stanley Pest Control. Rodenticides may have been applied via broadcasting prior to 2010; this method of application ceased in 2010. Broadcasting was confined to areas away from existing buildings, and primarily conducted on the hillsides immediately east of MHS.

The Los Angeles County Health Department, which routinely assesses rodent populations as part of its jurisdiction, will issue a letter if it deems abatement and rodent control is needed.

Ant control is conducted on an as needed basis. Typically, surfaces are cleaned first by removing residual food and crumbs before deploying physical ant traps. Spiders are abated by sweeping the affected area.

Weeds were controlled using the herbicide "RoundUp" for spot application on slopes, away from buildings. Reportedly, the use of herbicides ceased in November/December 2013. Currently weed whackers are used for weed abatement and control.

Fertilizers are applied three to four times per year only on athletic fields.

ENVIRON interviewed Ms. Herkner specifically related to the JCES's use of the Cornucopia area. According to Ms. Herkner, JCES students visited Cornucopia once or twice monthly during the school year, typically less than one hour per visit, for educational purposes. Students visited Cornucopia for science instruction, primarily related to organic farming. JCES has not used Cornucopia for educational purposes since early 2014.

3.4 Hazardous Materials Information

According to facility personnel and based on site visit observations, current chemical use at the site is limited to maintenance (e.g., janitorial) chemicals, which are stored in gallon containers and kept in locked custodial closets (one closet per floor in each building) and pool chemicals, which are stored in the pool chemical storage area, east of the swimming pool. MSDSs related to general cleaning materials are included in Appendix D of the PEA Work Plan. MHS stores only small quantities of chemicals for educational purposes, some of which may be hazardous, in the chemistry storage room, woodshop, and photography dark room. Small quantities of herbicides (e.g., RoundUp) may be stored in the Grounds Shop located in the northwest corner of MHS.

3.5 Previous Investigations

Prior to implementation of this PEA, subsurface investigations had been conducted only at MHS. Subsurface investigation information was obtained from available files received from regulatory agencies and files received from the District.

3.5.1 Subsurface Investigations

Previous subsurface investigations conducted at MHS consisted of:

- Removal of the two former 10,000 gallon USTs located at the Bus Barn; these investigations were conducted by Ocean Blue Engineers, Cape Environmental Management, and Vector Three Environmental between 1992 and 1996;
- Evaluation and backfilling of septic system leach pits at JCES and MHS conducted by Topanga Underground in 2009; and

• Soil investigations and subsequent soil removal in areas proposed for redevelopment at MHS; these investigations were conducted by ARCADIS in 2009 and 2010. Soil removal was conducted in 2011.

These investigations are summarized in the following sections.

3.5.1.1 Former UST Removal Activities

In a letter dated May 15, 1986, Dames and Moore reported the results of integrity testing conducted on the former diesel USTs, which indicated a "slight leak somewhere within the system and arrangements are being made to have the systems checked and repaired." On August 27, 1987, the LACDPW issued a letter regarding the USTs' integrity test failure and requested a written report to document the lateral and vertical extent of the potential impact of the leaking USTs. The USTs and associated piping were removed in August 1992 under the oversight of the LACDPW. Soil confirmation samples were collected two feet beneath the former USTs and associated dispensers and were analyzed for BTEX by United Stated Environmental Protection Agency (USEPA) Method 8020 and for total petroleum hydrocarbon-diesel (TPH-d) by USEPA Method 8015 Modified (M). Analytical results indicated that toluene, ethylbenzene, xylenes, and/or TPH-d were detected in soil in sample SST2AW at maximum concentrations of 10,000 µg/kg, 15,000 µg/kg, 130,000 µg/kg, and 5,800 µg/kg, respectively.

Five stockpile soil samples were collected from stockpiled excavated soils and were analyzed for BTEX by USEPA Method 8020 and for TPH-d by USEPA Method 8015 M. Stockpile soil sampling results indicated that diesel was detected at a maximum concentration of 1,200 milligrams per kilogram (mg/kg). Toluene was detected in a sample at a concentration of 6.2 μ g/kg and xylenes were detected in two soil samples, at concentrations of 880 μ g/kg in SSSP1E and 430 μ g/kg in SSSP1SE.

The removed USTs were certified as non-hazardous and were transported to D.W. Russel Co. for recycling or destruction.

In October 1992, eight borings (B1 through B8) were drilled in the vicinity of the former USTs to characterize the extent of impacted soil. Soil borings B3 and B8 were advanced to a depth of approximately 40 feet and 35 feet bgs, respectively. Soil borings B1, B2, and B4 through B7 were advanced to a depth of approximately 20 feet bgs, and soil samples were collected at variable depths as summarized on Figure 10. Soil samples were analyzed for BTEX by USEPA Method 8020 and for TPH-d by USEPA Method 8015M. Soil sampling results indicated that BTEX and TPH-d were detected at maximum concentrations of 360 µg/kg, 17,000 µg/kg, 32,000 µg/kg, 310,000 µg/kg, and 2,200 µg/kg, respectively (see Figure 10).

In January 1993, an additional subsurface investigation was conducted to better define the extent of impacted soil. Three additional soil borings (B9 through B11) were advanced to depths of approximately 30- and 40-feet bgs. Soil samples were collected from boring B9 starting from approximately 25 feet bgs and then at 5 foot intervals to the total depth of the boring and from boring B11 starting from approximately 15 feet bgs and then at 5 foot intervals to the total depth of the boring. Boring B10 was slant-drilled underneath the east dispensers and the building and sampled at depths of approximately 12-, 21-, and 30-feet bgs. In addition, two

soil samples (W. Dispenser and E. Dispenser) were collected directly underneath the dispensers at depths of approximately 3- and 4-feet bgs, respectively. Soil samples were analyzed for BTEX by USEPA Method 8020 and TPH-d by USEPA Method 8015 M. BTEX and TPH-d were detected in soil samples from B9 through B11 at maximum concentrations of 500 µg/kg, 690 µg/kg, 320 µg/kg, 2,900 µg/kg, and 14 µg/kg, respectively.

Soil samples collected below the dispensers indicated that soil was impacted with TPH-d at a maximum concentration of 290 μ g/kg. BTEX were not detected above their respective laboratory reporting limits (see Figure 10).

During advancement of the borings, perched groundwater was encountered in boring B11 at approximately 40 feet bgs and a grab groundwater sample was collected and analyzed for BTEX by USEPA Method 8020. The grab groundwater sample results indicated that BTEX was detected at concentrations of 1,500 micrograms per liter (μ g/l), 19,000 μ g/l, 2,300 μ g/l, and 15,000 μ g/l, respectively (see Figure 11).

In early 1993, oversight of the USTs removal was transferred from the LACDPW to the LARWQCB. The LARWQCB requested evaluation of groundwater conditions through installation of four monitoring wells. In 1995, monitoring wells MW1 through MW3 were installed to a depth of approximately 50 feet bgs and monitoring well MW4 was installed to a depth of approximately 42 feet bgs (see Figures 10 and 11). During well installation, soil samples were collected at 5-foot intervals from each boring. BTEX and TPH-d were not detected above their respective laboratory reporting limits in soil samples obtained from borings MW-1 through MW-3. Soil samples obtained from monitoring well MW-4 indicated BTEX was detected at maximum concentrations of 444 μ g/kg, 63 μ g/kg, 212 μ g/kg, and 193 μ g/kg at approximate depths ranging from 32 to 35 feet bgs (see Figure 10).

Initial groundwater sampling was conducted in April 1995, post well development, and results indicated that BTEX and TPH-d were detected only in MW-3 and MW-4 at maximum concentrations of 42.9 μ g/l, 16.3 μ g/l, 6.9 μ g/l, 41.5 μ g/l, 1.2 μ g/l, respectively. BTEX and TPH-d were not detected above their respective laboratory reporting limits in MW-1 and MW-2 (Figure 11).

In 1996, three quarters of groundwater sampling were conducted in January, April, and July. Concentrations of BTEX and TPH-d were not detected above their respective laboratory reporting limits in MW-1 and MW-2. Concentrations of BTEX in monitoring well MW-4 decreased to below their respective reporting limits by July 1996. In monitoring well MW-3, the July 1996 sampling results indicated that TPH-d, toluene, and xylenes were not detected above their laboratory reporting limits. Benzene was detected at a concentration of 33.4 μ g/l, exceeding its MCL of 1 μ g/l and ethylbenzene was detected at a concentration of 34.7 μ g/l, below its MCL of 700 μ g/l (Figure 11).

Based on the groundwater monitoring results, Ocean Blue Engineers concluded that concentrations of BTEX had generally been declining, and therefore requested closure from the LARWQCB on August 21, 1996. On September 11, 1996 the LARWQCB provided regulatory

closure for the former USTs. Monitoring wells MW-1 through MW-4 were abandoned on November 6, 1996.

3.5.1.2 Evaluation and Backfilling of Septic Systems Leach Pits

In 2009, a District contractor, Topanga Underground, installed 11 monitoring wells (MW-1 through MW-11) at JCES and MHS to evaluate the separation between the groundwater table and the base of each leach pit associated with the various on-site septic systems. The City of Malibu requires a separation of 10 feet between the bottom of each leach pit and the groundwater table. The locations of the monitoring wells and septic tanks are illustrated on Figures 7 (JCES) and 8 (MHS). Depth to water measurements collected following installation of the monitoring wells indicated that the distance between the groundwater table and the bottom of each pit associated with Septic Systems 1, 3, 4, 7, 9, and 11 was less than 10 feet and therefore the base of the leach pits needed to be adjusted. For each pit requiring adjustment, a concrete and sand slurry mixture was placed in the lower portion of the pit, raising the bottom of the pit to obtain the required 10-foot separation between the bottom of the pit and the underlying groundwater table. Details are presented on Table 1b. In accordance with the LARWQCB WDR permit for the septic systems, groundwater monitoring wells are gauged and sampled quarterly to monitor the separation between base of the leach pits and the water table and to monitor for coliform bacteria (total and fecal), enterococcus, ammonia, and pH.

3.5.1.3 Shallow Soil and Soil Vapor Sampling by ARCADIS

In October 2009, ARCADIS, on behalf of the District, conducted a Phase I ESA in preparation for the redevelopment of certain portions of MHS. The Phase I ESA identified five RECs: REC-1, the potential for lead-based paint (LBP) and termiticides due to the age of the buildings; REC-2, the former 10,000 gallon former diesel USTs; REC-3, septic tanks; REC-4, bus washing station in the Bus Barn; and REC-5, transformers.

ARCADIS reviewed these RECs in light of the planned redevelopment, which at that time, consisted of the 20 areas illustrated on Figure 12. ARCADIS then prepared a PEA Work Plan to evaluate the 3 RECs that were located within the boundaries of the 20 areas proposed for redevelopment and improvements. The other two RECs were not included in the PEA because they were located outside the proposed improvement areas. The 3 RECs addressed in ARCADIS' PEA are illustrated on Figure 12, as development areas, and include:

- **REC-1:** Current and former structures constructed prior to the ban of LBP and organochlorinated pesticides in the late 1970s/early 1980s identified as development areas 9 through 12 (Figure 12);
- **REC-2:** Residual volatile hydrocarbons in the vicinity of the former USTs located adjacent to Area 14 and hydrologically up-gradient from development areas 3 and 13 (Figure 12); and
- **REC-3:** The potential for hazardous materials from the chemistry laboratories, woodshop, art studio, and/or the photography darkroom being released to the septic systems in development area 15 and adjacent to development area 9 (Figure 12).

ARCADIS conducted a PEA (without regulatory agency oversight) in November 2009 and February 2010. Its PEA included the collection and analysis of soil and soil vapor samples. Results were compared to residential California Human Health Screening Levels (RCHHSLs)⁵ available at that point in time. Results of ARCADIS' investigation of the RECs are summarized below:

REC-1: Shallow⁶ soil samples were collected from depths of approximately 0.5- and 2.5-feet bgs at 18 locations (SS-Structure-1 through SS-Structure-18) and were analyzed for lead (Figure 13A), pesticides (Figure 13B), and PCBs (Figure 13C) using USEPA Methods 6010B, 8081A, and 8082, respectively. Below is a summary of the compounds detected:

- Lead concentrations ranged from 2.74 mg/kg in SS-STRUCTURE-10-0.5 to 57.4 mg/kg in soil sample SS-STRUCTURE-7-0.5 located east of Building E (Figure 13A). Lead concentrations were not reported above the RCHHSL for lead of 80 mg/kg.
- Of the pesticides, technical chlordane, alpha chlordane, and gamma chlordane were detected in soil at maximum concentrations of 1,910 μg/kg, 683 μg/kg, and 305 μg/kg in soil sample SS-STRUCTURE-7-0.5, located east of Building E (Figure 13B). 4,4-DDT was detected at a maximum concentration of 361 μg/kg at SS-Structure-13-0.5, located north of Building A. Technical chlordane exceeded the RCHHSL of 430 μg/kg at SS-STRUCTURE-7 at 0.5 feet (1,910 μg/kg) and 2.5 feet (601 μg/kg), and alpha chlordane exceeded the same RCHHSL at 0.5 feet (683 μg/kg).
- Aroclor-1254 was the only detected PCB, with a maximum concentration of 1,040 μg/kg in soil sample SS-STRUCTURE-12-0.5, located north of Buildings B/C (Administration Building) (Figure 13C). PCBs (Aroclor-1254) exceeded the RCHHSL of 89 μg/kg at 11 of 18, or 61 % of sampled locations.

Subsequent to the initial sampling, 16 step-out soil samples (SS-SO-2 through SS-SO-17) were collected from depths of approximately 0.5- and/or 2.5-feet bgs from various areas to further delineate PCB-impacted soils and 3 soil step-out samples (SS-SO-18 through SS-SO-20) were collected to delineate pesticide-impacted soils surrounding sample location SS-Structure-7. In summary:

 Aroclor-1254 was reported in soil samples collected from approximately 0.5 feet bgs at locations SS-SO-2 through SS-SO-6, SS-SO-9, SS-SO-13, and SS-SO-14 and ranged in concentrations from 50.4 μg/kg to 1,420 μg/kg, exceeding the RCHHSL at five locations. Aroclor 1254 also was detected in soil samples collected from approximately 2.5 feet bgs at locations SS-SO-2 (98.8 μg/kg) and SS-SO-5 (119 μg/kg) that exceeded the RCHHSL. All other reported detections of Aroclor 1254 in soil samples collected from approximately 2.5 feet bgs were below the RCHHSL (see Figure 14A).

⁵ In 2010 when ARCADIS compared detected concentrations of PCBs, pesticides, and metals to screening thresholds, it used residential CHHSLs. According to the current DTSC PEA Guidance Manual (page 39), "CHHSLs are no longer generally recommended for use in a human health risk evaluation, because they are not routinely reviewed and revised as new scientific information becomes available." The current residential USEPA RSL for Aroclor 1254 is 240 µg/kg

⁶ Shallow samples are less than or equal to 2.5 feet.

 Pesticide soil step-out samples were collected from a depth of approximately 0.5-feet bgs. Pesticides were not detected above laboratory reporting limits in soil samples SS-SO-18 or SS-SO-19. Alpha chlordane, gamma chlordane, and technical chlordane were detected in soil sample SS-SO-20 at concentrations of 21.2 μg/kg, 15.3 μg/kg, and 155 μg/kg, respectively, below their RCHHSLs of 430 μg/kg, 500 μg/kg, and 430 μg/kg (see Figure 14B).

REC-2: Three vapor probes (SV-5 through SV-7) were advanced in the vicinity of the neutralization tank, and three vapor probes (SV-8 through SV-10) were advanced north of the Bus Barn area. Soil vapor samples were collected at 5 and 10 feet bgs. Soil vapor samples were analyzed for volatile organic compounds (VOCs) using USEPA Method 8260B. Soil vapor sampling results indicated that VOCs were not detected above their respective laboratory reporting limits in SV-5 through SV-7, in the general vicinity of the neutralization tank.

In the Bus Barn area, benzene was detected at 5 and 10 feet bgs at a concentration of 0.1 μ g/l and 0.16 μ g/l in SV-9. Toluene was not detected at 5 feet bgs in any of the 3 vapor probes, but was detected in all 3 soil vapor samples at 10 feet bgs at a maximum concentration of 1.2 μ g/l in soil vapor probe SV-8. Soil vapor sampling results are depicted on Figure 15. No additional step-out sampling was conducted.

REC-3: Soil and soil vapor sampling were conducted in REC-3 as further described below:

Shallow Soil Sampling

Soil samples were collected from nine locations (SS-Perc-1 through SS-Perc-9) at depths ranging from 10- to 30-feet bgs to evaluate the seepage pits associated with the septic systems. Four background soil samples (SB-1 through SB-4) were also were collected from approximately 2.5 feet bgs from undeveloped areas around the site. All samples were analyzed for metals and pH by USEPA Methods 6010 and 9045C, respectively. Maximum concentrations of detected metals were compared to the maximum concentrations of metals in background samples and to the RCHHSLs. Results are illustrated on Figure 16A. pH ranged from 7.0 to 8.7 pH units in the percolation zone samples and ranged from 7.6 to 7.7 pH units in the background sample locations (see Figure 16A). Metals that were detected at concentrations greater than their respective RCHHSLs are discussed below:

- Arsenic concentrations ranged from 1.12 mg/kg to 13.7 mg/kg in the soil samples collected from the percolation zones and from 3.59 mg/kg to 10.6 mg/kg in the soil samples collected from undeveloped areas for the background metals comparison. Detected arsenic concentrations collected from the percolation zones and the background samples exceeded arsenic's RCHHSL of 0.07 mg/kg.
- Cadmium concentrations ranged from not detected above the laboratory reporting limit to 6.17 mg/kg in the percolation zone samples and ranged from 1.05 mg/kg to 4.77 mg/kg in the background sample locations. Select cadmium concentrations collected from the percolation zones and the background samples exceeded cadmium's RCHHSL of 1.7 mg/kg.

• Lead concentrations ranged from 0.59 mg/kg to 304 mg/kg in the percolation zone sample locations and ranged from 1.23 mg/kg to 4.1 mg/kg in the background sample locations. Detected lead concentrations collected from the percolation zones and the background samples were below the RCHHSL of 80 mg/kg, except for one location, SS-Perc-9 (near the neutralization tank), at a concentration of 304 mg/kg, at a depth of approximately 10 feet bgs.

While the concentrations of certain metals were above their respective RCHHSLs, these same metals occur naturally in soils throughout California. Lead was detected in sample SS-Perc-9 (near the neutralization tank are) at a depth of approximately 10 feet bgs at a concentration of 304 mg/kg, exceeding the maximum background for lead of 4.1 mg/kg and the RCHHSL of 80 mg/kg. Step-out (and up) sampling was conducted and consisted of one soil boring (SS-SO-1); with soil samples collected from depths of approximately 0.5- and 2.5-feet bgs, adjacent to SS-Perc-9. These soil samples were analyzed for lead by USEPA Method 6010B. Lead was detected at 5.03 mg/kg at 0.5-foot bgs and 2.26 mg/kg at 2.5 feet bgs, below the RCHHSL of 80 mg/kg (see Figure 16B).

Soil Vapor Sampling

Four soil vapor probes were advanced in the vicinity of the leach pits associated with Septic Tank 1 (SV-1 through SV-4). Soil vapor samples were collected at depths of approximately 5 and 10 feet bgs. Soil vapor samples were analyzed for VOCs. Analytical results illustrated on Figure 14 indicate that toluene was detected in SV-2 in the 10-foot sample at a concentration of 4.3 μ g/L and benzene was detected at a concentration of 0.1 μ g/L at 5 feet in SV-1, exceeding its RCHHSL of 0.036 μ g/L. VOCs were not detected in any of the samples collected from SV-3 and SV-4 (Figure 17).

Human Health Screening Risk Evaluation

ARCADIS conducted a HHSRE, assuming residential use, using soil and soil vapor concentrations obtained from the PEA (ARCADIS, 2010a). The ARCADIS HHSRE followed conservative risk estimation procedures recommended by USEPA and the California Environmental Protection Agency (CalEPA), in effect at that time. ARCADIS calculated an estimated excess lifetime cancer risk of 2 x 10⁻⁵ using the maximum concentrations detected during the PEA.

In addition, the non-carcinogenic health hazard estimate for the chemicals of potential concern (COPCs) was evaluated. The estimated hazard index (HI) for non-carcinogenic effects was 2, exceeding the target HI of 1.

A hypothetical risk estimation was calculated by removing impacted soil containing the risk driving chemicals (Aroclor 1254 and technical chlordane) above RCHHSLs, assuming completion of removal and confirmation samples below the remaining maximum concentrations. The hypothetical post-remedial calculation for the estimated excess lifetime cancer risk was 3×10^{-6} .

A hypothetical risk estimation was calculated by removing PCBs- and pesticide-impacted soil, assuming completion of removal and confirmation samples below the remaining maximum concentrations. The hypothetical post-remedial HI for non-carcinogenic effects was 0.1.

Based on the results of the HHSRE, ARCADIS recommended excavating soils containing Aroclor 1254 and technical chlordane at concentrations greater than the applicable RCHHSLs of 89 µg/kg and 430 µg/kg, respectively.

3.5.1.4 Shallow Soil Excavation by ARCADIS

Based on the PEA subsurface investigation results and the HHSRE, ARCADIS recommended excavating soil at REC-1 that contained pesticides and PCBs (Aroclor 1254) at concentrations greater than the respective Preliminary Clean-up Goal (PCG). PCGs were established using RCHHSLs as the PCG. Therefore, the PCG for alpha-chlordane, gamma-chlordane, and technical chlordane was based on the RCHHSL of 430 µg/kg for technical chlordane.⁷ The RCHHSL of 89 µg/kg was selected as the PCG for PCBs (PCB RCHHSL was 89 µg/kg for all Aroclors).

In August 2010, ARCADIS prepared a Removal Action Workplan, which was implemented between July and August of 2011 to excavate, remove, and dispose of impacted soil from nine impacted areas (Areas 1 through 9), Area 9, illustrated on Figure 18A, was identified as pesticide-impacted soil and the remaining eight areas (Areas 1-8) illustrated on Figure 18B were identified as PCB-impacted soil. In total, approximately 1,179 cubic yards (yds³) of pesticide and PCB-impacted soil was excavated (Figure 18C), subsequently characterized as non-hazardous, and disposed of at the Chiquita Canyon Landfill in Castaic, California. Details of the excavation conducted in each of the areas are discussed below:

Pesticide-Impacted Area (Area 9)

Area 9 was excavated to a total depth of approximately 3 feet bgs. Confirmation samples collected from the bottom and sidewalls of the excavation indicated that pesticides were not detected above their respective laboratory reporting limits (See Figure 18A).

PCB-Impacted Areas (Areas 1 through 8)

PCB-impacted soil identified in Areas 1 through 8 was excavated vertically and laterally until confirmation soil samples were below the respective PCG of 89 μ g/kg (See Figures 18B and 18C). Each identified area is further discussed below:

<u>Area 1:</u> Area 1 was excavated to a total depth of 2 feet bgs. Two bottom confirmation samples were collected at a depth of approximately 2 feet bgs; sidewall confirmation samples were not collected. Concentrations of PCBs were not detected above their respective laboratory reporting limits in confirmation samples collected from Area 1.

<u>Area 2:</u> Area 2 was initially excavated to a depth of 2 feet bgs. Three bottom confirmation samples collected at a depth of approximately 2 feet bgs and 1 sidewall sample collected

⁷ Since alpha and gamma chlordane are components of technical chlordane, technical chlordane was considered the indicator chemical.

from approximately 1 foot bgs indicated that Aroclor-1254 was detected at concentrations of 85.4 μ g/kg and 233 μ g/kg in 2 of the bottom confirmation samples and at 89 μ g/kg in the sidewall confirmation sample. Based on the initial confirmation sample results, one additional foot was excavated laterally and vertically to a total depth of 3 feet bgs. PCBs were not detected in the one sidewall and one bottom confirmation samples.

<u>Area 3:</u> Soil in this area was excavated to approximately 3 feet bgs. One bottom confirmation sample was collected at the base of the excavation. Aroclor-1254 was reported at a concentration of 140 μ g/kg in this sample. No sidewall samples were collected. An additional foot of soil was excavated and another bottom confirmation sample was collected. PCBs were not detected above laboratory reporting limits in the bottom confirmation sample.

<u>Area 4</u>: Soil in this area was excavated to approximately 2 feet bgs. One bottom confirmation sample was collected at the base of the excavation and 2 sidewall samples were collected at depths of approximately 1-foot bgs. PCBs were not detected above laboratory reporting limits in any of the confirmation soil samples.

Area 5: Area 5 was divided into four sub-areas (5A through 5D) as further discussed below:

Soil in Area 5A was excavated to approximately 2 feet bgs. Four bottom confirmation samples were collected at the base of the excavation and 4 sidewall confirmation samples were collected at a depth of approximately 1-foot bgs. PCBs were not detected above laboratory reporting limits in the bottom or sidewall confirmation samples.

Soil in Area 5B was excavated to approximately 2 feet bgs. Four bottom confirmation samples were collected at the base of the excavation and 5 sidewall confirmation samples were collected at a depth of approximately 1-foot bgs. PCBs were not detected in the bottom confirmation samples. Aroclor-1254 was detected in 1 sidewall sample at 246 µg/kg. An additional foot was excavated laterally and another confirmation sample was collected. PCBs were not detected in the sidewall confirmation sample. In addition, four soil samples (T-1 through T-4) were advanced in the vicinity of several trees in order to shrink the area of excavation to ensure the safety of the trees during excavation. Soil samples were collected from depths of approximately 0.5- to 4-feet bgs. Aroclor 1254 was detected at concentrations ranging from 74.3 µg/kg in T-4 at 0.5 feet bgs to 2,350 µg/kg in sample T-4 at 3 feet bgs. An additional soil sample collected from T-4 at 4 feet bgs indicated that Aroclor 1254 was detected at a concentration of 50.8 µg/kg. PCBs were not detected above laboratory reporting limits in samples collected from T-1 through T-3. Area 5B was excavated to a depth of approximately 2 feet bgs and 5 feet laterally to remove the detected PCBs at concentrations greater than the PCG.

Soil in Area 5C was excavated to approximately 2 feet bgs. One bottom confirmation sample was collected at the base of the excavation and 1 sidewall confirmation sample was collected at a depth of approximately 1-foot bgs. PCBs

were not reported above laboratory reporting limits in the bottom or sidewall confirmation samples.

Soil in Area 5D was excavated to approximately 2 feet bgs. Four bottom confirmation samples were collected at the base of the excavation and 4 sidewall confirmation samples were collected at a depth of approximately 1-foot bgs. PCBs were not reported above laboratory reporting limits in the bottom or sidewall confirmation samples.

<u>Area 6</u>: Area 6 was excavated to approximately 2 feet bgs. Two bottom confirmation samples were collected at the base of the excavation and 1 sidewall sample was collected at a depth of approximately 1-foot bgs. PCBs were not reported above laboratory reporting limits in the bottom or sidewall confirmation samples.

<u>Area 7</u>: Area 7 was excavated to approximately 2 feet bgs. Two bottom confirmation samples were collected at the base of the excavation. Aroclor-1254 was detected in one confirmation sample at a concentration of 88.4 μ g/kg. No sidewall confirmation samples were collected.

<u>Area 8</u>: Area 8 initially was excavated to approximately 2 feet bgs. Two bottom confirmation samples were collected at the base of the original excavation. Aroclor-1254 was detected in both confirmation samples at concentrations of 199 μ g/kg and 409 μ g/kg. An additional foot was excavated and 2 confirmation samples were obtained from the base of the excavation at 3 feet bgs. Aroclor-1254 was detected at concentrations of 292 μ g/kg and 74.5 μ g/kg. An additional foot was excavated below the area where Aroclor-1254 exceeded 89 μ g/kg and an additional bottom confirmation sample was collected at 4 feet bgs. PCBs were not detected above their respective reporting limits. Therefore, the maximum depth of the excavation in Area 8 was 4 feet bgs. Sidewall confirmation samples were not collected from Area 8.

3.6 Other Evaluations/Investigations

3.6.1 Naturally Occurring Asbestos (NOA)

LFR evaluated the potential presence of NOA at the site during its 2009 Phase I Environmental Site Assessment. LFR concluded "the closest mapped rock outcrops that are likely to contain naturally occurring asbestos are located approximately 60 to 80 miles northwest of the site in Santa Barbara County." Therefore, NOA does not appear to be an environmental concern at the site.

3.6.2 Oil Wells

ARCADIS evaluated the potential presence of oil wells at the site during its PEA and Phase I Environmental Site Assessment, respectively. ARCADIS reviewed readily available and pertinent oil and gas field maps from the DOGGR. According to W2-1 Map, the McKeon Oil Co. "Malibou 1" well was located within 0.5 miles of the site. According to the map information, the "Malibou 1" well was a "plugged and abandoned dry hole" and thus did not represent an environmental concern for the site. Therefore, oil wells do not appear to be an environmental concern at the site.

3.6.3 Radon

Panacea conducted a radon survey at JCES and MHS in November 2013. The maximum building-specific average radon concentration measured at JCES was 2.75 picoCuries per liter (pCi/L). The maximum building-specific average radon concentration measured at MHS was 1.18 pCi/L. Based on information included in the EDR database report, the site is located in an area categorized as Zone 2, which has average indoor basement radon levels between 2 and 4 pCi/L. The USEPA's continuous exposure limit, which is the limit at which further testing or remedial action is suggested, is 4.0 pCi/L. This USEPA continuous exposure limit applies to residential, not commercial, properties. Therefore, radon does not appear to be an environmental concern at the site.

4 Consultation with DTSC and Public Participation

DTSC is the lead oversight agency. Throughout the PEA process, ENVIRON consulted with DTSC starting with the scoping meeting on March 21, 2014 through completion of this PEA Report. The continuous collaboration consisted of open and transparent communications regarding general PEA activities and next steps. ENVIRON also worked closely with the DTSC to ensure that the community's needs and concerns were addressed. Prior to and during field activities, ENVIRON assisted DTSC, as requested, with community outreach, fact sheet mailing, work notices, and preparation for the open house as further described below. During execution of the PEA field work, ENVIRON expedited sampling activities and data reporting to complete the necessary PEA steps during the summer break and to report the validated shallow soil sampling results to the DTSC and to the community prior to the start of the 2014/2015 school year.

4.1 Public Participation

Prior to and during implementation of the PEA, DTSC conducted community outreach through a variety of avenues. The main goals of the outreach were to: (1) understand and document community interests, views, and concerns regarding subsurface conditions at the schools; (2) ensure that the community was informed and had access to DTSC personnel; and (3) keep the community informed of scheduled fieldwork and the overall progress of the PEA. ENVIRON provided assistance to DTSC to accomplish these goals. Activities that were conducted to achieve these goals are described in the following sections.

4.1.1 Develop Site Mailing List/Contacts

A mailing list was developed for the site so that information could be readily disseminated to all community members. The mailing list, which was updated on an as-needed basis, is comprised of school employees; parents; residences/businesses within ¼-mile of the schools; and key government/regulatory officials. The names, home addresses, and email addresses of school employees and parents of all students currently attending the schools were provided by the District. Addresses for residents/ businesses within ¼-mile of the schools were provided by a private mailing service. The names and addresses of key government officials were provided by DTSC. These various lists were compiled into one comprehensive list for mailing purposes. Email was preferred, followed by United States (US) Mail if email addresses were not available or emails were returned.

4.1.2 DTSC Community Survey

DTSC and ENVIRON developed a community survey to receive feedback about the level of interest in and concerns regarding the site. The community survey was provided in English and Spanish. On Thursday, April 3, 2014, 1,297 surveys were distributed to the community: 1,134 via email and 163 via US Mail. A summary of the responses is provided in Appendix A of the PEA Work Plan.

4.1.3 DTSC Community Interviews with Key Stakeholders

To help DTSC understand community questions and concerns, DTSC conducted interviews with community members including parents, teachers, representatives of Malibu Unites (now

American Unites for Kids) (MU), school officials, and District Board members. Information gathered from the interviews is available on DTSC's EnviroStor website.

4.1.4 DTSC Community Profile

According to information provided on the US Department of Commerce, US Census Bureau website (<u>http://quickfacts.census.gov</u>), the 2012 population estimate for Malibu was 12,832 people. In 2010, 87.4% of the population was classified as White alone (not Latino), 2.6% was classified as Asian alone, and 6.1% was classified as Latino. During the time period from 2008-2012, 85.4% of the population had lived in the same dwelling for one year or more. During this same time interval, 98.3% of the population (25 years and older) had at least a high school education. The median household income was calculated at \$135,330 with approximately 8.6% of the population living below the poverty level.

Malibu is a general law city and operates under the council-manager form of government. The five-member City Council is elected at-large to serve four-year terms. The Mayor's Office is rotated annually among all councilmembers. The City Council hires a city manager to carry out policies and serve as executive officer. The current mayor is John Sibert, and the mayor *pro tem* is Laura Rosenthal. The remaining city council members are Joan House, Lou LaMonte, and Skylar Peak.

There is a high level of community interest pertaining to potential environmental issues at the schools. Based on community responses received as of May 1, 2014, many residents read the Malibu Times, the local community newspaper. Survey respondents also mentioned Malibu Unites (MU) as a grass roots organization that has strong interest in preserving a safe and healthy school environment. In addition, the Public Employees for Environmental Responsibility (PEER) organization purports to represent 29 teachers and staff at JCES and MHS and has expressed views on environmental issues at the schools.

4.1.5 PEA Fact Sheet/Meeting Notice

DTSC prepared community notices at key milestones (prior to commencement of PEA related fieldwork and prior to issuance of the PEA-related reporting) to provide the community with information about the plans for, progress of, and findings of the PEA. The first community notice was an initial fact sheet, describing the background of the site, the PEA process, and the plans/schedule for a community meeting. Ensuing notices were prepared prior to fieldwork and described the types and duration of the fieldwork, locations of fieldwork, and planned schedule. These fact sheets and notices include:

- A Community Notice entitled "A Community Meeting Re: Draft Preliminary Environmental Assessment for Malibu High, Middle, and Elementary Schools," mailed out on June 9, 2014;
- A Community Update entitled "Summary of the Surface Soil Sampling Results at Malibu High/Middle School and the Juan Cabrillo Elementary School," mailed out on September 3, 2014;
- A Work Notice entitled "Cornucopia Garden Soil Sampling Investigation Fieldwork," mailed out on September 23, 2014;

- A Community Update entitled "Malibu High School, Draft Removal Action Work Plan Available for Public Comment," mailed out on November 5, 2014; and
- A Work Notice entitled "Malibu High School Building G Area, 30215 Morning View Drive, Malibu, California," mailed out on December 15, 2014.

Community notices were provided in English and Spanish. Notices were distributed to all parties on the email and mailing list and to the document repositories as listed in section 4.1.9 below.

4.1.6 DTSC Open House

On June 26, 2014, DTSC scheduled an informal open house to communicate and present the content of the Draft PEA Work Plan to the interested community members⁸. The purpose of the Open House was to communicate enough information in order for the community to have a good understanding of the content of and rationale for the sampling during the PEA. The open house was held at Malibu City Hall (Theatre Room), 23825 Stuart Ranch Road, Malibu, from 3:30 PM to 8:00 PM. Community members who attended the open house were able to interact directly with DTSC to voice their questions, suggestions, and comments.

4.1.7 PEA Progress Updates

ENVIRON prepared regular updates regarding the progress of the PEA. Updates were prepared initially every two weeks during implementation of the PEA Work Plan, then weekly during implementation of the Building G RAW, then monthly after completion of PEA related field activities. Updates were submitted to the District and DTSC, and were posted on the District's website and on EnviroStor. Updates included a short description of work completed over the two weeks prior to the date of the update and activities planned for the upcoming two-week period. The updates also provided the revised schedule when deviations from planned schedules occurred.

4.1.8 Document Repositories

DTSC made documents prepared as part of the PEA available to the public electronically on its EnviroStor web site. Electronic copies of prepared documents also were posted to the District's website. Documents were also provided to the document repositories and included community and public notices, fact sheets, work plans, and reports. Hard copies of prepared documents were placed in two document repositories:

Malibu High School Library 30215 Morning View Drive, Malibu, California Hours of operation are coincident with school hours

Malibu Library 23519 Civic Center Way Malibu, California (310) 456-6438

⁸ In addition to the Open House, on June 16, 2014, DTSC and Ramboll Environ met with MU and its consultant, Kurt Fehling, to discuss its comments on the Draft PEA Work Plan.

4.1.9 Ongoing Community Outreach

An email address was established, specific to the schools, to allow the community to express its concerns, questions, and/or views, 24 hours a day. This email address is <u>SMMUSDEnvironmentalInput@Environcorp.com</u>. Any emails sent to this address were received and reviewed by ENVIRON. Received emails pertaining to the PEA also were forwarded to DTSC for consideration.

5 Investigative Approach

Based on the historical information reviewed and previous subsurface investigations conducted at MHS, 18 areas of interest (AOIs) were identified at the JCES and MHS based on the following:

- Community concerns;
- Site historical and current use;
- Previous subsurface investigation results;
- Potential exposures;
- The type and nature of chemicals of potential concern (COPCs);
- Discussions with DTSC; and
- The District's plans for redevelopment of MHS.

COPCs associated with certain areas of the site included pesticides, herbicides, metals, TPH, semi-volatile organic compounds (SVOCs), VOCs, and PCBs. COPCs and associated media are listed below:

- Shallow soils (surface to 2 feet bgs): pesticides (organophosphates and organochlorine), herbicides, metals, PCBs, pH, and TPH;
- Deeper soils (> than 2 feet bgs): SVOCs, metals and TPH;
- Soil vapor (equal to or > 5 feet bgs): VOCs; and
- Grab Groundwater: VOCs and TPH.

The AOIs are illustrated on Figure 19. The AOIs, rationale for selection, and COPCs are listed in the table below.

AOI No.	Name	COPCs	Rationale for Selection			
	JCES					
1	Buildings Constructed Prior to 1981	PCBs, pesticides, herbicides, lead	Due to the age of the buildings, buildings may have been painted using lead-based paint. Certain building materials (e.g., caulk) may contain PCBs. Lead and PCBs can be released to the environment during weathering of building materials. Pesticides, herbicides, and termiticides also may have been applied around the exterior of the buildings for vector and weed control, and may have contacted adjacent soils.			

AOI No.	Name	COPCs	Rationale for Selection			
2	Septic Systems	VOCs, SVOCs, TPH, metals	Septic systems are used primarily to manage discharges of sanitary waste. However, releases of small quantities of chemicals to Septic System 8 could not be ruled out as the system also receives waste from sinks in science rooms and art rooms.			
3	Electrical Transformer west of Building A	PCBs	The current electrical transformer, which was installed in 2010, replaced a previous transformer. Due to its age, the previous transformer could have contained PCB-bearing fluids. Although ENVIRON did not observe obvious visual evidence of releases (e.g., staining) at the time of the site visits, without sampling, the potential for a release from the former transformer to soil could not be ruled out.			
4	Grassy and Sandy Playgrounds	Pesticides, herbicides, metals	Pesticides and herbicides may have historically been applied in these areas. Because students regularly access these areas, the potential for occurrence of these compounds was evaluated.			
	MHS					
5	Buildings Constructed Prior to 1981	PCBs, pesticides, herbicides, lead	Due to the age of the buildings, buildings may have been painted using lead-based paint. Certain building materials (e.g., caulk) may contain PCBs. Lead and PCBs can be released to the environment during weathering of building materials. Pesticides, herbicides, and termiticides also may have been applied around the exterior of the buildings for vector and weed control, and may have contacted adjacent soils.			
6	Areas Previously Excavated by ARCADIS	PCBs, pesticides, herbicides	ARCADIS previously excavated soils containing PCBs and pesticides. Soil sampling was conducted in these areas to confirm previous pre- and post- excavation sampling results.			
7	Open Areas Around and in Between Older Buildings within AOI-5	Pesticides, herbicides, metals	Pesticides and herbicides may have historically been applied in these areas. Because students regularly access these areas, the potential for occurrence of these compounds was evaluated.			
8	Neutralization Tank	VOCs, SVOCs, metals, TPH, pH	The neutralization tank receives waste from the chemistry laboratory. Based on this use, without sampling, ENVIRON could not rule out discharges of small quantities of chemicals to the neutralization tank and potentially surrounding soil.			

AOI No.	Name	COPCs	Rationale for Selection
9	Former USTs at Bus Barn	VOCs and TPH	Previous investigations of this area indicated the presence of certain VOCs, specifically BTEX, and TPH in soil. The area received regulatory closure from the LARWQCB in 1996. Additional sampling of soil, soil vapor, and groundwater was conducted in this area to evaluate the current status of VOCs and TPH previously detected in the subsurface.
10	Diesel-impacted Soil Stockpile at Bus Barn	ТРН	Soil from the previous UST excavation was stockpiled on plastic in this area prior to off-site disposal. Soil sampling was conducted in this area to assess the potential for residual TPH from the previous soil stockpile.
11	Grounds Shop	TPH, SVOCs, pesticides, herbicides, and pH	Gasoline, pesticides, and herbicides have been stored in the Grounds Shop. Soil sampling was conducted in this area to assess the potential of soil impact from current and former operations/storage.
12	Septic Systems	VOCs, SVOCs, TPH, metals	Septic systems are used primarily to manage discharges of sanitary waste. However, releases of small quantities of chemicals to Septic Systems 1, 3, and 5 could not be ruled out as the systems also receive waste from sinks in science rooms, art rooms, wood-shop, etc.
13	Retention Basin	SVOCs, TPH, metals	The retention basin receives surface runoff from adjacent parking areas. A soil sample was collected from the area to evaluate the potential presence of chemical residuals from vehicles parked in the parking area.
14	Athletic Fields	Pesticides, herbicides, metals	Pesticides and herbicides may have historically been applied in these areas. Because students regularly access these areas, the potential for occurrence of these compounds was evaluated.
15	Cornucopia	Pesticides, herbicides, metals	Pesticides and herbicides may have historically been applied in these areas. Because students regularly access and dig in these areas, the potential for occurrence of these compounds was evaluated.
16	Undeveloped Area – Building E	Pesticides, herbicides, metals	Pesticides and herbicides may have historically been applied in this area. Because students regularly traverse this area on the way to the football field, the potential for occurrence of these compounds was evaluated.

AOI No.	Name	COPCs	Rationale for Selection
17	Electrical Transformers (a total of three)	PCBs	The current electrical transformers, which were installed in 1994 and 2000, replaced previous transformers. Due to the age of the previous transformers, such could have contained PCB- bearing fluids. Although ENVIRON did not observe obvious visual evidence of releases (e.g., staining) at the time of the site visits, without sampling, the potential for a release from the former transformers to soil could not be ruled out.
18	Redevelopment Areas – Parking Lot, pathway and road; I.T. Room; Tennis Court; new ramp and stairs; new drop-off area; modified stairs in visitor's parking area; Middle School Quad, and High School Quad	Pesticides, herbicides, metals	Pesticides and herbicides may have historically been applied in these areas. Due to the redevelopment plans at MHS, surface soils in these areas may be temporarily disturbed during grading. Although, based on previous site history it is not anticipated that soils in these areas are impacted, considering the likelihood of short-term surface disturbance during grading, soils were sampled as a precautionary measure.

6 Summary of Sampling Activities

The following sections present the general procedures that were implemented prior to and during the field investigation. Field activities were conducted under the supervision of a California-registered Professional Geologist (PG) and under the oversight of DTSC personnel. Any deviations in the DTSC-approved scope of work were communicated to DTSC personnel and approved prior to implementation.

6.1 Pre-field Activities

6.1.1 Field Documentation

ENVIRON personnel working on site documented the field activities conducted during the fieldwork associated with the PEA Work Plan. The sampling activities were documented to: (1) provide a record of procedures performed in the field; (2) record key events during field operations; (3) identify samples and track status in the field and during transfer to the laboratory; and (4) facilitate chain-of-custody and accountability procedures by providing legible, concise information.

6.1.2 Health and Safety

All field work was performed in accordance with the site-specific Health and Safety Plan (HASP) included as Appendix I in the PEA Work Plan.

6.1.3 Work Notification of Field Activities

Prior to the start of fieldwork, DTSC notified school employees and the community of the impending work and the fieldwork schedule, which was contingent on summer school schedules at the site (Proposed Malibu Summer Plan, Option B included as Appendix K of the PEA Work Plan). To provide maximum flexibility in scheduling the fieldwork, summer school at JCES was relocated. Summer school at MHS was confined to a small portion of the site. In addition, athletic fields at MHS were used during the summer. ENVIRON conducted fieldwork in AOI's only when such were unoccupied. Depending upon the location of the fieldwork, temporary fencing was erected around certain investigation areas. Fieldwork was conducted so as not to interfere with the summer school and athletic field schedules.

6.1.4 Utility Clearance

Prior to initiating fieldwork, ENVIRON marked and labeled each boring location. ENVIRON requested that the District provide utility maps and that landscape maintenance personnel identify irrigation lines prior to commencement of drilling activities. In addition, Underground Service Alert (USA) of Southern California or Dig Alert was notified prior to any drilling activities and marked utilities at the site boundary. ENVIRON also retained Spectrum Geophysical, a private utility locator to clear sampling locations for the presence of underground pipes and utilities using geophysical methods.

6.1.5 Field Equipment Use

Equipment used to obtain measurements during fieldwork was calibrated in accordance with the equipment manufacturer's instructions prior to commencing fieldwork and on each day that sampling was conducted.

6.2 Field Investigation

Between June 30, 2014 and August 1, 2014, ENVIRON advanced 778 borings at the site and collected 525 soil, soil vapor, and/or groundwater samples. Soil, soil vapor, and groundwater sampling locations are illustrated on Figure 20. Table 2 lists each identified AOI, number of borings, sampling depths, analytes, scope of work conducted, and rationale for sampling selection and methodology. Generally soil borings 5 feet deep or less were advanced using a hand auger while deeper borings (greater than 5 feet) were advanced using a combination of a direct push/geoprobe and hollow stem augering drilling techniques depending field conditions encountered during drilling. ENVIRON retained BC2 Environmental (BC2) of Orange, California, a licensed California driller to conduct drilling activities. Drilling, soil, soil vapor, and groundwater sampling were conducted in accordance with their respective protocols included in Appendix H of the PEA Work Plan.

6.2.1 Soil

A total of 454 soil samples were collected from 18 AOIs as depicted on Figure 20. Soil samples were collected from each boring at variable depths and analyzed for the COPCs listed in Table 2. Drilling and soil sampling were performed in accordance with ENVIRON's respective field sampling protocols, included in Appendix H of the PEA Work Plan. A total of 454 soil samples were delivered for chemical analysis to Test America, a California State certified fixed laboratory on the day of collection, under standard chain-of-custody protocols, in accordance with soil sample handling protocols included in Appendix H of the PEA Work Plan.

6.2.1.1 Sample Type

To address the objectives listed above, soil, soil vapor, and/or grab groundwater samples were collected from each of the defined AOIs presented in Table 2. Soil sampling techniques were AOI specific and further described in the next paragraph. Soil samples were collected from shallow soils (between the ground surface and 2 feet bgs) and deeper soils. Four types of soil sampling were conducted at the site: discrete, composite, incremental, and lithological. Each soil sampling type was conducted in accordance with the Soil Sampling Protocol included in Appendix H of the PEA Work Plan and is further described below:

- **Discrete Sampling**: Discrete sampling is a soil sampling technique whereby soil samples are selected and analyzed individually, providing results at specific locations and depths. Discrete sampling was used at the majority of the AOIs to evaluate the presence and distribution of COPCs in soil. Results of discrete samples were used to evaluate potential health risks (Section 9).
- **Composite Sampling**: Composite sampling is a soil sampling technique whereby multiple temporally or spatially discrete soil samples are combined from within an AOI. Composite sampling results were used to assist the District in deciding if further evaluation is needed for soils in areas subject to redevelopment (AOI-18) where soils may be temporarily disturbed during grading activities. Composite sampling results collected from AOI-18 were not used to evaluate potential health risks.
- **Incremental Sampling**: Incremental sampling is a structured composite sampling (or advanced composite sampling) and processing protocol that reduces data variability and

provides a reasonably unbiased estimate of mean chemical concentrations in a volume of soil targeted for sampling. Incremental sampling provides representative sample by performing the steps outlined in the Soil Sampling Protocol included in Appendix H of the PEA Work Plan.

Incremental soil sampling was conducted on the athletic fields and for the step out sampling conducted in Cornucopia (See Section 4.1.2.11). The athletic fields were divided into three Decision Units (DUs) for sampling purposes: (1) the football field (40 increments), (2) the large baseball field (30 increments), and (3) the upper softball/soccer field areas (30 increments).

Lithological Sampling: Lithological sampling is a detailed visual identification and logging of the subsurface soil using the USCS. Lithological sampling/logging was performed on deeper borings (greater than 5 feet bgs) located in AOI-8, AOI-9, and AOI-12. With DTSC's concurrence, borings were logged at approximately 5-foot intervals, except for 10 borings (JC-SB-59, JC-SB-60, JC-SB-62, MH-SB-96, MH-SB-100, MH-SB-104, MH-SB-105, MH-SB-108, MH-SB-110, and MH-SB-113), which were continuously logged. Borings were selected for continuous logging (one boring per cluster) with the concurrence of DTSC's Geologist, who was providing oversight during sampling activities. The detailed lithological logging was used to create cross-sectional views of the subsurface to help understand the potential migration of detected COPCs. Boring logs are included in Appendix A.

6.2.2 Split Sampling

Split soil sampling was conducted according to the procedures outlined in the PEA Work Plan. ENVIRON collected the primary soil samples first, and collected a split soil sample for DTSC from an adjacent (co-located) boring, as requested. Split samples were analyzed by DTSC for the same COPCs using the same analytical methods as the primary samples.

6.2.3 Background Soil Sampling

Background soil samples were collected and analyzed to distinguish between potentially siterelated chemicals and naturally occurring or pre-existing anthropogenic chemical levels. The approach to developing background metals concentrations is in accordance with DTSC's "Selecting Inorganic Constituents as Chemicals of Potential Concern at Risk Assessments of Hazardous Waste Sites and Permitted Facilities" (DTSC, 1997), and "Determination of a Southern California Regional Background Arsenic Concentration in Soil" (Chernoff et al. 2008). Ten soil samples, BKRD-1 through BKRD-10, were collected in areas located away from buildings in the undeveloped fields where natural terrain and vegetation are prominent. Four soil samples, BKRD-1 though BKRD-4, were collected from JCES, and six soil samples, BKRD-5 though BKRD-10, were collected from MHS. Background metals sampling locations are depicted on Figure 20. Background soil samples were collected from 0.5 feet bgs and analyzed for metals by USEPA Method 6010/7000, which is the same analytical method used to analyze metals in samples collected from other areas of the site. The metals background evaluation is presented in Appendix E.

6.2.4 Soil Vapor

Twenty six soil vapor borings were advanced at the locations depicted on Figure 20 and 77 soil vapor samples were collected as listed in Table 2. Each boring was converted to a temporary soil vapor probe/multi-depth nested soil vapor probe to obtain a vertical profile of the VOCs potentially present in the subsurface and was sampled in accordance with CalEPA, DTSC, Los Angeles Regional Water Quality Control Board, and San Francisco Regional Water Quality Control Board *Advisory – Active Soil Vapor Investigations*, dated April 2012 (*Advisory*). Soil vapor samples were analyzed for VOCs by Jones Environmental, a California State certified mobile laboratory using USEPA Method 8260B modified.

Upon completion of the soil vapor sampling, the temporary soil vapor probes were removed and boring locations were backfilled with bentonite chips.

6.2.5 Groundwater Sampling

Eleven monitoring wells are located at the Site (MW-1 through MW-11; see Figure 20). On July 31, 2014, ENVIRON measured the total depth and the depth to groundwater in each well according to the groundwater level monitoring protocol included in Appendix H of the PEA Work Plan. Monitoring wells MW-6 and MW-9 were dry; therefore, the groundwater level was not measured at those two wells.

Groundwater samples were collected on July 31 and August 1, 2014, from monitoring wells MW-3, MW-4, MW-5, MW-7, MW-10, and MW-11. Groundwater samples were collected according to the groundwater sampling protocol included in Appendix H of the PEA Work Plan and analyzed for the COPCs listed in Table 2.

Two grab groundwater samples, MH-SB-96 and MH-SB-97, were collected in the vicinity and downgradient of the former USTs at the Bus Barn Area on July 28, 2014. Grab groundwater samples were collected according to the groundwater sampling protocol included in Appendix H of the PEA Work Plan and analyzed for the COPCs specified in Table 2.

6.2.6 Field Quality Control Samples

During the PEA investigation, field quality control (QC) samples were collected, including field duplicates (for soil, soil vapor, and groundwater samples), trip blanks, and an equipment blank (groundwater samples). QC samples were labeled using the appropriate qualifiers listed below. Soil sample field duplicates were collected at a frequency of 5 percent (%) as specified in the *PEA Guidance Manual*, soil vapor sample duplicates were collected at a frequency of 10%, as specified in the *Advisory*, and groundwater duplicate samples were collected at a frequency of 10%. Duplicate samples were analyzed for the same suite of analytes as the primary samples.

6.2.7 Sample Identification

Soil, soil vapor, and groundwater samples collected during the PEA investigation were labeled immediately after collection to allow identification of the sample location, depth, and type of sample. The sample labeling system is described below.

Samples were labeled using the designated soil boring number (SV for soil vapor, SB for soil sample, and GW for groundwater sample), followed by the depth of the sample. For example, a complete sample designation for the first soil boring advanced at AOI-1, with a sample collected at a depth of 0 to 0.5 feet bgs, was SB-1-0-0.5.

Sample qualifiers were used as appropriate, and included:

- TB Trip Blank (for groundwater)
- EB Equipment Blank (for groundwater)
- FD Field Duplicate (soil, soil vapor, and groundwater)

In addition to the sample number, each sample container was labeled with the company name, project name, project number, and the initials of the sample collector.

6.2.8 Sample Custody Procedures

Standard chain-of-custody procedures were implemented for all samples collected during the PEA investigation. Samples were clearly labeled immediately after collection, and each sample was assigned a unique identification number, as described above. Chain-of-custody forms were filled out in the field immediately after the sample had been collected and labeled. Chain-of-custody forms remained with the samples until they were delivered and/or picked up by the laboratory.

6.2.9 Equipment Decontamination

Prior to transporting the drill rig and support equipment to the site, the rig, drill rods, and other downhole equipment were steam-cleaned, washed with Alconox or a phosphate-free detergent, and pressure-rinsed with clean water. The drill rig and downhole tools were cleaned in the same manner after use at each successive boring location.

Soil vapor probe construction materials were supplied and warranted as new materials, free of solvents, oils, or any foreign matter.

Other equipment used for drilling or sampling was decontaminated prior to use at each boring location and after collection of each sample using the following decontamination procedure:

- Wash with potable water, using a brush if necessary;
- Wash with Alconox, or a phosphate-free detergent, and potable water solution, using a brush if necessary;
- Rinse with potable water;
- Rinse with distilled or deionized water;
- Air dry; and
- Collect and dispose of rinseate as described in Section 6.4.

6.2.10 Surveying

Sawaya Engineering Inc., of Yorba Linda, California, a licensed Professional Engineer (PE) and a Professional Licensed Surveyor (PLS) surveyed the monitoring wells, soil borings, soil vapor probes, and surveyed, staked, and labeled, the incremental soil samples. Vertical elevations were referenced to mean sea level to the nearest 0.01 foot. Horizontal positions reference the State Plane Coordinate System to the nearest 0.5 foot.

6.3 Analytical Testing

Soil vapor samples were analyzed for VOCs, in accordance with USEPA Method 8260B modified.

Soil and groundwater samples were selectively analyzed using the following analytical methods:

- VOCs using USEPA Method 8260B (groundwater only);
- SVOCs using USEPA Method 8270C;
- Pesticides using USEPA Methods 8141 and 8081;
- Herbicides using USEPA Method 8151;
- PCBs using USEPA Method 8082A;
- TPH using USEPA Method 8015M;
- Metals using USEPA Method 6010/7000; and
- pH using USEPA Method 9045.

In addition, five percent (10 samples) of the soil samples selected for PCB analysis were also analyzed for specific PCB congeners using USEPA Method 1668. DTSC selected these soil samples from both JCES and MHS to account for the range of PCB concentrations detected at the site. MU consultant, Kurt Fehling, also reviewed and concurred with the selection of soil samples for PCB congener analysis.

6.4 Investigation Derived Waste

Decontamination rinseate, disposable sampling equipment, personal protective equipment (PPE), purged water from monitoring wells, and drilling residuals such as unused portions of soil samples and drill cuttings were collected and contained in Department of Transportation (DOT)-approved 55-gallon drums.

All drums were labeled, sealed, and stored on-site inside the fenced Bus Barn area, away from occupied buildings and playgrounds, pending appropriate off-site disposal in accordance with state and federal regulations. Seventy one (71) drums of soil/drilling residuals, 5 drums of decontamination rinseate, 1 drum of purge water, and 1 drum of concrete/bentonite were generated during the PEA field activities.

On August 22, 2014, ENVIRON collected four composite soil samples from the drummed waste to appropriately characterize the waste material for off-site disposal. Composite soil samples

were analyzed for VOCs using USEPA Method 8260B, TPH using USEPA Method 8015M, metals using USEPA Method 6010/7000, PCBs using USEPA Method 8082, and for pesticides using USEPA Method 8081. The four composited samples were delivered to Test America under chain-of-custody procedures. The composite soil sampling results indicated that the investigation derived soil waste from the site was non-hazardous.

On September 9, 2014, American Integrated Services (AIS), of Santa Ana, California transported the investigation derived soil waste from the site to Soil Safe facility, in Adelanto, California. Investigation derived decontamination rinseate, purge water and concrete/bentonite were handled, transported, and disposed of as non-hazardous waste at the Crosby and Overton facility, in Long Beach California. Investigation derived waste manifests are included in Appendix B.

6.5 Deviations from the PEA Work Plan

This section presents any deviations to the PEA Work Plan that occurred before and during the completion of the fieldwork.

- In AOI-7, at boring location MH-SB-17, the deeper soil sample (1.5 to 2 feet bgs) was not collected due to encountering a sub-surface conduit at approximately 1.5 feet bgs.
- In AOI-5, at boring location MH-SB-43, the deeper soil sample (1.5 to 2 feet bgs) was not collected due to encountering a concrete slab at approximately 1 foot bgs.
- In AOI-9, a soil vapor sample was not collected from soil vapor probe, MH-SV-3, at 35 feet bgs due to low flow conditions.
- In AOI-11, at the request of the DTSC, boring location MH-SB-6 was relocated from outside the Grounds Shop to the inside. The boring location was selected by the DTSC Geologist during a site walk on June 30, 2014.
- In AOI-12, the following deviations occurred in the field:
 - A soil vapor sample was not collected from soil vapor probe, MH-SV-20, at 22 feet bgs due to low flow conditions.
 - Boring location MH-SB-99/MH-SV-7 located adjacent to the Septic Tank 11 was relocated to the parking lot due to access constraints. The boring was advanced in an area 5 feet higher in surface elevation than the originally proposed location. Due to the difference in elevation between the originally proposed boring location and the actual, soil and soil vapor samples were collected 5 feet deeper than originally proposed.
 - Monitoring wells MW-6 and MW-9 were dry; therefore, the depth to groundwater was not measured and the wells were not sampled.

7 Sampling Results

7.1 Presentation of Data

The findings of the PEA field activities described in Section 6 of this report are presented in this section. Soil, soil vapor, and groundwater analytical results are summarized in Tables 3a through 20d, and on Figures 23 through 62.

Soil data collected from JCES and MHS during the PEA initially were compared to DTSC modified and/or USEPA residential Regional Screening Levels (RSLs) for soil to understand if additional evaluation of an area was needed. The DTSC-modified RSLs or USEPA RSLs are concentrations of chemicals in residential soil that the CalEPA and/or USEPA consider to be below thresholds of concern for risks to human health over a lifetime. In 2013, the DTSC incorporated CalEPA toxicity criteria and recommendations (e.g. route-to-route extrapolation), and calculated the DTSC-modified residential and commercial/industrial soil screening levels for a subset of chemicals for which 1) the CalEPA recommended toxicity value was more protective than the toxicity value used to derive the USEPA RSLs, or 2) there was no RSL due to the lack of route-to-route extrapolation when deriving the USEPA RSLs. For the chemicals listed by the DTSC, the DTSC-modified residential RSLs were used as the health-based screening values; otherwise, the USEPA residential RSLs were used. Consistent with the DTSC PEA Guidance Manual (CalEPA, 2013b), the most recently published DTSC-modified residential RSLs (USEPA, 2015) were used.

Only metals with detections that exceeded the residential DTSC-modified RSLs, USEPA RSLs, and/or southern California regional upper-bound background soil level for arsenic in one or more borings are graphically depicted on figures. These metals are cadmium, lead, and arsenic.

For arsenic, the DTSC-modified residential soil RSL of 0.062 mg/kg is approximately 1-2 orders of magnitude lower than naturally occurring background in southern California. Therefore, DTSC compares arsenic detections to12 mg/kg⁹. Arsenic concentrations in soil samples collected at the site were conservatively compared to the regional upper-bound background soil concentration of 12 mg/kg for initial screening purposes.

Consistent with DTSC guidance, soil vapor data in JCES and MHS were compared to calculated residential soil vapor screening levels. Soil vapor screening levels are calculated as the ratio of the DTSC-Modified RSL (CalEPA 2014) or USEPA RSL (USEPA 2014) for residential air to a default attenuation factor of 0.001 for future residential buildings, as recommended by CalEPA (2013a). In accordance with DTSC guidance, the default attenuation factor applies to shallow soil vapor depths of 5 feet bgs or less. (DTSC/CalEPA, 2011). Soil gas samples collected at depths greater than 5 feet were not directly compared to a regulatory threshold and were included in the HHSRE, presented in Section 9.

⁹ The calculation of 12 mg/kg is based on over 1,000 samples collected at 19 school sites in Los Angeles County (Chernoff et al. 2008). It was determined that the regional upper-bound background soil concentration for arsenic was 12 mg/kg for southern California, which is the 95% UCL on the 99th quantile of the arsenic dataset. The arsenic concentrations for the whole background dataset ranged from 0.15 mg/kg to 20 mg/kg.

Groundwater data from JCES and MHS were compared to MCLs for drinking water and/or action levels. MCLs represent the maximum concentration of a chemical that is allowed in public drinking water systems. The MCLs are established by both the USEPA and CalEPA. If both agencies had developed an MCL for a chemical, the more stringent MCL was used in this evaluation. The groundwater beneath the site is not considered a public drinking water system. Therefore, comparing groundwater data from the site to this screening criterion is highly protective.

As a conservative screen, individual soil samples were first compared directly to the chemical-specific residential RSLs and for arsenic, to the southern California regional upper-bound background soil level for arsenic; soil vapor samples collected from 5 feet bgs were directly compared to calculated residential screening levels; and, groundwater samples were compared to the established MCLs and/or action levels. In addition, soil, soil vapor, and groundwater samples were further evaluated as part of site wide HHSRE presented in Section 9 and Appendix E of this PEA Report.

7.1.1 JCES Sampling Results

ENVIRON advanced 62 soil borings, 5 soil vapor borings, and collected groundwater samples from 2 existing monitoring wells (MW-3 and MW-4) at JCES (see Figure 20). One hundred twenty six (126) soil samples were analyzed from borings JC-SB-1 through JC-SB-62, and 10 soil vapor samples were analyzed from vapor probes SV-1 through SV-5. Results for soil borings JC-SB-1 through JC-SB-62 and for soil vapor borings JC-SV-1 through JC-SV-5 are depicted on Figures 21and 22, respectively. Further details for soil, soil vapor, and groundwater sample results are summarized in Tables 3a through 6d and on Figures 21 through 33. Laboratory analytical reports and third party data validation reports are included in Appendix C.

Four AOIs were identified at JCES as listed below:

- AOI-1 addresses buildings constructed prior to 1981;
- AOI-2 addresses Septic Systems 7, 8, and 9;
- AOI-3 addresses the pad-mounted electrical transformer; and
- AOI-4 addresses the grassy and sandy playgrounds.

Overview of Soil Sampling Results

Depending upon the location, soil samples collected from each of the AOIs listed above were selectively analyzed for pesticides, herbicides, PCBs, TPH, metals (including lead), and SVOCs. A summary of the soil sampling results is illustrated on Figure 21. A detailed discussion of sampling results is provided, per AOI, in the ensuing sections. In summary:

- All soil samples that were analyzed for herbicides and SVOCs were non-detect for these compounds.
- 99% of soil samples (all but one) tested for PCBs were non-detect for PCBs. The soil sample that contained PCBs, JC-SB-13, contained Aroclor 1260 at a concentration of 250 µg/kg, which slightly exceeds USEPA's residential RSL of 240 µg/kg. JC-SB-13 is

located in a planter box containing bushes along the northern side of Building D. PCBs were not detected in the other samples obtained from the planter box, therefore this detection appears to be an isolated occurrence.

- All samples tested for TPH were either non-detect or TPH was present at concentrations (in small carbon fractions) less than applicable USEPA residential RSLs.
- 99% of samples analyzed for pesticides were either non-detect or had concentrations less than applicable USEPA and/or DTSC-modified residential RSLs. One soil sample, JC-SB-39, contained chlordane at a concentration of 2,600 µg/kg, exceeding the USEPA residential RSL of 1,800 µg/kg. The chlordane exceedance appears to be an isolated occurrence.
- Metals occur naturally in soil. Arsenic concentrations detected in soil were below the southern California regional upper-bound background soil level of 12 mg/kg, and 99% of concentrations for other metals detected in soil were less than applicable USEPA and/or DTSC-modified residential RSLs. Two soil samples, JC-SB-59, at a depth of 4.5 feet bgs and JC-SB-62 at 39.5 feet bgs, contained cadmium at concentrations of 7.2 mg/kg and 5.9 mg/kg, respectively, slightly exceeding the DTSC-modified residential RSL of 4.6 mg/kg. One soil sample, JC-SB-13, contained lead at a concentration of 89 mg/kg, slightly exceeding the DTSC-modified residential RSL of 80 mg/kg. As noted above, JC-SB-13 is located in a planter box containing bushes along the northern side of Building D. Lead detections in the other soil samples collected in the planter box ranged from non-detect to 23 mg/kg. The lead, the cadmium, and the arsenic exceedances do not represent a significant concern due to the depth of the samples and therefore, limited potential for exposure. All nearby surface soil samples were below the DTSC-modified residential RSL and/or southern California regional upper-bound background soil level of 12 mg/kg for lead, cadmium, and arsenic.

Overview of Soil Vapor Sampling Results

Soil vapor samples were obtained from temporary soil vapor probes advanced in AOI-2, adjacent to Septic Systems 7, 8, and 9, at depths ranging from 5 feet bgs to 36 feet bgs. Soil vapor samples were analyzed for VOCs using a state-certified mobile laboratory. Soil vapor sampling results indicate that VOCs were not detected above the laboratory reporting limit in any of the soil vapor samples. Soil vapor sampling results are illustrated on Figure 22.

Overview of Groundwater Sampling Results

Groundwater samples were collected from monitoring wells MW-3 and MW-4, within AOI-2, in proximity to Septic Systems 8 and 9, respectively. Groundwater samples were analyzed for VOCs, SVOCs, TPH, and metals. Groundwater sample results indicate that VOCs, SVOCs, and TPH, were not detected above their respective laboratory reporting limits.

Several metals, specifically barium, total chromium, molybdenum nickel, selenium, and vanadium were detected in groundwater, at low concentrations. Detections of barium, total chromium, nickel, and selenium were below MCLs and/or action levels. MCLs and action levels have not been promulgated for molybdenum and vanadium.

7.1.1.1 AOI-1: Buildings Constructed Prior to 1981

Forty-three borings were advanced in AOI-1 (JC-SB-09 through JC-SB-42 and JC-SB-45 through JC-SB-53). Soil samples were collected from the surface (0-0.5 feet bgs) and from 1.5 to 2 feet bgs at each boring location. Eighty-six soil samples were collected and analyzed for PCBs, pesticides, herbicides, and lead. Sampling results for AOI-1 are presented in Tables 3a through 3e and are further evaluated in the HHSRE.

- Of the PCBs, Aroclor 1260 was detected in one surface soil sample (JC-SB-13) at a concentration of 250 µg/kg, which slightly exceeds USEPA's residential RSL of 240 µg/kg. PCB sampling results are presented in Table 3a and graphically depicted on Figure 23. JC-SB-13 is located in a planter box containing bushes along the northern side of Building D. Aroclor 1260 was not detected above its respective laboratory reporting limit in the deeper sample collected from SB-JC-13 from 1.5 feet bgs. Additionally, the other nine soil samples collected in the planter box were non-detect for PCBs. Therefore, the average concentration in soil would be well below the RSL. A 95 percent UCL could not be calculated due to the lack of distinct detected concentrations. Because the detection in the surface soil sampling in JC-SB-13 is localized, vertically and laterally isolated, and limited to that specific location, it does not represent an environmental concern. PCBs were not detected above their respective laboratory reporting limits in any other samples collected within AOI-1.
- Of the organochlorine pesticides, 4,4'-DDE, 4,4'-DDT, chlordane, dieldrin, and heptachlor epoxide were detected at concentrations above their respective laboratory reporting limits. Organochlorine pesticide results are presented in Table 3b and graphically depicted on Figure 24. 4,4'-DDE was detected in 14 soil samples at concentrations ranging from 5.1 µg/kg in surface soil sample JC-SB-13 to 23 µg/kg in surface soil sample JC-SB-46. 4,4'-DDT was detected in 10 samples at concentrations ranging from 5.0 µg/kg in surface soil sample JC-SB-48 to 18 µg/kg in surface soil sample JC-SB-13. Dieldrin was detected in one surface soil sample (JC-SB-13) at a concentration of 5.4 µg/kg. Heptachlor epoxide was detected in two surface soil samples at concentrations ranging from 7.6 µg/kg in sample JC-SB-10 to 51 µg/kg in sample JC-SB-39. All detections of 4,4'-DDE, 4,4'-DDT, dieldrin, and heptachlor epoxide were below their respective DTSC-modified and/or USEPA residential RSL, of 1,600 µg/kg, 1,900 µg/kg, 33 µg/kg, and 59 µg/kg, respectively.

Chlordane was detected in 19 soil samples at concentrations ranging from 61 μ g/kg in JC-SB-12 at a depth of 1.5 to 2 feet bgs to 2,600 μ g/kg in the surface soil sample JC-SB-39. In soil samples where chlordane was detected, all but one contained chlordane at a concentration below its applicable USEPA residential RSL of 1,800 μ g/kg. The surface soil sample at JC-SB-39 contained chlordane at a concentration of 2,600 μ g/kg, exceeding its residential RSL. Chlordane was not detected above its laboratory reporting limit in the deeper soil sample collected from the same boring at a depth of 1.5 feet bgs. JC-SB-39, along with 15 soil samples (JC-SB-28 through 42), were collected between Buildings C and B. The 95 percent UCL concentration in this area is 551.9 μ g/kg for the surface samples, well below the RSL (USEPA, 2015). Therefore, the chlordane detections in this area do not represent an environmental concern.

- Organophosphate pesticides and herbicides were not detected above their respective laboratory reporting limits in any of the soil samples in AOI-1. Organophosphate pesticides and herbicide results are presented in Tables 3c and 3d, respectively.
- Lead was detected in 86 soil samples at concentrations ranging from 2.2 mg/kg in JC-SB-45 at a depth of 1.5 to 2 feet bgs to 89 mg/kg in surface soil sample JC-SB-13. Lead sampling results are presented in Table 3e and graphically depicted on Figure 25. All but one soil sample contained lead at a concentration below the applicable DTSC-modified residential RSL of 80 mg/kg for lead. JC-SB-13 (surface) contained lead at a concentration of 89 mg/kg. The deeper soil sample collected from SB-JC-13 at 1.5 feet bgs contained lead at a concentration of 5.8 mg/kg. JC-SB-13 is located in a planter box containing bushes along the north side of Building D. Lead detections in the other soil samples collected in the planter box ranged from non-detect to 23 mg/kg. The 95 percent UCL concentration in this area is 57.6 mg/kg for the surface samples (ENVIRON 2014). Therefore, the lead detection in the surface soil sampling in JC-SB-13 is localized, vertically and laterally isolated and limited to that specific location, and does not represent an environmental concern.

7.1.1.2 AOI-2: Septic Systems 7, 8, and 9

Soil, soil vapor, and groundwater samples were collected from AOI-2. AOI-2 sampling results are further evaluated in the HHSRE.

Soil Sampling Results

Five borings were advanced at AOI-2 (JC-SB-58 through JC-SB-62) and 17 soil samples were collected and analyzed for SVOCs, TPH, and metals at depths of 4.5-5 feet bgs, 9.5-10 feet bgs, 14.5-15 feet bgs, 24.5-25 feet bgs, 34.5-35 feet bgs, and 39.5-40 feet bgs (JC-SB-62 only). Soil sampling results for AOI-2 are presented in Tables 4a through 4c.

- SVOCs and TPH were not detected above their respective laboratory reporting limits in any of the soil samples collected from AOI-2. SVOCs and TPH soil sampling results are presented in Tables 4a and 4b, respectively.
- Of the metals, arsenic was detected in soil at concentrations below the southern California regional upper-bound background soil level of 12 mg/kg, while barium, chromium, cobalt, copper, lead, molybdenum, nickel, selenium, vanadium, zinc, and mercury were detected in soil at concentrations below their respective DTSC-modified and/or USEPA residential RSLs. Metals soil sampling results are presented in Table 4c and arsenic, cadmium, and lead sampling results are graphically depicted on Figures 26, 27, and 28, respectively. Cadmium was detected in two soil samples above its applicable DTSC-modified RSL in AOI-2. Borings JC-SB-59 (4.5 feet bgs) and JC-SB-62 (39.5 feet bgs) at concentrations of 7.2 mg/kg and 5.9 mg/kg, respectively, slightly exceeding the DTSC-modified residential RSL of 4.6 mg/kg. Boring JC-SB-59 is located northwest of Building D, and boring JC-SB-62 is located southeast of Building B. The slight exceedances do not represent a concern due to the depths of the samples.

Soil Vapor Sampling Results

Five soil vapor borings were advanced at AOI-2, JC-SV-1 through JC-SV-5. Each soil vapor boring was converted to temporary vapor probes (either single or triple nested depending on the location relative to the septic tank system). Eleven soil vapor samples were obtained from vapor probes SV-1 through SV-5 at depths ranging from 5 to 36 feet. Soil vapor sampling results and the respective depth of each probe are summarized in Table 4d.

• VOCs were not detected above their respective laboratory reporting limits in any of the soil vapor samples collected from AOI-2.

Groundwater Sampling Results

Groundwater samples were collected from existing wells MW-3 and MW-4, within AOI-2, in proximity to Septic Systems 8 and 9, respectively (Figure 7). Groundwater samples were analyzed for VOCs, SVOCs, TPH, and metals. Groundwater sampling results are presented in Tables 4e though 4h.

- VOCs, SVOCs, and TPH were not detected above their respective laboratory reporting limits in any of the groundwater samples collected from monitoring wells MW-3 and MW-4. VOCs, SVOCs, and TPH groundwater sampling results are presented in Tables 4e, 4f, and 4g, respectively; and
- Of the metals, barium, total chromium, molybdenum, nickel, selenium, and vanadium were detected in groundwater, at low concentrations. Detections of barium, total chromium, nickel, and selenium were below MCLs and/or action levels. MCLs and action levels have not been promulgated for molybdenum and vanadium. Metals groundwater sampling results are presented in Table 4h.

Soil, soil vapor, and groundwater sampling results in AOI-2 do not indicate an environmental concern.

7.1.1.3 AOI-3: Electrical Transformer

Two borings, JC-SB-43 and JC-SB-44, were advanced in AOI-3. At each boring location, one soil sample was collected from the surface (0-0.5 feet bgs) and from 1.5 to 2 feet bgs. Four soil samples were analyzed for PCBs. Soil sampling results are summarized on Table 5 and depicted on Figure 29.

• PCBs were not detected above their respective laboratory reporting limits in any of the soil samples.

Soil sampling results do not indicate an environmental concern in AOI-3.

7.1.1.4 AOI-4: Grassy and Sandy Playgrounds

Twelve borings were advanced in AOI-4 (JC-SB-1 through JC-SB-8 and JC-SB-54 through JC-SB-57). Soil samples were collected from the surface (0-0.5 feet bgs) and from 1.5 to 2 feet bgs, except for borings advanced in the sand boxes (JC-SB-01, JC-SB-02, JC-SB-08, JC-SB-55, and JC-SB-57), where soil samples were collected from 0.5 to 1 feet bgs.

A total of 19 soil samples were collected and analyzed for pesticides, herbicides, and metals. Soil sample results are summarized in Tables 6a through 6d, graphically illustrated on Figures 30 through 33, and are further evaluated in the HHSRE presented in Section 9.

- Of the organochlorine pesticides, 4,4'-DDE, 4,4'-DDT were detected in one soil sample, SB-JC-08, at concentrations of 93 µg/kg and 10 µg/kg, respectively, which are several orders of magnitude below their respective DTSC-modified and/or USEPA residential RSLs of 1,600 µg/kg and 1,900 µg/kg (see Figure 30). Organochlorine pesticide results are summarized in Table 6a.
- Organophosphate pesticides and herbicides were not detected above their respective laboratory reporting limits in any of the soil samples. Organophosphate pesticides and herbicides results are summarized in Tables 6b and 6c, respectively.
- Of the metals, arsenic was detected in soil at concentrations below the southern California regional upper-bound background soil level of 12 mg/kg, while barium, cadmium, chromium, cobalt, copper, lead, molybdenum, nickel, silver, vanadium, zinc, and mercury were detected in soil at concentrations below their respective DTSC-modified and/or USEPA residential RSLs. Metals soil sampling results are summarized in Table 6d and arsenic, cadmium, and lead are graphically depicted on Figures 31, 32, and 33.

Soil sampling results do not indicate an environmental concern in AOI-4.

7.1.2 MHS Sampling Results

ENVIRON advanced 440 soil borings (soil borings MH-SB-1 through MH-SB-124, MH-CS-1A/B/C/D, MH-CS-2A/B, MH-CS-3A/B/C/D, and MH-CS-4A/B, and MH-IS-1A/B/C through MH-IS-100A/B/C), installed 21 soil vapor probes (MH-SV-1 through MH-SV-21), collected 2 grab groundwater samples from borings MH-SB-96 and MH-SB-97, and collected 4 groundwater samples from 4 existing monitoring wells (MW-5, 7, 10, and 11) during the PEA field investigation. These boring locations are illustrated on Figure 20.

Three hundred and nineteen (319) soil samples were obtained from borings MH-SB-1 through MH-SB-124, MH-CS-1A/B/C/D, MH-CS-2A/B, MH-CS-3A/B/C/D, and MH-CS-4A/B, and MH-IS-1A/B/C through MH-IS-100A/B/C; 50 soil vapor samples were obtained from vapor probes SV-1 through SV-21; 2 grab groundwater samples were obtained from borings MH-SB-96 and MH-SB-97; and 4 groundwater samples were collected from monitoring wells MW-5, 7, 10, and 11. Overall results for soil borings, MH-SB-1 through MH-SB-124, are illustrated on Figure 34 and overall results for soil vapor borings, JC-SV-6 through JC-SV-21 are illustrated on Figure 35. Additional details regarding soil, soil vapor, and groundwater sampling results are presented in Tables 7a through 20d and Figures 34 through 62. Laboratory analytical and third party data validation reports are included in Appendix C.

Fourteen AOIs were identified at MHS (AOI -5 through AOI-18). General boring locations were selected based on each identified AOI summarized below:

• AOI-5 addresses buildings constructed prior to 1981;

- AOI-6 addresses areas previously excavated by ARCADIS;
- AOI-7 addresses open areas around and in between older buildings within AOI-5;
- AOI-8 addresses the neutralization tank;
- AOI-9 addresses the former USTs at the Bus Barn area;
- AOI-10 addresses the diesel-impacted former soil stockpile at the Bus Barn area;
- AOI-11 addresses the Grounds Shop at the Bus Barn area;
- AOI-12 addresses Septic Systems 1, 3, 4, 5, 6, and 11;
- AOI-13 addresses the infiltration/retention basin, located north of the Bus Barn area;
- AOI-14 addresses the athletic fields (football, baseball, softball, and soccer fields);
- AOI-15 addresses the area known as Cornucopia;
- AOI-16 addresses the open undeveloped area between Building E and the football field;
- AOI-17 addresses the pad-mounted electrical transformers; and
- AOI-18 addresses areas proposed for redevelopment.

Overview of Soil Sampling Results

Depending upon the location, soil samples collected from each of the AOIs listed above were selectively analyzed for pesticides, herbicides, PCBs, TPH, metals (including lead), and SVOCs. An overall summary of the soil sampling results is depicted on Figure 34 and further summarized below. A detailed discussion of sampling results is presented per AOI in the ensuing sections.

- All soil samples that were analyzed for herbicides were non-detect for these compounds.
- All soil samples analyzed for pesticides, SVOCs and total petroleum hydrocarbons were either non-detect or had concentrations less than applicable DTSC-modified and/or USEPA residential RSLs.
- 96% of the soil samples (all but five samples) tested for PCBs were either non-detect or were present at concentrations less than applicable USEPA residential RSLs. Five soil samples in AOI-5, MH-SB-10 at the surface and 1.5 feet bgs, and surface samples MH-SB-76, MH-SB-77, and MH-SB-79, contained Aroclor 1254 at concentrations of 590 µg/kg, 270 µg/kg, 1,500 µg/kg, 720 µg/kg, and 700 µg/kg, respectively. These concentrations exceeded the USEPA residential RSL of 240 µg/kg for Aroclor 1254. All four borings where Aroclor 1254 exceeded USEPA residential RSL are located east Building G, in the planter area adjacent to the concrete walkway. Based on the results of this investigation, step out soil sampling results indicated that an area measuring approximately 1.5-foot thick by 38 feet long by 7 feet wide was impacted with Aroclor 1254. Therefore, as agreed between the District and DTSC, ENVIRON performed a removal action, as further discussed in Section 7.1.2.1.1.

- Metals occur naturally in soil. 98% of metals concentrations detected in soil either were below the southern California regional upper-bound background soil level for arsenic or were less than applicable DTSC-modified and/or USEPA residential RSLs for other metals, except for the following:
 - One soil sample in AOI-5, MH-SB-93 at a depth of 1.5 feet bgs, contained lead at a concentration of 170 mg/kg, exceeding the DTSC-modified residential RSL of 80 mg/kg. Soil step out sampling was conducted in this area of AOI-5; soil step out sampling results indicated that the lead exceedance was localized and does not represent a significant concern. See detailed discussion in Section 7.1.2.1.
 - One soil sample located in AOI-7, MH-SB-23 at a depth of 1.5 feet bgs and two soil samples in AOI-12, MH-SB-100 at a depth of 44.5 feet bgs and MH-SB-107 at a depth of 39.5 feet bgs, contained cadmium at concentrations of 5.7 mg/kg, 8.3 mg/kg, and 5.2 mg/kg, respectively, slightly exceeding the DTSC-modified residential RSL of 4.6 mg/kg. Six soil samples in AOI-12, MH-SB-99 at a depth of 19.5 bgs, MH-SB-100 at a depth of 54.5 feet bgs, MH-SB-102 at a depth of 44.5 feet bgs, MH-SB-103 at a depth of 34.5 feet bgs, MH-SB-107 at a depth of 24.5 feet bgs, and MH-SB-110 at a depth of 34.5 feet bgs, contained arsenic at concentrations of 18 mg/kg, 13 mg/kg, 16 mg/kg, 31 mg/kg, 19 mg/kg, and 24 mg/kg, respectively, exceeding the southern California regional upper-bound background soil concentration for arsenic of 12 mg/kg. The cadmium and the arsenic exceedances do not represent a significant concern due to the depths of the samples and therefore, limited potential for exposure. See detailed discussion in Section 7.1.2.1.
 - Two of eight soil samples obtained from AOI-15 (Cornucopia), MH-SB-2 at a depth 1.5 feet bgs and MH-SB-4 at the surface, contained arsenic at concentrations of 15 mg/kg and 17 mg/kg, respectively. Both detections exceeded the southern California regional upper-bound background soil concentration for arsenic of 12 mg/kg. Boring MH-SB-2 is located near a tree in an open space and boring MH-SB-4 is located in a raised planting bed. At both locations, it appears that planting soil was brought to the area from an outside source. Incremental soil step-out sampling was conducted at the Cornucopia area to evaluate the presence of arsenic in shallow soil. The results of the incremental soil step-out sampling, which are presented in Section 7.1.2.11, indicate that all results are within the range of the southern California regional background data set (from 0.15 mg/kg to 20 mg/kg), are therefore indicative of naturally occurring arsenic, and do not present an environmental concern.

Overview of Soil Vapor Sampling Results

Soil vapor samples were collected from temporary vapor probes in AOI-8, adjacent to the neutralization tank, AOI-9 adjacent and downgradient of the former USTs in the Bus Barn, and from AOI-12 adjacent to MHS Septic Systems 1, 3, 4, 5, 6, and 11, at depths ranging from 6 feet bgs to 56 feet bgs. Soil vapor samples were analyzed for VOCs using a state-certified mobile laboratory. Soil vapor sampling results are illustrated on Figure 35 and indicate that:

• In AOI-8, VOCs were not detected above the laboratory reporting limit in any of the soil vapor samples.

- In AOI-9, adjacent to the former USTs, three vapor probe samples, MH-SV-2, MH-SV-3, and MH-SV-4, at a depth of 5 feet, contained benzene at concentrations of 0.227 µg/l, 0.114 µq/l, and 0.684 µg/l, respectively, exceeding the residential soil vapor screening levels for benzene in shallow soil gas of 0.084 µg/l. Other petroleum related VOCs, 1,2,4trimethylbenzene, ethylbenzene, naphthalene, and xylenes, were also detected at concentrations that exceeded their respective residential shallow soil vapor screening levels. Maximum concentrations of petroleum related VOCs were detected in MH-SV-2, at a depth of 36 feet bgs and are likely due to the historical operations of the former USTs, which were removed in August 1992. Detections of benzene, 1,2,4-trimethylbenzene, ethylbenzene, naphthalene, and xylenes appear to be vertically and laterally localized and limited to a maximum depth of approximately 36 feet bgs. The localization of the detections is evidenced by the fact that VOCs, with the exception of toluene, were not detected in grab groundwater samples collected from borings MH-SB-96 and MH-SB-97, located adjacent to soil vapor probes MH-SV-2 and MH-SV-3, respectively and VOCs were not detected above their respective laboratory reporting limit in soil vapor samples collected from MH-SV-5 and MH-SV-6, located at the boundary between the Bus Barn and JCES, downgradient of the former USTs. Detected petroleum-related VOCs in soil vapor do not pose a risk to public health because the Bus Barn area is capped with asphalt, is only used to stage school buses, and is not used by students or faculty; therefore the potential exposure is limited.
- In AOI-12, two of 41 soil vapor samples at 5 feet bgs, MH-SV-14 and MH-SV-16, contained benzene at concentrations of 0.098 µg/l and0.089 µg/l, respectively, slightly exceeding the residential shallow soil vapor screening level of 0.084 µg/l for benzene. Soil vapor probe MH-SV-14 is located adjacent to Septic System 4, south of Building H, and soil vapor probe MH-SV-16 is located adjacent to Septic System 6, west of Building B/C. Benzene concentrations detected in these locations are fairly low, outside any building footprint and do not pose a significant risk to occupants in the nearby buildings. VOCs were not detected in other vapor probe samples at concentrations that exceeded the residential shallow soil vapor screening levels of 5 feet bgs.

Overview of Groundwater Sampling Results

Two grab groundwater samples were collected from borings MH-SB-96 and MH-SB-97 in the Bus Barn area and four groundwater samples were collected from existing wells MW-5, MW-7, MW-10, and MW-11, within AOI-12, in proximity to Septic Systems 1 and 6, respectively. Grab groundwater samples were analyzed for VOCs and TPH and monitoring well groundwater samples were analyzed for VOCs, SVOCs, TPH, and metals. Of the VOCs, only toluene was detected in the grab groundwater sample collected from boring MH-SB-96 at a concentration of 1.6 μ g/l, slightly exceeding its laboratory reporting limit of 1 μ g/l and two orders of magnitude below its MCL of 150 μ g/l. TPH was detected above its laboratory reporting limit in the grab groundwater samples collected from borings MH-SB-96 and MH-SB-97 in the Bus Barn area at concentrations slightly exceeding the laboratory reporting limits. Regulatory screening levels are not available for TPH in groundwater.

In the monitoring well groundwater samples, SVOCs were not detected above their respective laboratory reporting limits. Several metals, specifically barium, total chromium, molybdenum, nickel, and vanadium were detected in groundwater at low concentrations. Detected

concentrations of barium, total chromium, and nickel were below their respective MCLs and/or action levels. MCLs and action levels have not been promulgated for molybdenum and vanadium.

7.1.2.1 AOI-5: Buildings Constructed Prior to 1981

Thirty-four borings were advanced at AOI-5 (MH-SB-10, MH-SB-11, MH-SB-13, MH-SB-14, MH-SB-15, MH-SB-18, MH-SB-21, MH-SB-29, MH-SB-30, MH-SB-32, MH-SB-37, MH-SB-38, MH-SB-41, MH-SB-43 through 48, MH-SB-62, MH-SB-70, MH-SB-71, MH-SB-73 through 77, MH-SB-79, MH-SB-81, MH-SB-82, MH-SB-84, MH-SB-86, MH-SB-92 and MH-SB-93). Twelve step-out borings were advanced in a portion of AOI-5, east of Building G adjacent to a planter (MH-SB-17A and MH-SB-114 through MH-SB-124). Soil and step-out soil samples were collected from the surface (0-0.5 feet bgs) and from 1.5 to 2 feet bgs at each boring location, except MH-SB-17A and MH-SB-43 where only surface soil samples were collected. A total of 90 soil samples were collected and selectively analyzed for PCBs, pesticides, herbicides and lead. Sampling results for AOI-5 are presented in Tables 7a through 7e and are further evaluated in the HHSRE.

Of the PCBs, only Aroclor 1254 and Aroclor 1260 were detected in soil. Aroclor 1260 was detected in one soil sample, MH-SB-44 at the surface at a concentration of 86 µg/kg, below its USEPA residential RSL of 240 µg/kg. Aroclor 1254 was detected in 20 samples at concentrations ranging from 50 µg/kg in surface soil sample MH-SB-37 to 1,500 µg/kg in surface soil sample MH-SB-76, located east of Building G (this location was removed during the removal action, see section 7.1.2.1.1). PCB sampling results are presented in Table 7a and graphically depicted on Figure 36.

Aroclor 1254 was detected in 4 borings out of 20 (5 samples) at concentrations that exceeded its USEPA residential RSL of 240 µg/kg: MH-SB-10 at the surface and 1.5 to 2 feet bgs, and surface samples MH-SB-76, MH-SB-77, and MH-SB-79, contained Aroclor 1254 at concentrations of 590 µg/kg, 270 µg/kg, 1,500 µg/kg, 720 µg/kg, and 700 µg/kg, respectively. All four borings are located east of Building G/G2, in the planter area adjacent to the concrete walkway (Figure 36). As this was the only area where there were multiple adjacent detections of PCBs at concentrations greater than the USEPA residential RSL, DTSC requested that ENVIRON evaluate this area further through soil step out sampling. On August 18, 2014, 11 step out soil borings, MH-SB-114 through MH-SB-124, were advanced east of Building G from within and approximately 5 feet east of the planter and one step out soil boring, MH-SB-17A, was advanced south of Building G. Soil samples were collected from the ground surface (0.-0.5 feet bgs) and from 1.5-2.0 feet bgs, except for step out boring SB-MH-17A, where one ground surface sample was collected. Twenty-three additional soil samples were collected from borings MH-SB-114 through MH-SB-124 and MH-SB-17A and were analyzed for PCBs. Six of the 23 soil samples, MH-SB-114, MH-SB-116, MH-SB-118, MH-SB-119, MH-SB-120, and MH-SB-17A contained Aroclor 1254 at concentrations of 800 µg/kg, 410 µg/kg, 1,100 µg/kg, 340 µg/kg, 430 µg/kg, and 250 µg/kg respectively, exceeding the USEPA residential RSL. The step-out soil sampling results were used to delineate the extent of PCBs in soils in this area (see Figure 37). Based on the soil step-out sampling results, a limited removal action was conducted east of Building G, as further discussed in Section 7.1.2.1.1.

- Of the organochlorine pesticides, 4,4'-DDE, 4,4'-DDT and chlordane, were detected at concentrations above their respective laboratory reporting limits. Organochlorine pesticides sampling results are presented in Table 7b and graphically depicted on Figure 38. 4,4'-DDE was detected in 28 samples at concentrations ranging from 5.1 µg/kg in surface soil samples MH-SB-45 and MH-SB-62 to 100 µg/kg in MH-SB-29 at a depth of 1.5 to 2 feet bgs. 4,4'-DDT was detected in 11 samples at concentrations ranging from 5.0 µg/kg in surface soil sample MH-SB-46 to 28 µg/kg in MH-SB-29 at a depth of 1.5 to 2 feet bgs. Chlordane was detected in four samples at concentrations ranging from 88 µg/kg in surface soil sample MH-SB-13 to 220 µg/kg in surface soil sample MH-SB-43. All detections of 4,4'-DDE, 4,4'-DDT and chlordane were below their respective DTSC-modified and/or USEPA residential RSLs of 1,600 µg/kg, 1,900 µg/kg and 1,800 µg/kg, respectively.
- Organophosphate pesticides and herbicides were not detected above their respective laboratory reporting limits in any of the soil samples. Organophosphate pesticides and herbicides sampling results are presented in Tables 7c and 7d, respectively.
- Lead was detected in 67 samples at concentrations ranging from 2.0 mg/kg in MH-SB-84 and MH-SB-76 at a depth of 1.5 to 2 feet bgs to 170 mg/kg in soil sample MH-SB-93 at a depth of 1.5 to 2 feet bgs. Lead soil sampling results are presented in Table 7d and graphically depicted on Figure 39. Lead detections in AOI-5 were below the applicable DTSC-modified residential RSL of 80 mg/kg for lead, in all except one soil sample, MH-SB-93, which contained lead at a concentration of 170 mg/kg. Boring MH-SB-93 is located in a planter along the southeast wall of Building H (Figure 39). On September 22, 2014, DTSC requested limited step out sampling in proximity to this boring to further evaluate the occurrence of lead in this area. On September 25, 2014, ENVIRON advanced two soil stepout borings in the planter area in proximity to MH-SB-93; one step-out boring, MH-SB-93A. was advanced to the southeast of SB-93 and a second step-out boring, MH-SB-93B, was advanced south of SB-93. At both step-out boring locations, soil samples were collected from 0-0.5 feet bgs and from 1.5-2 feet bgs. ENVIRON also attempted to collect a soil sample at 3 feet bgs at soil boring MH-SB-93 and was unable to do so due to drilling refusal. All four step-out soil samples were analyzed for lead using USEPA Method 6010. Lead was detected at concentrations ranging from 8.1 mg/kg in soil sample SB-MH-93B at 1.5 feet bgs to 40 mg/kg in the surface soil sample of SB-MH-93B. Lead detections in the soil step out samples were below the applicable DTSC-modified residential RSL of 80 mg/kg for lead (see Figure 39). Therefore, the occurrence of lead at concentrations greater than the DTSCmodified residential RSL is localized, limited to the interval between 1.5 to 2.0 feet bgs, is not readily accessible due to its location in a planter, and does not represent an environmental concern.

7.1.2.1.1 Removal Action East of Building G in AOI-5

As stated above, PCBs, specifically Aroclor 1254, were detected in shallow soil east of Building G. The initial and step-out soil sampling conducted in the Building G Area revealed a relatively small PCB-impacted area in which two or more adjacent borings contained Aroclor 1254 at a concentration that exceeded its USEPA RSL for residential use (see Figure 37). These PCB exceedances were localized and confined to surficial soil in a planter area, directly adjacent to a concrete walkway, located east of Building G. Similar PCB exceedances were not observed in

other areas at MHS and thus appear to be unique to the Building G Area. The area of Aroclor 1254-impacted soil consisted of an approximate 1.5-foot thick surficial layer; measuring approximately 38 feet long by 7 feet wide (see Figure 40).

To address PCB exceedances, as agreed between the District and DTSC, ENVIRON prepared a Removal Action Work Plan (RAW [ENVIRON, 2014]) to perform a focused removal action east of the Building G Area. As part of the RAW, ENVIRON conducted a HHSRE of the Building G Area considering the current school use and potential future residential use. Under a school scenario, the estimated excess lifetime cancer risks before and after excavation were below 1x10⁻⁶. Therefore, although no remediation was necessary or recommended under the school scenario, because the District desired to be able to use the Building G Area for any purpose in the future (i.e., unrestricted use), the District and DTSC agreed that the soil containing the highest Aroclor 1254 concentrations in the Building G Area would be excavated. For the afterexcavation residential scenario (after excavating the two highest Aroclor 1254 detections exceeding 1000 μ g/kg), the estimated excess lifetime cancer risk for hypothetical future on-site residents was 1x10⁻⁶. The purpose of the RAW was to provide for limited excavation of Aroclor-1254 impacted shallow soil in the Building G Area of MHS, to conditions that allow for future unrestricted (i.e., residential) use. The Draft RAW (ENVIRON, 2014f) was submitted to DTSC on November 6, 2014. DTSC approved the Draft RAW (ENVIRON, 2014f) with no modifications in a letter dated December 15, 2014, after which the Final RAW (ENVIRON, 2014g) was submitted to DTSC on December 17, 2014.

Pre-excavation and excavation activities occurred between December 21 and December 30, 2014, during MHS Winter Break. The planar footprint of the excavation encompassed the highest detected concentrations of Aroclor 1254; soil samples MH-SB-76 and MH-SB-118, as well as locations MH-SB-119 through MH-SB-121 and MH-SB-124. Approximately 15 cubic yards of soil was excavated, determined to be non-hazardous, and transported off site for disposal at the Waste Connections - Chiquita Landfill, located in Castaic, California.

Excavation activities were documented in a Draft Removal Action Completion Report (RACR [ENVIRON, 2014]), dated February 27, 2015. The DTSC provided regulatory closure for the Building G Area when it approved the RACR in a letter entitled "Approval of the Removal Action Completion Report and Issuance of a No Further Action Determination For the Malibu High School, Building G Area, 30215 Morning View Drive, Malibu, Los Angeles County, California," dated March 26, 2015 (Letter). In its Letter, DTSC stated that "Based on review of the Draft Removal Action Completion Report, which summarizes the remedial action activities and soil confirmation sampling conducted after excavation and prior to backfill of the MHS Building G Area RAW implementation, DTSC has determined the removal action objectives have been met, and that the MHS Building G Area property is suitable for future unrestricted use. Therefore, by this letter, DTSC certifies that the final remedial action for the MHS Building G Area property."

Soil sampling results subsequent to the excavation conducted in AOI-5 do not indicate an environmental concern.

7.1.2.2 AOI-6: Areas Previously Excavated by ARCADIS

Nineteen borings were advanced at AOI-6 (MH-SB-40, MH-SB-49 through MH-SB-54, MH-SB-56 through MH-SB-61, MH-SB-63 through MH-SB-67 and MH-SB-91). Soil samples were collected from the surface (0-0.5 feet bgs) and from 1.5 to 2 feet bgs at each boring location. A total of 38 soil samples were collected and analyzed for PCBs, pesticides, and herbicides. Soil sampling results are presented in Tables 8a through 8d and are further evaluated in the HHSRE.

- Of the PCBs, Aroclor 1254 and Aroclor 1260 were detected in soil. Aroclor 1260 was detected in one surface soil sample at a concentration of 56 µg/kg, below its USEPA residential RSL of 240 µg/kg. Aroclor 1254 was detected in three soil samples at concentrations ranging from 61 µg/kg in surface soil sample MH-SB-53 to 84 µg/kg in surface soil sample MH-SB-91, below its USEPA residential RSL of 240 µg/kg. PCB results are presented in Table 8a and graphically depicted on Figure 41.
- Of the organochlorine pesticides, only 4,4'-DDE and 4,4'-DDT were detected at concentrations above their respective laboratory reporting limits. Organochlorine pesticide results are presented in Table 8b and graphically depicted on Figure 42. 4,4'-DDE was detected in 18 soil samples at concentrations ranging from 5.8 µg/kg in surface soil sample MH-SB-63 to 430 µg/kg in MH-SB-52 at a depth of 1.5 to 2 feet bgs. 4,4'-DDT was detected in 4 soil samples at concentrations ranging from 5.1 µg/kg in surface soil sample MH-SB-64 to 37 µg/kg in MH-SB-52 at a depth of 1.5 to 2 feet bgs. All detections of 4,4'-DDE and 4,4'-DDT were below their respective USEPA residential RSLs of 1,600 µg/kg and 1,900 µg/kg.
- Organophosphate pesticides and herbicides were not detected above their respective laboratory reporting limits in any of the soil samples. Herbicide and organophosphate pesticide results are summarized in Tables 8c and 8d, respectively.

Soil sampling results in AOI-6 do not indicate an environmental concern.

7.1.2.3 AOI-7: Open Areas Around and in between older Buildings within AOI-5

Twenty-seven borings were advanced at AOI-7 (MH-SB-12, MH-SB-16, MH-SB-17, MH-SB-19, MH-SB-20, MH-SB-22 through MH-SB-25, MH-SB-31, MH-SB-33 through MH-SB-36, MH-SB-39, MH-SB-42, MH-SB-69, MH-SB-72, MH-SB-78, MH-SB-80, MH-SB-83, MH-SB-85, MH-SB-87 through MH-SB-90 and MH-SB-94). Soil samples were collected from the surface (0-0.5 feet bgs) and from 1.5 to 2 feet bgs at each boring location, except MH-SB-17. The deeper soil sample (1.5 to 2 feet bgs) at MH-SB-17 was not collected due to drilling refusal. A total of 54 soil samples were collected and analyzed for pesticides, herbicides, and metals. Soil sampling results for AOI-7 are presented in Tables 9a through 9e.

 Of the organochlorine pesticides, only 4,4'-DDE and 4,4'-DDT were detected at concentrations above their respective laboratory reporting limits. Organochlorine pesticides soil sampling results are presented in Table 9a and graphically depicted on Figure 43. 4,4'-DDE was detected in 25 soil samples at concentrations ranging from 5.0 µg/kg in surface soil sample MH-SB-83 to 60 µg/kg in surface soil sample MH-SB-36. 4,4'-DDT was detected in 5 soil samples at concentrations ranging from 5.2 µg/kg in surface soil sample MH-SB-69 to 9.9 μ g/kg in MH-SB-19 at a depth of 1.5 to 2 feet bgs. All detections of 4,4'-DDE and 4,4'-DDT were below their USEPA residential RSLs of 1,600 μ g/kg and 1,900 μ g/kg, respectively.

- Organophosphate pesticides and herbicides were not detected above their respective laboratory reporting limits in any of the soil samples. Organophosphate pesticide and herbicide results are presented in Tables 9b and 9c, respectively.
- Of the metals, arsenic was detected in soil at concentrations below the southern California regional upper-bound background soil level, while barium, chromium, cobalt, copper, lead, molybdenum, nickel, vanadium, zinc, and mercury were detected in soil at concentrations below their respective DTSC-modified and/or USEPA RSLs. Metals results are summarized in Table 8d. Arsenic, cadmium, and lead concentrations in soil are depicted on Figures 44, 45, and 46, respectively. Greater than 99% of the soil samples (all but one soil sample) tested for metals were either non-detect or were present at concentrations less than applicable DTSC-modified and/or USEPA RSLs or the southern California regional upperbound background soil level. One soil sample, MH-SB-23, contained cadmium at a concentration of 5.7 mg/kg at 1.5 feet bgs, slightly exceeding its DTSC-modified RSL of 4.6 mg/kg. MH-SB-23 is located between Buildings I and F. Metals results are presented in Table 8d. The cadmium exceedance appears to be an isolated occurrence and limited to that specific location, and does not represent an environmental concern.

Soil sampling results in AOI-7 do not indicate an environmental concern.

7.1.2.4 AOI-8: Neutralization Tank

Soil and soil vapor samples were collected at AOI-8. One soil boring was advanced at AOI-8 (MH-SB-113) and three soil samples were collected from 1.5 to 2 feet bgs, 4.5 to 5 feet bgs, and 9.5-10 feet bgs. Soil samples were analyzed for SVOCs, metals, TPH, and pH. Soil vapor boring MH-SV-113 was advanced adjacent to the neutralization tank and converted to a double nested vapor probe at depths of approximately 5 and 10 feet bgs; soil vapor samples were collected from each of these two intervals and analyzed for VOCs. Soil sampling results are summarized in Tables 10a through 10c and soil vapor sampling results are summarized in Table 10e. Soil and soil vapor sampling results are further evaluated in the HHSRE.

Soil Sampling Results

- SVOCs and TPH were not detected above their respective laboratory reporting limits in any of the soil samples collected in AOI-8. SVOC and TPH sampling results are summarized in Tables 10a and 10b.
- Of the metals, arsenic, barium, cadmium, chromium, cobalt, copper, lead, nickel, vanadium, and zinc were detected in soil. Arsenic was detected at concentrations below the southern California regional upper-bound background soil level, while all other metal detections were below their respective DTSC-modified and/or USEPA residential RSLs. Metals results are summarized in Table 10c and arsenic, cadmium and lead concentrations in AOI-8 are graphically depicted on Figure 47.

• pH was detected at concentrations of 8.52 at depths of 1.5 feet bgs and 4.5 feet bgs, and 8.29 at a depth of 9.5 feet bgs. pH results are presented in Table 10d.

Soil vapor Sampling Results

Two soil vapor samples in AOI-8 were collected at depths of approximately 5 and 10 feet bgs from boring MH-SV-113 and analyzed for VOCs. VOCs were not detected above their respective laboratory reporting limits in any of the soil vapor samples. Soil vapor sampling results are presented in Table 10e.

Soil and soil vapor sampling results in AOI-8 do not indicate an environmental concern.

7.1.2.5 AOI-9: Former USTs at the Bus Barn area

Soil, soil vapor, and grab groundwater samples were collected from AOI-9. Four soil borings were advanced at AOI-9 (MH-SB-95 through MH-SB-98) and soil samples were collected at depths of 9.5 to 10 feet bgs, 19.5 to 20 feet bgs, 29.5 to 30 feet bgs, 39.5 to 40 feet bgs, and 49.5 to 50 feet bgs at each boring location. Twenty soil samples were collected and analyzed for TPH. Six soil vapor borings, MH-SV-1 through MH-SV-6, were advanced in AOI-9 and converted to multi-depth vapor probes, screened at depths of 5, 20, and 35 feet bgs. Eighteen soil vapor samples were collected and analyzed for VOCs. Two grab groundwater samples were collected from two borings, MH-SB-96 and MH-SB-97 in AOI-9 and analyzed for VOCs and TPH. Soil, soil vapor, and grab groundwater sampling results are presented in Tables 11a through 11d, respectively. AOI-9 sampling results are further evaluated in the HHSRE.

Soil Sampling Results

• Soil samples analyzed for TPH in AOI-9 were either non-detect or were detected at concentrations (in small carbon fractions) less than applicable USEPA residential RSLs. TPH sampling results are presented in Table 11a.

Soil Vapor Sampling Results

- Of the VOCs, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, benzene, cumene, ethylbenzene, naphthalene, n-butylbenzene, n-propylbenzene, p-cymene, secbutylbenzene, toluene, and xylenes were detected in soil vapor. Soil vapor sampling results are presented in Table 11b.
- Benzene, ethylbenzene, 1,2,4-trimethylbenzene, naphthalene, and xylenes were detected at concentrations that exceeded their respective residential shallow soil vapor screening levels of 5 feet bgs and these results also are summarized on Figure 48. Three vapor probe samples at a depth of 5 feet bgs, MH-SV-2, MH-SV-3, and MH-SV-4, contained benzene at concentrations of 0.227 μg/l, 0.114 μg/l, and 0.684 μg/l, respectively, exceeding the residential shallow soil vapor screening levels for benzene of 0.084 μg/l (see Figure 48 and Table 11b). Other petroleum related VOCs, 1,2,4-trimethylbenzene, ethylbenzene, naphthalene, and xylenes, also were detected at concentrations that exceeded their respective residential shallow soil vapor screening levels. Maximum concentrations of petroleum related VOCs were detected in MH-SV-2, at a depth of 36 feet bgs and are likely due to the historical operations of the former USTs, which were removed in August 1992.

Detections of benzene, 1,2,4-trimethylbenzene, benzene, ethylbenzene, naphthalene, toluene, and xylenes appear to be vertically and laterally localized and limited to approximately a maximum depth of 36 feet bgs. The localization of the detections is evidenced by the fact that VOCs, with the exception of toluene, were not detected in grab groundwater samples collected from borings MH-SB-96 and MH-SB-97, located adjacent to soil vapor probes MH-SV-2 and MH-SV-3, respectively and VOCs were not detected above their respective laboratory reporting limits in soil vapor samples collected from MH-SV-5 and MH-SV-6, located at the boundary between the Bus Barn and JCES, downgradient of the former USTs. Detected petroleum related VOCs in soil vapor do not pose a risk to public health because the Bus Barn area is capped with asphalt, is only used to stage school buses, and is not used by students or faculty, and therefore the potential exposure is limited.

Grab Groundwater Sampling Results

Two grab groundwater samples were collected from borings MH-SB-96 and MH-SB-97. Grab groundwater samples were analyzed for TPH and VOCs. Grab groundwater sampling results for TPH and VOCs are presented in Tables 11c and 11d, respectively.

- Of the VOCs, only toluene was detected in the grab groundwater sample collected from boring MH-SB-96 at a concentration of 1.6 μ g/l, slightly exceeding its laboratory reporting limit of 1 μ g/l but two orders of magnitude below its MCL of 150 μ g/l.
- TPH were detected above laboratory reporting limits in the grab groundwater samples collected from borings MH-SB-96 and MH-SB-97 at concentrations slightly exceeding the laboratory reporting limits. Regulatory screening levels are not available for TPH in groundwater.

Soil, soil vapor, and grab groundwater sampling results in AOI-9 do not indicate a current environmental concern.

7.1.2.6 AOI-10: Diesel-Impacted Former Soil Stockpile at Bus Barn

One soil boring, MH-SB-5, was advanced at AOI-10. One soil sample was collected from the surface (0-0.5 feet bgs) and was analyzed for TPH. Soil sampling results are presented on Table 12 and are further evaluated in the HHSRE.

• TPH were not detected above their respective laboratory reporting limits in the one soil sample.

Soil sampling results in AOI-10 do not indicate an environmental concern.

7.1.2.7 AOI-11: Ground Shop

One soil boring, MH-SB-6, was advanced in AOI-11 and two soil samples were collected; one from the surface (0-0.5 feet bgs) and the second from 1.5 to 2 feet bgs. Both soil samples were analyzed for pesticides, herbicides, and TPH and the surface sample was additionally analyzed for pH. Soil sampling results are presented in Tables 13a through 13e and are further evaluated in the HHSRE.

- Of the organochlorine pesticides, only chlordane was detected in one soil sample, MH-SB-6, at a depth of 1.5 to 2 feet bgs, at a concentration of 60 μg/kg. Organochlorine pesticide results are presented in Table 13a and are graphically depicted on Figure 49. The chlordane detection is well below its USEPA residential RSL of 1,800 μg/kg.
- Organophosphate pesticides, herbicides, and TPH were not detected above their respective laboratory reporting limits in any of the soil samples collected in AOI-11. Organophosphate pesticides, herbicides, and TPH sampling results are presented in Tables 13b through 13d, respectively.
- pH was detected at a concentration of 7.83 in surface sample MH-SB-6 (see table 13e).

Soil sampling results collected from AOI-11 do not represent an environmental concern.

7.1.2.8 AOI-12: Septic Systems 1, 3, 4, 5, 6 and 11

Soil, soil vapor, and groundwater samples were collected from AOI-12. AOI-12 sampling results are further evaluated in the HHSRE.

Soil Sampling Results

Fourteen soil borings, MH-SB-99 through MH-SB-112, were advanced at AOI-12. Soil samples were collected at depths ranging from 5 to 55 feet bgs. Seventy soil samples were collected and analyzed for SVOCs, TPH and metals. SVOCs, TPH, and metals results are in Tables 14a through 14c.

- SVOCs were not detected above their respective laboratory reporting limits in any of the soil samples. SVOC results are presented in Table 14a.
- All soil samples that were analyzed for TPH were either non-detect or were detected at concentrations (in small carbon fractions) less than applicable USEPA residential RSLs. TPH results are presented in Table 14b.
- Of the metals, barium, beryllium, chromium, cobalt, copper, lead, molybdenum, nickel, selenium, silver, vanadium, and zinc were detected in soil at concentrations below their respective DTSC-modified and/or USEPA residential RSLs. Metals results are summarized in Table 14c. Cadmium was detected in two soil samples at concentrations above the USEPA and/or DTSC-modified RSL of 4.6 mg/kg; MH-SB-100 at a depth of 44.5 feet bgs and MH-SB-107 at a depth of 39.5 feet bgs contained cadmium at concentrations of 8.3 mg/kg and 5.2 mg/kg, respectively. MH-SB-100 and MH-SB-107 are located adjacent to Septic Tanks 6 and 3, respectively. Arsenic was detected in six soil samples in AOI-12 at concentrations above the southern California regional upper-bound background soil concentration of 12 mg/kg for arsenic. MH-SB-99 at a depth of 19.5 feet bgs, MH-SB-100 at a depth of 54.5 feet bgs, MH-SB-102 at a depth of 44.5 feet bgs, MH-SB-103 at a depth of 34.5 feet bgs, MH-SB-107 at a depth of 24.5 feet bgs, and MH-SB-110 at a depth of 34.5 feet bgs, contained arsenic at concentrations of 18 mg/kg, 13 mg/kg, 16 mg/kg, 31 mg/kg, 19 mg/kg, and 24 mg/kg, respectively. MH-SB-99 is located adjacent to Septic Tank 11, MH-SB-100, MH-SB-102, and MH-SB-103 are located adjacent to Septic Tank 6, MH-SB-107 is located adjacent to Septic Tank 3, and MH-SB-110 is located adjacent to

Septic Tank 1. Figures 50, 51, and 52 summarize arsenic, cadmium and lead concentrations, respectively, in AOI-12. The cadmium and the arsenic exceedances do not represent a significant concern due to the depths of the samples and therefore, limited potential for exposure.

Soil Vapor Sampling Results

Fourteen soil vapor borings were advanced at AOI-12. Forty-two soil vapor samples were collected at depths ranging from 5 to 55 feet bgs and were analyzed for VOCs. Soil vapor sampling results are summarized in Table 14d and graphically depicted on Figure 53.

- Benzene, cumene, ethylbenzene, chloroform, naphthalene, n-propylbenzene, p-cymene, sec-butylbenzene, toluene, and xylenes were detected in soil vapor.
- Benzene was detected in two vapor probe samples above its residential shallow soil vapor screening level of 0.084 μg/l in AOI-12. MH-SV-14 and MH-SV-16 at a depth of 5 bgs, contained benzene at concentrations of 0.098 μg/l and 0.089 μg/l, respectively (Figure 53).

Groundwater Sampling Results

Groundwater samples were collected from existing monitoring wells MW-5, MW-7, MW-10, and MW-11, within AOI-12, in proximity to Septic Systems 1 and 6. Groundwater samples were analyzed for VOCs, SVOCs, TPH, and metals. VOCs, SVOCs, TPH, and metals sampling results are summarized in Tables 14e through 14h.

- VOCs, SVOCs and TPH were not detected above their respective laboratory reporting limits in any of the groundwater samples collected in AOI-12. TPH, VOCs, and SVOCs results are presented in Tables 14f through 14h, respectively.
- Several metals, specifically barium, total chromium, molybdenum, nickel, and vanadium were detected in groundwater in AOI-12. Barium, total chromium, and nickel were detected at concentrations below their respective drinking water MCLs. MCLs and action levels have not been promulgated for molybdenum and vanadium. Metals results are presented in Table 14e.

Soil, soil vapor, and groundwater sampling results collected from AOI-12 do not represent an environmental concern.

7.1.2.9 AOI-13: Retention Basin

One boring, MH-SB-7, was advanced at AOI-13. One soil sample was collected from the surface (0-0.5 feet bgs) and was analyzed for SVOCs, TPH, and metals. Soil sampling results are presented in Tables 15a through 15c and further evaluated in the HHSRE.

- SVOCs and TPH were not detected above their respective laboratory reporting limits in the soil sample. SVOCs and TPH soil sampling results are presented in Tables 15a and 15b.
- Of the metals, arsenic, barium, cadmium, chromium, cobalt, copper, lead, nickel, vanadium, zinc were detected in the soil. Arsenic was detected at concentrations below the southern California regional upper-bound background soil level, while all other metal detections were

below their respective DTSC-modified and/or USEPA residential RSLs. Metals sampling results are presented in Table 14c and arsenic, cadmium, and lead are graphically depicted on Figure 54.

Soil sampling results collected from AOI-13 do not represent an environmental concern.

7.1.2.10 AOI-14: Athletic Fields

As described in the PEA Work Plan, incremental soil sampling was conducted in the athletic fields. The athletic fields were divided into three DUs for sampling purposes: (1) the football field (40 increments), (2) the large baseball field (30 increments), and (3) the upper softball/soccer field areas (30 increments). Three surface samples were randomly collected within each increment of each DU. Therefore, a total of 120 soil samples were collected from the football field, 90 soil samples were collected from the large baseball field, and 90 soil samples were collected from the upper softball/soccer field area. A total of 300 soil samples were collected from the athletic fields. These incremental soil sampling locations are depicted on Figure 55. Soil samples collected from each DU, were combined to form three samples (i.e., into A, B, and C increments) into MH-IS-BASEBALL-A, -B and -C, MH-IS-FOOTBALL-A, -B and -C, and MH-IS-SOFTBALL-A, -B and -C. The soil samples were analyzed for pesticides, herbicides, and metals. Sampling results are presented in Tables 16a through16d, and further evaluated in the HHSRE.

- Of the organochlorine pesticides, only 4,4'-DDE was detected at concentrations ranging from 5.3 µg/kg in MH-IS-FOOTBALL-B to 8.5 µg/kg in MH-IS-FOOTBALL-C. Detections of 4,4'-DDE were well below its USEPA residential RSL of 1,600 µg/kg. Organochlorine pesticides results are presented in Table 16a.
- Organophosphate pesticides and herbicides were not detected above their respective laboratory reporting limits in any of the soil samples collected from AOI-14.
 Organophosphate pesticides and herbicides soil sampling results are presented in Tables 16b and 16c, respectively.
- Of the metals, arsenic, barium, cadmium, chromium, cobalt, copper, lead, molybdenum, nickel, vanadium, zinc, and mercury were detected in the soil. Arsenic was detected at concentrations below the southern California regional upper-bound background soil level, while all other metal detections were below their respective DTSC-modified and/or USEPA residential RSLs. Metals soil sampling results are presented in Table 16d.

Soil sampling results collected from AOI-14 do not represent an environmental concern.

7.1.2.11 AOI-15: Cornucopia

Four soil borings, MH-SB-1 through MH-SB-4, were advanced in AOI-15. Soil samples were collected from the surface (0-0.5 feet bgs) and from 1.5 to 2 feet bgs at each boring location. Eight soil samples were collected and analyzed for pesticides, herbicides, and metals. Soil sampling results are presented in Tables 17a through 17d, and further evaluated in the HHSRE.

 Of the organochlorine pesticides, 4,4'-DDE and 4,4'-DDT were detected in only one soil sample (surface sample at MH-SB-1) at concentrations of 49 µg/kg and 8.5 µg/kg, respectively. Detections of 4,4'-DDE and 4,4'-DDT were below their respective USEPA residential RSLs of 1,600 μ g/kg and 1,900 μ g/kg (Table 17a). Organochlorine pesticide soil sampling results are graphically depicted on Figure 56.

- Organophosphate pesticides and herbicides were not detected above their respective laboratory reporting limits in any of the soil samples collected at AOI-15. Organophosphate pesticides and herbicides soil sampling results are presented in Tables 17b and 17c, respectively.
- Of the metals, barium, cadmium, chromium, cobalt, copper, lead, molybdenum, nickel, silver, vanadium, zinc, and mercury were detected in soil at concentrations below their respective DTSC-modified and/or USEPA residential RSLs. Arsenic was detected in two soil samples at concentrations slightly exceeding the southern California regional upper-bound background soil level. Arsenic, cadmium, and lead results are graphically depicted on Figure 57.

Based on these two arsenic detections, DTSC and ENVIRON discussed step-out sampling at the Cornucopia area on September 5, 2014. ENVIRON provided DTSC with a scope of work for the step out sampling on September 10, 2014. The proposed scope of work included incremental step-out soil sampling in the planting beds and in the open areas outside the planting beds. Two DUs were identified for the incremental step-out soil sampling; incremental soil sampling locations are depicted on Figure 58. DTSC approved the proposed step-out sampling in an email dated September 12, 2014. At the time of approval, DTSC asked that the analytical laboratory collect a laboratory duplicate for one of the incremental samples.

Incremental Soil Step out Sampling

DU-1 was comprised of the 12 planting beds within Cornucopia. Within this DU, each planting bed was divided into four grids, for a total of 48 grids, with 3 randomly selected incremental soil-sampling locations per grid, for a total of 144 increments. DU-2 was comprised of the remaining area within Cornucopia, and was divided into 31 grids, with 3 randomly selected incremental soil-sampling locations per grid, for a total of 93 increments.

ENVIRON conducted the step-out sampling from September 23 through 26, 2014 using the incremental soil sampling methods described in the DTSC-approved PEA Work Plan. At each boring location two soil samples were collected, one from 0-0.5 feet bgs and one from 1.5-2 feet bgs. Soil samples were analyzed for arsenic using USEPA Method 6010. ENVIRON also requested that the laboratory collect a laboratory duplicate for one of the incremental samples.

During execution of the step-out sampling, ENVIRON discovered that the northern boundary of the Cornucopia area had been incorrectly delineated on the original plot plans, and the area was smaller than originally diagrammed (the fence line is actually 20 feet further south than that marked on the original plot plans). This finding was discussed with DTSC prior to fieldwork and, after obtaining DTSC's concurrence, the sampling area was adjusted to stay within the actual fenced Cornucopia area. The sampling grid was reduced from 31 to 24 grids. The revised sampling grid and locations are depicted on Figure 58.

Incremental soil step out sampling results are presented in Table 17e. Laboratory and data validation reports for these samples are provided in Appendix C.

- In DU-1, arsenic was detected in all 6 step-out soil samples at concentrations ranging from 4.3 mg/kg to 8.8 mg/kg. Based on the reviewed results, environmental concerns were not identified in shallow soil within DU-1.
- In DU-2, 5 soil samples contained arsenic at concentrations ranging from 4.4 mg/kg to 6.9 mg/kg. One of the 6 samples, MH-IS-CORNUCOPIA-B at the surface, contained arsenic at a concentration of 14 mg/kg, slightly exceeding the southern California regional upperbound background soil level for arsenic of 12 mg/kg, but within the range of the southern California regional background data set (from 0.15 mg/kg to 20 mg/kg). Therefore, environmental concerns were not identified in shallow soil within DU-2.

Soil sampling results and subsequent incremental soil step out sampling results do not indicate an environmental concern at AOI-15.

7.1.2.12 AOI-16: Undeveloped Area

Three soil borings, MH-SB-26, MH-SB-55, and MH-SB-68, were advanced at AOI-16. Soil samples were collected from the surface (0-0.5 feet bgs) at each boring location. Three soil samples were collected and analyzed for pesticides, herbicides, and metals. Pesticides, herbicides, and metals soil sampling results are presented in Tables 18a through 18d.

- Of the organochlorine pesticides, 4,4'-DDE was detected in one surface soil sample, MH-SB-55, at a concentration of 7.3 µg/kg. The 4,4-DDE detection is well below its USEPA residential RSL of 1,600 µg/kg. The organochlorine pesticide soil sampling results are presented in Table 18a and graphically depicted on Figure 59.
- Organophosphate pesticides and herbicides were not detected above their respective laboratory reporting limits in any of the soil samples collected from AOI-16. Organophosphate pesticides and herbicides soil sampling results are presented in Tables 18b and 18c, respectively.
- Of the metals, arsenic was detected in the soil at concentrations below the southern California regional upper-bound background soil level, while barium, cadmium, chromium, cobalt, copper, lead, molybdenum, nickel, vanadium, zinc, and mercury were detected in the soil at concentrations below their respective DTSC-modified and/or USEPA residential RSLs. Metals soil sampling results are summarized in Table 18d and results for arsenic, cadmium, and lead are graphically depicted on Figure 60.

Based on the reviewed results, environmental concerns were not identified in AOI-16.

7.1.2.13 AOI-17: Electrical Transformers

Six borings, MH-SB-8, MH-SB-9, MH-SB-27A, MH-SB-27B, MH-SB-28A, and MH-SB-28B, were advanced at AOI-17. Soil samples were collected from the surface (0-0.5 feet bgs) and from 1.5 to 2 feet bgs. Soil samples were collected and analyzed for PCBs. PCB sampling results are presented in Table 19 and graphically depicted on Figure 6.

• PCBs were not detected above their respective laboratory reporting limits in any of the soil samples (Figure 61). Based on the reviewed results, environmental concerns were not identified in AOI-17.

7.1.2.14 AOI-18: Redevelopment Area

Twelve borings were advanced in AOI-18 as illustrated in Figure 62; twenty four soil samples were collected from the surface (0-0.5 feet bgs) and from 1.5 feet bgs from each boring (Figure 62). The 24 soil samples were composited in the laboratory into eight soil samples collected (four surface soil samples and four soil samples collected from 1.5 feet bgs). These soil samples are: MH-CS-1 (composite of MH-CS-1A through -1D), MH-CS-2 (composite MH-CS-2A through -2B), MH-CS-3 (MH-CS-3A through -3D), and MH-CS-4 (MH-CS-4A through -4B) according to the steps outlined in the Soil Sampling Protocol in Appendix H of the PEA Work Plan. The soil samples were analyzed for pesticides, herbicides, and metals. Soil sampling results are presented in Tables 20a through 20d, and are further described below:

- Of the organochlorine pesticides, only 4,4'-DDE and 4,4'-DDT were detected at concentrations above their respective laboratory reporting limits. 4,4'-DDE was detected in 2 samples at concentrations of 14 µg/kg in MH-CS-4 (surface) and 27 µg/kg in MH-CS-4 (1.5 to 2 feet bgs). 4,4'-DDT was detected in 1 soil sample at a concentration of 5.5 µg/kg in MH-CS-4 at a depth of 1.5 to 2 feet bgs. Detections of 4,4'-DDE and 4,4'-DDT were below their respective USEPA residential RSLs of 1,600 µg/kg and 1,900 µg/kg. Organochlorine pesticides soil sampling results are presented in Table 20a.
- Organophosphate pesticides and herbicides were not detected above their respective laboratory reporting limits in any of the soil samples collected in AOI-18; Organophosphate pesticides and herbicides soil sampling results are presented in Tables 20b and 20c.
- Of the metals, arsenic, barium, cadmium, chromium, cobalt, copper, lead, molybdenum, nickel, vanadium, zinc, and mercury were detected in the soil samples. Arsenic was detected in the soil at concentrations below the southern California regional upper-bound background soil level, while all other metal detections were below their respective DTSCmodified and/or USEPA residential RSLs. Metals soil sampling results are presented in Table 20d.

Based on the reviewed results, environmental concerns were not identified in AOI-18.

7.2 Congener Analysis

As mentioned previously, soil samples for PCB congener's analysis were selected from both campuses by DTSC and cover the full range of PCB Aroclor concentrations detected at the site. DTSC selected 10 soil samples previously analyzed for PCBs using USEPA Method 8082 for congener analysis using USEPA Method 1668 (samples JC-SB-11, JC-SB-13, JC-SB-42, JC-SB-43, MH-SB-8, MH-SB-44, MH-SB-53, MH-SB-76, MH-SB-79, and MH-SB-91 from AOIs -1, 3, 4, 5, 6, and 17) and with a range of detections from less than the laboratory reporting limit of 50 μ g/kg to 1,500 μ g/kg. PCB congener data results were compared with those measured by USEPA Method 8082 to confirm the Aroclor detections and/or presence or absence of PCBs in the soil matrix. This comparison showed that the PCB Aroclor analysis

provided consistent results with the PCB congener analysis. The soil sampling results, laboratory reports, and data validation reports are included in Appendix D.

7.3 Analysis of Field Quality Control Samples

In accordance with the QC guidelines described in Section 6.2.6, field QC samples collected during the PEA included 3 trip blank samples, 2 equipment blank samples (for grab groundwater samples), and 33 duplicate samples (for soil, soil vapor, and groundwater samples). The trip blank samples were analyzed for VOCs by USEPA Method 8260B and duplicate and equipment blank samples were analyzed for the same suite of compounds analyzed for in the primary sample. Duplicate results were generally similar to the results reported in the primary samples. No VOCs were detected in any of the trip blank samples submitted for analysis during the PEA investigation. No compounds were detected above their respective laboratory reporting limits in any of the equipment blank samples collected. Based on these results, the field QC objectives were met.

7.4 Third Party Data Validation

LDC of Carlsbad, California, performed USEPA Level III validation reviews of the data, based on data validation procedures established by the USEPA (National Functional Guidelines for Data Validation). The QC information reviewed by LDC for all data included, at a minimum, chain-of-custody forms, holding times, reporting limits, matrix spike/matrix spike duplicate (MS/MSD) analyses, laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analyses, and blanks. Third party data validation reports are included in Appendix C. The results of the data validation review indicate the data are useable.

Some of the data were qualified (U, J, UJ) and the data tables have been updated accordingly. The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

8 Environmental Setting

This section has been developed to present site-specific geologic, hydrogeologic, and access information that has the potential to influence the transport of COPCs detected at the site, through identified potential exposure pathways to the individual. This information forms the basis of the conceptual site model (CSM) provided on Figure 63.

8.1 Factors Related to Soil Pathways

8.1.1 Site Topography and Surface Slope

Based on a review of the USGS 7.5 minute topographic series, Point Dume, Malibu, California Quadrangle Map (dated 2012), and ENVIRON's observations during the PEA, the site slopes from the northeast to the south-southwest toward the Pacific Ocean. Surface runoff follows the topography, draining to the south. Intermittent streams border the site in the surrounding canyons. Elevation change is significant; the site is situated on graded "tiers," ranging from approximately 190 feet amsl at the northern baseball field on MHS, to approximately 100 feet amsl at the classrooms along Morning View Drive. Major "tiers" include the fields, the basketball courts, parking lots, and classrooms.

8.1.2 Predominant Soil Types

Regional and local geology are described in Section 2.3. In summary, the geology beneath the site consists of two main units: the Young Non-Marine Terrace Deposits and the Monterey Shale. During the PEA field investigation, the lithology was evaluated to a maximum depth of approximately 65 feet bgs.

Based on observations during drilling and sampling activities, the site is primarily underlain by interbedded lenses of clay, silty clay, and silt layers that gradually transition to a layer of predominantly sand at approximately 100 to 105 feet amsl, although pockets of finer-grained material are present within these sandier units. The sand is underlain by a predominantly silt layer found at approximately 80 to 90 feet amsl. The hillsides on the site consist of thick bands of clay and fine-grained material. Soils encountered at the site were slightly moist. Overall, as indicated above, surface soils at the site are relatively fine-grained and moist, which would reduce the potential for upward migration of vapor from COPCs detected at depth, to the ground surface.

8.1.3 Site Accessibility and Controls

The site is bordered to the east by an undeveloped hillside with graded access roads and trails, and by residential structures to the north, east, and south. Access to the site is provided from public roads such as Morning View Drive. Perimeter access is controlled via fencing and access gates. In general, the sports fields are bounded by undeveloped land with natural vegetated slopes that discourage access. Approximately half the site is paved with asphalt and/or concrete, therefore direct access to site soils is limited due to paved parking lots, walkways, and buildings.

8.1.4 Nearby Sensitive Receptors

During the 2013/14 school year, JCES was attended by approximately 250 children in grades kindergarten to 5. MHS was attended by approximately 1,100 children in grades 6 to 12. The site is surrounded by residences to the north, south, and west, which comprises the primary land use within 1 mile of the site. A day care center and assisted living facility are also found within 1 mile of the site.

8.2 Factors related to Water Pathways

8.2.1 Hydrogeology

Site hydrogeology is discussed above in Section 2.4. In summary, the site is within the Malibu Hydrological Unit and the Trancas Canyon Hydrologic Sub-Area (Los Angeles Regional Water Quality Control Board [LARWQCB], Basin Plan). There is no designated groundwater basin in the area of the site and groundwater is not assigned any beneficial uses according to the Basin Plan, and groundwater underlying the site is not used for drinking water.

Eleven monitoring wells are present at the site to monitor the site's septic systems. As measured by ENVIRON field staff on July 31, 2014, first groundwater typically is encountered at depths ranging from approximately 51 to 62.7 feet bgs and generally flows to the south, toward the Pacific Ocean (see Figure 5). The first encountered groundwater at the site is likely perched.

8.2.2 Impacted Aquifers

The monitoring wells at the site currently are sampled quarterly to comply with the site's LARWQCB WDR permit for the septic systems; groundwater is analyzed for coliform, enterococcus, and ammonia. As described below, during the PEA investigation, groundwater from selected monitoring wells was analyzed for VOCs, SVOCs, TPH, and metals. No analytes were reported above applicable drinking water MCLs in the monitoring wells. Grab groundwater samples were collected in the Bus Barn area; toluene and TPH were reported at concentrations slightly above reporting limits and well below drinking water MCLs. As previously stated groundwater at the site is not a source of drinking water and is not assigned any beneficial uses. Drinking water at the site is supplied by the MWDSC.

8.2.3 Surface Water

An infiltration/retention basin, designated as AOI-13, is present at MHS; it receives surface runoff from adjacent asphalt-paved parking lots. No natural surface water bodies occur on the site. The closest natural surface water body is the Pacific Ocean, located approximately 0.3 miles southwest of the site. Runoff from the site is expected to be minimal, as approximately half the site is paved or improved with buildings. No sampling and/or analysis of surface water was required during this PEA.

9 Human Health Screening Risk Evaluation

To evaluate the potential human health risks to current and potential future on-site populations due to exposure to the chemicals detected in soil and soil vapor at the site, a HHSRE was performed. The HHSRE approach consisted of: 1) calculating cancer risks and non-cancer hazards for school receptors (i.e. school students and teachers/staff) potentially exposed to soil through direct contact using CalEPA Office of Environmental Health Hazard Assessment (OEHHA) Schools Risk Screening Model (CalEPA 2010); 2) calculating cancer risks and non-cancer hazards for hypothetical future on-site residents potentially exposed to soil through direct contact using established screening levels (i.e. CalEPA DTSC-modified RSLs [CalEPA 2014] or USEPA RSLs [USEPA 2015]) for residential soil; and, 3) calculating cancer risks and non-cancer hazards for current and future school receptors and hypothetical future on-site residents potentially exposed to vOCs in soil vapor migrating to indoor and outdoor air using site-specific vapor migration modeling.

The various components of the HHSRE are discussed in the following subsections. The HHSRE methodology and results are presented in detail in Appendix E.

9.1 Exposure Pathways and Media of Potential Concern

The site is currently occupied by JCES and MHS and there are no plans to use the site for other purposes. Therefore, this HHSRE identified school students and teachers/staff as the potentially exposed populations, which is consistent with the OEHHA guidance for school sites (CalEPA 2004). In addition, consistent with the DTSC PEA Guidance Manual (CalEPA 2013), future unrestricted/residential land use was considered as the most health-protective and conservative land use for the purposes of this HHSRE. Therefore, hypothetical future on-site residents were also evaluated in the HHSRE.

The PEA Guidance Manual recommends consideration of exposure to on-site soil and groundwater (CalEPA 2013). Consideration of these media was consistent with the results of previous investigations of the site, which have shown impacts to soil and localized impacts to groundwater (at the former USTs in the Bus Barn). Since VOCs had been detected in soil and groundwater at the site previously, the potential for VOCs to migrate into indoor and outdoor air was considered. Soil vapor samples were used to evaluate the potential vapor migration pathway in this HHSRE.

The CSM for the HHSRE, shown on Figure 63, illustrates exposure pathways by which receptors (school students/staff and hypothetical future on-site residents) could be exposed to chemicals in soil and soil vapor at the site. Hypothetical future on-site residents could potentially be directly exposed to chemicals in soil from 0 to 10 feet bgs (assuming that soil may be regraded during redevelopment) through incidental ingestion, dermal contact, and inhalation of soil particulates in ambient air. These are the exposure routes on which the DTSC-modified RSLs (CalEPA 2014) and the USEPA RSLs (USEPA 2015) for residential soil are based. For school receptors, to be consistent with the OEHHA Schools Risk Screening Model, in addition to direct contact with soil from 0 to 2 feet bgs, indoor dust direct contact exposure routes, including incidental ingestion, dermal contact, and inhalation of dust particulates in indoor air, were also

considered. Approximately half the site is paved with asphalt and/or concrete, which may limit direct contact to soil by current school receptors. Risks due to soil exposure estimated for these areas are considered conservative due to the limited amount of exposed soil at the site and the corresponding limited exposures.

Furthermore, current school receptors and hypothetical future on-site residents could potentially be exposed to VOCs in soil vapor migrating to ambient air. Soil vapor samples were collected near all existing septic tanks at both schools and in the Bus Barn area of MHS. Although currently there are no buildings over the soil vapor sampling locations, it was conservatively assumed that future buildings could be constructed over these locations, and the risks to future school receptors and hypothetical future on-site residents from exposure to VOCs in soil vapor migrating to indoor air were also evaluated.

Since all water used at the site is provided by municipal water supply, ingestion of groundwater was not evaluated in the HHSRE.

Finally, ENVIRON confirmed with the District that the quantity of vegetables/fruits consumed from Cornucopia (AOI-15) by school receptors was limited; therefore, ingestion of fruits/vegetables was not evaluated in the HHSRE.

9.2 Identification of Chemicals of Potential Concern

Soil samples collected at 0-10 feet bgs from the site were selectively analyzed for herbicides, metals, PCBs, pesticides (organophosphates and organochlorine), SVOCs, and TPHs. Soil vapor samples collected at 5-56 feet bgs were analyzed for VOCs.

For non-metal compounds, all chemicals detected in soil or soil gas were evaluated in the HHSRE. Consistent with DTSC Guidance (CalEPA 2013), metals detected in soils at levels less than or equivalent to background were eliminated as COPCs. All other metals have been included in the HHSRE

A total of 13 metals, five organochlorine pesticides, two PCBs, one SVOC, and three TPH compounds were identified as COPCs for soil, while 13 VOCs are were identified as COPCs for soil vapor. The COPCs for each AOI are summarized in Appendix E.

9.3 Fate and Transport

VOCs detected in soil vapor can potentially migrate through the unsaturated zone to indoor or outdoor air. This migration is quantified for the purposes of this HHSRE through an intermedia transfer factor. When the transfer factor is multiplied by the source concentration of a chemical in soil vapor (in micrograms per cubic meter [μ g/m³]), the product is the resulting steady-state concentration that is predicted in indoor or outdoor air (in μ g/m³).

Ramboll Environ developed transfer factors for soil vapor to indoor and outdoor air (for exposure of current and future school receptors and hypothetical future on-site residents). Details about the vapor migration modeling are presented in Appendix E.

9.4 Risk Characterization Summary

Excess lifetime cancer risks and non-cancer Hazard Quotients were estimated for school receptors and hypothetical future on-site residents exposed to soil and soil vapor at the site (see Appendix E for details). It should be noted that the risk and hazard estimated in the HHSRE do not represent absolute estimates at the site, since generic assumptions for residential land use and conservative assumptions for school receptors were used. The goal of the PEA site wide HHSRE is to ensure that no potential health hazard is overlooked; therefore, the screening evaluation's assumptions and default values are restricted to a reasonable maximum exposure (RME) scenario. The site wide HHSRE risk/hazard calculations and results are detailed in Appendix E.

The site wide HHSRE was based primarily on a series of conservative assumptions. The use of conservative assumption tends to produce upper-bound estimates of risk. Although it is difficult to quantify the uncertainties associated with all the assumptions used in this assessment, the use of conservative assumptions is likely to result in a substantial overestimate of exposure, and hence, risk.

9.5 Conclusions

The objective of the site wide HHSRE was to evaluate potential health risks to current/future school receptors (students and teachers/staff) and hypothetical future on-site residents due to exposure to chemicals detected in soil and soil vapor at the site.

Based on this site wide HHSRE, no significant risks due to exposure to chemicals in soil (direct contact) and soil vapor (vapor migration) are expected for the current or future school students and teachers/staff.

Similarly, based on this site wide HHSRE, no significant risks due to exposure to chemicals in soil (direct contact) or soil vapor (vapor migration) are expected for hypothetical future on-site residents in all AOIs, except for AOI-9 (Bus Barn). If land use at AOI-9 (Bus Barn) should ever change to residential in the future, soil vapor adjacent to the former USTs may need to be re-evaluated at that time.

10 Conclusions and Recommendations

A PEA was conducted at JCES and MHS to assess current environmental conditions at the site. The PEA included an initial subsurface investigation of soil, soil vapor, and groundwater to determine if releases have occurred at the site, step out sampling to determine the extent of impacted areas, a site wide HHSRE to evaluate the potential human health risks and hazards associated with identified COPCs, and excavation of a localized area of PCB-impacted soil east of Building G. Soil, soil vapor, and groundwater data collected from the site indicate no current environmental concerns at the site.

Based on this site wide HHSRE, no significant risks due to exposure to chemicals in soil (direct contact) and soil vapor (vapor migration) are expected for the current or future school students and teachers/staff.

Similarly, based on this site wide HHSRE, no significant risks due to exposure to chemicals in soil (direct contact) or soil vapor (vapor migration) are expected for hypothetical future on-site residents in all AOIs, except for AOI-9 (Bus Barn). If land use at AOI-9 (Bus Barn) should ever change to residential in the future, soil vapor adjacent to the former USTs may need to be re-evaluated at that time. As such, on behalf of the District, Ramboll Environ respectfully requests "no further action" (NFA) be granted for this site.

11 References

- ARCADIS. 2010a. "Preliminary Environmental Assessment Report, Malibu Middle and High School Campus Improvements Project, 30215 Morning View Drive, Malibu, California." June 14.
- ARCADIS. 2010b. "Removal Action Work Plan, Malibu Middle and High School Campus Improvement Project, 30215 Morning View Drive, Malibu, California." August 5.
- ARCADIS. 2012. "Removal Action Completion Report Malibu Middle and High School Campus Improvements Project, 30215 Morning View Drive, Malibu, California." June 12.
- Ashirt Engineering, Inc. 2014. "4th Quarter 2013 Monitoring Report for Malibu High School, Malibu Middle School, and Juan Cabrillo Elementary School (File No. 08-168, WDR 97-10-DWQ, Series No. 053, CI-9744, Global ID WDR 10000846)." January 14.
- Atkins, formerly PBS&J. 2011. "Santa Monica-Malibu Unified School District Malibu Middle and High School Campus Improvement Project Environmental Impact Report." July.
- California Environmental Protection Agency (CalEPA). 2004. Guidance for School Site Risk Assessment Pursuant to Health and Safety Code Section 901(f): Guidance for Assessing Exposures and Health Risks at Existing and Proposed School Sites. Final Report. Office of Environmental Health Hazard Assessment. February.
- CalEPA. 2010. Schools Risk Screening Model. March.
- CalEPA. 2012. Advisory Active Soil Gas Investigations. April.
- CalEPA. 2013. Preliminary Endangerment Assessment Guidance Manual. Interim Final, Revised October.
- CalEPA. 2014. Human Health Risk Assessment (HHRA) Note Number 3, Issue: DTSC recommended methodology for use of U.S. EPA Regional Screening Levels (RSLs) in the Human Health Risk Assessment process at hazardous waste sites and permitted facilities. July.
- California Regional Water Quality Control Board, Los Angeles Region. 1995. Water Quality Control Plan Los Angeles Region, Basin Plan for the Coastal Watersheds of Los Angeles and Venture Counties. February 23, 1995.
- California Regional Water Quality Control Board, Los Angeles Region. 1996. Underground Storage Tank Case Closure, Malibu Park School. September 11.
- Cape Environmental Management. 1993a. SMMUSD ES Reconstruction Program, Report of Additional Site Assessment Activities. February 18.
- Cape Environmental Management. 1993b. Workplan to Assess Malibu Park High Site Closure Permit No 9285B. August 2.

- Chernoff G, Bosan W, Oudiz D. 2008. *Determination of a Southern California Regional Background Arsenic Concentration in Soil.* <u>https://www.dtsc.ca.gov/upload/Background-Arsenic.pdf</u>.
- CTL Environmental Services. 2000. Phase I Environmental Site Assessment for the Property Located at Malibu High School, 30215 Morning View Drive, Malibu CA. March 2000.
- D. Lewis Company. 2009. Building Sewers to Septic System, Malibu High School and Juan Cabrillo Elementary School. January 28.
- Department of Toxic Substances Control (DTSC). 1997. "Selecting Inorganic Constituents as Chemicals of Potential Concern at Risk Assessments of Hazardous Waste Sites and Permitted Facilities."
- DTSC. 2004. Guidance for School Site Risk Assessment Pursuant to Health and Safety Code Section 901 (f): Guidance for Assessing Exposures and Health Risks at Existing and Proposed School Sites, Final Report. February.
- DTSC. 2011. Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance). October.
- DTSC. 2013a. HERO Human Health Risk Assessment (HHRA) Note Number: 3. May 21.
- DTSC. 2013b. Preliminary Endangerment Assessment Guidance Manual. October.
- DTSC. 2014. Conditional Approval of Draft Preliminary Environmental Assessment Work Plan, Santa Monica-Malibu Unified School District, Santa Monica, California. June 27.
- DTSC. 2015. Approval of the Removal Action Completion Report and Issuance of a No Further Action Determination For the Malibu High School, Building G Area, 30215 Morning View Drive, Malibu, Los Angeles County, California. March 26.
- ENVIRON International Corporation (ENVIRON). 2014a. Draft Preliminary Environmental Assessment Work Plan, Juan Cabrillo Elementary School and Malibu Middle and High Schools, 30237 and 30215 Morning View Drive, Malibu, California. May 23.
- ENVIRON. 2014b. Final Summary of Soil, Soil Vapor, and Groundwater Sampling Results Juan Cabrillo Elementary School, 30237 Morning View Drive, Malibu, California. September 12.
- ENVIRON. 2014c. Final Summary of Soil, Soil Vapor, and Groundwater Sampling Results Malibu High School, 30215 Morning View Drive, Malibu, California. September 23.
- ENVIRON. 2014d. Soil Step-Out Sampling, Malibu High School (MHS), 30215 Morning View Drive, Malibu, California. October 3.
- ENVIRON. 2014e. Preliminary Environmental Assessment Work Plan, Juan Cabrillo Elementary School and Malibu Middle and High Schools, 30237 and 30215 Morning View Drive, Malibu, California. October 13.
- ENVIRON. 2014f. Draft Removal Action Work Plan, Building G Area, Malibu High School, 30215 Morning View Drive, Malibu, California. November 6.

- ENVIRON. 2014g. *Removal Action Work Plan, Building G Area, Malibu High School, 30215 Morning View Drive, Malibu, California.* December 17.
- ENVIRON. 2015a. Draft Removal Action Completion Report, Building G Area, Malibu High School, 30215 Morning View Drive, Malibu, California. February 27.
- ENVIRON. 2015b. Removal Action Completion Report, Building G Area, Malibu High School, 30215 Morning View Drive, Malibu, California. April 6.
- Environmental Data Resources (EDR). 2014. The EDR Radius Map Report with GeoCheck, 30237 Morning View Drive, Malibu, California. April 29.
- GeoConcepts, Inc. 2009. Monitoring Wells, 30237 Morning View Drive, Malibu, California. February 5.
- J.R. Simplot Company. Material Safety Data Sheet. Best N-FLEXX 22-4-10. August.
- Law/Crandall, Inc. 1994. Consultation Regarding Floor Slab Moisture, Existing Building E, Malibu High School, 30215 Morning View Drive, Malibu, California, Law/Crandall Project 2661.40541.0001.
- Leighton Consulting, Inc. 2009. Addendum No. 1 to Geotechnical Investigation and Recommendations for the Proposed new Administration and Classroom building and Bleachers with Light Poles for the Football Field, Malibu Middle/High School, 30215 Morning View Drive, Malibu, California. January 19.
- LFR (an ARCADIS Company). 2009. Draft Phase I Environmental Site Assessment, Malibu Middle and High School Campus, 30215 Morning View Drive, Malibu, California. September 17.
- Malibu High School. 1999. Facilities Area Survey, Malibu High School and Juan Cabrillo Elementary School. March 1.
- Ocean Blue Engineers, Inc. 1993. Additional Data Regarding Water Depth in the Vicinity of Malibu Park School, Malibu, California. August 4.
- Ocean Blue Engineers, Inc. 1994. Background Information and Specifications for Subsurface Investigation by Drilling Four Borings and Soil Sampling, and Possible Installation, Development and Sampling of Four Groundwater Monitoring Wells at Malibu Park School, Malibu, California. July 27.
- Ocean Blue Engineers, Inc. 1994a. Subsurface Investigation by Drilling Four Borings and Soil Sampling, and Possible Installation, Development and Sampling of Four Groundwater Monitoring Wells at Malibu Park School, Malibu, California. April 4.
- Ocean Blue Engineers, Inc. 1996b. Summary Report of Previous Site Investigations and Closure Requests for Malibu Park School Located at 30215 Morning View Drive, Malibu, California. August 21.
- Ocean Blue Engineers, Inc. 1996c. Destruction of Four Groundwater Monitoring Wells at Malibu Park School Located at 30215 Morning View Drive, Malibu, California. November 5.

- Panacea. 2013. Summary of Indoor Environmental Quality, Electromagnetic Fields, and Radon Monitoring Results, Malibu High School, Malibu Middle School, and Juan Cabrillo Elementary School. November.
- Santa Monica Malibu Schools. 2005. Award of Bid #3.05 Energy Efficiency Lighting Retrofit Project – Phase III – Malibu High School. October 28.

Stanley Pest Control. 2011. Service Agreement with Webster Elementary. July 7.

- The Reynolds Group. 1996a. Groundwater Monitoring Report, Malibu Park School, 30215 Morning View Drive, Malibu, California. January.
- The Reynolds Group. 1996b. Groundwater Monitoring Report, Malibu Park School, 30215 Morning View Drive, Malibu, California. April.
- The Reynolds Group. 1996c. Groundwater Monitoring Report, Malibu Park School, 30215 Morning View Drive, Malibu, California. July.
- Topanga Underground. 2009a. Scope of Work, Seepage Pit Backfill. July 30.
- Topanga Underground. 2009b. Final Percolation Test Data Seepage Pits, Revised Seepage Pit Depths. August 25.
- United States Environmental Protection Agency (USEPA). 2015. Region 9 Regional Screening Levels. <u>http://www.epa.gov/region9/superfund/prg/</u>.
- Vector Three Environmental, Inc. 1995. Interim Report of Groundwater Monitoring Well Installation and Site Assessment Report at 30215 Morning View Drive, Malibu, California. December 7.

Waxie Sanitary Supply. Material Safety Data Sheet – Sanitary Chemical Maintenance.

Yerkes, R.F. and R.H. Campbell. 2005. Preliminary Geologic map of Los Angeles 30' X 60' Quadrangle, Southern California. US Geological Survey. Open File Report 2005-1019. <u>http://pubs.usgs.gov/of/2005/1019.</u>

Tables

Table 1a. Groundwater Elevations

Juan Cabrillo Elementary and Malibu High School 30237 and 30215 Morning View Drive Malibu, California

Well ID	TOC (in feet amsl)	Date Measured	Depth to Water (in feet bgs)	Groundwater Elevation (in feet amsl)
MW-1	116.63	8/1/2014	52.3	64.33
MW-2	111.52	8/1/2014	65.07	46.45
MW-3	116.46	8/1/2014	54.77	61.69
MW-4	112.40	8/1/2014	60.37	52.03
MW-5	110.16	8/1/2014	62.12	48.04
MW-6	102.56	8/1/2014	dry	NA
MW-7	99.00	8/1/2014	63.13	35.87
MW-8	135.16	8/1/2014	51.38	83.78
MW-9	111.80	8/1/2014	Dry	NA
MW-10	92.39	8/1/2014	57.61	34.78
MW-11	85.56	8/1/2014	52.6	32.96

Notes:

TOC - Top of casing amsl - Above mean sea level bgs - below ground surface NA - Not applicable



Table 1b. Septic Systems

Juan Cabrillo Elementary School and Malibu High School 30237 and 30215 Morning View Drive Malibu, California

Septic Tank	Pit I.D.	Original Depth (feet below ground surface)	Modified Depth (feet below ground surface)	Location	Buildings Serviced
	•		Juan Cat	orillo Elementary School	
7	7-1 7-2 7-3	44 41 41	31 30 32	West of building G	A-Administration, B-Classrooms 1-5, C-Classrooms 8-11, D-Classrooms 12-15, G-Multi-purpose, Portable Classrooms
8	Leach Field	NA	NA	South of Building F	Adjacent to Basketball Courts Building F Classrooms
9	9-1	45	36	Southeast of Classrooms 1-5	Portable Classrooms East of Classrooms 1-5
0	51	40		u Middle/High School	
	1-1-1	50	31		
	1-1-1	47	32		A-Library, E-Classrooms 1-10, F-Music,
1	1-2-1	47	32	South Parking lot	G-Art/Wood Shop, Portable 511, Portable 512,
	1-2-2	45	30		Portable 513,
	3-1	50	35		
	3-2	50	35		
	3-3	51	36	Northwest of	B/C-Administration/Attendance,
3	3-4	53	38	Building B/C	D-Science and Classrooms 201-212
	3-5	53	38		
	3-6	54	39		
	4-1	52	37		
4	4-2	52	37	South of Auditorium	Kitchen/Auditorium
	4-3	52	37		
5	5-1	51	51	West of G/G-2	New Science, Buildingl-Graphic Arts and New Gymnasium
	6-1-1	51	51		
	6-1-2	51	51		
	6-1-3	53	53		
6	6-1-4	53	53	East of Gymnasium under	Old Gymnasium and Track & Field Bathrooms
0	6-2-1	53	53	basketball courts	on Cymhasium and Track & Field Balliloonis
	6-2-2	55	55		
	6-2-3	55	55		
	6-2-4	56	56		



		Are	ea/Building	Media	Number of Borings	Boring IDs	Number of Samples	Depth (feet bgs)	Sampling Type	Analysis	Scope of Work	Objective
(JCES)	A01-1	Buildings constructed prior to 1981	Building A (teacher's lounge, office) Building B Building C Building D Building E Building F	Soil	43	JC-SB-9 through JC-SB-42 and JC-SB-45 through JC-SB-53	86	0 and 1.5	Discrete	PCBs, Pesticides, Herbicides, and Lead	 Soil samples were collected adjacent to buildings constructed prior to 1981 in accessible exposed areas (typically grassy, planter, or sandy areas); At buildings where concrete walkways about the side of the building, soil samples were collected from soil as close as feasible to the edge of the concrete; Soil samples were collected from elevated planters, adjacent to buildings; and Soil boring locations were evenly spaced around the buildings at intervals ranging from 20 to 25 feet and/or in areas closest to and/or across from windows where PCB-containing caulk may potentially be present. 	 Evaluate the potential presence of PCBs, lead, and termiticides in exposed soil adjacent to and in close proximity to buildings constructed prior to 1981. Evaluate the potential presence of pesticides and herbicides due to potential application of such at the site. Perform a human health screening risk evaluation.
Juan Cabrillo Elementary School	A0I-2	Septic Systems	Septic System 7 (3 pits @ 31, 30, 32 feet bgs) Septic System 8 (Leach Field) Septic System 9 (1 pit @ 36 feet bgs)	Soil and Soil Vapor Soil, Soil Vapor, and Groundwater	2 Soil Vapor 2 Soil 2 Soil Vapor 2 Soil 1 groundwater (MW-3) 1 Soil Vapor 1 Soil 1 groundwater (MW-4)	JC-SB-58/JC-SV-1 JC-SB-59/JC-SV-2 JC-SB-60/JC-SV-3 JC-SB-61/JC-SV-4 JC-SB-62/JC-SV-5	6 Soil Vapor 8 Soil 2 Soil Vapor 4 Soil; 1 Groundwater 3 Soil Vapor 5 Soil; 1 Groundwater	SV: 5, 15, 28 Soil: 4.5, 14.5, 24.5, 34.5 SV: 5, 15, 30 Soil: 4.5, 14.5, 24.5, 34.5 SV: 5 Soil: 4.5, 9.5 SV: 5 Soil: 4.5, 9.5 SV: 5, 21, 36 Soil: 4.5, 14.5, 24.5, 34.5, 39.5	Discrete	SV: VOCs Soil: SVOCs, TPH, and Metals, Groundwater: VOCs, SVOCs, TPH, and Metals		 Evaluate potential impact to soil from septic systems and leach pits. Determine groundwater quality in proximity to septic system 9. Perform a human health screening risk evaluation.
	AOI-3	Electrical Transformer	Electrical Transformer west of Building A	Soil	2	JC-SB-43 and JC-SB-44	4	0 and 1.5	Discrete	PCBs	Soil samples were collected adjacent to the transformer concrete pad.	 Evaluate the potential for PCBs in soil due to potential impact from former/ older transformer. Perform a human health screening risk evaluation.
	AOI-4	Grassy and Sandy Playgrounds	Playground - grassy area Drop-off - grassy area Area near patio/lunch Playground -sandy area	Soil	12	JC-SB-1 through JC-SB-8, and JC- SB-54 through JC-SB-57	19	0, 1, and 1.5	Discrete	Pesticides, Herbicides, and Metals	Soil samples were collected from the open playground areas (grassy and sandy) where pesticides and herbicides could have been applied. Soil sample locations were randomly selected across the playing fields.	 Evaluate the potential presence of pesticides and herbicides due to potential application of such at the site. Perform a human health screening risk evaluation.
Middle/High School (MHS)	A01-5	Buildings constructed prior to1981	Building E Building D Building A Buildings B/C Building G/G2 Building I	Soil	34	MH-SB-10, MH-SB-11, MH-SB- 13, MH-SB-14, MH-SB-15, MH- SB-18, MH-SB-21, MH-SB-29, MH-SB-30, MH-SB-32, MH-SB- 37, MH-SB-38, MH-SB-41, MH- SB-43 through MH-SB-48, MH-SB- 62, MH-SB-70, MH-SB-71, MH- SB-73 through MH-SB-77, MH-SB- 79, MH-SB-81, MH-SB-82, MH- SB-84, MH-SB-86, MH-SB-92 and MH-SB-93	67	0 and 1.5	Discrete	PCBs, Pesticides, Herbicides, and Lead	 Soil samples were collected adjacent to buildings constructed prior to 1981 in accessible exposed areas (typically grassy, planter, or sandy areas); At buildings where concrete walkways about the side of the building, soil samples were collected from soil as close as feasible to the edge of the concrete; Soil samples were collected from elevated planters, adjacent to buildings; and Soil boring locations were evenly spaced around the buildings at intervals ranging from 20 to 25 feet and/or in areas closest to and/or across from windows where PCB-containing caulk may potentially be present. 	 Evaluate potential presence of PCBs, pesticides, lead, and termiticides in exposed soil by collecting soil samples adjacent to and in proximity to buildings constructed prior to 1981 buildings that have not been previously sampled;. Evaluate the potential presence of pesticides and herbicides due to potential application of such at the site. Perform a human health screening risk evaluation.
Malibu M	AOI-6	Areas Previously Excavated by Arcadis	Various Buildings	Soil	19	MH-SB-40, MH-SB-49 through MH-SB-54, MH-SB-56 through MH-SB-61, MH-SB-63 through MH-SB-67 and MH-SB-91	36	0 and 1.5; for previously excavated areas just below the base of previous excavation	Discrete	PCBs, pesticides, and herbicides		 Confirm the adequacy of the lateral and vertical extent of the excavations performed by Arcadis. Assess and confirm previous soil sampling results conducted by Arcadis. Perform a human health screening risk evaluation.

Table 2. Rationale and Scope of WorkJuan Cabrillo Elementary School and Malibu High School30237 and 30215 Morning View DriveMalibu, California

					Number of		Number of	Depth	Sampling			
		Are	a/Building	Media	Borings	Boring IDs	Samples	(feet bgs)	Туре	Analysis	Scope of Work	Objective
	A0I-7	Open areas around and in between older buildings within AOI-5	Open areas around and in between older buildings within AOI-5 Building H Open areas around and in between buildings	Soil	27	MH-SB-12, MH-SB-16, MH-SB- 17, MH-SB-19, MH-SB-20, MH- SB-22 through MH-SB-25, MH-SB- 31, MH-SB-33 through MH-SB-36, MH-SB-39, MH-SB-42, MH-SB- 69, MH-SB-72, MH-SB-78, MH- SB-80, MH-SB-83, MH-SB-85, MH-SB-87 through MH-SB-90 and MH-SB-94	53	0 and 1.5	Discrete	and Metals	Soil samples were collected from open areas between buildings where pesticides and herbicides could have been applied. Soil samples were randomly selected.	 Evaluate potential presence of pesticides and herbicides due to potential application of such at the site. Perform a human health screening evaluation.
	AOI-8	Neutralization Tank	Chemistry lab waste neutralization area	Soil and Soil Vapor	1 Soil Vapor 1 Soil	MH-SB-113/MH-SV-21	2 Soil Vapor 3 Soil	SV: 6, 10 Soil: 1.5, 4.5, and 9.5	Discrete	SV: VOCs Soil: SVOCs, metals, TPH, and pH	Soil and soil vapor samples were collected adjacent to the neutralization tank to 5 feet beneath the base of the tank;	 Evaluate potential impact to soil from neutralization tank waste. Perform a human health screening risk evaluation.
Malibu Middle/High School (MHS)	AOI-9	Former USTs at Bus Barn	Former USTs at Bus Barn, Bus Washing Station	Soil, Soil Vapor, and Groundwater	6 Soil Vapor 4 Soil 2 Grab Groundwater samples	MH-SB-95/MH-SV-1 MH-SB-96/MH-SV-2 MH-SB-97/MH-SV-3 MH-SB-98/MH-SV-4 MH-SV-5 MH-SV-6	17 Soil Vapor 20 Soil 2 Grab Groundwater samples	Soil Vapor: 5, 20, and 35 Soil: 9.5, 19.5, 29.5, 39.5, 49.5 Soil Vapor: 5, 21, and 36 Soil: 9.5, 19.5, 29.5, 39.5, 49.5 Grab Groundwater: at approximately Soil Vapor: 5, 20 Soil: 9.5, 19.5, 29.5, 39.5, 49.5 Grab Groundwater: at approximately Soil Vapor: 5, 20, and 34 Soil: 10, 20, 30, 40, 50 Soil Vapor: 5, 21, and 33	Discrete	Soil: TPH Groundwater: VOCs and TPH	to and downgradient of the former USTs. Soil samples were collected at 10 foot intervals, starting just above the former base of the USTs (10 feet bgs) and ending at 50 feet bgs where historical soil sampling results indicated low levels of BTEX. Grab groundwater samples were collected adjacent to the former USTs where maximum BTEX concentrations were reported in soil and hydraulically downgradient to the former USTs.	 Perform a human health screening risk evaluation.
	AOI-10	Diesel- impacted soil stockpile at Bus Barn	Bus Barn/Former USTs	Soil	1	MH-SB-5	1	0	Discrete		A soil sample was collected from the general area where TPH-impacted soil was stockpiled on plastic after UST removal activities and prior to off-site disposal.	 Evaluate potential impact to surface soils from the previous stockpile.
	AOI-11	Grounds i Shop	Grounds Shop in Bus Barn Area	Soil	1	MH-SB-6	2	0 and 1.5	Discrete	TPH, pH, SVOCs, Pesticides, and Herbicides	A soil sample was collected from inside the Maintenance Building where gasoline and herbicides are stored.	 Evaluate potential I impact to soil from Maintenance Building operations. Perform a human health screening risk evaluation.

		Are	ea/Building	Media	Number of Borings	Boring IDs	Number of Samples	Depth (feet bgs)	Sampling Type	Analysis	Scope of Work	Objective
				Soil, Soil Vapor, and Groundwater	3 Soil Vapor 3 soil	MH-SB-110/MH-SV-18	8 Soil Vapor 12 soil	SV: 6, 20, 35 Soil: 4.5, 14.5, 24.5, 34.5	Discrete	SV: VOCs Soil: SVOCs, TPH,	Soil and soil vapor samples were collected adjacent to leach pits associated with Septic Tanks 1, 3, 4, 5,	 Evaluate potential impact to soil from septic systems and leach pits.
						MH-SB-111/MH-SV-19 MH-SB-112/MH-SV-20		SV: 5, 20, 35 Soil:4.5, 14.5, 24.5, 34.5 SV: 7, 34	-	Metals Groundwater: VOCs, SVOCs, TPH, and	6, and 11. In each boring:Soil samples were collected at 10-foot intervals	 Determine groundwater quality in proximity to septic systems1, 3, and 5. Perform a human health screening
			Septic System 3-1 and 3-2			MH-SB-107/MH-SV-15	9 Soil Vapor	Sv: 7, 34 Soil: 4.5, 14.5, 24.5, 34.5 SV: 5, 20, 40	-	Metals	 Soli samples were conected at 10-000 intervals starting at 5 feet bgs to below or adjacent to the base of the leach pit; 	risk evaluation.
			(6 pits @ 35, 35, 36, 38, 38, 39 feet		3 Soil Vapor 3 soil	MH-SB-107/MH-SV-15 MH-SB-108/MH-SV-16	9 Soli Vapor 15 soil	SV: 5, 20, 40 Soil: 4.5, 14.5, 24.5, 34.5 SV: 5, 20, 30	4		 Soil vapor samples were collected at three 	
			bgs)			MH-SB-109/MH-SV-16		Sv: 5, 20, 30 Soil: 4.5, 14.5, 24.5, 34.5 SV: 5, 20, 40	-		cations: at 5 feet bgs, near the middle of the leach pit, and near the bottom of the leach pit; and	
			Septic System 4 (3 pits @ 37 feet bgs)		2 Soil Vapor	MH-SB-105/MH-SV-17	6 Soil Vapor	Soil: 4.5, 14.5, 24.5, 34.5 SV: 5, 20, 40			 Groundwater samples were collected from existing wells MW-5 MW-7, MW-10, 	
		S	Septic System 4 (5 pits @ 57 leet bys)		2 soil	MH-SB-106/MH-SV-14	10 soil	Soil: 4.5, 14.5, 24.5, 34.5	4		and MW-11.	
	5	ystem						SV: 5, 20, 40 Soil:4.5, 14.5, 24.5, 34.5				
	AOI-12	Septic Sy	Septic system 5 (1 pit @ 51 feet bgs)		1 Soil Vapor 1 soil	MH-SB-104/MH-SV-12	3 Soil Vapor 6 soil	SV: 6, 22, 50 Soil: 4.5, 14.5, 24.5, 34.5, 44.5, 54.5				
		ŭ	Septic system 6 -1 and 6-2 (8 pits @ 51, 51, 53, 53, 53, 55, 55, 41 (act has)		4 Soil Vapor 4 soil	MH-SB-100/MH-SV-8	12 Soil Vapor 24 soil	SV: 6, 24, 54 Soil: 4.5, 14.5, 24.5, 34.5, 44.5, 54.5	-			
			41 feet bgs)			MH-SB-101/MH-SV-9		SV: 5, 24, 56 Soil: 4.5, 14.5, 24.5, 34.5,	-			
						MH-SB-102/MH-SV-10		44.5, 54.5 SV: 6, 26, 54	-			
SHM)								Soil: 4.5, 14.5, 24.5, 34.5, 44.5, 54.5				
hool						MH-SB-103/MH-SV-11		SV: 6, 25, 54 Soil: 4.5, 14.5, 24.5, 34.5,				
gh Sc			Septic system 11		1 Soil Vapor	MH-SB-99/MH-SV-7	3 Soil Vapor	44.5, 54.5 SV: 10, 15, 25				
lle/Hi		<u>ح</u>	(1 pit @ 21 feet bgs) Retention Basin located in the northern	Soil	1 soil 1	MH-SB-7	3 soil 1	Soil: 9.5, 19.5, and 29.5 0	Discrete	SVOCs, TPH, and	A surface soil sample was collected adjacent to the	Evaluate the potential that runoff from
Malibu Middle/High School (MHS)	AOI-13	Retention Basin	parking lot							Metals	discharge pipe.	the parking lot has impacted the retention basin.Perform a human health screening risk evaluation.
ž		sp	Football/Baseball/softball and soccer fields	Soil	300	MH-IS-1-A through MH-IS-100-A, MH-IS-1-B through MH-IS-100-B,	9	0	Incremental	Pesticides, Herbicides, and Metals	athletic fields where mean COPC concentrations	Evaluate the potential presence of pesticides, herbicides, and metals in surged pail.
	AOI-14	iic fiel				MH-IS-1-C through MH-IS-100-C					were used to evaluate potential health risks. The athletic fields were divided into three Decision Units	in exposed soil.Perform a human health screening rick auduation
	AC	Athlet									(DUs) for sampling purposes: (1) the football field (40 increments); (2) the large baseball field (30 increments); and (3) the upper softball/soccer field areas (30 increments).	risk evaluation.
-		D	Cornucopia	Soil	4	MH-SB-1 through MH-SB-4	8	0 and 1.5	Discrete	Pesticides, Herbicides, and Metals		• Evaluate the potential for pesticides, herbicides, and metals in exposed
	AOI-15	Cornucopia									areas. Soil sample selection within the growing bed was based on the direct contact with the soil when gardening. Soil sampling was conducted in areas where pesticides and herbicides could have	soil. • Perform a human health screening risk evaluation.
		0	Open Undeveloped Area between	Soil	3	MH-SB-26, MH-SB-55, MH-SB-68	3	0	Discrete	Pesticides, Herbicides.	historically been used. Soil samples were collected in areas that students	 Evaluate the potential presence for
	AOI-16	Undevelope Area - Building E	Building E and football field							and Metals	traverse where pesticides and herbicides could have historically been used. Soil sample locations were randomly selected.	pesticides, herbicides, and metals in exposed soil.Perform a human health screening risk evaluation.

		Α	rea/Building	Media	Number of Borings	Boring IDs	Number of Samples	Depth (feet bgs)	Sampling Type	Analysis	Scope of Work	Objective
	AOI-17	Electrical Transformers	Electrical Transformer north of "Boys and Girls Club"; Electrical Transformers (2) west of Food Service/Kitchen Building	Soil	6	MH-SB-8, MH-SB-9, MH-SB-27A, MH-SB-27B, MH-SB-28A, MH-SB- 28B	12	0 and 1.5	Discrete	PCBs	Soil samples were collected adjacent to the concrete pad where the transformers are situated (two soil samples for each concrete pad area).	 Evaluate the potential of PCBs in soil due to potential impact from former/ older transformer. Perform a human health screening risk evaluation.
			New parking lot and modified stairs visitor's parking	Soil	4	MH-CS-1A, MH-CS-1B, MH-CS- 1C, MH-CS-1D	2	0 and 1.5	Composite	Pesticides, Herbicides, and Metals	Soil samples were collected from an undeveloped area where pesticides and herbicides could have been applied. This undeveloped area is proposed for future redevelopment as a parking lot. Four soil samples were collected from random locations at each depth and composited into one sample per depth.	 Evaluate the potential for pesticides, herbicides, and metals in soil prior to ground disturbance for grading in areas not previously evaluated under another AOI.
School (MHS)		ea	New Bleachers	Soil	2	MH-CS-2A and MH-CS-2B	2	0 and 1.5	Composite	Pesticides, Herbicides, and Metals	Soil samples were collected from an undeveloped area where pesticides and herbicides could have been applied. This undeveloped area is proposed for future redevelopment as new bleachers. Two soil samples were collected from random locations at each depth and composited into one sample per depth.	
Malibu Middle/High Scho	AOI-18	Redevelopment Ar	New Tennis Court	Soil	4	MH-CS-3A, MH-CS-3B, MH-CS- 3C, MH-CS-4D	Soil samples were collected from an undeveloped area where pesticides and herbicides could have been applied. This undeveloped area is proposed for future redevelopment as a tennis court. Four soil samples were collected from random locations at each depth and composited into one sample per depth. Sampling methodology was based on the size of the area, its future use by students, and future proposed surface (concrete).					
2			New Student Drop-off	Soil	2	MH-CS-4A and MH-CS-4B	2	0 and 1.5	Composite	Pesticides, Herbicides, and Metals	Soil samples were collected from an undeveloped area where pesticides and herbicides could have been applied. Two soil samples were collected from random locations at each depth and composited into one sample per depth.	
			New I.T. Room		•	It is being eva	luated as part of AOIs	s 6 and 7			It is being evaluated as part of AOIs 6 and 7	
			New Ramp and Stairs			It is being	evaluated as part of A	OI 16			It is being evaluated as part of AOI 16	
			Middle School Quad			It is being eva	luated as part of AOIs	s 6 and 7			It is being evaluated as part of AOIs 6 and 7	
			High School Quad			It is being eva	luated as part of AOIs	s 6 and 7			It is being evaluated as part of AOIs 6 and 7	

Notes: Polychlorinated Biphenyls (PCBs) were analyzed using USEPA analytical method 8082A

Pesticides were analyzed by USEPA analytical methods 8141 (organophosphates) and 8081 (organochlorine) Herbicides were analyzed by USEPA analytical method 8151

Semi-volatile organic compounds (SVOCs) were analyzed by USEPA analytical method 8270C

Total petroleum hydrocarbons (TPH) were analyzed by USEPA analytical method 8015 M Volatile organic compounds (VOCs) were analyzed by USEPA analytical method 8260B modified

Metals were analyzed by USEPA analytical method 6010/7471

pH was analyzed by USEPA analytical method 9045

USEPA - United States Environmental Protection Agency (USEPA)

SV - Soil Vapor

bgs - below ground surface

BTEX - benzene, toluene, ethylbenzene, and xylenes

UST - underground storage

1. At boring locations MH-SB-17 and MH-SB-43, the deeper soil sample (1.5 to 2 feet bgs) was not collected, refer to Section 6.5 of the PEA report for details. 2. Soil vapor samples were not collected at MH-SV-20 at 22 feet bgs and MH-SV-3 at 35 ft bgs due to no-flow conditions.

Table 3a. AOI-1 PCBs in Soil

Juan Cabrillo Elementary School 30237 Morning View Drive Malibu, California

Area of Interest (AOI) Residenti	Sample ID	Sample Date	Depth	Aroclor	Aroclor	Aroclor	PCBs in μg/k	Aroclor	Aroclor	Aroclor
· · ·		Duic	(feet bgs)	1016	1221	1232	1242	1248	1254	1260
	al DTSC-Modifi			4,000	150	150	240	240	240	240
	JC-SB-9	7/2/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	JC-SB-9	7/2/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	JC-SB-10	7/2/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	JC-SB-10	7/2/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	JC-SB-11	7/2/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	JC-SB-11	7/2/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	JC-SB-12	7/2/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	JC-SB-12	7/2/2014	1.5	< 49	< 49	< 49	< 49	< 49	< 49	< 49
	JC-SB-12	7/2/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	JC-SB-13 JC-SB-13	7/2/2014	0 1.5	< 50 < 50	250 < 50					
	JC-SB-13	7/2/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	JC-SB-14	7/2/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	JC-SB-15	7/2/2014	0	< 49	< 49	< 49	< 49	< 49	< 49	< 49
	JC-SB-15	7/2/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	JC-SB-15	7/2/2014	1.5	< 49	< 49	< 49	< 49	< 49	< 49	< 49
	JC-SB-16	7/2/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	JC-SB-16	7/2/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	JC-SB-17	7/2/2014	0	< 49	< 49	< 49	< 49	< 49	< 49	< 49
	JC-SB-17	7/2/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	JC-SB-18 JC-SB-18	7/2/2014	0 1.5	< 50 < 50	< 50	< 50 < 50	< 50 < 50	< 50 < 50	< 50	< 50 < 50
	JC-SB-18 JC-SB-19	7/2/2014	0	< 50 < 50						
	JC-SB-19	7/2/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	JC-SB-20	7/2/2014	0	< 49	< 49	< 49	< 49	< 49	< 49	< 49
ž	JC-SB-20	7/2/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50
1981	JC-SB-21	7/2/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	JC-SB-21	7/2/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Prior to	JC-SB-22	7/2/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	JC-SB-22	7/2/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50
ted	JC-SB-23	7/2/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Constructed	JC-SB-23 JC-SB-23	7/2/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	< 50
istr	JC-SB-23 JC-SB-24	7/2/2014	1.5 0	< 50 < 49						
o	JC-SB-24	7/2/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50
) s	JC-SB-25	7/2/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Buildings	JC-SB-25	7/2/2014	1.5	< 49	< 49	< 49	< 49	< 49	< 49	< 49
lild	JC-SB-26	7/2/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	JC-SB-26	7/2/2014	1.5	< 49	< 49	< 49	< 49	< 49	< 49	< 49
÷	JC-SB-27	7/2/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	< 50
AOI-1	JC-SB-27	7/2/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50
٩	JC-SB-28	7/3/2014	0	< 49	< 49	< 49	< 49	< 49	< 49	< 49
	JC-SB-28 JC-SB-29	7/3/2014	1.5 0	< 49 < 50						
	JC-SB-29	7/3/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	JC-SB-30	7/3/2014	0	< 49	< 49	< 49	< 49	< 49	< 49	< 49
	JC-SB-30	7/3/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	JC-SB-31	7/7/2014	0	< 49	< 49	< 49	< 49	< 49	< 49	< 49
	JC-SB-31	7/7/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	JC-SB-32	7/7/2014	0	< 49	< 49	< 49	< 49	< 49	< 49	< 49
	JC-SB-32	7/7/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	JC-SB-32	7/7/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	JC-SB-33 JC-SB-33	7/3/2014	0 1.5	< 49	< 49	< 49	< 49	< 49	< 49	< 49 < 49
	JC-SB-33 JC-SB-34	7/3/2014 7/3/2014	0	< 49 < 50						
	JC-SB-34	7/3/2014	0	< 50 < 50	< 50	< 50	< 50	< 50	< 50	< 50
	JC-SB-34	7/3/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	JC-SB-35	7/3/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	JC-SB-35	7/3/2014	1.5	< 49	< 49	< 49	< 49	< 49	< 49	< 49
	JC-SB-36	7/3/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	JC-SB-36	7/3/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	JC-SB-37	7/3/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	JC-SB-37	7/3/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	JC-SB-38	7/3/2014	0	< 49	< 49	< 49	< 49	< 49	< 49	< 49
	JC-SB-38 JC-SB-39	7/3/2014 7/3/2014	1.5 0	< 49 < 50						
	JC-SB-39 JC-SB-39	7/3/2014	1.5	< 50 < 49						



Table 3a. AOI-1 PCBs in SoilJuan Cabrillo Elementary School30237 Morning View Drive

Malibu, California

Area of						F	PCBs in µg/k	g		
Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260
Resident	ial DTSC-Modifi	ed RSL or US	EPA RSL	4,000	150	150	240	240	240	240
	JC-SB-40	7/3/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	JC-SB-40	7/3/2014	1.5	< 49	< 49	< 49	< 49	< 49	< 49	< 49
	JC-SB-41	7/2/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	JC-SB-41	7/2/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	JC-SB-42	7/7/2014	0	< 140	< 140	< 140	< 140	< 140	< 140	< 140
81	JC-SB-42	7/7/2014	1.5	< 49	< 49	< 49	< 49	< 49	< 49	< 49
AOI-1 - Buildings Constructed Prior to 1981	JC-SB-45	7/3/2014	0	< 49	< 49	< 49	< 49	< 49	< 49	< 49
ę	JC-SB-45	7/3/2014	1.5	< 49	< 49	< 49	< 49	< 49	< 49	< 49
ior	JC-SB-46	7/3/2014	0	< 49	< 49	< 49	< 49	< 49	< 49	< 49
L L	JC-SB-46	7/3/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50
ted	JC-SB-46	7/3/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50
nci	JC-SB-47	7/3/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	< 50
str	JC-SB-47	7/3/2014	1.5	< 49	< 49	< 49	< 49	< 49	< 49	< 49
no	JC-SB-48	7/3/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	< 50
S	JC-SB-48	7/3/2014	1.5	< 49	< 49	< 49	< 49	< 49	< 49	< 49
bu	JC-SB-49	7/3/2014	0	< 49	< 49	< 49	< 49	< 49	< 49	< 49
ibli	JC-SB-49	7/3/2014	1.5	< 49	< 49	< 49	< 49	< 49	< 49	< 49
Bui	JC-SB-50	7/3/2014	0	< 49	< 49	< 49	< 49	< 49	< 49	< 49
-	JC-SB-50	7/3/2014	1.5	< 49	< 49	< 49	< 49	< 49	< 49	< 49
	JC-SB-51	7/3/2014	0	< 49	< 49	< 49	< 49	< 49	< 49	< 49
AC	JC-SB-51	7/3/2014	1.5	< 49	< 49	< 49	< 49	< 49	< 49	< 49
	JC-SB-52	7/3/2014	0	< 48	< 48	< 48	< 48	< 48	< 48	< 48
	JC-SB-52	7/3/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	JC-SB-52	7/3/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	JC-SB-53	7/3/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	JC-SB-53	7/3/2014	1.5	< 49	< 49	< 49	< 49	< 49	< 49	< 49

Notes:

Bolded values exceed the Residential DTSC-Modified RSL or USEPA RSL

µg/kg - micrograms per kilogram

Field duplicates are shown in italics

PCBs by USEPA Method 8082A

PCBs - Polychlorinated biphenyls

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Levels

bgs - below ground surface

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Area of			Depth										Pestici	des (Organo	chlorine) in µ	g/kg							
Interest	Sample	Sample	(feet	4,4'-	4,4'-	4,4'-		alpha-	beta-	Chlordane	delta-		Endosulfan	Endosulfan			Endrin	Endrin	gamma-		Heptachlor	Methoxy-	Toxa-
(AOI)	ID	Date	bgs)	DDD	DDE	DDT	Aldrin	BHC	BHC	(total)	BHC	Dieldrin	I	II	sulfate	Endrin	aldehyde	ketone	BHC	Heptachlor	epoxide	chlor	phene
Res	idential DTS or USE	C-Modified RS	SL	2,200	1,600	1,900	31	85	300	1,800	NA	33	370,000	370,000	370,000	18,000	18,000	18,000	560	120	59	310,000	480
	JC-SB-9	7/2/2014	0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	JC-SB-9	7/2/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 10	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	JC-SB-10	7/2/2014	0	< 5.0	< 5.0	7.5	< 5.0	< 5.0	< 5.0	660	< 10	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	7.6	< 5.0	< 200
	JC-SB-10	7/2/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	130	< 10	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	JC-SB-11	7/2/2014	0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 10	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	JC-SB-11	7/2/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	JC-SB-12	7/2/2014	0	< 5.0	< 5.0	16 J	< 5.0	< 5.0	< 5.0	270	< 10	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	JC-SB-12	7/2/2014	1.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	61	< 9.9	< 4.9	< 4.9	< 4.9	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
	JC-SB-12	7/2/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 10	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	JC-SB-13	7/2/2014	0	< 5.0	5.1	18	< 5.0	< 5.0	< 5.0	140	< 9.9	5.4	< 5.0	< 5.0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	JC-SB-13	7/2/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 10	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	JC-SB-14	7/2/2014	0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	JC-SB-14	7/2/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 10	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
_	JC-SB-15	7/2/2014	0	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.8	< 4.9	< 4.9	< 4.9	< 9.8	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
981	JC-SB-15	7/2/2014	0	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.8	< 4.9	< 4.9	< 4.9	< 9.8	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
Q	JC-SB-15	7/2/2014	1.5	< 5.0	8.0	6.8	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
Prior	JC-SB-16	7/2/2014	0	< 5.0	13	9.5	< 5.0	< 5.0	< 5.0	< 50	< 10	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	JC-SB-16	7/2/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
ted	JC-SB-17	7/2/2014	0	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.8	< 4.9	< 4.9	< 4.9	< 9.8	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
ruct	JC-SB-17	7/2/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
nst	JC-SB-18	7/2/2014	0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
ပိ	JC-SB-18	7/2/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 10	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
sgr	JC-SB-19	7/2/2014	0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
Building	JC-SB-19	7/2/2014	1.5	< 5.0	15	< 5.0	< 5.0	< 5.0	< 5.0	210	< 10	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
Bu	JC-SB-20	7/2/2014	0	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
<u>-</u>	JC-SB-20	7/2/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 10	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
AOI	JC-SB-21	7/2/2014	0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 10	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	JC-SB-21	7/2/2014	1.5	< 5.0			< 5.0		< 5.0	< 50	< 10	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	JC-SB-22	7/2/2014	0	< 5.0	< 5.0	< 5.0	< 5.0		< 5.0	< 50	< 10	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	JC-SB-22	7/2/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0		< 5.0	< 50	< 10	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	JC-SB-23	7/2/2014	0	< 5.0	< 5.0	< 5.0	< 5.0		< 5.0	< 50	< 10	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	JC-SB-23	7/2/2014	0	< 5.0	< 5.0	< 5.0	< 5.0		< 5.0	< 50	< 10	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	JC-SB-23	7/2/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0		< 5.0	< 50	< 10	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	JC-SB-24	7/2/2014	0	< 4.9	< 4.9	< 4.9	< 4.9		< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
	JC-SB-24	7/2/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0		< 5.0	< 50	< 10	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	JC-SB-25	7/2/2014	0	< 5.0	< 5.0	< 5.0	< 5.0		< 5.0	190	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	JC-SB-25	7/2/2014	1.5	< 4.9	6.4	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
	JC-SB-26	7/2/2014	0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	JC-SB-26	7/2/2014	1.5	< 4.9	6.2	< 4.9	< 4.9		< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
	JC-SB-27	7/2/2014	0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	JC-SB-27	7/2/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200

Table 3b. AOI-1 Organochlorine Pesticides in SoilJuan Cabrillo Elementary School30237 Morning View DriveMalibu, California

Area of			Depth										Pestici	des (Organo	chlorine) in µ	g/kg							
Interest (AOI)	Sample ID	Sample Date	(feet bgs)	4,4'- DDD	4,4'- DDE	4,4'- DDT	Aldrin	alpha- BHC	beta- BHC	Chlordane (total)	delta- BHC	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulfate	Endrin	Endrin aldehyde	Endrin ketone	gamma- BHC	Heptachlor	Heptachlor epoxide	Methoxy- chlor	Toxa- phene
Res	idential DTS or USEI	C-Modified RS	SL	2,200	1,600	1,900	31	85	300	1,800	NA	33	370,000	370,000	370,000	18,000	18,000	18,000	560	120	59	310,000	480
	JC-SB-28	7/3/2014	0	< 4.9J	< 49J	< 9.9J	< 4.9J	< 4.9J	< 4.9J	< 9.9J	< 4.9J	< 4.9J	< 4.9J	< 4.9J	< 4.9J	< 4.9J	< 4.9J	< 200J					
	JC-SB-28	7/3/2014	1.5	< 5.0J	< 5.0J	5.8 J	< 5.0J	< 5.0J	< 5.0J	< 50J	< 10J	< 5.0J	< 5.0J	< 5.0J	< 10J	< 5.0J	< 5.0J	< 5.0J	< 5.0J	< 5.0J	< 5.0J	< 5.0J	< 200J
	JC-SB-29	7/3/2014	0	< 5.0J	< 5.0J	< 5.0J	< 5.0J		< 5.0J	< 50J	< 9.9J	< 5.0J	< 5.0J	< 5.0J	< 9.9J	< 5.0J	< 5.0J	< 5.0J	< 5.0J	< 5.0J	< 5.0J	< 5.0J	< 200J
	JC-SB-29	7/3/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	JC-SB-30	7/3/2014	0	< 4.9J	< 4.9J	< 4.9J	< 4.9J		< 4.9J	< 49J	< 9.8J	< 4.9J	< 4.9J	< 4.9J	< 9.8J	< 4.9J	< 4.9J	< 4.9J	< 4.9J	< 4.9J	< 4.9J	< 4.9J	< 200J
	JC-SB-30	7/3/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	JC-SB-31	7/7/2014	0	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
	JC-SB-31	7/7/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	JC-SB-32	7/7/2014	0	< 4.9	11	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
	JC-SB-32	7/7/2014	1.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
	JC-SB-32	7/7/2014	1.5	< 5.0	16	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	JC-SB-33 JC-SB-33	7/3/2014	0	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	210	< 9.9	< 4.9	< 4.9	< 4.9	< 9.9 < 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9 < 4.9	< 4.9	< 200
	JC-SB-33 JC-SB-34	7/3/2014	1.5 0	< 4.9 < 5.0	< 49 76	< 9.9 < 9.9	< 4.9 < 5.0	< 4.9 < 5.0	< 4.9 < 5.0	< 9.9 < 9.9	< 4.9 < 5.0	< 4.9 < 5.0	< 4.9 < 5.0	< 4.9 < 5.0	< 4.9 < 5.0	< 4.9	< 4.9 < 5.0	< 200 < 200					
8	JC-SB-34 JC-SB-34	7/3/2014	0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 50	< 9.9 < 10	< 5.0 < 5.0	< 5.0	< 5.0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0	< 5.0 < 5.0	< 200
1981	JC-SB-34	7/3/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	67	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
r to	JC-SB-35	7/3/2014	0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	210	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
Prior	JC-SB-35	7/3/2014	1.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
ре́ Е	JC-SB-36	7/3/2014	0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
lcte	JC-SB-36	7/3/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
stru	JC-SB-37	7/3/2014	0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
Constructed	JC-SB-37	7/3/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	JC-SB-38	7/3/2014	0	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
Buildings	JC-SB-38	7/3/2014	1.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
Buil	JC-SB-39	7/3/2014	0	< 5.0	16	9.7	< 5.0	< 5.0	< 5.0	2600	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	51	< 5.0	< 200
L E	JC-SB-39	7/3/2014	1.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
4 01	JC-SB-40	7/3/2014	0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	JC-SB-40	7/3/2014	1.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
	JC-SB-41	7/2/2014	0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	JC-SB-41	7/2/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	JC-SB-42	7/7/2014	0	< 5.0	7.6	9.9	< 5.0		< 5.0	99	< 10	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	JC-SB-42	7/7/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 10	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	JC-SB-45	7/3/2014	0	< 4.9	< 4.9	< 4.9			< 4.9	180	< 9.9	< 4.9	< 4.9	< 4.9	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
	JC-SB-45	7/3/2014	1.5	< 4.9	< 4.9	< 4.9	< 4.9		< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
	JC-SB-46	7/3/2014	0	< 4.9	23	9.8	< 4.9		< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
	JC-SB-46	7/3/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0		< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	JC-SB-46	7/3/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0		< 5.0	89	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	JC-SB-47	7/3/2014	0	< 5.0J		< 5.0J	< 5.0J		< 5.0J	74 J	< 9.9J	< 5.0J	< 5.0J	< 5.0J	< 9.9J	< 5.0J	< 5.0J	< 5.0J	< 5.0J	< 5.0J	< 5.0J	< 5.0J	< 200J
	JC-SB-47	7/3/2014	1.5	< 4.9J		< 4.9J	< 4.9J		< 4.9J	65 J	< 9.9J	< 4.9J	< 4.9J	< 4.9J	< 9.9J	< 4.9J	< 4.9J	< 4.9J	< 4.9J	< 4.9J	< 4.9J	< 4.9J	< 200J
	JC-SB-48	7/3/2014	0	< 5.0	5.6	5.0	< 5.0		< 5.0	220	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	JC-SB-48	7/3/2014	1.5	< 4.9J	130 J	< 9.9J	< 4.9J	< 4.9J	< 4.9J	< 9.9J	< 4.9J	< 4.9J	< 4.9J	< 4.9J	< 4.9J	< 4.9J	< 4.9J	< 200J					

Area of			Depth										Pestici	des (Organo	chlorine) in µ	g/kg							
Interest (AOI)	Sample ID	Sample Date	(feet bgs)	4,4'- DDD	4,4'- DDE	4,4'- DDT	Aldrin	alpha- BHC	beta- BHC	Chlordane (total)	delta- BHC	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulfate	Endrin	Endrin aldehyde	Endrin ketone	gamma- BHC	Heptachlor	Heptachlor epoxide	Methoxy- chlor	Toxa- phene
Res	sidential DTS or USE	C-Modified R PA RSL	SL	2,200	1,600	1,900	31	85	300	1,800	NA	33	370,000	370,000	370,000	18,000	18,000	18,000	560	120	59	310,000	480
	JC-SB-49	7/3/2014	0	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
ted	JC-SB-49	7/3/2014	1.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
ruc	JC-SB-50	7/3/2014	0	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.8	< 4.9	< 4.9	< 4.9	< 9.8	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
nst 11	JC-SB-50	7/3/2014	1.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
Con: 1981	JC-SB-51	7/3/2014	0	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
igs to	JC-SB-51	7/3/2014	1.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
Buildings Prior to	JC-SB-52	7/3/2014	0	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 48	< 9.6	< 4.8	< 4.8	< 4.8	< 9.6	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 190
Ъ с	JC-SB-52	7/3/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
<u>-</u>	JC-SB-52	7/3/2014	1.5	< 5.0J	< 5.0J	< 5.0J	< 5.0J	< 5.0J	< 5.0J	< 50J	< 9.9J	< 5.0J	< 5.0J	< 5.0J	< 9.9J	< 5.0J	< 5.0J	< 5.0J	< 5.0J	< 5.0J	< 5.0J	< 5.0J	< 200J
AOI	JC-SB-53	7/3/2014	0	< 5.0	5.8	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	JC-SB-53	7/3/2014	1.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200

Notes:

Bolded values exceed the Residential DTSC-Modified RSL or USEPA RSL

µg/kg - micrograms per kilogram

Field duplicates are shown in italics

Pesticides by USEPA Method 8081

USEPA - United States Environmental Protection Agency

bgs - below ground surface

DTSC - Department of Toxic Substances Control

RSLs - Regional Screening Levels

J - Results and or reporting limits are estimated

NA - not available

Table 3c. AOI-1 Organophosphate Pesticides in SoilJuan Cabrillo Elementary School30237 Morning View Drive

Malibu,	California
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					Pesticides (Organophosphate) in μg/kg												
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	2-Butenoic acid, 3- [(dimethoxy- phosphinyl)oxy]-, m	Chlorpyrifos	Co-Ral	Dasanit	Demeton (Demeton O + Demeton S)		Dichlorovos	Dimethoate		Ethoprop	Ethyl P-Nitorphenyl Benzenethio- phosphate	Famphur	Fenthion	Guthion
Resident	ial DTSC-Modi	ified RSL or US	EPA RSL	NA	62,000	NA	NA	2,500	43,000	1,800	12,000	2,500	NA	620	NA	NA	NA
	JC-SB-9	7/2/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-9	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-10	7/2/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-10	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-11	7/2/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-11	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-12	7/2/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-12	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-12	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-13	7/2/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-13	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
5	JC-SB-14	7/2/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
1981	JC-SB-14	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 65	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
r to	JC-SB-15	7/2/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
Prior	JC-SB-15	7/2/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
ed F	JC-SB-15	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
ucted	JC-SB-16	7/2/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
Constr	JC-SB-16	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-17	7/2/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
sgr	JC-SB-17	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
Buildings	JC-SB-18	7/2/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
Bu	JC-SB-18	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
- - -	JC-SB-19	7/2/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
AOI	JC-SB-19	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-20	7/2/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-20	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-21	7/2/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-21	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-22	7/2/2014	0	< 33	< 33	< 33	< 33	< 65	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-22	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-23	7/2/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-23	7/2/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-23	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-24	7/2/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-24	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-25	7/2/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33

Table 3c. AOI-1 Organophosphate Pesticides in SoilJuan Cabrillo Elementary School30237 Morning View DriveMalibu: California

Malibu,	California
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				Pesticides (Organophosphate) in μg/kg													
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	2-Butenoic acid, 3- [(dimethoxy- phosphinyl)oxy]-, m	Chlorpyrifos	Co-Ral	Dasanit	Demeton (Demeton O + Demeton S)		Dichlorovos	Dimethoate		Ethoprop	Ethyl P-Nitorphenyl Benzenethio- phosphate	Famphur	Fenthion	Guthion
Resident	ial DTSC-Modi	fied RSL or USI	EPA RSL	NA	62,000	NA	NA	2,500	43,000	1,800	12,000	2,500	NA	620	NA	NA	NA
	JC-SB-25	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-26	7/2/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-26	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-27	7/2/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-27	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 65	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-28	7/3/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-28	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-29	7/3/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-29	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-30	7/3/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-30	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
5	JC-SB-31	7/7/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
1981	JC-SB-31	7/7/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
rto	JC-SB-32	7/7/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
Prio	JC-SB-32	7/7/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
ed F	JC-SB-32	7/7/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
ucted	JC-SB-33	7/3/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
nstr	JC-SB-33	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
ပိ	JC-SB-34	7/3/2014	0	< 33	< 33	< 33	< 33	< 65	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
sbu	JC-SB-34	7/3/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
uildings	JC-SB-34	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
Bu	JC-SB-35	7/3/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
도	JC-SB-35	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
AOI	JC-SB-36	7/3/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-36	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-37	7/3/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-37	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-38	7/3/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-38	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-39 JC-SB-39	7/3/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-39 JC-SB-40	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-40 JC-SB-40	7/3/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-40 JC-SB-41	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-41 JC-SB-41	7/2/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-41 JC-SB-42	7/2/2014 7/7/2014	1.5 0	< 33	< 33 < 33	< 33 < 33	< 33 < 33	< 66 < 65	< 33 < 33	< 33	< 33 < 33	< 33 < 33					
	JO-0D-42	1/1/2014	0	< 33	< 33	< 33	<	< 00	< 33	< 33	< 33	<	< 33	<	< 33	<	<

Table 3c. AOI-1 Organophosphate Pesticides in SoilJuan Cabrillo Elementary School30237 Morning View DriveMalibu: California

Malibu,	California
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Pesticides (Organophosphate) in μg/kg																	
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	2-Butenoic acid, 3- [(dimethoxy- phosphinyl)oxy]-, m	Chlorpyrifos	Co-Ral	Dasanit	Demeton (Demeton O + Demeton S)	Diazinon	Dichlorovos	Dimethoate	Disulfoton	Ethoprop	Ethyl P-Nitorphenyl Benzenethio- phosphate		Fenthion	Guthion
Resident	ial DTSC-Modi	ied RSL or USEPA RSL		NA	62,000	NA	NA	2,500	43,000	1,800	12,000	2,500	NA	620	NA	NA	NA
	JC-SB-42	7/7/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-45	7/3/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-45	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-46	7/3/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
1981	JC-SB-46	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
to 19	JC-SB-46	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-47	7/3/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
Prior	JC-SB-47	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
cted	JC-SB-48	7/3/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-48	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
onstr	JC-SB-49	7/3/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
0	JC-SB-49	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
uildings	JC-SB-50	7/3/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
nild	JC-SB-50	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 65	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
ā	JC-SB-51	7/3/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
AOI-1	JC-SB-51	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
A	JC-SB-52	7/3/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-52	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-52	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-53	7/3/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-53	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33

Notes:

µg/kg - micrograms per kilogram

Field duplicates are shown in italics

USEPA - United States Environmental Protection Agency

DTSC - Department of Toxic Substances Control

RSLs - Regional Screening Level

Pesticides by USEPA Method 8141A

NA - not available

bgs - below ground surface

Table 3c. AOI-1 Organophosphate Pesticides in SoilJuan Cabrillo Elementary School30237 Morning View DriveMalibu, California

							Р	esticides (Or	ganophosph	ate) in μg/kg					
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Malathion	Methyl parathion	O,O,O-Triethyl phosphorothioate	O-Ethyl O-2,4,5- trichlorophenyl ethyl-phosphonothioate	Parathion	Phorate	Prothiophos	Ronnel	Stirophos	Sulfotepp	Sulprofos	Thionazin
Resident	ial DTSC-Modi	ified RSL or US	EPA RSL	1,200,000	15,000	NA	NA	370,000	12,000	NA	3,100,000	22,000	31,000	NA	NA
	JC-SB-9	7/2/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-9	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-10	7/2/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-10	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-11	7/2/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-11	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-12	7/2/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-12	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-12	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-13	7/2/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-13	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
.	JC-SB-14	7/2/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
1981	JC-SB-14	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
9	JC-SB-15	7/2/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
Prior	JC-SB-15	7/2/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
- Ц ре	JC-SB-15	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
ucted	JC-SB-16	7/2/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
Istr	JC-SB-16	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
Co	JC-SB-17	7/2/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
sbi	JC-SB-17	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
uildings	JC-SB-18	7/2/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
Bui	JC-SB-18	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
י ב	JC-SB-19	7/2/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
AOL	JC-SB-19	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-20	7/2/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-20	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-21	7/2/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-21	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-22	7/2/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-22	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-23	7/2/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-23	7/2/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-23	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-24	7/2/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-24	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-25	7/2/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33

Table 3c. AOI-1 Organophosphate Pesticides in SoilJuan Cabrillo Elementary School30237 Morning View DriveMalibu, California

					Pesticides (Organophosphate) in μg/kg											
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Malathion	Methyl parathion	O,O,O-Triethyl phosphorothioate	O-Ethyl O-2,4,5- trichlorophenyl ethyl-phosphonothioate	Parathion	Phorate	Prothiophos	Ronnel	Stirophos	Sulfotepp	Sulprofos	Thionazin	
Resident	ial DTSC-Modi	ified RSL or US	EPA RSL	1,200,000	15,000	NA	NA	370,000	12,000	NA	3,100,000	22,000	31,000	NA	NA	
	JC-SB-25	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
	JC-SB-26	7/2/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
	JC-SB-26	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
	JC-SB-27	7/2/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
	JC-SB-27	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
	JC-SB-28	7/3/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
	JC-SB-28	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
	JC-SB-29	7/3/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
	JC-SB-29	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
	JC-SB-30	7/3/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
	JC-SB-30	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
.	JC-SB-31	7/7/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
1981	JC-SB-31	7/7/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
9	JC-SB-32	7/7/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
Prior	JC-SB-32	7/7/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
	JC-SB-32	7/7/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
structed	JC-SB-33	7/3/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
ıstr	JC-SB-33	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
Col	JC-SB-34	7/3/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
sbu	JC-SB-34	7/3/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
uildings	JC-SB-34	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
Bui	JC-SB-35	7/3/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
÷	JC-SB-35	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
AOI	JC-SB-36	7/3/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
	JC-SB-36	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
	JC-SB-37	7/3/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
	JC-SB-37	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
	JC-SB-38	7/3/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
	JC-SB-38	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
	JC-SB-39	7/3/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
	JC-SB-39	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
	JC-SB-40	7/3/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
	JC-SB-40	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
	JC-SB-41	7/2/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
	JC-SB-41	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
	JC-SB-42	7/7/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	

Table 3c. AOI-1 Organophosphate Pesticides in SoilJuan Cabrillo Elementary School30237 Morning View DriveMalibu: Onliferation

							Р	esticides (Org	ganophosph	ate) in μg/kg					
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Malathion	Methyl parathion	O,O,O-Triethyl phosphorothioate	O-Ethyl O-2,4,5- trichlorophenyl ethyl-phosphonothioate	Parathion	Phorate	Prothiophos	Ronnel	Stirophos	Sulfotepp	Sulprofos	Thionazin
Resident	ial DTSC-Modi	fied RSL or USI	EPA RSL	1,200,000	15,000	NA	NA	370,000	12,000	NA	3,100,000	22,000	31,000	NA	NA
	JC-SB-42	7/7/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-45	7/3/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-45	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-46	7/3/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
1981	JC-SB-46	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
0 13	JC-SB-46	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
ort	JC-SB-47	7/3/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
Pri	JC-SB-47	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
sted	JC-SB-48	7/3/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
truc	JC-SB-48	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
suo	JC-SB-49	7/3/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
s C	JC-SB-49	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
uildings	JC-SB-50	7/3/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
uild	JC-SB-50	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
<u> </u>	JC-SB-51	7/3/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
AOI-1	JC-SB-51	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
Ă	JC-SB-52	7/3/2014	0	< 33	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-52	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-52	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-53	7/3/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-53	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33

Notes:

µg/kg - micrograms per kilogram

Field duplicates are shown in italics

USEPA - United States Environmental Protection Agency

DTSC - Department of Toxic Substances Control

RSLs - Regional Screening Level

Pesticides by USEPA Method 8141A

NA - not available

bgs - below ground surface

Table 3d. AOI-1 Herbicides in Soil

Juan Cabrillo Elementary School 30237 Morning View Drive Malibu, California

Area of Interest			Depth		Herbicides (µg/kg)
(AOI)	Sample ID	Sample Date	(feet bgs)	2,4,5-T	2,4,5-TP	2,4-D
Residen	tial DTSC-Modifie	d RSL or USEPA R	SL	620,000	490,000	690,000
-	JC-SB-9	7/2/2014	0	< 20	< 20	< 80
-	JC-SB-9 JC-SB-10	7/2/2014 7/2/2014	1.5 0	< 20 < 20	< 20 < 20	< 80 < 80
-	JC-SB-10	7/2/2014	1.5	< 20	< 20	< 80
	JC-SB-11	7/2/2014	0	< 20	< 20	< 80
	JC-SB-11	7/2/2014	1.5	< 20	< 20	< 80
	JC-SB-12	7/2/2014	0	< 20	< 20	< 80
-	JC-SB-12	7/2/2014	1.5	< 20	< 20	< 80
-	JC-SB-12 JC-SB-13	7/2/2014 7/2/2014	1.5 0	< 20 < 20	< 20 < 20	< 80 < 80
ŀ	JC-SB-13	7/2/2014	1.5	< 20	< 20	< 80
	JC-SB-14	7/2/2014	0	< 20	< 20	< 80
	JC-SB-14	7/2/2014	1.5	< 20	< 20	< 80
-	JC-SB-15	7/2/2014	0	< 20	< 20	< 80
-	JC-SB-15 JC-SB-15	7/2/2014 7/2/2014	0 1.5	< 20 < 20	< 20 < 20	< 80 < 80
-	JC-SB-15	7/2/2014	0	< 20	< 20	< 80
	JC-SB-16	7/2/2014	1.5	< 20	< 20	< 80
	JC-SB-17	7/2/2014	0	< 20	< 20	< 80
	JC-SB-17	7/2/2014	1.5	< 20	< 20	< 80
-	JC-SB-18	7/2/2014	0	< 20	< 20	< 80
-	JC-SB-18 JC-SB-19	7/2/2014 7/2/2014	1.5 0	< 20 < 20	< 20 < 20	< 79 < 80
-	JC-SB-19	7/2/2014	1.5	< 20	< 20	< 80
	JC-SB-20	7/2/2014	0	< 20	< 20	< 80
	JC-SB-20	7/2/2014	1.5	< 20	< 20	< 80
	JC-SB-21	7/2/2014	0	< 20	< 20	< 80
AOI-1 - Buildings Constructed Prior to 1981	JC-SB-21	7/2/2014	1.5	< 20	< 20	< 80
to -	JC-SB-22 JC-SB-22	7/2/2014 7/2/2014	0 1.5	< 20 < 20	< 20 < 20	< 80 < 80
io	JC-SB-23	7/2/2014	0	< 20	< 20	< 80
L L	JC-SB-23	7/2/2014	0	< 20	< 20	< 80
cte	JC-SB-23	7/2/2014	1.5	< 20	< 20	< 80
, stru	JC-SB-24	7/2/2014	0	< 20	< 20	< 80
- Suo	JC-SB-24	7/2/2014	1.5 0	< 20	< 20	< 80
S C	JC-SB-25 JC-SB-25	7/2/2014 7/2/2014	1.5	< 20 < 20	< 20 < 20	< 80 < 79
dinç	JC-SB-26	7/2/2014	0	< 20	< 20	< 80
Build	JC-SB-26	7/2/2014	1.5	< 20	< 20	< 80
- - 	JC-SB-27	7/2/2014	0	< 20	< 20	< 80
ō	JC-SB-27	7/2/2014	1.5	< 20	< 20	< 80
<	JC-SB-28 JC-SB-28	7/3/2014 7/3/2014	0 1.5	< 20 < 20	< 20 < 20	< 80 < 79
ŀ	JC-SB-29	7/3/2014	0	< 20	< 20	< 80
ľ	JC-SB-29	7/3/2014	1.5	< 20	< 20	< 79
	JC-SB-30	7/3/2014	0	< 20	< 20	< 80
-	JC-SB-30	7/3/2014	1.5	< 20	< 20	< 80
ŀ	JC-SB-31 JC-SB-31	7/7/2014 7/7/2014	0 1.5	< 20 < 20	< 20 < 20	< 79 < 80
	JC-SB-31 JC-SB-32	7/7/2014	0	< 20	< 20	< 79
1	JC-SB-32	7/7/2014	1.5	< 20	< 20	< 80
	JC-SB-32	7/7/2014	1.5	< 20	< 20	< 80
Ļ	JC-SB-33	7/3/2014	0	< 20	< 20	< 80
	JC-SB-33	7/3/2014	1.5 0	< 20	< 20	< 80
+	JC-SB-34 JC-SB-34	7/3/2014 7/3/2014	0	< 20 < 20	< 20 < 20	< 80 < 80
+	JC-SB-34	7/3/2014	1.5	< 20	< 20	< 80
ľ	JC-SB-35	7/3/2014	0	< 20	< 20	< 80
	JC-SB-35	7/3/2014	1.5	< 20	< 20	< 80
Ļ	JC-SB-36	7/3/2014	0	< 20	< 20	< 80
	JC-SB-36	7/3/2014	1.5	< 20	< 20	< 80
+	JC-SB-37 JC-SB-37	7/3/2014 7/3/2014	0 1.5	< 20 < 20	< 20 < 20	< 80 < 80
ŀ	JC-SB-37	7/3/2014	0	< 20	< 20	< 80
1	JC-SB-38	7/3/2014	1.5	< 20	< 20	< 80
	JC-SB-39	7/3/2014	0	< 20	< 20	< 80
	JC-SB-39	7/3/2014	1.5	< 20	< 20	< 80
	JC-SB-40	7/3/2014	0 1.5	< 20	< 20	< 80
	JC-SB-40	7/3/2014	1.0	< 20	< 20	< 80



Table 3d. AOI-1 Herbicides in Soil

Juan Cabrillo Elementary School 30237 Morning View Drive Malibu, California

Area of Interest			Depth	ł	- Herbicides (μg/kg	I)
(AOI)	Sample ID	Sample Date	(feet bgs)	2,4,5-T	2,4,5-TP	2,4-D
Resider	ntial DTSC-Modifie	d RSL or USEPA R	SL	620,000	490,000	690,000
	JC-SB-41	7/2/2014	0	< 20	< 20	< 80
	JC-SB-41	7/2/2014	1.5	< 20	< 20	< 80
	JC-SB-42	7/7/2014	0	< 20	< 20	< 80
	JC-SB-42	7/7/2014	1.5	< 20	< 20	< 80
-	JC-SB-45	7/3/2014	0	< 20	< 20	< 80
Buildings Constructed Prior to 1981	JC-SB-45	7/3/2014	1.5	< 20	< 20	< 80
2	JC-SB-46	7/3/2014	0	< 20	< 20	< 80
- D	JC-SB-46	7/3/2014	1.5	< 20	< 20	< 80
Pri	JC-SB-46	7/3/2014	1.5	< 20	< 20	< 80
eq	JC-SB-47	7/3/2014	0	< 20	< 20	< 80
nct	JC-SB-47	7/3/2014	1.5	< 20	< 20	< 80
str	JC-SB-48	7/3/2014	0	< 20	< 20	< 80
uo	JC-SB-48	7/3/2014	1.5	< 20	< 20	< 79
S	JC-SB-49	7/3/2014	0	< 20	< 20	< 80
ng	JC-SB-49	7/3/2014	1.5	< 20	< 20	< 80
ild	JC-SB-50	7/3/2014	0	< 20	< 20	< 79
	JC-SB-50	7/3/2014	1.5	< 20	< 20	< 80
- 	JC-SB-51	7/3/2014	0	< 20	< 20	< 79
AOI-1	JC-SB-51	7/3/2014	1.5	< 20	< 20	< 79
٩	JC-SB-52	7/3/2014	0	< 20	< 20	< 80
	JC-SB-52	7/3/2014	1.5	< 20	< 20	< 80
	JC-SB-52	7/3/2014	1.5	< 20	< 20	< 80
	JC-SB-53	7/3/2014	0	< 20	< 20	< 79
	JC-SB-53	7/3/2014	1.5	< 20	< 20	< 79

Notes:

μg/kg - micrograms per kilogram

Field duplicates are shown in italics

Herbicides by USEPA Method 8151

USEPA - United States Environmental Protection Agency

DTSC - Department of Toxic Substances Control

RSLs - Regional Screening Levels

bgs - below ground surface



Table 3e. AOI-1 Lead in Soil

Juan Cabrillo Elementary School 30237 Morning View Drive Malibu, California

Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Lead (mg/kg)
		ified RSL or USEPA RSI		80
	JC-SB-9	7/2/2014	0	8.8
	JC-SB-9	7/2/2014	1.5	4.7
	JC-SB-10	7/2/2014	0	12
	JC-SB-10	7/2/2014	1.5	< 4.0
	JC-SB-11	7/2/2014	0	4.8
	JC-SB-11	7/2/2014	1.5	2.5
	JC-SB-12	7/2/2014	0	11
	JC-SB-12	7/2/2014	1.5	2.7
	JC-SB-12	7/2/2014	1.5	23
	JC-SB-13	7/2/2014	0	89
	JC-SB-13	7/2/2014	1.5	5.8
	JC-SB-14	7/2/2014	0	4.5
	JC-SB-14	7/2/2014	1.5	3.8
	JC-SB-15	7/2/2014	0	7.7
	JC-SB-15	7/2/2014	0	3.9
	JC-SB-15	7/2/2014	1.5	8.3
	JC-SB-16	7/2/2014	0	5.8
	JC-SB-16	7/2/2014	1.5	3.5
	JC-SB-17 JC-SB-17	7/2/2014 7/2/2014	0	<u>3.5</u> 2.7
	JC-SB-17 JC-SB-18	7/2/2014	0	6.5
	JC-SB-18	7/2/2014	1.5	3.1
	JC-SB-18 JC-SB-19	7/2/2014	0	5.2
	JC-SB-19 JC-SB-19	7/2/2014	1.5	4.5
	JC-SB-19	7/2/2014	0	4.1
	JC-SB-20	7/2/2014	1.5	7.5
	JC-SB-21	7/2/2014	0	45
-	JC-SB-21	7/2/2014	1.5	3.2
AOI-1 - Buildings Constructed Prior to 1981	JC-SB-22	7/2/2014	0	7.9
5	JC-SB-22	7/2/2014	1.5	2.5
ior	JC-SB-23	7/2/2014	0	6.3
E C	JC-SB-23	7/2/2014	0	5.2
ted	JC-SB-23	7/2/2014	1.5	< 3.9
ruc	JC-SB-24	7/2/2014	0	7.1
nst	JC-SB-24	7/2/2014	1.5	2.6
ပိ	JC-SB-25	7/2/2014	0	7.8
sbu	JC-SB-25	7/2/2014	1.5	5.9
ldir	JC-SB-26	7/2/2014	0	11
Bui	JC-SB-26	7/2/2014	1.5	5.1
	JC-SB-27	7/2/2014	0	8.5
Ċ.	JC-SB-27	7/2/2014	1.5	11
٩	JC-SB-28	7/3/2014	0	6.8
	JC-SB-28	7/3/2014	1.5	3.6
	JC-SB-29	7/3/2014	0	6.6
	JC-SB-29	7/3/2014	1.5	3.7
	JC-SB-30	7/3/2014	0	68
	JC-SB-30	7/3/2014	1.5	5.9
	JC-SB-31	7/7/2014	0	4.9
	JC-SB-31	7/7/2014	1.5	5.4
	JC-SB-32	7/7/2014	0	4.9
	JC-SB-32 JC-SB-32	7/7/2014	1.5	2.4
		7/7/2014	1.5	3.6
	JC-SB-33 JC-SB-33	7/3/2014 7/3/2014	0 1.5	11 < 3.9
	JC-SB-33 JC-SB-34	7/3/2014	0	< 3.9 10
	JC-SB-34 JC-SB-34	7/3/2014	0	< 3.9
	JC-SB-34 JC-SB-34	7/3/2014	1.5	9.6
	JC-SB-34 JC-SB-35	7/3/2014	0	7.3
	JC-SB-35	7/3/2014	1.5	5.9
	JC-SB-36	7/3/2014	0	13
	JC-SB-36	7/3/2014	1.5	10
	JC-SB-37	7/3/2014	0	13
	JC-SB-37	7/3/2014	1.5	< 2.0
	JC-SB-38	7/3/2014	0	29
	JC-SB-38	7/3/2014	1.5	7.6
	JC-SB-39	7/3/2014	0	18
	JC-SB-39	7/3/2014	1.5	< 3.9
	JC-SB-40	7/3/2014	0	10
	JC-SB-40	7/3/2014	1.5	< 3.9

Table 3e. AOI-1 Lead in Soil

Juan Cabrillo Elementary School 30237 Morning View Drive Malibu, California

Area of Interest (AOI) Res	Sample ID idential DTSC-Mod	Sample Date	Depth (feet bgs) SL	Lead (mg/kg) 80
	JC-SB-41	7/2/2014	0	14
	JC-SB-41	7/2/2014	1.5	11
	JC-SB-42	7/7/2014	0	15
	JC-SB-42	7/7/2014	1.5	2.8
	JC-SB-45	7/3/2014	0	6.6
81	JC-SB-45	7/3/2014	1.5	2.2
AOI-1 - Buildings Constructed Prior to 1981	JC-SB-46	7/3/2014	0	7.2
orte	JC-SB-46	7/3/2014	1.5	2.5
- Lic	JC-SB-46	7/3/2014	1.5	2.0
_ p∈	JC-SB-47	7/3/2014	0	5.8
rcte	JC-SB-47	7/3/2014	1.5	14
stru	JC-SB-48	7/3/2014	0	24
yon	JC-SB-48	7/3/2014	1.5	5.7
s C	JC-SB-49	7/3/2014	0	4.0
ing	JC-SB-49	7/3/2014	1.5	2.7
plin	JC-SB-50	7/3/2014	0	5.6
B.	JC-SB-50	7/3/2014	1.5	3.2
7	JC-SB-51	7/3/2014	0	12
D A O	JC-SB-51	7/3/2014	1.5	3.8
	JC-SB-52	7/3/2014	0	9.2
	JC-SB-52	7/3/2014	1.5	3.2
	JC-SB-52	7/3/2014	1.5	2.7
	JC-SB-53	7/3/2014	0	4.6
	JC-SB-53	7/3/2014	1.5	< 2.0

Notes:

Bolded values exceed the Residential DTSC-Modified RSL or USEPA RSL

mg/kg - milligrams per kilogram

Field duplicates are shown in italics

Lead by USEPA Method 6010

USEPA - United States Environmental Protection Agency

DTSC - Department of Toxic Substances Control

RSLs - Regional Screening Levels

bgs - below ground surface



Juan Cabrillo Elementary School 30237 Morning View Drive Malibu, California

					Semi-Volatile Organic Compounds (SVOCs) in μg/kg 4- 1,2- 1,2- 2,2'-oxybis 2,4,5- 2,4,6- 2,4- 2,6-												
Area of				1,2,4-	1,2-	1,2-			2,2'-oxybis	2,4,5-	2,4,6-	2,4-				2,6-	
Interest			Depth	Trichloro-	Dichloro-	Diphenyl-	1,3-Dichloro-	1,4-Dichloro-	(1-Chloro-	Trichloro-	Trichloro-	Dichloro-	2,4-Dimethyl-	2,4-Dinitro-	2,4-Dinitro-	Dinitro-	2-Chloronaph
(AOI)	Sample ID	Sample Date	(feet bgs)	benzene	benzene	hydrazine	benzene	benzene	propane)	phenol	phenol	phenol	phenol	phenol	toluene	toluene	thalene
Residen	tial DTSC-Modi	fied RSL or USE	PA RSL	24,000	1,800,000	670	530,000	2,600	4,900	6,200,000	6,900	180,000	1,200,000	120,000	1,700	360	6,300,000
	JC-SB-58	7/7/2014	4.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 650	< 330	< 330	< 330
	JC-SB-58	7/7/2014	14.5	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 650	< 320	< 320	< 320
6	JC-SB-58	7/7/2014	24.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 650	< 330	< 330	< 330
pu	JC-SB-58	7/7/2014	34.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 660	< 330	< 330	< 330
, a	JC-SB-59	7/7/2014	4.5	< 660	< 660	< 660	< 660	< 660	< 660	< 660	< 660	< 660	< 660	< 1300	< 660	< 660	< 660
7, 8	JC-SB-59	7/7/2014	14.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 650	< 330	< 330	< 330
. su	JC-SB-59	7/7/2014	24.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 660	< 330	< 330	< 330
ten	JC-SB-59	7/7/2014	34.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 660	< 330	< 330	< 330
jysi	JC-SB-60	7/3/2014	4.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 660	< 330	< 330	< 330
ທ ວ	JC-SB-60	7/3/2014	9.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 660	< 330	< 330	< 330
pti	JC-SB-61	7/3/2014	4.5	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 640	< 320	< 320	< 320
Se	JC-SB-61	7/3/2014	9.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 660	< 330	< 330	< 330
-2 -	JC-SB-62	7/8/2014	4.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 660	< 330	< 330	< 330
Ō	JC-SB-62	7/8/2014	14.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 650	< 330	< 330	< 330
⋖	JC-SB-62	7/8/2014	24.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 650	< 330	< 330	< 330
	JC-SB-62	7/8/2014	34.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 650	< 330	< 330	< 330
	JC-SB-62	7/8/2014	39.5	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 640	< 320	< 320	< 320

Notes:

µg/kg - micrograms per kilogram

Field duplicates are shown in italics

SVOCs by USEPA Method 8270

USEPA - United States Environmental Protection Agency

DTSC - Department of Toxic Substances Control

RSLs - Regional Screening Levels

bgs - below ground surface

Juan Cabrillo Elementary School 30237 Morning View Drive Malibu, California

									Sem	i-Volatile Organi	ic Compo	unds (SVOCs)	in µg/kg					
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	2-Chloro- phenol	2-Methyl- naphthalene	2-Methyl- phenol	2-Nitro- aniline	2-Nitro- phenol	3&4-Methyl- phenol	3,3'-Dichloro- benzidine	3-Nitro- aniline	4,6-Dinitro-2- methyl- phenol	4-Bromo- phenyl- phenyl ether	4-Chloro- 3-methyl- phenol	4- Chloro- aniline	4-Chloro- phenyl-phenyl ether	4-Nitro- aniline	4-Nitro- phenol
		fied RSL or USE		63,000	230,000	3,100,000	610,000	NA	NA	1,200	18,000	4,900	NA	6,200,000	2,700	NA	27,000	NA
	JC-SB-58	7/7/2014	4.5	< 330	< 330	< 330	< 330	< 330	< 330	< 820	< 330	< 420	< 330	< 330	< 330	< 330	< 820	< 820
	JC-SB-58	7/7/2014	14.5	< 320	< 320	< 320	< 320	< 320	< 320	< 820	< 320	< 410	< 320	< 320	< 320	< 320	< 820	< 820
6	JC-SB-58	7/7/2014	24.5	< 330	< 330	< 330	< 330	< 330	< 330	< 820	< 330	< 420	< 330	< 330	< 330	< 330	< 820	< 820
pu	JC-SB-58	7/7/2014	34.5	< 330	< 330	< 330	< 330	< 330	< 330	< 820	< 330	< 420	< 330	< 330	< 330	< 330	< 820	< 820
, a	JC-SB-59	7/7/2014	4.5	< 660	< 660	< 660	< 660	< 660	< 660	< 1700	< 660	< 840	< 660	< 660	< 660	< 660	< 1700	< 1700
7, 8	JC-SB-59	7/7/2014	14.5	< 330	< 330	< 330	< 330	< 330	< 330	< 820	< 330	< 410	< 330	< 330	< 330	< 330	< 820	< 820
. su	JC-SB-59	7/7/2014	24.5	< 330	< 330	< 330	< 330	< 330	< 330	< 830	< 330	< 420	< 330	< 330	< 330	< 330	< 830	< 830
ten	JC-SB-59	7/7/2014	34.5	< 330	< 330	< 330	< 330	< 330	< 330	< 830	< 330	< 420	< 330	< 330	< 330	< 330	< 830	< 830
jys	JC-SB-60	7/3/2014	4.5	< 330	< 330	< 330	< 330	< 330	< 330	< 830	< 330	< 420	< 330	< 330	< 330	< 330	< 830	< 830
<u>.0</u>	JC-SB-60	7/3/2014	9.5	< 330	< 330	< 330	< 330	< 330	< 330	< 830	< 330	< 420	< 330	< 330	< 330	< 330	< 830	< 830
ept	JC-SB-61	7/3/2014	4.5	< 320	< 320	< 320	< 320	< 320	< 320	< 810	< 320	< 410	< 320	< 320	< 320	< 320	< 810	< 810
, Š	JC-SB-61	7/3/2014	9.5	< 330	< 330	< 330	< 330	< 330	< 330	< 830	< 330	< 420	< 330	< 330	< 330	< 330	< 830	< 830
?	JC-SB-62	7/8/2014	4.5	< 330	< 330	< 330	< 330	< 330	< 330	< 830	< 330	< 420	< 330	< 330	< 330	< 330	< 830	< 830
	JC-SB-62	7/8/2014	14.5	< 330	< 330	< 330	< 330	< 330	< 330	< 820	< 330	< 410	< 330	< 330	< 330	< 330	< 820	< 820
	JC-SB-62	7/8/2014	24.5	< 330	< 330	< 330	< 330	< 330	< 330	< 820	< 330	< 420	< 330	< 330	< 330	< 330	< 820	< 820
	JC-SB-62	7/8/2014	34.5	< 330	< 330	< 330	< 330	< 330	< 330	< 820	< 330	< 410	< 330	< 330	< 330	< 330	< 820	< 820
	JC-SB-62	7/8/2014	39.5	< 320	< 320	< 320	< 320	< 320	< 320	< 810	< 320	< 410	< 320	< 320	< 320	< 320	< 810	< 810

Notes:

µg/kg - micrograms per kilogram

Field duplicates are shown in italics

SVOCs by USEPA Method 8270

USEPA - United States Environmental Protection Agency

DTSC - Department of Toxic Substances Control

RSLs - Regional Screening Levels

bgs - below ground surface

Juan Cabrillo Elementary School 30237 Morning View Drive Malibu, California

									Semi-V	olatile Orga	nic Compo	unds (SVO	Cs) in µg/kg	3			
Area of											Benzo(b)	-	Benzo(k)-			bis	bis
Interest			Depth	Acena-	Acenaph-				Benzo(a)	Benzo(a)	fluoran-	(g,h,i)	fluoran-		Benzyl	(2-Chloroethoxy)	(2-Chloroethyl)
(AOI)	Sample ID	Sample Date	•	phthene	thylene	Aniline	Anthracene	Benzidine	anthracene	pyrene	thene	perylene	thene	Benzoic Acid	Alcohol	methane	ether
Residen	tial DTSC-Modi	fied RSL or USE	PARSL	3,500,000	NA	93,000	17,000,000	0.52	150	15	150	NA	380	250,000,000	6,200,000	180,000	230
	JC-SB-58	7/7/2014	4.5	< 330	< 330	< 420	< 330	< 1300	< 330	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330
	JC-SB-58	7/7/2014	14.5	< 320	< 320	< 410	< 320	< 1300	< 320	< 320	< 320	< 320	< 320	< 820	< 320	< 320	< 320
6	JC-SB-58	7/7/2014	24.5	< 330	< 330	< 420	< 330	< 1300	< 330	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330
ри	JC-SB-58	7/7/2014	34.5	< 330	< 330	< 420	< 330	< 1300	< 330	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330
a	JC-SB-59	7/7/2014	4.5	< 660	< 660	< 840	< 660	< 2700	< 660	< 660	< 660	< 660	< 660	< 1700	< 660	< 660	< 660
7, 8	JC-SB-59	7/7/2014	14.5	< 330	< 330	< 410	< 330	< 1300	< 330	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330
าร เ	JC-SB-59	7/7/2014	24.5	< 330	< 330	< 420	< 330	< 1300	< 330	< 330	< 330	< 330	< 330	< 830	< 330	< 330	< 330
ten	JC-SB-59	7/7/2014	34.5	< 330	< 330	< 420	< 330	< 1300	< 330	< 330	< 330	< 330	< 330	< 830	< 330	< 330	< 330
jysi	JC-SB-60	7/3/2014	4.5	< 330	< 330	< 420	< 330	< 1300	< 330	< 330	< 330	< 330	< 330	< 830	< 330	< 330	< 330
ທ ບ	JC-SB-60	7/3/2014	9.5	< 330	< 330	< 420	< 330	< 1300	< 330	< 330	< 330	< 330	< 330	< 830	< 330	< 330	< 330
pti	JC-SB-61	7/3/2014	4.5	< 320	< 320	< 410	< 320	< 1300	< 320	< 320	< 320	< 320	< 320	< 810	< 320	< 320	< 320
Se	JC-SB-61	7/3/2014	9.5	< 330	< 330	< 420	< 330	< 1300	< 330	< 330	< 330	< 330	< 330	< 830	< 330	< 330	< 330
	JC-SB-62	7/8/2014	4.5	< 330	< 330	< 420	< 330	< 1300	< 330	< 330	< 330	< 330	< 330	< 830	< 330	< 330	< 330
ō	JC-SB-62	7/8/2014	14.5	< 330	< 330	< 410	< 330	< 1300	< 330	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330
▼	JC-SB-62	7/8/2014	24.5	< 330	< 330	< 420	< 330	< 1300	< 330	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330
	JC-SB-62	7/8/2014	34.5	< 330	< 330	< 410	< 330	< 1300	< 330	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330
	JC-SB-62	7/8/2014	39.5	< 320	< 320	< 410	< 320	< 1300	< 320	< 320	< 320	< 320	< 320	< 810	< 320	< 320	< 320

Notes:

µg/kg - micrograms per kilogram

Field duplicates are shown in italics

SVOCs by USEPA Method 8270

USEPA - United States Environmental Protection Agency

DTSC - Department of Toxic Substances Control

RSLs - Regional Screening Levels

bgs - below ground surface

Juan Cabrillo Elementary School 30237 Morning View Drive Malibu, California

								Semi-Vo	latile Organi	c Compounds	(SVOCs) in µ	g/kg				
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	bis (2-Ethylhexyl) phthalate	Butylbenzyl- phthalate	Chrysene	Dibenz(a,h)- anthracene	Dibenzo- furan	Diethyl- phthalate	Dimethyl- phthalate	Di-n-butyl- phthalate	Di-n-octyl- phthalate	Fluoran- thene	Fluorene	Hexachloro- benzene	Hexachloro- butadiene
Residen	tial DTSC-Modi	fied RSL or USE	PA RSL	38,000	280,000	3,800	15	72,000	49,000,000	610,000,000	6,200,000	2,400,000	2,300,000	2,300,000	330	6,800
	JC-SB-58	7/7/2014	4.5	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330
	JC-SB-58	7/7/2014	14.5	< 320	< 320	< 320	< 410	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320
6	JC-SB-58	7/7/2014	24.5	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330
pu	JC-SB-58	7/7/2014	34.5	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330
a	JC-SB-59	7/7/2014	4.5	< 660	< 660	< 660	< 840	< 660	< 660	< 660	< 660	< 660	< 660	< 660	< 660	< 660
7, 8	JC-SB-59	7/7/2014	14.5	< 330	< 330	< 330	< 410	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330
s.	JC-SB-59	7/7/2014	24.5	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330
ten	JC-SB-59	7/7/2014	34.5	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330
jysi	JC-SB-60	7/3/2014	4.5	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330
о С	JC-SB-60	7/3/2014	9.5	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330
pti	JC-SB-61	7/3/2014	4.5	< 320	< 320	< 320	< 410	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320
Še	JC-SB-61	7/3/2014	9.5	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330
	JC-SB-62	7/8/2014	4.5	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330
ō	JC-SB-62	7/8/2014	14.5	< 330	< 330	< 330	< 410	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330
< <	JC-SB-62	7/8/2014	24.5	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330
	JC-SB-62	7/8/2014	34.5	< 330	< 330	< 330	< 410	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330
	JC-SB-62	7/8/2014	39.5	< 320	< 320	< 320	< 410	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320

Notes:

µg/kg - micrograms per kilogram

Field duplicates are shown in italics

SVOCs by USEPA Method 8270

USEPA - United States Environmental Protection Agency

DTSC - Department of Toxic Substances Control

RSLs - Regional Screening Levels

bgs - below ground surface

Juan Cabrillo Elementary School 30237 Morning View Drive Malibu, California

							Semi-Volatile	Organic Comp	ounds (SVOCs) i	n µg/kg					
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Hexachloro- cyclo- pentadiene	Hexachloro- ethane	Indeno (1,2,3-cd) pyrene	Isophorone	Naphthalene	Nitrobenzene	N-Nitroso-di-n- propylamine	N-Nitroso- diphenylamine	Pentachloro- phenol	Phenan- threne	Phenol	Pyrene
Resider	ntial DTSC-Modi	ified RSL or USE	EPA RSL	370,000	13,000	150	560,000	3,800	5,100	76	110,000	990	NA	18,000,000	1,700,000
	JC-SB-58	7/7/2014	4.5	< 820	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 820	< 330	< 330	< 330
	JC-SB-58	7/7/2014	14.5	< 820	< 320	< 320	< 320	< 320	< 320	< 250	< 320	< 820	< 320	< 320	< 320
6	JC-SB-58	7/7/2014	24.5	< 820	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 820	< 330	< 330	< 330
pu	JC-SB-58	7/7/2014	34.5	< 820	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 820	< 330	< 330	< 330
a a	JC-SB-59	7/7/2014	4.5	< 1700	< 660	< 660	< 660	< 660	< 660	< 500	< 660	< 1700	< 660	< 660	< 660
7, 8	JC-SB-59	7/7/2014	14.5	< 820	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 820	< 330	< 330	< 330
. st	JC-SB-59	7/7/2014	24.5	< 830	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 830	< 330	< 330	< 330
ten	JC-SB-59	7/7/2014	34.5	< 830	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 830	< 330	< 330	< 330
yst	JC-SB-60	7/3/2014	4.5	< 830	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 830	< 330	< 330	< 330
s c	JC-SB-60	7/3/2014	9.5	< 830	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 830	< 330	< 330	< 330
eptic	JC-SB-61	7/3/2014	4.5	< 810	< 320	< 320	< 320	< 320	< 320	< 240	< 320	< 810	< 320	< 320	< 320
Se	JC-SB-61	7/3/2014	9.5	< 830	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 830	< 330	< 330	< 330
	JC-SB-62	7/8/2014	4.5	< 830	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 830	< 330	< 330	< 330
ō	JC-SB-62	7/8/2014	14.5	< 820	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 820	< 330	< 330	< 330
▲	JC-SB-62	7/8/2014	24.5	< 820	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 820	< 330	< 330	< 330
	JC-SB-62	7/8/2014	34.5	< 820	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 820	< 330	< 330	< 330
	JC-SB-62	7/8/2014	39.5	< 810	< 320	< 320	< 320	< 320	< 320	< 240	< 320	< 810	< 320	< 320	< 320

Notes:

µg/kg - micrograms per kilogram

Field duplicates are shown in italics

SVOCs by USEPA Method 8270

USEPA - United States Environmental Protection Agency

DTSC - Department of Toxic Substances Control

RSLs - Regional Screening Levels

bgs - below ground surface

Table 4b. AOI-2 TPH in SoilJuan Cabrillo Elementary School30237 Morning View DriveMalibu, California

							Gasoline Range (Drganics in mg/kg			
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Petroleum Hydrocarbons (C04 - C06)	Petroleum Hydrocarbons (C06 - C07)	Petroleum Hydrocarbons (C07 - C08)	Petroleum Hydrocarbons (C08 - C09)	Petroleum Hydrocarbons (C09 - C10)	Petroleum Hydrocarbons (C10 - C11)	Petroleum Hydrocarbons (C11 - C12)	Petroleum Hydrocarbons (C12 - C13)
	JC-SB-58	7/7/2014	4.5	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.4
	JC-SB-58	7/7/2014	14.5	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38
6	JC-SB-58	7/7/2014	24.5	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39
6 pr	JC-SB-58	7/7/2014	34.5	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38
, ar	JC-SB-59	7/7/2014	4.5	< 0.40J	< 0.40 J	< 0.40J	< 0.40J	< 0.40J	< 0.40 J	< 0.40 J	< 0.40 J
8	JC-SB-59	7/7/2014	14.5	< 0.34	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40
ls 7	JC-SB-59	7/7/2014	24.5	< 0.38 J	< 0.38 J	< 0.38 J	< 0.38J	< 0.38 J	< 0.38 J	< 0.38 J	< 0.38 J
em	JC-SB-59	7/7/2014	34.5	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38
yst	JC-SB-60	7/3/2014	4.5	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39
S S	JC-SB-60	7/3/2014	9.5	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39
pti	JC-SB-61	7/3/2014	4.5	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39
se	JC-SB-61	7/3/2014	9.5	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39
	JC-SB-62	7/8/2014	4.5	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.0049	< 0.39	< 0.39
ō	JC-SB-62	7/8/2014	14.5	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.005	< 0.40	< 0.40
A	JC-SB-62	7/8/2014	24.5	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.005	< 0.38	< 0.38
	JC-SB-62	7/8/2014	34.5	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.005	< 0.39	< 0.39
	JC-SB-62	7/8/2014	39.5	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.005	< 0.38	< 0.38

Notes:

mg/kg - milligrams per kilogram

Field duplicates are shown in italics

TPH by USEPA Method 8015M

USEPA - United States Environmental Protection Agency

DTSC - Department of Toxic Substances Control

RSLs - Regional Screening Levels

bgs - below ground surface

J - Results and or reporting limits are estimated

EFH - Extractable Fuel Hydrocarbon

USEPA RSLs for Petroleum Hydrocarbons (results are compared to the most conservative value for the specified range) (USEPA 2015)

Aliphatic Low, C5 - C8	520 mg/kg
Aromatic Low, C6 - C8	82 mg/kg
Aliphatic Medium, C9 - C18	96 mg/kg
Aromatic Medium, C9 - C16	110 mg/kg
Aliphatic High, C19 - C32	230,000 mg/kg
Aromatic High, C17 - C32	2,500 mg/kg



Table 4b. AOI-2 TPH in SoilJuan Cabrillo Elementary School30237 Morning View Drive

Malibu, California

							Diesel Range Or	rganics in mg/kg			
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	EFH (C13 - C14)	EFH (C15 - C16)	EFH (C17 - C18)	EFH (C19 - C20)	EFH (C21 - C22)	EFH (C23 - C24)	EFH (C25 - C26)	EFH (C27 - C28)
	JC-SB-58	7/7/2014	4.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9
	JC-SB-58	7/7/2014	14.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
റ	JC-SB-58	7/7/2014	24.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
p	JC-SB-58	7/7/2014	34.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
ar	JC-SB-59	7/7/2014	4.5	< 5.0 J							
α Σ	JC-SB-59	7/7/2014	14.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9
ls I	JC-SB-59	7/7/2014	24.5	< 4.9 J							
ten	JC-SB-59	7/7/2014	34.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
yst	JC-SB-60	7/3/2014	4.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
v v	JC-SB-60	7/3/2014	9.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
pti	JC-SB-61	7/3/2014	4.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Š	JC-SB-61	7/3/2014	9.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
, ,	JC-SB-62	7/8/2014	4.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9
ō	JC-SB-62	7/8/2014	14.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
▲	JC-SB-62	7/8/2014	24.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
	JC-SB-62	7/8/2014	34.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
	JC-SB-62	7/8/2014	39.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0

Notes:

mg/kg - milligrams per kilogram

Field duplicates are shown in italics

TPH by USEPA Method 8015M

USEPA - United States Environmental Protection Agency

DTSC - Department of Toxic Substances Control

RSLs - Regional Screening Levels

bgs - below ground surface

J - Results and or reporting limits are estimated

EFH - Extractable Fuel Hydrocarbon

USEPA RSLs for Petroleum Hydrocarbons (results are compared to the most conservative value for the specified range) (USEPA 2015)

Aliphatic Low, C5 - C8	520 mg/kg
Aromatic Low, C6 - C8	82 mg/kg
Aliphatic Medium, C9 - C18	96 mg/kg
Aromatic Medium, C9 - C16	110 mg/kg
Aliphatic High, C19 - C32	230,000 mg/kg
Aromatic High, C17 - C32	2,500 mg/kg



Table 4b. AOI-2 TPH in SoilJuan Cabrillo Elementary School30237 Morning View Drive

Malibu, California

						Diesel	Range Organics in	mg/kg		
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	EFH (C29 - C30)	EFH (C31 - C32)	EFH (C33 - C34)	EFH (C35 - C36)	EFH (C37 - C38)	EFH (C39 - C40)	EFH (C13 - C40)
	JC-SB-58	7/7/2014	4.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9
	JC-SB-58	7/7/2014	14.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
ი	JC-SB-58	7/7/2014	24.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
b pu	JC-SB-58	7/7/2014	34.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
, ar	JC-SB-59	7/7/2014	4.5	< 5.0 J	5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	38 J
8	JC-SB-59	7/7/2014	14.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9
Is 7	JC-SB-59	7/7/2014	24.5	< 4.9 J	6.1 J					
ter	JC-SB-59	7/7/2014	34.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
yst	JC-SB-60	7/3/2014	4.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	8.3
S C	JC-SB-60	7/3/2014	9.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	6.7
ptic	JC-SB-61	7/3/2014	4.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	19
Se	JC-SB-61	7/3/2014	9.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
-2-	JC-SB-62	7/8/2014	4.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9
AOI	JC-SB-62	7/8/2014	14.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
▲	JC-SB-62	7/8/2014	24.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
	JC-SB-62	7/8/2014	34.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
	JC-SB-62	7/8/2014	39.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0

Notes:

mg/kg - milligrams per kilogram

Field duplicates are shown in italics

TPH by USEPA Method 8015M

USEPA - United States Environmental Protection Agency

DTSC - Department of Toxic Substances Control

RSLs - Regional Screening Levels

bgs - below ground surface

J - Results and or reporting limits are estimated

EFH - Extractable Fuel Hydrocarbon

USEPA RSLs for Petroleum Hydrocarbons (results are compared to the most conservative value for the specified range) (USEPA 2015)

Aliphatic Low, C5 - C8	520 mg/kg
Aromatic Low, C6 - C8	82 mg/kg
Aliphatic Medium, C9 - C18	96 mg/kg
Aromatic Medium, C9 - C16	110 mg/kg
Aliphatic High, C19 - C32	230,000 mg/kg
Aromatic High, C17 - C32	2,500 mg/kg



Table 4c. AOI-2 Metals in SoilJuan Cabrillo Elementary School30237 Morning View DriveMalibu, California

Area of											Metals	s in mg	/kg							
Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium (total)	Cobalt	Copper	Lead	Molybdenum	Nickel	Selenium	Silver		Vanadium	Zinc	Mercury
Residen	tial DTSC-Mod	ified RSL or USE	PA RSL	31	12 ^a	15,000	16	4.6	120,000	23	3,100	80	390	1,500	390	390	0.78 ^b	390	23,000	23
	JC-SB-58	7/7/2014	4.5	< 9.8 J	< 2.9	180	< 0.49	1.2	45	13	19	2.3	< 2.0	45	< 2.9	< 1.5	< 9.8	48	31	0.022
	JC-SB-58	7/7/2014	14.5	< 10 J	3.1	89	< 0.50	1.2	56	17	25	2.8	< 2.0	61	< 3.0	< 1.5	< 10	58	44	0.027
	JC-SB-58	7/7/2014	24.5	< 9.9 J	< 3.0	65	< 0.50	0.98	45	11	19	< 2.0	< 2.0	43	< 3.0	< 1.5	< 9.9	49	34	0.031
6 P	JC-SB-58	7/7/2014	34.5	< 20 J	< 6.0	200	< 1.0	< 1.0	49	18	37	< 4.0	< 4.0	98	< 6.0	< 3.0	< 20	28	48	< 0.020
an	JC-SB-59	7/7/2014	4.5	< 10 J	6.7	110	< 0.50	7.2	58	11	38	2.4	15	84	4.2	< 1.5	< 10	88	79	0.10
ŵ	JC-SB-59	7/7/2014	14.5	< 20 J	< 5.9	64	< 0.98	< 0.98	58	19	26	< 3.9	< 3.9	70	< 5.9	< 2.9	< 20	55	45	0.021
IS 7	JC-SB-59	7/7/2014	24.5	< 20 J	< 5.9	51	< 0.99	1.2	68	23	31	< 3.9	< 3.9	81	< 5.9	< 3.0	< 20	58	46	< 0.020
E	JC-SB-59	7/7/2014	34.5	< 20 J	< 6.0	87	< 1.0	1.3	68	18	30	< 4.0	< 4.0	80	< 6.0	< 3.0	< 20	63	44	< 0.020
yst	JC-SB-60	7/3/2014	4.5	< 20 J	< 5.9	83 J	< 0.99	2.6	69	20	29	< 3.9	4.5	79	< 5.9	< 3.0	< 20	78	59	0.10
S C	JC-SB-60	7/3/2014	9.5	< 20 J	< 6.0	90 J	< 1.0	2.8	77	22	32	< 4.0	4.6	88	< 6.0	< 3.0	< 20	83	64	0.069
pti	JC-SB-61	7/3/2014	4.5	< 10 J	< 3.0	56 J	< 0.50	1.9	47	13	19	2.3	2.7	52	< 3.0	< 1.5	< 10	55	40	0.055
s,	JC-SB-61	7/3/2014	9.5	< 20 J	< 5.9	84 J	< 0.99	2.7	69	20	29	< 3.9	4.5	81	< 5.9	< 3.0	< 20	75	64	0.068
-7	JC-SB-62	7/8/2014	4.5	< 10 J	< 3.0	61 J	< 0.50	1.4	47	14	20	2.5	< 2.0	46	< 3.0 J	< 1.5	< 10	50	28 J	0.026
AOI	JC-SB-62	7/8/2014	14.5	< 20 J	< 6.0	43 J	< 1.0	2.1	78	22	28	< 4.0	< 4.0	86	< 6.0 J	< 3.0	< 20	65	61 J	0.040
	JC-SB-62	7/8/2014	24.5	< 10 J	< 3.0	29 J	< 0.50	0.74	41	11	12	2.1	< 2.0	35	< 3.0 J	< 1.5	< 10	34	25 J	< 0.020
	JC-SB-62	7/8/2014	34.5	< 9.9 J	6.0	530 J	< 0.49	0.56	41	2.2	21	< 2.0	5.5	35	< 3.0 J	< 1.5	< 9.9	60	39 J	0.033
	JC-SB-62	7/8/2014	39.5	< 10 J	6.8	540 J	< 0.50	5.9	46	5.3	24	< 2.0	11	34	< 3.0 J	< 1.5	< 10	92	46 J	0.027

Notes:

Bolded values exceed the Residential DTSC-Modified RSL or USEPA RSL

mg/kg - milligrams per kilogram

Field duplicates are shown in italics

Metals by USEPA Method 6010/7471

USEPA - United States Environmental Protection Agency

DTSC - Department of Toxic Substances Control

RSLs - Regional Screening Levels

bgs - below ground surface

J - Results and or reporting limits are estimated

^a Arsenic occurs naturally in soil. An evaluation of arsenic soil data from school sites in Southern California found arsenic concentrations ranging from 0.15 mg/kg to 20 mg/kg, with an upper-bound background arsenic concentration of 12 mg/kg (Chernoff G, Bosan W, Oudiz D. 2008. Determination of a Southern California Regional Background Arsenic Concentration in Soil). Arsenic concentrations in soil samples collected at the site were conservatively screened against 12 mg/kg. Arsenic concentrations greater than 12 mg/kg were further evaluated in Section 9 of the PEA Report.

^b - As specified in the DTSC-approved PEA Work Plan, the reporting limit for thallium exceeds the RSL. As all results are non-detect, values are not bolded.



Juan Cabrillo Elementary School 30237 Morning View Drive Malibu, California

									Vola	tile Orga	nic Comp	oounds (VOCs) in	µg/L					
Area of Interest (AOI)	Sample ID	Sample date	Depth (feet bgs)	1,1,1,2- Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2- Tetrachloroethane	1,1,2-Trichloro-1,2,2- trifluoroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3- chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane
Residential	Soil Gas Screeni	ng Level for 5 feet	bgs or less ^b	0.33	1040	0.04	31000	0.18	1.52	73	NA	2.1	0.0001112	2.1	7.3	0.00017 ^a	0.0047	210	0.11
ი	JC-SV-1	7/23/2014	5	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
pue	JC-SV-1	7/23/2014	15	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
ŝ	JC-SV-1	7/23/2014	15	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
٦,	JC-SV-1	7/23/2014	28	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
sm	JC-SV-2	7/23/2014	5	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
ste	JC-SV-2	7/23/2014	15	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
Sy	JC-SV-2	7/23/2014	30	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
otic	JC-SV-3	7/23/2014	5	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
Sep	JC-SV-4	7/23/2014	5	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
- 2	JC-SV-5	7/23/2014	5	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
ö	JC-SV-5	7/23/2014	21	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
Ă	JC-SV-5	7/23/2014	36	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008

Notes:

µg/L - micrograms per liter

bgs - below ground surface

Field duplicates are shown in italics

VOCs - Volatile Organic Compounds

VOCs by United States Environmental Protection

Agency Method 8260B

^a As specified in the DTSC-approved PEA Work Plan, the reporting limit for 1,2,3-trichloropropane and 1,2-dibromo-3- chloropropane exceed the RSL. As all results are non-detect, values are not bolded.

^b Soil gas screening levels are calculated as the ratio of DTSC- Modified RSL (Cal/EPA 2014) or USEPA RSL (USEPA 2014) for residential air to a default attenuation factor of 0.001 for future residential building, as recommended by CalEPA (2013). This screening evaluation does not take into account sample depth.

Soil gas screening levels are applicable to soil gas data collected at 5 feet bgs or less.



Juan Cabrillo Elementary School 30237 Morning View Drive Malibu, California

									Vola	tile Orga	nic Com	oounds (\	VOCs) in	µg/L					
Area of Interest (AOI)	Sample ID	Sample date	Depth (feet bgs)	1,2-Dichloropropane	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane	2-Chlorotoluene	4-Chlorotoluene	Benzene	Bromobenzene	Bromodichloromethane	Bromoform	Carbon Tetrachloride	Chlorobenzene	Chloroform	cis-1,2-Dichloroethene
Residential	Soil Gas Screeni	ng Level for 5 feet	bgs or less ^b	0.28	36.5	NA	NA	0.26	NA	NA	NA	0.08	63	0.07	2.21	0.06	52	0.12	7.3
ი	JC-SV-1	7/23/2014	5	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
put	JC-SV-1	7/23/2014	15	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
° S	JC-SV-1	7/23/2014	15	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
٦,	JC-SV-1	7/23/2014	28	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
ms	JC-SV-2	7/23/2014	5	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
ste	JC-SV-2	7/23/2014	15	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
Sy	JC-SV-2	7/23/2014	30	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
otic	JC-SV-3	7/23/2014	5	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
Sep	JC-SV-4	7/23/2014	5	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
- 2	JC-SV-5	7/23/2014	5	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
Ö	JC-SV-5	7/23/2014	21	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
Ā	JC-SV-5	7/23/2014	36	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008

Notes:

µg/L - micrograms per liter

bgs - below ground surface

Field duplicates are shown in italics

VOCs - Volatile Organic Compounds

VOCs by United States Environmental Protection

Agency Method 8260B

^a As specified in the DTSC-approved PEA Work Plan, the reporting limit for 1,2,3-trichloropropane and 1,2-dibromo-3- chloropropane exceed the RSL. As all results are non-detect, values are not bolded.

^b Soil gas screening levels are calculated as the ratio of DTSC- Modified RSL (Cal/EPA 2014) or USEPA RSL (USEPA 2014) for residential air to a default attenuation factor of 0.001 for future residential building, as recommended by CalEPA (2013). This screening evaluation does not take into account sample depth.

Soil gas screening levels are applicable to soil gas data collected at 5 feet bgs or less.



Juan Cabrillo Elementary School 30237 Morning View Drive Malibu, California

									Vola	tile Orga	nic Com	oounds (\	/OCs) in	µg/L					
Area of Interest (AOI)	Sample ID	Sample date	Depth (feet bgs)	cis-1,3-Dichloropropene	Cumene	Dibromochloromethane	Dibromomethane	Dichlorodifluoromethan e	Diisopropyl ether	Ethyl Benzene	Ethyl tert-butyl ether	Hexachlorobutadiene	Methyl tert-butyl ether	Methylene Chloride	Naphthalene	n-Butylbenzene	n-Propylbenzene	p-Cymene	sec-Butylbenzene
Residential	Soil Gas Screeni	ng Level for 5 feet	bgs or less ^b	0.15	420	0.09	4.2	100	730	1.1	NA	0.11	11	0.69	0.08	183	1000	NA	183
თ	JC-SV-1	7/23/2014	5	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
pue	JC-SV-1	7/23/2014	15	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
ŝ	JC-SV-1	7/23/2014	15	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
Α,	JC-SV-1	7/23/2014	28	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
su	JC-SV-2	7/23/2014	5	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
ste	JC-SV-2	7/23/2014	15	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
ŝ	JC-SV-2	7/23/2014	30	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
otic	JC-SV-3	7/23/2014	5	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
Sep	JC-SV-4	7/23/2014	5	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
5	JC-SV-5	7/23/2014	5	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	JC-SV-5	7/23/2014	21	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
<	JC-SV-5	7/23/2014	36	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008

Notes:

µg/L - micrograms per liter

bgs - below ground surface

Field duplicates are shown in italics

VOCs - Volatile Organic Compounds

VOCs by United States Environmental Protection

Agency Method 8260B

^a As specified in the DTSC-approved PEA Work Plan, the reporting limit for 1,2,3-trichloropropane and 1,2-dibromo-3- chloropropane exceed the RSL. As all results are non-detect, values are not bolded.

^b Soil gas screening levels are calculated as the ratio of DTSC- Modified RSL (Cal/EPA 2014) or USEPA RSL (USEPA 2014) for residential air to a default attenuation factor of 0.001 for future residential building, as recommended by CalEPA (2013). This screening evaluation does not take into account sample depth.

Soil gas screening levels are applicable to soil gas data collected at 5 feet bgs or less.



Juan Cabrillo Elementary School 30237 Morning View Drive Malibu, California

							Vola	tile Orga	nic Com	oounds (\	VOCs) in	μg/L			
Area of Interest (AOI)	Sample ID	Sample date	Depth (feet bgs)	Styrene	t-Amyl methyl ether	tert Butyl alcohol	tert-Butylbenzene	Tetrachloroethene	Toluene	trans-1,2- Dichloroethene	trans-1,3- Dichloropropene	Trichloroethene	Trichlorofluoromethane	Vinyl Chloride	Xylenes (total)
Residential	Soil Gas Screeni	ng Level for 5 feet	bgs or less ^b	939	NA	NA	183	0.41	313	7.3	0.15	0.48	730	0.03	100
ი	JC-SV-1	7/23/2014	5	< 0.008	< 0.040	< 0.400	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
and	JC-SV-1	7/23/2014	15	< 0.008	< 0.040	< 0.400	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
8, 8	JC-SV-1	7/23/2014	15	< 0.008	< 0.040	< 0.400	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
٦,	JC-SV-1	7/23/2014	28	< 0.008	< 0.040	< 0.400	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
sm	JC-SV-2	7/23/2014	5	< 0.008	< 0.040	< 0.400	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
Systems	JC-SV-2	7/23/2014	15	< 0.008	< 0.040	< 0.400	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
Sy	JC-SV-2	7/23/2014	30	< 0.008	< 0.040	< 0.400	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
Septic	JC-SV-3	7/23/2014	5	< 0.008	< 0.040	< 0.40	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
Sep	JC-SV-4	7/23/2014	5	< 0.008	< 0.040	< 0.400	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
1	JC-SV-5	7/23/2014	5	< 0.008	< 0.040	< 0.400	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
AOI-2	JC-SV-5	7/23/2014	21	< 0.008	< 0.040	< 0.400	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
Ă	JC-SV-5	7/23/2014	36	< 0.008	< 0.040	< 0.400	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008

Notes:

µg/L - micrograms per liter

bgs - below ground surface

Field duplicates are shown in italics

VOCs - Volatile Organic Compounds

VOCs by United States Environmental Protection

Agency Method 8260B

^a As specified in the DTSC-approved PEA Work Plan, the reporting limit for 1,2,3-trichloropropane and 1,2-dibromo-3- chloropropane exceed the RSL. As all results are non-detect, values are not bolded.

^b Soil gas screening levels are calculated as the ratio of DTSC- Modified RSL (Cal/EPA 2014) or USEPA RSL (USEPA 2014) for residential air to a default attenuation factor of 0.001 for future residential building, as recommended by CalEPA (2013). This screening evaluation does not take into account sample depth.

Soil gas screening levels are applicable to soil gas data collected at 5 feet bgs or less.

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Table 4e. AOI-2 VOCs in Groundwater

Juan Cabrillo Elementary School 30237 Morning View Malibu, California

																Volatil	e Orga	nic Co	mpou	nds in	µg/L												
Area of Interest (AOI)	Sample ID	Sample date	1,1,1,2- Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2- Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3- chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane	2-Butanone	2-Chlorotoluene	4-Chlorotoluene	Benzene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	Carbon Tetrachloride
California	and/or USEPA	MCL (µg/L)	NA	200	1	5	5	6	NA	NA	NA	5	NA	NA	NA	600	0.5	5	NA	NA	NA	5	NA	NA	NA	NA	1	NA	NA	NA	NA	NA	0.5
ems 9	MW-3	7/31/2014	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 5.0	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 2.0 J	< 1.0	< 0.50
AOI-2 - sptic Systems 7, 8, and 9	MW-4	8/1/2014	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 5.0	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 2.0 J	< 1.0	< 0.50
/ Septi 7,	MW-4	8/1/2014	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 5.0	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 2.0 J	< 1.0	< 0.50

Notes:

µg/L - micrograms per kilogram

USEPA - United States Environmental Protection Agency

MCLs - Maximum Contaminant Levels

bgs - below ground surface

J - Results and/or reporting limits are estimated

Field duplicates are shown in italics

VOCs - Volatile Organic Compounds

VOCs by USEPA Method 8260B

Table 4e. AOI-2 VOCs in Groundwater

Juan Cabrillo Elementary School 30237 Morning View Malibu, California

															Volat	ile Org	anic C	ompo	unds i	n µg/L												
Area of Interest (AOI)	Sample ID	Sample date	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Cumene	Dibromochloromethane	Dibromomethane	Dichlorodifluoromethane	Ethyl Benzene	Hexachlorobutadiene	m,p-xylene	Methyl tert-butyl ether	Methylene Chloride	Naphthalene	n-Butylbenzene	n-Propylbenzene	ortho-xylene	p-Cymene	sec-Butylbenzene	Styrene	tert-Butylbenzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	trans-1,3- Dichloropropene	Trichloroethene	Trichlorofluoromethane	Vinyl Chloride
California	and/or USEPA	MCL (µg/L)	NA	NA	NA	NA	6	NA	NA	NA	NA	NA	300	NA	1750	13	5	NA	NA	NA	NA	NA	260	100	NA	5	150	10	NA	5	150	0.5
6 6	MW-3	7/31/2014	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 0.50	< 5.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0	< 0.50
AOI-2 - sptic System 7, 8, and 9	MW-4	8/1/2014	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0 J	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 0.50	< 5.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0	< 0.50
/ Septi 7,	MW-4	8/1/2014	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0 J	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 0.50	< 5.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0	< 0.50

Notes:

µg/L - micrograms per kilogram

USEPA - United States Environmental Protec

MCLs - Maximum Contaminant Levels

bgs - below ground surface

J - Results and/or reporting limits are estimate

Field duplicates are shown in italics

VOCs - Volatile Organic Compounds

VOCs by USEPA Method 8260B

Table 4f. AOI-2 SVOCs in Groundwater

Juan Cabrillo Elementary School 30237 Morning View Malibu, California

											Semi-	Volatile	Organic	: Compo	ounds (S	SVOCs)	in µg/L								
Area of Interest (AOI)	Sample ID	Sample Date	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,2-Diphenylhydrazine	1,3-Dichlorobenzene	1,4-Dichlorobenzene	2,2'-oxybis(1- Chloropropane)	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene	2-Chlorophenol	2-Methylnaphthalene	2-Methylphenol	2-Nitroaniline	2-Nitrophenol	3&4-Methylphenol	3,3'-Dichlorobenzidine	3-Nitroaniline	4,6-Dinitro-2-methylphenol
tems 9	MW-3	7/31/2014	< 0.94	< 0.47	< 0.94	< 0.47	< 0.47	< 0.47	< 1.9	< 0.94	< 1.9	< 1.9	< 4.7	< 4.7	< 4.7	< 0.47	< 0.94	< 0.94	< 1.9	< 4.7	< 1.9	< 4.7	< 4.7	< 4.7	< 4.7
AOI-2 - tic Syst , 8, and	MW-4	8/1/2014	< 0.95	< 0.48	< 0.95	< 0.48	< 0.48	< 0.48	< 1.9	< 0.95	< 1.9	< 1.9	< 4.8	< 4.8	< 4.8	< 0.48	< 0.95	< 0.95	< 1.9	< 4.8	< 1.9	< 4.8	< 4.8	< 4.8	< 4.8
, Septi 7,	MW-4	8/1/2014	< 0.95	< 0.47	< 0.95	< 0.47	< 0.47	< 0.47	< 1.9	< 0.95	< 1.9	< 1.9	< 4.7	< 4.7	< 4.7	< 0.47	< 0.95	< 0.95	< 1.9	< 4.7	< 1.9	< 4.7	< 4.7	< 4.7	< 4.7

Notes:

μg/L - micrograms per liter Field duplicates are shown in italics SVOCs by USEPA Method 8270



Table 4f. AOI-2 SVOCs in Groundwater

Juan Cabrillo Elementary School 30237 Morning View Malibu, California

											Semi-	Volatile	Organic	: Compo	ounds (S	SVOCs)	in µg/L								
Area of Interest (AOI)	Sample ID	Sample Date	4-Bromophenyl-phenyl ether	4-Chloro-3-methylphenol	4-Chloroaniline	4-Chlorophenyl-phenyl ether	4-Nitroaniline	4-Nitrophenol	Acenaphthene	Acenaphthylene	Aniline	Anthracene	Benzidine	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl Alcohol	bis(2- Chloroethoxy)methane	bis(2-Chloroethyl) ether	bis(2-Ethylhexyl)phthalate	Butylbenzylphthalate	Chrysene
tems 9	MW-3	7/31/2014	< 0.94	< 1.9	< 1.9	< 0.47	< 4.7	< 4.7	< 0.47	< 0.47	< 9.4	< 0.47	< 9.4 J	< 4.7	< 1.9	< 1.9	< 4.7	< 0.47	< 4.7	< 4.7	< 0.47	< 0.47	< 4.7	< 4.7	< 0.47
AOI-2 - utic Syst ', 8, and	MW-4	8/1/2014	< 0.95	< 1.9	< 1.9	< 0.48	< 4.8	< 4.8	< 0.48	< 0.48	< 9.5	< 0.48	< 9.5 J	< 4.8	< 1.9	< 1.9	< 4.8	< 0.48	< 4.8	< 4.8	< 0.48	< 0.48	< 4.8	< 4.8	< 0.48
/ Septi 7,	MW-4	8/1/2014	< 0.95	< 1.9	< 1.9	< 0.47	< 4.7	< 4.7	< 0.47	< 0.47	< 9.5	< 0.47	< 9.5 J	< 4.7	< 1.9	< 1.9	< 4.7	< 0.47	< 4.7	< 4.7	< 0.47	< 0.47	< 4.7	< 4.7	< 0.47

Notes:

μg/L - micrograms per liter Field duplicates are shown in italics SVOCs by USEPA Method 8270



Table 4f. AOI-2 SVOCs in Groundwater

Juan Cabrillo Elementary School 30237 Morning View Malibu, California

										Sen	ni-Volati	le Orga	nic Com	pounds	(SVOC	s) in µg/	L							
Area of Interest (AOI)	Sample ID	Sample Date	Dibenz(a,h)anthracene	Dibenzofuran	Diethylphthalate	Dimethylphthalate	Di-n-butylphthalate	Di-n-octylphthalate	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-cd)pyrene	lsophorone	Naphthalene	Nitrobenzene	N-Nitroso-di-n-propylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
tems 1 9	MW-3	7/31/2014	< 0.47	< 0.47	< 0.94	< 0.47	< 1.9	< 4.7	< 0.47	< 0.47	< 0.94	< 1.9	< 4.7	< 2.8	< 1.9	< 0.94	< 0.94	< 0.94	< 1.9	< 0.94	< 1.9	< 0.47	< 0.94	< 0.47
AOI-2 - tic Syst , 8, and	MW-4	8/1/2014	< 0.48	< 0.48	< 0.95	< 0.48	< 1.9	< 4.8	< 0.48	< 0.48	< 0.95	< 1.9	< 4.8	< 2.9	< 1.9	< 0.95	< 0.95	< 0.95	< 1.9	< 0.95	< 1.9	< 0.48	< 0.95	< 0.48
, Septi 7,	MW-4	8/1/2014	< 0.47	< 0.47	< 0.95	< 0.47	< 1.9	< 4.7	< 0.47	< 0.47	< 0.95	< 1.9	< 4.7	< 2.8	< 1.9	< 0.95	< 0.95	< 0.95	< 1.9	< 0.95	< 1.9	< 0.47	< 0.95	< 0.47

Notes:

μg/L - micrograms per liter Field duplicates are shown in italics SVOCs by USEPA Method 8270



Table 4g. AOI-2 TPH in Groundwater

Juan Cabrillo Elementary School 30237 Morning View Malibu, California

			Total I	Petroleum Hydrocarbor	ns (TPH) in mg/L
			GRO	DF	RO
				Petroleum Hydrocarbons	Petroleum Hydrocarbons
Area of Interest	Sample ID	Sample Date	C12-C13	C13 - C22	C23 - C40
ol-2 - Systems and 9	MW-3	7/31/2014	< 0.05	< 0.47	< 0.47
	MW-4	8/1/2014	< 0.05	< 0.47	< 0.47
AC Septic 7, 8,	MW-4	8/1/2014	< 0.05	< 0.47	< 0.47

Notes:

mg/L - milligrams per liter

Field duplicates are shown in italics

TPH by United States Environmental Protection Agency Method 8015M

DRO - Diesel range organics

GRO - Gasoline range organics

Table 4h. AOI-2 Metals in GroundwaterJuan Cabrillo Elementary School30237 Morning ViewMalibu, California

										М	etals in m	ng/L							
Area of	Sample ID	Sample Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium (total)	Cobalt	Copper	Lead	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Mercury
Interest	Californ	ia MCLs	0.006b	0.01	1	0.004	0.005	0.05	NA	1.3a	0.015a	NA	0.1	0.05	NA	0.002b	NA	NA	0.002
tems 9	MW-3	7/31/2014	< 0.010	< 0.010	0.027	< 0.0020	< 0.0050	0.0052	< 0.010	< 0.010	< 0.0050	< 0.020	< 0.010	0.023	< 0.010	< 0.010	0.011	< 0.020	< 0.00020
AOI-2 - eptic Syste 7, 8, and	MW-4	8/1/2014	< 0.010 J	< 0.010	0.045	< 0.0020	< 0.0050	0.015	< 0.010	< 0.010	< 0.0050	0.027	0.013	< 0.010	< 0.010	< 0.010	0.010	< 0.020	< 0.00020
/ Septi 7,	MW-4	8/1/2014	< 0.010 J	< 0.010	0.044	< 0.0020	< 0.0050	0.015	< 0.010	< 0.010	< 0.0050	0.025	0.013	< 0.010	< 0.010	< 0.010	0.010	< 0.020	< 0.00020

Notes:

mg/L - milligrams per liter

MCLs - Maximum Contaminant Levels

J - Results and/or reporting limits are estimated

Field duplicates are shown in italics

Metals by USEPA Method 6010/7471

^a - Values referred to as MCLs for lead and copper are not actually MCLs; instead they are called "Action Levels"

^b - As specified in the DTSC-approved PEA Work Plan, the reporting limit for thallium and antimony exceeds the RSL. As all results are non-detect, values are not bolded.



Table 5. AOI-3 PCBs in Soil

Juan Cabrillo Elementary School 30237 Morning View Drive Malibu, California

						P	CBs in µg/	kg		
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260
Residential D	TSC-Modified R	SL or USEPA	RSL	4,000	150	150	240	240	240	240
	JC-SB-43	7/2/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	< 50
AOI-3 - Electrical Transformer	JC-SB-43	7/2/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50
AOI Electi Iransfe	JC-SB-44	7/2/2014	0	< 49	< 49	< 49	< 49	< 49	< 49	< 49
	JC-SB-44	7/2/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50

Notes:

μg/kg - micrograms per kilogram

Field duplicates are shown in italics

PCBs by USEPA Method 8082A

PCBs - Polychlorinated biphenyls

USEPA - United States Environmental Protection Agency

DTSC - Department of Toxic Substances Control

RSLs - Regional Screening Levels

bgs - below ground surface



Table 6a. AOI-4 Organochlorine Pesticides in SoilJuan Cabrillo Elementary School30237 Morning View DriveMalibu, California

Area of													Pesticides (0	Organochlor	ine) in µg/kg	l							
Interest	Sample	Sample	Depth	4,4'-	4,4'-	4,4'-		alpha-	beta-	Chlordane	delta-			Endosulfan			Endrin		-	Heptac	Heptachlor	Methoxy-	Тоха-
(AOI)	ID	Date	(feet bgs)	DDD	DDE	DDT	Aldrin	BHC	BHC	(total)	BHC	Dieldrin	Endosulfan I	II	sulfate		aldehyde	ketone	BHC	hlor	epoxide	chlor	phene
	(µg/ł	(g)		2,200	1,600	1,900	31	85	300	1,800		33	370,000	370,000	370,000	18,000	18,000	18,000	560	120	59	310,000	480
	JC-SB-01	7/2/2014	0.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	JC-SB-02	7/2/2014	0.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	JC-SB-03	7/2/2014	0	< 9.9	< 9.9	< 9.9	< 9.9	< 9.9	< 9.9	< 99	< 20	< 9.9	< 9.9	< 9.9	< 20	< 9.9	< 9.9	< 9.9	< 9.9	< 9.9	< 9.9	< 9.9	< 400
	JC-SB-03	7/2/2014	1.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
spu	JC-SB-04	7/2/2014	0	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
Playgrounds	JC-SB-04	7/2/2014	0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
ıbAt	JC-SB-04	7/2/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	JC-SB-05	7/2/2014	0	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
Sandy	JC-SB-05	7/2/2014	1.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
Sai	JC-SB-06	7/2/2014	0	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
and	JC-SB-06	7/2/2014	1.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.8	< 4.9	< 4.9	< 4.9	< 9.8	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
	JC-SB-07	7/2/2014	0	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
Grassy	JC-SB-07	7/2/2014	1.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.8	< 4.9	< 4.9	< 4.9	< 9.8	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
ī	JC-SB-08	7/2/2014	0.5	< 5.0	93	10	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
A01-4	JC-SB-54	7/3/2014	0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
Ā	JC-SB-54	7/3/2014	1.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.8	< 4.9	< 4.9	< 4.9	< 9.8	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
	JC-SB-55	7/3/2014	0.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	JC-SB-56	7/3/2014	0	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.8	< 4.9	< 4.9	< 4.9	< 9.8	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
	JC-SB-56	7/3/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	JC-SB-57	7/3/2014	0.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200

Notes:

µg/kg - micrograms per kilogram

Field duplicates are shown in italics

Pesticides by USEPA Method 8081

USEPA - United States Environmental Protection Agency

DTSC - Department of Toxic Substances Control

RSLs - Regional Screening Levels

bgs - below ground surface

NA - Not Available

Table 6b. AOI-4 Organophosphate Pesticides in SoilJuan Cabrillo Elementary School30237 Morning View DriveMalibu, California

								Р	esticides (Organophospl	nate) in µg/kg						
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	2-Butenoic acid, 3-[(dimethoxy- phosphinyl)oxy]-, m	Chlorpyrifos	Co-Ral	Dasanit	Demeton (Demeton O + Demeton S)	Diazinon	Dichlorovos	Dimethoate	Disulfoton	Ethoprop	Ethyl P- Nitorphenyl Benzene- thiophosphate	Famphur	Fenthion	Guthion
Residential	DTSC-Modified	RSL or USE	PA RSL	NA	62,000	NA	NA	2,500	43,000	1,800	12,000	2,500	NA	620	NA	NA	NA
	JC-SB-01	7/2/2014	0.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-02	7/2/2014	0.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-03	7/2/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-03	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
spu	JC-SB-04	7/2/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
no	JC-SB-04	7/2/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
ıygı	JC-SB-04	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
Ë	JC-SB-05	7/2/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
h	JC-SB-05	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
Saı	JC-SB-06	7/2/2014	0	< 33	< 33	< 33	< 33	< 65	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
and	JC-SB-06	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
sya	JC-SB-07	7/2/2014	0	< 38	< 38	< 38	< 38	< 75	< 38	< 38	< 38	< 38	< 38	< 38	< 38	< 38	< 38
rass	JC-SB-07	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-08	7/2/2014	0.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
9-4	JC-SB-54	7/3/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
AC	JC-SB-54	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-55	7/3/2014	0.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-56	7/3/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-56	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-57	7/3/2014	0.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33

Notes:

µg/kg - micrograms per kilogram

Field duplicates are shown in italics

USEPA- United States Environmental Protection Agency

Pesticides by USEPA Method 8141A

DTSC - Department of Toxic Substances Control

RSLs - Regional Screening Levels

bgs - below ground surface



Table 6b. AOI-4 Organophosphate Pesticides in SoilJuan Cabrillo Elementary School30237 Morning View DriveMalibu, California

							Pestici	des (Organo	phosphat	e) in µg/kg					
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Malathion	Methyl parathion	O,O,O-Triethyl phosphorothioate	O-Ethyl O-2,4,5- trichlorophenyl ethyl- phospho-nothioate	Parathion	Phorate	Prothiophos	Ronnel	Stirophos	Sulfotepp	Sulprofos	Thionazin
Residential	DTSC-Modified	I RSL or USE	PARSL	1,200,000	15,000	NA	NA	370,000	12,000	NA	3,100,000	22,000	31,000	NA	NA
	JC-SB-01	7/2/2014	0.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-02	7/2/2014	0.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-03	7/2/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-03	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
spu	JC-SB-04	7/2/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
_	JC-SB-04	7/2/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
laygrou	JC-SB-04	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
L	JC-SB-05	7/2/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
Vbn	JC-SB-05	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
Sar	JC-SB-06	7/2/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
pu	JC-SB-06	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
sy a	JC-SB-07	7/2/2014	0	< 38	< 38	< 38	< 38	< 38	< 38	< 38	< 38	< 38	< 38	< 38	< 38
ass	JC-SB-07	7/2/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
5 -	JC-SB-08	7/2/2014	0.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
4	JC-SB-54	7/3/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
AOI	JC-SB-54	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-55	7/3/2014	0.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-56	7/3/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-56	7/3/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	JC-SB-57	7/3/2014	0.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33

Notes:

µg/kg - micrograms per kilogram

Field duplicates are shown in italics

USEPA- United States Environmental Protection Agency

Pesticides by USEPA Method 8141A

DTSC - Department of Toxic Substances Control

RSLs - Regional Screening Levels

bgs - below ground surface



Table 6c. AOI-4 Herbicides in Soil

Juan Cabrillo Elementary School 30237 Morning View Drive Malibu, California

				Не	rbicides (µg/	kg)
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	2,4,5-T	2,4,5-TP	2,4-D
Residential I	DTSC-Modifie	d RSL or USE	EPA RSL	620,000	490,000	690,000
	JC-SB-01	7/2/2014	0.5	< 20	< 20	< 80
	JC-SB-02	7/2/2014	0.5	< 20	< 20	< 80
	JC-SB-03	7/2/2014	0	< 20	< 20	< 80
a a	JC-SB-03	7/2/2014	1.5	< 20	< 20	< 80
Ē	JC-SB-04	7/2/2014	0	< 20	< 20	< 80
gro	JC-SB-04	7/2/2014	0	< 20	< 20	< 80
ayı	JC-SB-04	7/2/2014	1.5	< 20	< 20	< 80
E	JC-SB-05	7/2/2014	0	< 20	< 20	< 80
(pr	JC-SB-05	7/2/2014	1.5	< 20	< 20	< 80
Sai	JC-SB-06	7/2/2014	0	< 20	< 20	< 80
p	JC-SB-06	7/2/2014	1.5	< 20	< 20	< 80
/ ai	JC-SB-07	7/2/2014	0	< 20	< 20	< 80
SS	JC-SB-07	7/2/2014	1.5	< 20	< 20	< 80
Grassy and Sandy Playgrounds	JC-SB-08	7/2/2014	0.5	< 20	< 20	< 80
	JC-SB-54	7/3/2014	0	< 20	< 20	< 80
AOI-4	JC-SB-54	7/3/2014	1.5	< 20	< 20	< 80
A A A	JC-SB-55	7/3/2014	0.5	< 20	< 20	< 80
	JC-SB-56	7/3/2014	0	< 20	< 20	< 80
	JC-SB-56	7/3/2014	1.5	< 20	< 20	< 79
	JC-SB-57	7/3/2014	0.5	< 20	< 20	< 80

Notes:

μg/kg - micrograms per kilogram Field duplicates are shown in italics Herbicides by USEPA Method 8151 USEPA - United States Environmental Protection Agency bgs - below ground surface DTSC - Department of Toxic Substances Control RSLs - Regional Screening Levels

Table 6d. AOI-4 Metals in Soil

Juan Cabrillo Elementary School 30237 Morning View Drive Malibu, California

											Ме	tals (m	g/kg)							
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium (total)	Cobalt	Copper		Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Mercury
Residential DTS	SC-Modified	RSL or US	EPA RSL	31	12 ^a	15,000	16	4.6	120,000	23	3,100	80	390	1,500	390	390	0.78 ^b	390	23,000	9.4
	JC-SB-01	7/2/2014	0.5	< 10 J	< 3.0	46 J	< 0.50	< 0.50	7.8	3.5	7.8	2.6	< 2.0	4.2	< 3.0 J	< 1.5	< 10	24	29	0.030
	JC-SB-02	7/2/2014	0.5	< 9.8 J	< 2.9	22 J	< 0.49	< 0.49	5.5	1.8	3.7	< 2.0	< 2.0	3.5	< 2.9 J	< 1.5	< 9.8	13	15	< 0.020
	JC-SB-03	7/2/2014	0	< 10 J	< 3.0	94 J	< 0.50	1.5	54	10	19	3.9	< 2.0	40	< 3.0 J	< 1.5	< 10	63	54	0.059
	JC-SB-03	7/2/2014	1.5	< 9.9 J	< 3.0	89 J	< 0.49	1.4	66	15	20	3.5	< 2.0	51	< 3.0 J	< 1.5	< 9.9	67	38	0.044
ds	JC-SB-04	7/2/2014	0	< 10 J	< 3.0	62 J	< 0.50	3.5	28	5.8	15	4.7	5.0	25	< 3.0 J	< 1.5	< 10	58	60	0.038
uno	JC-SB-04	7/2/2014	0	< 9.9 J	3.1	65 J	< 0.49	3.8	29	5.7	16	5.3	5.3	27	< 3.0 J	< 1.5	< 9.9	62	62	0.041
aygr	JC-SB-04	7/2/2014	1.5	< 10 J	< 3.0	79 J	< 0.50	1.0	68	13	21	2.6	< 2.0	50	< 3.0 J	< 1.5	< 10	67	36	0.11
Pla	JC-SB-05	7/2/2014	0	< 10 J	3.0	62 J	< 0.50	1.4	64	14	20	2.4	< 2.0	51	< 3.0 J	< 1.5	< 10	64	41	0.029
ybr	JC-SB-05	7/2/2014	1.5	< 10 J	< 3.0	63 J	< 0.50	1.2	66	15	22	3.2	< 2.0	50	< 3.0 J	< 1.5	< 10	65	42	0.048
Sar	JC-SB-06	7/2/2014	0	< 9.9 J	3.4	60 J	< 0.50	3.6	26	5.6	14	4.8	4.2	23	< 3.0 J	< 1.5	< 9.9	55	60	0.029
and	JC-SB-06	7/2/2014	1.5	< 10 J	3.2	73 J	< 0.50	1.8	73	16	23	2.7	4.4	62	< 3.0 J	< 1.5	< 10	88	42	0.029
sy a	JC-SB-07	7/2/2014	0	< 9.8 J	< 2.9	50 J	< 0.49	2.8	22	5.5	14	7.2	2.6	20	< 2.9 J	< 1.5	< 9.8	40	140	0.030
iras	JC-SB-07	7/2/2014	1.5	< 9.9 J	< 3.0	34 J	< 0.50	0.95	42	11	17	2.6	< 2.0	44	< 3.0 J	< 1.5	< 9.9	51	38	0.028
9	JC-SB-08	7/2/2014	0.5	< 9.9	< 3.0	30	< 0.50	< 0.50	16 J	2.8	5.5 J	9.1	< 2.0	9.3	< 3.0	< 1.5	< 9.9	20	49 J	< 0.020
AOI-4	JC-SB-54	7/3/2014	0	< 9.9 J	3.7	130	< 0.49	4.2	58	15	32	12	< 2.0	43	< 3.0	1.7	< 9.9	48	57	0.11
A,	JC-SB-54	7/3/2014	1.5	< 10 J	< 3.0	93	< 0.50	1.1	44	15	19	2.7	< 2.0	43	< 3.0	< 1.5	< 10	50	25	0.032
	JC-SB-55	7/3/2014	0.5	< 10 J	< 3.0	26	< 0.50	< 0.50	6.1	2.1	4.0	< 2.0	< 2.0	4.5	< 3.0	< 1.5	< 10	10	25	0.033
	JC-SB-56	7/3/2014	0	< 10 J	3.1	100	< 0.50	1.3	50	16	22	2.9	< 2.0	49	< 3.0	< 1.5	< 10	47	29	0.036
	JC-SB-56	7/3/2014	1.5	< 10 J	< 3.0	620	< 0.50	1.5	45	15	22	< 2.0	< 2.0	54	< 3.0	< 1.5	< 10	47	53	0.052
	JC-SB-57	7/3/2014	0.5	< 9.9 J	< 3.0	11	< 0.50	< 0.50	7.5	1.3	2.1	< 2.0	< 2.0	3.8	< 3.0	< 1.5	< 9.9	6.4	9.4	< 0.020

Notes:

Bolded values exceed the Residential DTSC-Modified RSL or USEPA RSL

mg/kg - milligrams per kilogram

Field duplicates are shown in italics

Metals by USEPA Method 6010/7471

USEPA - United States Environmental Protection Agency

J - Results and/or reporting limits are estimated

bgs - below ground surface

DTSC - Department of Toxic Substances Control

RSLs - Regional Screening Levels

^a Arsenic occurs naturally in soil. An evaluation of arsenic soil data from school sites in Southern California found arsenic concentrations ranging from 0.15 mg/kg to 20 mg/kg, with an upper-bound background arsenic concentration of 12 mg/kg (Chernoff G, Bosan W, Oudiz D. 2008. Determination of a Southern California Regional Background Arsenic Concentration in Soil). Arsenic concentrations in soil samples collected at the site were conservatively screened against 12 mg/kg. Arsenic concentrations greater than 12 mg/kg were further evaluated in Section 9 of the PEA Report.

^b As specified in the DTSC-approved PEA Work Plan, the reporting limit for thallium exceeds the RSL. As all results are non-detect, values are not bolded.

RAMBOLL ENVIRON

Table 7a. AOI-5 PCBs in SoilMalibu High School30215 Morning View DriveMalibu, California

Area of						P	CBs in µg/	ka		
Interest			Depth	Aroclor	Aroclor	Aroclor	Aroclor	Aroclor	Aroclor	Aroclor
(AOI)	Sample ID	Sample Date	(feet bgs)	1016	1221	1232	1242	1248	1254	1260
Reside	ntial DTSC-Mod	ified RSL or USE	PA RSL	4,000	150	150	240	240	240	240
	MH-SB-10	7/9/2014	0	< 99	< 99	< 99	< 99	< 99	590	< 99
	MH-SB-10	7/9/2014	1.5	< 50	< 50	< 50	< 50	< 50	270 J	< 50
	MH-SB-11	7/9/2014	0	< 49	< 49	< 49	< 49	< 49	< 49	< 49
	MH-SB-11 MH-SB-13	7/9/2014 7/9/2014	1.5 0	< 49 < 49	< 49 230	< 49 < 49				
	MH-SB-13 MH-SB-13	7/9/2014	1.5	< 49 < 49	< 49	< 49 < 49				
	MH-SB-14	7/9/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	MH-SB-14	7/9/2014	1.5	< 49	< 49	< 49	< 49	< 49	< 49	< 49
	MH-SB-15	7/9/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	MH-SB-15	7/9/2014	1.5	< 49	< 49	< 49	< 49	< 49	< 49	< 49
	MH-SB-18	7/9/2014	0	< 49	< 49	< 49	< 49	< 49	< 49	< 49
	MH-SB-18	7/9/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	MH-SB-21 MH-SB-21	7/9/2014 7/9/2014	0 1.5	< 50 < 50	130 < 50	< 50 < 50				
	MH-SB-21 MH-SB-29	7/8/2014	0	< 50	< 50	< 50	< 50	< 50	< 30 140	< 50
	MH-SB-29	7/8/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	MH-SB-30	7/8/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	MH-SB-30	7/8/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	MH-SB-32	7/8/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	MH-SB-32	7/8/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	MH-SB-37	7/8/2014	0	< 50	< 50	< 50	< 50	< 50	50	< 50
	MH-SB-37 MH-SB-38	7/8/2014 7/8/2014	1.5 0	< 50 < 50	< 50 < 50					
	MH-SB-38 MH-SB-38	7/8/2014	0 1.5	< 50 < 50	< 50 < 50					
	MH-SB-41	7/9/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	MH-SB-41	7/9/2014	1.5	< 50	< 50	< 50	< 50	< 50	66	< 50
	MH-SB-43	7/9/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	MH-SB-44	7/8/2014	0	< 50	< 50	< 50	< 50	< 50	170	86
81	MH-SB-44	7/8/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50
0 15	MH-SB-45	7/8/2014	0	< 50	< 50	< 50	< 50	< 50	94	< 50
or to	MH-SB-45 MH-SB-46	7/8/2014 7/8/2014	1.5 0	< 50 < 50	< 50 85 J	< 50 < 50				
Pri	MH-SB-46	7/8/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50
ted	MH-SB-46	7/8/2014	1.5	< 49	< 49	< 49	< 49	< 49	< 49	< 49
ruc	MH-SB-47	7/8/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	< 50
inst	MH-SB-47	7/8/2014	1.5	< 49	< 49	< 49	< 49	< 49	< 49	< 49
ů	MH-SB-48	7/8/2014	0	< 49	< 49	< 49	< 49	< 49	83	< 49
sbu	MH-SB-48	7/8/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50
ildi	MH-SB-62	7/8/2014	0	< 49	< 49	< 49	< 49	< 49	< 49	< 49
·Bu	MH-SB-62 MH-SB-70	7/8/2014 7/21/2014	1.5 0	< 50 < 50	57 78	< 50 < 50				
AOI-5 - Buildings Constructed Prior to 1981	MH-SB-70	7/21/2014	1.5	< 49	< 49	< 49	< 49	< 49	< 49	< 49
AO	MH-SB-71	7/21/2014	0	< 49	< 49	< 49	< 49	< 49	< 49	< 49
	MH-SB-71	7/21/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	MH-SB-71	7/21/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	MH-SB-73	7/21/2014	0	< 49	< 49	< 49	< 49	< 49	< 49	< 49
	MH-SB-73	7/21/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	MH-SB-74	7/21/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	MH-SB-74 MH-SB-75	7/21/2014 7/21/2014	1.5 0	< 50 < 50	< 50 < 50					
	MH-SB-75 MH-SB-75	7/21/2014	0	< 30 < 49	< 30 < 49					
	MH-SB-75	7/21/2014	1.5	< 49	< 49	< 49	< 49	< 49	< 49	< 49
	MH-SB-76	7/9/2014	0	< 500	< 500	< 500	< 500	< 500	1500	< 500
	MH-SB-76	7/9/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	MH-SB-77	7/9/2014	0	< 99	< 99	< 99	< 99	< 99	720	< 99
	MH-SB-77	7/9/2014	1.5	< 50	< 50	< 50	< 50	< 50	130 J	< 50
	MH-SB-79 MH-SB-79	7/9/2014 7/9/2014	0 1.5	< 99 < 49	700 < 49	< 99 < 49				
	MH-SB-79 MH-SB-81	7/9/2014	0	< 49 < 50	< 49 < 50					
	MH-SB-81	7/21/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	MH-SB-82	7/21/2014	0	< 49	< 49	< 49	< 49	< 49	< 49	< 49
	MH-SB-82	7/21/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	MH-SB-84	7/21/2014	0	< 49	< 49	< 49	< 49	< 49	< 49	< 49
	MH-SB-84	7/21/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	MH-SB-86	7/21/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	MH-SB-86 MH-SB-92	7/21/2014 7/21/2014	1.5 0	< 50 < 50	< 50 53	< 50 < 50				
	MH-SB-92 MH-SB-92	7/21/2014	1.5	< 50 < 49	140	< 50 < 49				
	MH-SB-92 MH-SB-93	7/21/2014	0	< 49 < 50	< 49 < 50	< 49 < 50	< 50	< 49 < 50	< 50	< 49 < 50
	MH-SB-93	7/21/2014	0	< 49	< 49	< 49	< 49	< 49	< 49	< 49
	MH-SB-93	7/21/2014	1.5	< 50 J	120 J	< 50 J				
B	-				•			•		<u> </u>



Table 7a. AOI-5 PCBs in SoilMalibu High School30215 Morning View DriveMalibu, California

Area of				PCBs in µg/kg									
Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260			
Residential DTSC-Modified RSL or USEPA RSL				4,000	150	150	240	240	240	240			
				Soil Step Out Sampling									
	MH-SB-114	8/15/2014	0	< 250	< 250	< 250	< 250	< 250	800 J	< 250			
	MH-SB-114	8/15/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50			
	MH-SB-115	8/15/2014	0	< 49	< 49	< 49	< 49	< 49	< 49	< 49			
_	MH-SB-115	8/15/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50			
AOI-5 - Buildings Constructed Prior to 1981	MH-SB-116	8/15/2014	0	< 140	< 140	< 140	< 140	< 140	410	< 140			
6	MH-SB-116	8/15/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50			
or t	MH-SB-117	8/15/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	< 50			
Pri	MH-SB-117	8/15/2014	1.5	< 49	< 49	< 49	< 49	< 49	< 49	< 49			
ed	MH-SB-118	8/15/2014	0	< 250	< 250	< 250	< 250	< 250	1100	< 250			
nct	MH-SB-118	8/15/2014	1.5	< 140	< 140	< 140	< 140	< 140	< 140	< 140			
str	MH-SB-119	8/15/2014	0	< 50	< 50	< 50	< 50	< 50	340	< 50			
Son	MH-SB-119	8/15/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50			
<u>s</u>	MH-SB-120	8/15/2014	0	< 49	< 49	< 49	< 49	< 49	430	< 49			
ling	MH-SB-120	8/15/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50			
plir	MH-SB-121	8/15/2014	0	< 49	< 49	< 49	< 49	< 49	140	< 49			
ā	MH-SB-121	8/15/2014	1.5	< 50	< 50	< 50	< 50	< 50	64	< 50			
- <u>-</u> 2	MH-SB-122	8/15/2014	0	< 49	< 49	< 49	< 49	< 49	< 49	< 49			
AO	MH-SB-122	8/15/2014	1.5	< 49	< 49	< 49	< 49	< 49	< 49	< 49			
	MH-SB-123	8/15/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	< 50			
	MH-SB-123	8/15/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50			
	MH-SB-124	8/18/2014	0	< 50	< 50	< 50	< 50	< 50	72	< 50			
	MH-SB-124	8/18/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50			
	MH-SB-17A	9/25/2014	0	< 150	< 150	< 150	< 150	< 150	250	< 50			

Notes:

µg/kg - micrograms per kilogram

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Levels

bgs - below ground surface

J - Results and/or reporting limits are estimated

Field duplicates are shown in italics

PCBs - Polychlorinated biphenyls

PCBs by USEPA Method 8082A

Bolded values exceed residential RSL



Table 7b. AOI-5 Organochlorine Pesticides in SoilMalibu High School30215 Morning View Drive

Malibu, California

		Sample Date		Pesticides (Organochlorine) in µg/kg												
Area of Interest	Sample ID		Depth		Chlordane											
(AOI)			(feet bgs)	4,4'-DDD	4,4'-DDE	4,4'-DDT	Aldrin	alpha-BHC	beta-BHC	(total)	delta-BHC	Dieldrin	Endosulfan I	Endosulfan II		
Residential DTSC-Modified RSL or USEPA RSL			2,200	1,600	1,900	31	85	300	1,800	NA	33	370,000	370,000			
-	MH-SB-10	7/9/2014	0	< 5.0	59	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0		
	MH-SB-10	7/9/2014	1.5	< 5.0	26 J	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0		
	MH-SB-11	7/9/2014	0	< 4.9	6.0	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9		
	MH-SB-11	7/9/2014	1.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9		
	MH-SB-13	7/9/2014	0	< 4.9	22	< 4.9	< 4.9	< 4.9	< 4.9	88	< 9.9	< 4.9	< 4.9	< 4.9		
	MH-SB-13	7/9/2014	1.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9		
	MH-SB-14	7/9/2014	0	< 5.0	7.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0		
	MH-SB-14	7/9/2014	1.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9		
	MH-SB-15	7/9/2014	0	< 4.9	7.1	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9		
	MH-SB-15	7/9/2014	1.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9		
	MH-SB-18	7/9/2014	0	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9		
	MH-SB-18	7/9/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0		
1981	MH-SB-21	7/9/2014	0	< 5.0	50	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0		
2 7	MH-SB-21	7/9/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0		
	MH-SB-29	7/8/2014	0	< 5.0	5.6	< 5.0	< 5.0	< 5.0	< 5.0	110	< 9.9	< 5.0	< 5.0	< 5.0		
Prior	MH-SB-29	7/8/2014	1.5	< 5.0	100	28	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0		
	MH-SB-30	7/8/2014	0	< 5.0	5.6	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0		
ucted	MH-SB-30	7/8/2014	1.5	< 5.0	18	5.7	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0		
stri	MH-SB-32	7/8/2014	0	< 5.0	5.3	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0		
Con	MH-SB-32	7/8/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0		
	MH-SB-37	7/8/2014	0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0		
Buildings	MH-SB-37	7/8/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0		
nilo	MH-SB-38	7/8/2014	0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0		
ā	MH-SB-38	7/8/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0		
Ч Ч	MH-SB-41	7/9/2014	0	< 5.0	< 5.0	6.0	< 5.0	< 5.0	< 5.0	120	< 9.9	< 5.0	< 5.0	< 5.0		
AOI-5	MH-SB-41	7/9/2014	1.5	< 5.0	6.9	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0		
	MH-SB-43	7/9/2014	0	< 5.0	< 5.0	6.5	< 5.0	< 5.0	< 5.0	220	< 9.9	< 5.0	< 5.0	< 5.0		
	MH-SB-44	7/8/2014	0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0		
	MH-SB-44	7/8/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0		
	MH-SB-45	7/8/2014	0	< 5.0	5.1	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0		
	MH-SB-45	7/8/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0		
	MH-SB-46	7/8/2014	0	< 5.0	11	5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0		
	MH-SB-46	7/8/2014	1.5	< 5.0	5.4	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0		
	MH-SB-46	7/8/2014	1.5	< 4.9	8.8	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.8	< 4.9	< 4.9	< 4.9		
	MH-SB-47	7/8/2014	0	< 5.0	13	5.1	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0		
	MH-SB-47	7/8/2014	1.5	< 4.9	35	9.8	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9		
	MH-SB-48	7/8/2014	0	< 4.9	9.1	9.1	< 4.9	< 4.9	< 4.9	< 49	< 9.8	< 4.9	< 4.9	< 4.9		
	MH-SB-48	7/8/2014	1.5	< 5.0	11	7.3	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0		

RAMECLL ENVIRON

Table 7b. AOI-5 Organochlorine Pesticides in SoilMalibu High School30215 Morning View Drive

Malibu, California

				Pesticides (Organochlorine) in μg/kg										
Area of Interest			Depth							Chlordane				
(AOI)	Sample ID	Sample Date		4,4'-DDD	4,4'-DDE	4,4'-DDT	Aldrin	alpha-BHC	beta-BHC	(total)	delta-BHC	Dieldrin	Endosulfan I	Endosulfan II
Residential DTSC-Modified RSL or USEPA RSL		2,200	1,600	1,900	31	85	300	1,800	NA	33	370,000	370,000		
	MH-SB-62	7/8/2014	0	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9
	MH-SB-62	7/8/2014	1.5	< 5.0	5.1	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 10	< 5.0	< 5.0	< 5.0
	MH-SB-70	7/21/2014	0	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 50 J	< 9.9 J	< 5.0 J	< 5.0 J	< 5.0 J
	MH-SB-70	7/21/2014	1.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9
	MH-SB-71	7/21/2014	0	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9
	MH-SB-71	7/21/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
	MH-SB-71	7/21/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
	MH-SB-73	7/21/2014	0	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9
	MH-SB-73	7/21/2014	1.5	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 50 J	< 9.9 J	< 5.0 J	< 5.0 J	< 5.0 J
	MH-SB-74	7/21/2014	0	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 50 J	< 9.9 J	< 5.0 J	< 5.0 J	< 5.0 J
2	MH-SB-74	7/21/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
1981	MH-SB-75	7/21/2014	0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
2	MH-SB-75	7/21/2014	0	< 4.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 49 J	< 9.9 J	< 4.9 J	< 4.9 J	< 4.9 J
Prior	MH-SB-75	7/21/2014	1.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9
Ē	MH-SB-76	7/9/2014	0	< 5.0	46	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
cted	MH-SB-76	7/9/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
Li r	MH-SB-77	7/9/2014	0	< 4.9	50	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9
Constru	MH-SB-77	7/9/2014	1.5	< 5.0	11	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
	MH-SB-79	7/9/2014	0	< 5.0	23	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
Buildings	MH-SB-79	7/9/2014	1.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9
ldir	MH-SB-80	7/21/2014	0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
Bui	MH-SB-80	7/21/2014	1.5	< 4.9	5.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9
	MH-SB-81	7/21/2014	0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
A01-5	MH-SB-81	7/21/2014	1.5	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 50 J	< 9.9 J	< 5.0 J	< 5.0 J	< 5.0 J
Ā	MH-SB-82	7/21/2014	0	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9
	MH-SB-82	7/21/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
	MH-SB-84	7/21/2014	0	< 4.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 49 J	< 9.9 J	< 4.9 J	< 4.9 J	< 4.9 J
	MH-SB-84	7/21/2014	1.5	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 50 J	< 9.9 J	< 5.0 J	< 5.0 J	< 5.0 J
	MH-SB-86	7/21/2014	0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
	MH-SB-86	7/21/2014	1.5	< 5.0 J	27 J	6.1 J	< 5.0 J	< 5.0 J	< 5.0 J	< 50 J	< 9.9 J	< 5.0 J	< 5.0 J	< 5.0 J
	MH-SB-92	7/21/2014	0	< 5.0	6.3	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
	MH-SB-92	7/21/2014	1.5	< 4.9	46	8.2	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9
	MH-SB-93	7/21/2014	0	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 50 J	< 9.9 J	< 5.0 J	< 5.0 J	< 5.0 J
	MH-SB-93	7/21/2014	0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
	MH-SB-93	7/21/2014	1.5	< 5.0 J	10 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 50 J	< 9.9 J	< 5.0 J	< 5.0 J	< 5.0 J

Notes:

µg/kg - micrograms per kilogram

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Levels bgs - below ground surface NA - not available J - Results and/or reporting limits are estimated Field duplicates are shown in italics Pesticides by USEPA Method 8081A

Table 7b. AOI-5 Organochlorine Pesticides in SoilMalibu High School30215 Morning View Drive

Malibu, California

		Sample Date		Pesticides (Organochlorine) in µg/kg										
Area of Interest (AOI)	Sample ID		Depth (feet bgs)	Endosulfan Sulfate	Endrin	Endrin aldehyde	Endrin ketone	gamma-BHC	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene		
Residential DTSC-Modified RSL or USEPA RSL			370,000	18,000	18,000	18,000	560	120	59	310,000	480			
	MH-SB-10	7/9/2014	0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200		
	MH-SB-10	7/9/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200		
	MH-SB-11	7/9/2014	0	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200		
	MH-SB-11	7/9/2014	1.5	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200		
	MH-SB-13	7/9/2014	0	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200		
	MH-SB-13	7/9/2014	1.5	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200		
	MH-SB-14	7/9/2014	0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200		
	MH-SB-14	7/9/2014	1.5	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200		
	MH-SB-15	7/9/2014	0	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200		
	MH-SB-15	7/9/2014	1.5	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200		
	MH-SB-18	7/9/2014	0	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200		
	MH-SB-18	7/9/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200		
1981	MH-SB-21	7/9/2014	0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200		
to 1	MH-SB-21	7/9/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200		
	MH-SB-29	7/8/2014	0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200		
Prior	MH-SB-29	7/8/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200		
eq	MH-SB-30	7/8/2014	0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200		
ncto	MH-SB-30	7/8/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200		
stri	MH-SB-32	7/8/2014	0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200		
Con	MH-SB-32	7/8/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200		
	MH-SB-37	7/8/2014	0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200		
uildings	MH-SB-37	7/8/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200		
nilo	MH-SB-38	7/8/2014	0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200		
ā	MH-SB-38	7/8/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200		
-2	MH-SB-41	7/9/2014	0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200		
AOI	MH-SB-41	7/9/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200		
	MH-SB-43	7/9/2014	0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200		
	MH-SB-44	7/8/2014	0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200		
	MH-SB-44	7/8/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200		
	MH-SB-45	7/8/2014	0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200		
	MH-SB-45	7/8/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200		
	MH-SB-46	7/8/2014	0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200		
	MH-SB-46	7/8/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200		
	MH-SB-46	7/8/2014	1.5	< 9.8	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200		
	MH-SB-47	7/8/2014	0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200		
	MH-SB-47	7/8/2014	1.5	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200		
	MH-SB-48	7/8/2014	0	< 9.8	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200		
	MH-SB-48	7/8/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200		

Table 7b. AOI-5 Organochlorine Pesticides in Soil Malibu High School

30215 Morning View Drive Malibu, California

							Pesticides (Orga	anochlorine) in j	Pesticides (Organochlorine) in µg/kg										
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Endosulfan Sulfate	Endrin	Endrin aldehyde	Endrin ketone	gamma-BHC	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene							
Resident	ial DTSC-Modified I	RSL or USEPA R	SL	370,000	18,000	18,000	18,000	560	120	59	310,000	480							
	MH-SB-62	7/8/2014	0	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200							
	MH-SB-62	7/8/2014	1.5	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200							
	MH-SB-70	7/21/2014	0	< 9.9 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 200 J							
	MH-SB-70	7/21/2014	1.5	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200 J							
	MH-SB-71	7/21/2014	0	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200 J							
	MH-SB-71	7/21/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200 J							
	MH-SB-71	7/21/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200 J							
	MH-SB-73	7/21/2014	0	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200 J							
	MH-SB-73	7/21/2014	1.5	< 9.9 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 200 J							
	MH-SB-74	7/21/2014	0	< 9.9 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 200 J							
<u> </u>	MH-SB-74	7/21/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200 J							
1981	MH-SB-75	7/21/2014	0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200 J							
\$	MH-SB-75	7/21/2014	0	< 9.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 200 J							
Prior	MH-SB-75	7/21/2014	1.5	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200							
	MH-SB-76	7/9/2014	0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200							
ncted	MH-SB-76	7/9/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200							
	MH-SB-77	7/9/2014	0	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200							
Constr	MH-SB-77	7/9/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200							
-	MH-SB-79	7/9/2014	0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200							
Buildings	MH-SB-79	7/9/2014	1.5	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200							
dir	MH-SB-80	7/21/2014	0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200							
3ui	MH-SB-80	7/21/2014	1.5	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200							
-	MH-SB-81	7/21/2014	0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200 J							
AOI-5	MH-SB-81	7/21/2014	1.5	< 9.9 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 200 J							
Ā	MH-SB-82	7/21/2014	0	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200 J							
	MH-SB-82	7/21/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200 J							
	MH-SB-84	7/21/2014	0	< 9.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 200 J							
	MH-SB-84	7/21/2014	1.5	< 9.9 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 200 J							
	MH-SB-86	7/21/2014	0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200 J							
	MH-SB-86	7/21/2014	1.5	< 9.9 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 200 J							
	MH-SB-92	7/21/2014	0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200 J							
	MH-SB-92	7/21/2014	1.5	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200 J							
	MH-SB-93	7/21/2014	0	< 9.9 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 200 J							
	MH-SB-93	7/21/2014	0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200 J							
	MH-SB-93	7/21/2014	1.5	< 9.9 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 200 J							

Notes:

µg/kg - micrograms per kilogram

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Levels bgs - below ground surface NA - not available J - Results and/or reporting limits are estimated Field duplicates are shown in italics Pesticides by USEPA Method 8081A

					Pesticides (Or	ganophos	sphates) in	ua/ka	
Area of Interest			Depth	2-Butenoic acid, 3-[(dimethoxy-				Demeton (Demeton O +	
(AOI)	Sample ID	Sample Date	· • • /	phosphinyl)oxy]-, m	Chlorpyrifos		Dasanit	Demeton S)	Diazinon
Resid	ential DTSC-Mod	-		NA	62,000	NA	NA	2,500	43,000
	MH-SB-10 MH-SB-10	7/9/2014 7/9/2014	0 1.5	< 33 < 33	< 33 < 33	< 33 < 33	< 33 J < 33 J	< 66 J < 66 J	< 33 < 33
	MH-SB-11	7/9/2014	0	< 33	< 33	< 33	< 33 J	< 66 J	< 33
	MH-SB-11	7/9/2014	1.5	< 33	< 33	< 33	< 33 J	< 66 J	< 33
	MH-SB-13	7/9/2014	0	< 33	< 33	< 33	< 33 J	< 66 J	< 33
	MH-SB-13	7/9/2014	1.5	< 33	< 33	< 33	< 33 J	< 66 J	< 33
	MH-SB-14	7/9/2014	0	< 33	< 33	< 33	< 33 J	< 66 J	< 33
	MH-SB-14 MH-SB-15	7/9/2014 7/9/2014	1.5 0	< 33 < 33	< 33 < 33	< 33 < 33	< 33 J < 33 J	< 66 J < 66 J	< 33 < 33
	MH-SB-15 MH-SB-15	7/9/2014	1.5	< 33	< 33	< 33	< 33 J	< 66 J	< 33
	MH-SB-18	7/9/2014	0	< 33	< 33	< 33	< 33 J	< 66 J	< 33
	MH-SB-18	7/9/2014	1.5	< 33	< 33	< 33	< 33 J	< 66 J	< 33
	MH-SB-21	7/9/2014	0	< 33	< 33	< 33	< 33 J	< 66 J	< 33
	MH-SB-21	7/9/2014	1.5	< 33	< 33	< 33	< 33 J	< 66 J	< 33
	MH-SB-29	7/8/2014	0	< 15	< 20	< 13	< 25	< 39 J	< 22
	MH-SB-29 MH-SB-30	7/8/2014 7/8/2014	1.5 0	< 15 < 15	< 20 < 19	< 13 < 13	< 25 < 24	< 39 J < 38 J	< 22 < 21
	MH-SB-30	7/8/2014	1.5	< 15	< 20	< 13	< 24	< 38 J	< 22
	MH-SB-32	7/8/2014	0	< 14	< 19	< 12	< 24	< 37 J	< 21
	MH-SB-32	7/8/2014	1.5	< 14	< 19	< 12	< 24	< 37 J	< 21
	MH-SB-37	7/8/2014	0	< 33	< 44	< 29	< 55	< 86 J	< 49
	MH-SB-37	7/8/2014	1.5	< 17	< 22	< 14	< 28	< 43 J	< 24
	MH-SB-38	7/8/2014	0	< 33	< 33	< 33	< 33 J	< 66 J	< 33
	MH-SB-38 MH-SB-41	7/8/2014 7/9/2014	1.5 0	< 33 < 33	< 33 < 33	< 33 < 33	< 33 J < 33	< 66 J < 66 J	< 33 < 33
	MH-SB-41 MH-SB-41	7/9/2014	1.5	< 33	< 33	< 33	< 33	< 65 J	< 33
	MH-SB-43	7/9/2014	0	< 33	< 33	< 33	< 33	< 66 J	< 33
	MH-SB-44	7/8/2014	0	< 14	< 19	< 13	< 24	< 38 J	< 21
81	MH-SB-44	7/8/2014	1.5	< 14	< 19	< 12	< 24	< 37 J	< 21
19	MH-SB-45	7/8/2014	0	< 23	< 30	< 20	< 38	< 59 J	< 33
- Buildings Constructed Prior to	MH-SB-45	7/8/2014	1.5	< 21	< 27	< 18	< 34	< 53 J	< 30
Pric	MH-SB-46 MH-SB-46	7/8/2014 7/8/2014	0 1.5	< 14 < 15	< 19 < 19	< 13 < 13	< 24 < 24	< 38 J < 38 J	< 21 < 21
ted	MH-SB-46	7/8/2014	1.5	< 14	< 19	< 12	< 24	< 37 J	< 21
ruct	MH-SB-47	7/8/2014	0	< 15	< 20	< 13	< 25	< 38 J	< 22
nst	MH-SB-47	7/8/2014	1.5	< 15	< 20	< 13	< 24	< 38 J	< 21
ů	MH-SB-48	7/8/2014	0	< 14	< 19	< 12	< 24	< 37 J	< 21
sɓu	MH-SB-48	7/8/2014	1.5	< 14	< 19	< 12	< 23	< 36 J	< 21
ildi	MH-SB-62	7/8/2014	0	< 14	< 19	< 12	< 24	< 37 J	< 21
- B	MH-SB-62 MH-SB-70	7/8/2014 7/21/2014	1.5 0	< 15 < 33	< 19 < 33 J	< 13 < 33 J	< 24 < 33 J	< 38 J < 66 J	< 21 < 33
AOI-5	MH-SB-70	7/21/2014	1.5	< 33	< 33 J	< 33 J	< 33 J	< 66 J	< 33
AC	MH-SB-71	7/21/2014	0	< 33	< 33 J	< 33 J	< 33 J	< 66 J	< 33
	MH-SB-71	7/21/2014	1.5	< 33	< 33 J	< 33 J	< 33 J	< 66 J	< 33
	MH-SB-71	7/21/2014	1.5	< 33	< 33 J	< 33 J	< 33 J	< 66 J	< 33
	MH-SB-73	7/21/2014	0	< 33	< 33	< 33	< 33 J	< 66 J	< 33
	MH-SB-73 MH-SB-74	7/21/2014 7/21/2014	1.5 0	< 33 J < 33	< 33 J < 33	< 33 J	< 33 J < 33 J	< 66 J < 65 J	< 33 J < 33
	MH-SB-74 MH-SB-74	7/21/2014	0 1.5	< 33	< 33	< 33 < 33	< 33 J < 33 J	< 65 J < 66 J	< 33
	MH-SB-75	7/21/2014	0	< 33	< 33	< 33	< 33 J	< 66 J	< 33
	MH-SB-75	7/21/2014	0	< 33	< 33	< 33	< 33 J	< 66 J	< 33
	MH-SB-75	7/21/2014	1.5	< 33	< 33	< 33	< 33 J	< 66 J	< 33
	MH-SB-76	7/9/2014	0	< 33	< 33	< 33	< 33 J	< 66 J	< 33
	MH-SB-76	7/9/2014	1.5	< 33	< 33	< 33	< 33 J	< 65 J	< 33
	MH-SB-77 MH-SB-77	7/9/2014 7/9/2014	0 1.5	< 33 < 33	< 33 < 33	< 33 < 33	< 33 J < 33 J	< 66 J < 66 J	< 33 < 33
	MH-SB-79	7/9/2014	0	< 33	< 33	< 33	< 33 J	< 66 J	< 33
	MH-SB-79	7/9/2014	1.5	< 33	< 33	< 33	< 33 J	< 66 J	< 33
	MH-SB-81	7/21/2014	0	< 33	< 33	< 33	< 33 J	< 66 J	< 33
	MH-SB-81	7/21/2014	1.5	< 33	< 33	< 33	< 33 J	< 66 J	< 33
	MH-SB-82	7/21/2014	0	< 33	< 33	< 33	< 33 J	< 66 J	< 33
	MH-SB-82	7/21/2014	1.5	< 33	< 33	< 33	< 33 J	< 66 J	< 33
	MH-SB-84 MH-SB-84	7/21/2014 7/21/2014	0 1.5	< 33 < 33	< 33 < 33	< 33 < 33	< 33 J < 33 J	< 66 J < 66 J	< 33 < 33
	MH-SB-86	7/21/2014	0	< 33	< 33	< 33	< 33 J	< 65 J	< 33
	MH-SB-86	7/21/2014	1.5	< 33	< 33 J	< 33	< 33 J	< 65 J	< 33
	MH-SB-92	7/21/2014	0	< 33	< 33 J	< 33	< 33 J	< 66 J	< 33
	MH-SB-92	7/21/2014	1.5	< 33	< 33 J	< 33	< 33 J	< 66 J	< 33
	MH-SB-93	7/21/2014	0	< 33	< 33 J	< 33	< 33 J	< 66 J	< 33
	MH-SB-93	7/21/2014	0	< 33	< 33 J	< 33	< 33 J	< 66 J	< 33
	MH-SB-93	7/21/2014	1.5	< 33	< 33 J	< 33	< 33 J	< 66 J	< 33

µg/kg - micrograms per kilogram

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Level

bgs - below ground surface

NA - not available

J - Results and/or reporting limits are estimated

Field duplicates are shown in italics



				Pesticides (Organophosphates) in µg/kg									
Area of Interest			Depth	Disklaravas	Dimetheate	Disulfator	E th en ren	Ethyl P-Nitorphenyl	Family				
(AOI)	•	Sample Date		Dichlorovos				Benzenethiophosphate	Famphur				
Reside	ential DTSC-Mod MH-SB-10	7/9/2014	O D	1,800 < 33 J	12,000 < 33	2,500 < 33	NA < 33	620 < 33	NA < 33				
-	MH-SB-10 MH-SB-10	7/9/2014	1.5	< 33 J	< 33	< 33	< 33	< 33	< 33				
	MH-SB-11	7/9/2014	0	< 33 J	< 33	< 33	< 33	< 33	< 33				
	MH-SB-11	7/9/2014	1.5	< 33 J	< 33	< 33	< 33	< 33	< 33				
	MH-SB-13	7/9/2014	0	< 33 J	< 33	< 33	< 33	< 33	< 33				
	MH-SB-13	7/9/2014	1.5	< 33 J	< 33	< 33	< 33	< 33	< 33				
-	MH-SB-14	7/9/2014	0	< 33 J	< 33	< 33	< 33	< 33	< 33				
-	MH-SB-14 MH-SB-15	7/9/2014 7/9/2014	1.5 0	< 33 J < 33 J	< 33 < 33	< 33 < 33	< 33 < 33	< 33 < 33	< 33 < 33				
-	MH-SB-15 MH-SB-15	7/9/2014	1.5	< 33 J	< 33	< 33	< 33	< 33	< 33				
	MH-SB-18	7/9/2014	0	< 33 J	< 33	< 33	< 33	< 33	< 33				
	MH-SB-18	7/9/2014	1.5	< 33 J	< 33	< 33	< 33	< 33	< 33				
	MH-SB-21	7/9/2014	0	< 33 J	< 33	< 33	< 33	< 33	< 33				
	MH-SB-21	7/9/2014	1.5	< 33 J	< 33	< 33	< 33	< 33	< 33				
Ļ	MH-SB-29	7/8/2014	0	< 23	< 22	< 48	< 15	< 13	< 13				
F	MH-SB-29 MH-SB-30	7/8/2014	1.5	< 23 < 22	< 22	< 48 < 47	< 15 < 15	< 13 < 13	< 13				
F	MH-SB-30 MH-SB-30	7/8/2014 7/8/2014	0 1.5	< 22	< 21 < 22	< 47	< 15 < 15	< 13	< 13 < 13				
	MH-SB-30 MH-SB-32	7/8/2014	0	< 22	< 22	< 47	< 14	< 12	< 12				
	MH-SB-32	7/8/2014	1.5	< 22	< 21	< 46	< 14	< 12	< 12				
	MH-SB-37	7/8/2014	0	< 51	< 49	< 110	< 33	< 29	< 29				
	MH-SB-37	7/8/2014	1.5	< 25	< 24	< 53	< 17	< 14	< 14				
Ļ	MH-SB-38	7/8/2014	0	< 33 J	< 33	< 33	< 33	< 33	< 33				
F	MH-SB-38	7/8/2014	1.5	< 33 J	< 33	< 33	< 33	< 33	< 33				
F	MH-SB-41 MH-SB-41	7/9/2014 7/9/2014	0 1.5	< 33 J < 33 J	< 33 < 33	< 33 < 33	< 33 < 33	< 33 < 33	< 33 < 33				
F	MH-SB-43	7/9/2014	0	< 33 J	< 33	< 33	< 33	< 33	< 33				
F	MH-SB-44	7/8/2014	0	< 22 J	< 21	< 46	< 14	< 13	< 13				
981	MH-SB-44	7/8/2014	1.5	< 22 J	< 21	< 46	< 14	< 12	< 12				
÷	MH-SB-45	7/8/2014	0	< 35 J	< 33	< 72	< 23	< 20	< 20				
r to	MH-SB-45	7/8/2014	1.5	< 32 J	< 30	< 66	< 21	< 18	< 18				
Prio	MH-SB-46	7/8/2014	0	< 22 J	< 21	< 46	< 14	< 13	< 13				
ed	MH-SB-46 MH-SB-46	7/8/2014 7/8/2014	1.5 <i>1.5</i>	< 22 < 22	< 21 < 21	< 47 < 45	< 15 < 14	< 13 < 12	< 13 < 12				
Constructed Prior to	MH-SB-47	7/8/2014	0	< 23	< 22	< 47	< 15	< 13	< 13				
nst	MH-SB-47	7/8/2014	1.5	< 22	< 21	< 47	< 15	< 13	< 13				
ů –	MH-SB-48	7/8/2014	0	< 22	< 21	< 46	< 14	< 12	< 12				
sbu	MH-SB-48	7/8/2014	1.5	< 21	< 21	< 45	< 14	< 12	< 12				
ildi	MH-SB-62	7/8/2014	0	< 22 J	< 21	< 45	< 14	< 12	< 12				
- Buildings	MH-SB-62 MH-SB-70	7/8/2014 7/21/2014	1.5 0	< 22 J < 33 J	< 21 < 33	< 47 < 33 J	< 15 < 33	< 13 < 33	< 13 < 33				
AOI-5	MH-SB-70 MH-SB-70	7/21/2014	1.5	< 33 J	< 33	< 33 J	< 33	< 33	< 33				
AO	MH-SB-71	7/21/2014	0	< 33 J	< 33	< 33 J	< 33	< 33	< 33				
F	MH-SB-71	7/21/2014	1.5	< 33 J	< 33	< 33 J	< 33	< 33	< 33				
	MH-SB-71	7/21/2014	1.5	< 33 J	< 33	< 33 J	< 33	< 33	< 33				
Ļ	MH-SB-73	7/21/2014	0	< 33	< 33	< 33 J	< 33	< 33	< 33				
	MH-SB-73	7/21/2014	1.5	< 33 J	< 33 J	< 33 J	< 33 J	< 33 J	< 33 J				
	MH-SB-74 MH-SB-74	7/21/2014 7/21/2014	0 1.5	< 33 < 33 J	< 33 < 33	< 33 J < 33 J	< 33 < 33	< 33 < 33	< 33 < 33				
ŀ	MH-SB-74 MH-SB-75	7/21/2014	0	< 33 J	< 33	< 33 J	< 33	< 33	< 33				
F	MH-SB-75	7/21/2014	0	< 33 J	< 33	< 33 J	< 33	< 33	< 33				
F	MH-SB-75	7/21/2014	1.5	< 33 J	< 33	< 33 J	< 33	< 33	< 33				
	MH-SB-76	7/9/2014	0	< 33 J	< 33	< 33	< 33	< 33	< 33				
Ļ	MH-SB-76	7/9/2014	1.5	< 33 J	< 33	< 33	< 33	< 33	< 33				
F	MH-SB-77	7/9/2014	0	< 33 J	< 33	< 33	< 33	< 33	< 33				
ŀ	MH-SB-77 MH-SB-79	7/9/2014 7/9/2014	1.5 0	< 33 J < 33 J	< 33 < 33	< 33 < 33	< 33 < 33	< 33 < 33	< 33 < 33				
ŀ	MH-SB-79 MH-SB-79	7/9/2014	1.5	< 33 J	< 33	< 33	< 33	< 33	< 33				
F	MH-SB-81	7/21/2014	0	< 33 J	< 33	< 33 J	< 33	< 33	< 33				
F	MH-SB-81	7/21/2014	1.5	< 33 J	< 33	< 33 J	< 33	< 33	< 33				
	MH-SB-82	7/21/2014	0	< 33 J	< 33	< 33 J	< 33	< 33	< 33				
Ļ	MH-SB-82	7/21/2014	1.5	< 33 J	< 33	< 33 J	< 33	< 33	< 33				
F	MH-SB-84	7/21/2014	0	< 33 J	< 33	< 33 J	< 33	< 33	< 33				
F	MH-SB-84 MH-SB-86	7/21/2014 7/21/2014	1.5 0	< 33 J < 33 J	< 33 < 33	< 33 J < 33 J	< 33 < 33	< 33 < 33	< 33 < 33				
ŀ	MH-SB-86 MH-SB-86	7/21/2014 7/21/2014	0 1.5	< 33 J < 33 J	< 33	< 33 J < 33	< 33 < 33	< 33	< 33				
┝	MH-SB-00 MH-SB-92	7/21/2014	0	< 33 J	< 33	< 33 J	< 33	< 33	< 33				
F	MH-SB-92	7/21/2014	1.5	< 33 J	< 33	< 33 J	< 33	< 33	< 33				
F	MH-SB-93	7/21/2014	0	< 33 J	< 33	< 33 J	< 33	< 33	< 33				
	MH-SB-93	7/21/2014	0	< 33 J	< 33	< 33 J	< 33	< 33	< 33				
	MH-SB-93	7/21/2014	1.5	< 33 J	< 33	< 33 J	< 33	< 33	< 33				

µg/kg - micrograms per kilogram

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Level

bgs - below ground surface

NA - not available

J - Results and/or reporting limits are estimated

Field duplicates are shown in italics



				Pesticides (Organophosphates) in µg/kg									
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Fenthion	Guthion	Malathion	Methyl parathion	0,0,0-Triethyl phosphorothioate	O-Ethyl O-2,4,5- trichlorophenyl ethyl- phosphonothioate				
· · ·	ential DTSC-Mod	•		NA	NA	1,200,000	15,000	NA	NA				
Reside	MH-SB-10	7/9/2014	0		< 33 J			< 33	< 33				
Ⅰ ⊢			-	< 33		< 33	< 33						
-	MH-SB-10	7/9/2014	1.5	< 33	< 33 J	< 33	< 33	< 33	< 33				
	MH-SB-11	7/9/2014	0	< 33	< 33 J	< 33	< 33	< 33	< 33				
-	MH-SB-11	7/9/2014	1.5	< 33	< 33 J	< 33	< 33	< 33	< 33				
-	MH-SB-13	7/9/2014	0	< 33	< 33	< 33	< 33	< 33	< 33				
-	MH-SB-13	7/9/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33				
_	MH-SB-14	7/9/2014	0	< 33	< 33	< 33	< 33	< 33	< 33				
_	MH-SB-14	7/9/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33				
	MH-SB-15	7/9/2014	0	< 33	< 33	< 33	< 33	< 33	< 33				
	MH-SB-15	7/9/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33				
	MH-SB-18	7/9/2014	0	< 33	< 33	< 33	< 33	< 33	< 33				
	MH-SB-18	7/9/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33				
	MH-SB-21	7/9/2014	0	< 33	< 33	< 33	< 33	< 33	< 33				
	MH-SB-21	7/9/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33				
	MH-SB-29	7/8/2014	0	< 33	< 13	< 15	< 20	< 39	< 20				
	MH-SB-29	7/8/2014	1.5	< 33	< 13	< 15	< 20	< 39	< 20				
	MH-SB-30	7/8/2014	0	< 32	< 13	< 15	< 19	< 38	< 19				
I [MH-SB-30	7/8/2014	1.5	< 32	< 13	< 15	< 20	< 38	< 20				
[MH-SB-32	7/8/2014	0	< 32	< 12	< 14	< 19	< 37	< 19				
I [MH-SB-32	7/8/2014	1.5	< 31	< 12	< 14	< 19	< 37	< 19				
I [MH-SB-37	7/8/2014	0	< 73	< 29	< 33	< 44	< 86	< 44				
[MH-SB-37	7/8/2014	1.5	< 36	< 14	< 17	< 22	< 43	< 22				
	MH-SB-38	7/8/2014	0	< 33	< 33	< 33	< 33	< 33	< 33				
	MH-SB-38	7/8/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33				
	MH-SB-41	7/9/2014	0	< 33	< 33	< 33	< 33	< 33	< 33				
	MH-SB-41	7/9/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33				
	MH-SB-43	7/9/2014	0	< 33	< 33	< 33	< 33	< 33	< 33				
	MH-SB-44	7/8/2014	0	< 32	< 13	< 14	< 19	< 38	< 19				
981	MH-SB-44	7/8/2014	1.5	< 32	< 12	< 14	< 19	< 37	< 19				
19	MH-SB-45	7/8/2014	0	< 50	< 20	< 23	< 30	< 59	< 30				
ę	MH-SB-45	7/8/2014	1.5	< 45	< 18	< 21	< 27	< 53	< 27				
rior	MH-SB-46	7/8/2014	0	< 32	< 13	< 14	< 19	< 38	< 19				
a p	MH-SB-46	7/8/2014	1.5	< 32	< 13	< 15	< 19	< 38	< 19				
cted	MH-SB-46	7/8/2014	1.5	< 31	< 12	< 14	< 19	< 37	< 19				
- Buildings Constructed Prior	MH-SB-47	7/8/2014	0	< 32	< 13	< 15	< 20	< 38	< 20				
suc	MH-SB-47	7/8/2014	1.5	< 32	< 13	< 15	< 20	< 38	< 20				
ŭ	MH-SB-48	7/8/2014	0	< 31	< 12	< 14	< 19	< 37	< 19				
รธิเ	MH-SB-48	7/8/2014	1.5	< 31	< 12	< 14	< 19	< 36	< 19				
ipi	MH-SB-62	7/8/2014	0	< 31	< 12	< 14	< 19	< 37	< 19				
Bui	MH-SB-62	7/8/2014	1.5	< 32	< 13	< 15	< 19	< 38	< 19				
- ي	MH-SB-70	7/21/2014	0	< 33	< 33 J	< 33	< 33 J	< 33	< 33				
AOI-5	MH-SB-70	7/21/2014	1.5	< 33	< 33 J	< 33	< 33 J	< 33	< 33				
< <	MH-SB-71	7/21/2014	0	< 33	< 33 J	< 33	< 33 J	< 33	< 33				
	MH-SB-71	7/21/2014	1.5	< 33	< 33 J	< 33	< 33 J	< 33	< 33				
	MH-SB-71	7/21/2014	1.5	< 33	< 33 J	< 33	< 33 J	< 33	< 33				
	MH-SB-73	7/21/2014	0	< 33	< 33 J	< 33	< 33 J	< 33	< 33				
	MH-SB-73	7/21/2014	1.5	< 33 J	< 33 J	< 33 J	< 33 J	< 33 J	< 33 J				
	MH-SB-74	7/21/2014	0	< 33	< 33 J	< 33	< 33 J	< 33	< 33				
l L	MH-SB-74	7/21/2014	1.5	< 33	< 33 J	< 33	< 33 J	< 33	< 33				
	MH-SB-75	7/21/2014	0	< 33	< 33 J	< 33	< 33 J	< 33	< 33				
	MH-SB-75	7/21/2014	0	< 33	< 33 J	< 33	< 33 J	< 33	< 33				
	MH-SB-75	7/21/2014	1.5	< 33	< 33 J	< 33	< 33 J	< 33	< 33				
	MH-SB-76	7/9/2014	0	< 33	< 33	< 33	< 33	< 33	< 33				
	MH-SB-76	7/9/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33				
	MH-SB-77	7/9/2014	0	< 33	< 33	< 33	< 33	< 33	< 33				
	MH-SB-77	7/9/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33				
▎ └	MH-SB-79	7/9/2014	0	< 33	< 33 J	< 33	< 33	< 33	< 33				
	MH-SB-79	7/9/2014	1.5	< 33	< 33 J	< 33	< 33	< 33	< 33				
	MH-SB-81	7/21/2014	0	< 33	< 33 J	< 33	< 33 J	< 33	< 33				
	MH-SB-81	7/21/2014	1.5	< 33	< 33 J	< 33	< 33 J	< 33	< 33				
	MH-SB-82	7/21/2014	0	< 33	< 33 J	< 33	< 33 J	< 33	< 33				
	MH-SB-82	7/21/2014	1.5	< 33	< 33 J	< 33	< 33 J	< 33	< 33				
	MH-SB-84	7/21/2014	0	< 33	< 33 J	< 33	< 33 J	< 33	< 33				
	MH-SB-84	7/21/2014	1.5	< 33	< 33 J	< 33	< 33 J	< 33	< 33				
	MH-SB-86	7/21/2014	0	< 33	< 33 J	< 33	< 33 J	< 33	< 33				
	MH-SB-86	7/21/2014	1.5	< 33	< 33 J	< 33	< 33 J	< 33	< 33				
	MH-SB-92	7/21/2014	0	< 33	< 33 J	< 33	< 33 J	< 33	< 33				
	MH-SB-92	7/21/2014	1.5	< 33	< 33 J	< 33	< 33 J	< 33	< 33				
1 -	MH-SB-93	7/21/2014	0	< 33	< 33 J	< 33	< 33 J	< 33	< 33				
▎ ┝	MH-SB-93	7/21/2014	0	< 33	< 33 J	< 33	< 33 J	< 33	< 33				
	MH-SB-93	7/21/2014	1.5	< 33	< 33 J	< 33	< 33 J	< 33	< 33				

µg/kg - micrograms per kilogram

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RSLs - Regional Screening Level

bgs - below ground surface

NA - not available

J - Results and/or reporting limits are estimated

Field duplicates are shown in italics



			Pesticides (Organophosphates) in µg/kg									
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Parathion	Phorate	Prothiophos	Ronnel	Stirophos	Sulfotepp	Sulprofos	Thionazin	
Resid	ential DTSC-Mod	ified RSL or US		370,000	12,000	NA	3,100,000	22,000	31,000	NA	NA	
	MH-SB-10	7/9/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
	MH-SB-10	7/9/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
	MH-SB-11 MH-SB-11	7/9/2014 7/9/2014	0 1.5	< 33 < 33	< 33 < 33	< 33 < 33	< 33 < 33					
	MH-SB-13	7/9/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
	MH-SB-13	7/9/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
	MH-SB-14	7/9/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
	MH-SB-14	7/9/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
	MH-SB-15 MH-SB-15	7/9/2014 7/9/2014	0 1.5	< 33 < 33	< 33 < 33	< 33 < 33	< 33 < 33					
	MH-SB-18	7/9/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
	MH-SB-18	7/9/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
	MH-SB-21	7/9/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
	MH-SB-21 MH-SB-29	7/9/2014 7/8/2014	1.5 0	< 33 < 18	< 33 < 20	< 33 < 20	< 33 < 46	< 33 < 15	< 33 < 20	< 33 < 13	< 33 < 18	
	MH-SB-29 MH-SB-29	7/8/2014	1.5	< 18	< 20	< 20	< 46 < 46	< 15	< 20	< 13	< 18	
	MH-SB-30	7/8/2014	0	< 18	< 19	< 19	< 45	< 15	< 19	< 13	< 18	
	MH-SB-30	7/8/2014	1.5	< 18	< 20	< 20	< 45	< 15	< 20	< 13	< 18	
	MH-SB-32	7/8/2014	0	< 17	< 19	< 19	< 44	< 14	< 19	< 12	< 17	
	MH-SB-32 MH-SB-37	7/8/2014 7/8/2014	1.5 0	< 17 < 40	< 19 < 44	< 19 < 44	< 44 < 100	< 15 < 33	< 19 < 44	< 12 < 29	< 17 < 40	
	MH-SB-37 MH-SB-37	7/8/2014	1.5	< 20	< 22	< 22	< 51	< 17	< 22	< 14	< 20	
	MH-SB-38	7/8/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
	MH-SB-38	7/8/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
	MH-SB-41 MH-SB-41	7/9/2014 7/9/2014	0 1.5	< 33 < 33	< 33 < 33	< 33 < 33	< 33 < 33					
	MH-SB-41 MH-SB-43	7/9/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
	MH-SB-44	7/8/2014	0	< 17	< 19	< 19	< 44	< 14	< 19	< 13	< 17	
1981	MH-SB-44	7/8/2014	1.5	< 17	< 19	< 19	< 44	< 14	< 19	< 12	< 17	
	MH-SB-45	7/8/2014	0	< 27	< 30	< 30	< 69	< 23	< 30	< 20	< 27	
Buildings Constructed Prior to	MH-SB-45 MH-SB-46	7/8/2014 7/8/2014	1.5 0	< 25 < 17	< 27 < 19	< 27 < 19	< 63 < 44	< 21 < 14	< 27 < 19	< 18 < 13	< 25 < 17	
Pri	MH-SB-46	7/8/2014	1.5	< 17	< 19	< 19	< 45	< 15	< 19	< 13	< 17	
ctec	MH-SB-46	7/8/2014	1.5	< 17	< 19	< 19	< 43	< 14	< 19	< 12	< 17	
stru	MH-SB-47	7/8/2014	0	< 18	< 20	< 20	< 45	< 15	< 20	< 13	< 18	
Son	MH-SB-47 MH-SB-48	7/8/2014 7/8/2014	1.5 0	< 18 < 17	< 20 < 19	< 20 < 19	< 45 < 44	< 15 < 14	< 20 < 19	< 13 < 12	< 18 < 17	
gs (MH-SB-48	7/8/2014	1.5	< 17	< 19	< 19	< 43	< 14	< 19	< 12	< 17	
ldin	MH-SB-62	7/8/2014	0	< 17	< 19	< 19	< 43	< 14	< 19	< 12	< 17	
Bui	MH-SB-62	7/8/2014	1.5	< 17	< 19	< 19	< 45	< 15	< 19	< 13	< 17	
-2 -	MH-SB-70 MH-SB-70	7/21/2014 7/21/2014	0 1.5	< 33 < 33	< 33 < 33	< 33 < 33	< 33 < 33	< 33 J < 33 J	< 33 < 33	< 33 < 33	< 33 < 33	
AOI-5	MH-SB-70	7/21/2014	0	< 33	< 33	< 33	< 33	< 33 J	< 33	< 33	< 33	
	MH-SB-71	7/21/2014	1.5	< 33	< 33	< 33	< 33	< 33 J	< 33	< 33	< 33	
	MH-SB-71	7/21/2014	1.5	< 33	< 33	< 33	< 33	< 33 J	< 33	< 33	< 33	
	MH-SB-73	7/21/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33 J	
	MH-SB-73 MH-SB-74	7/21/2014 7/21/2014	1.5 0	< 33 J < 33	< 33 J < 33	< 33 J < 33	< 33 J < 33 J					
	MH-SB-74	7/21/2014	1.5	< 33	< 33	< 33	< 33	< 33 J	< 33	< 33	< 33 J	
	MH-SB-75	7/21/2014	0	< 33	< 33	< 33	< 33	< 33 J	< 33	< 33	< 33 J	
	MH-SB-75	7/21/2014	0	< 33	< 33	< 33	< 33	< 33 J	< 33	< 33	< 33 J	
	MH-SB-75 MH-SB-76	7/21/2014 7/9/2014	1.5 0	< 33 < 33	< 33 < 33	< 33 < 33	< 33 < 33	< 33 J < 33	< 33 < 33	< 33 < 33	< 33 J < 33	
	MH-SB-76	7/9/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
	MH-SB-77	7/9/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
	MH-SB-77	7/9/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
	MH-SB-79 MH-SB-79	7/9/2014 7/9/2014	0 1.5	< 33 < 33	< 33 < 33	< 33 < 33	< 33 < 33					
	MH-SB-79 MH-SB-81	7/21/2014	0	< 33	< 33	< 33	< 33	< 33 J	< 33	< 33	< 33 J	
	MH-SB-81	7/21/2014	1.5	< 33	< 33	< 33	< 33	< 33 J	< 33	< 33	< 33 J	
	MH-SB-82	7/21/2014	0	< 33	< 33	< 33	< 33	< 33 J	< 33	< 33	< 33 J	
	MH-SB-82	7/21/2014	1.5 0	< 33 < 33	< 33 < 33	< 33 < 33	< 33	< 33 J	< 33	< 33	< 33 J	
	MH-SB-84 MH-SB-84	7/21/2014 7/21/2014	1.5	< 33	< 33	< 33	< 33 < 33	< 33 J < 33 J	< 33 < 33	< 33 < 33	< 33 < 33	
	MH-SB-86	7/21/2014	0	< 33	< 33	< 33	< 33	< 33 J	< 33	< 33	< 33	
	MH-SB-86	7/21/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
	MH-SB-92	7/21/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	
	MH-SB-92 MH-SB-93	7/21/2014 7/21/2014	1.5 0	< 33 < 33	< 33 < 33	< 33 < 33	< 33 J < 33					
	MH-SB-93 MH-SB-93	7/21/2014	0	< 33	< 33	< 33	< 33	< 33 J	< 33	< 33	< 33 J	
	MH-SB-93	7/21/2014	1.5	< 33	< 33	< 33	< 33	< 33 J	< 33	< 33	< 33 J	

µg/kg - micrograms per kilogram

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RSLs - Regional Screening Level

bgs - below ground surface

NA - not available

Field duplicates are shown in italics

J - Results and/or reporting limits are estimated



Table 7d. AOI-5 Herbicides in Soil

Malibu High School 30215 Morning View Drive Malibu, California

Area of Interest			Depth	Herk	picides in µg	g/kg
(AOI)	Sample ID	Sample Date	(feet bgs)	2,4,5-T	2,4,5-TP	2,4-D
Residential	DTSC-Modifie	ed RSL or USEPA	RSL	620,000	490,000	690,000
	MH-SB-10	7/9/2014	0	< 20	< 20	< 80
	MH-SB-10	7/9/2014	1.5	< 20	< 20	< 80
	MH-SB-11	7/9/2014	0	< 20	< 20	< 80
	MH-SB-11	7/9/2014	1.5	< 20	< 20	< 80
	MH-SB-13	7/9/2014	0	< 20	< 20	< 79
	MH-SB-13	7/9/2014	1.5	< 20 J	< 20	< 80
	MH-SB-14	7/9/2014	0	< 20 J	< 20	< 80
	MH-SB-14	7/9/2014	1.5	< 20 J	< 20	< 80
	MH-SB-15	7/9/2014	0	< 20 J	< 20	< 80
	MH-SB-15	7/9/2014	1.5	< 20 J	< 20	< 80
	MH-SB-18	7/9/2014	0	< 20	< 20	< 80
	MH-SB-18	7/9/2014	1.5	< 20	< 20	< 80
	MH-SB-21	7/9/2014	0	< 20	< 20	< 80
981	MH-SB-21	7/9/2014	1.5	< 20	< 20	< 80
0	MH-SB-29	7/8/2014	0	< 20 J	< 20	< 78
or to	MH-SB-29	7/8/2014	1.5	< 20 J	< 20	< 79
Pric	MH-SB-30	7/8/2014	0	< 20 J	< 20	< 79
l þé	MH-SB-30	7/8/2014	1.5	< 20 J	< 20	< 78
rcte	MH-SB-32	7/8/2014	0	< 20 J	< 20	< 79
stru	MH-SB-32	7/8/2014	1.5	< 20 J	< 20	< 79
ũ	MH-SB-37	7/8/2014	0	< 19 J	< 19	< 76
s	MH-SB-37	7/8/2014	1.5	< 20 J	< 20	< 78
AOI-5 - Buildings Constructed Prior to 1981	MH-SB-38	7/8/2014	0	< 20	< 20	< 80
plir	MH-SB-38	7/8/2014	1.5	< 20	< 20	< 80
-Bi	MH-SB-41	7/9/2014	0	< 20	< 20	< 80
-2 -	MH-SB-41	7/9/2014	1.5	< 20	< 20	< 80
AOI	MH-SB-43	7/9/2014	0	< 20	< 20	< 80
	MH-SB-44	7/8/2014	0	< 20 J	< 20	< 79
	MH-SB-44	7/8/2014	1.5	< 20 J	< 20	< 80
	MH-SB-45	7/8/2014	0	< 20 J	< 20	< 79
	MH-SB-45	7/8/2014	1.5	< 20 J	< 20 J	< 78 J
	MH-SB-46	7/8/2014	0	< 20 J	< 20	< 79
	MH-SB-46	7/8/2014	1.5	< 51 J	< 51	< 200
	MH-SB-46	7/8/2014	1.5	< 20 J	< 20	< 79
	MH-SB-47	7/8/2014	0	< 250 J	< 250	< 990
	MH-SB-47	7/8/2014	1.5	< 29 J	< 29	< 120
	MH-SB-48	7/8/2014	0	< 32 J	< 32	< 130
	MH-SB-48	7/8/2014	1.5	< 21 J	< 21	< 82
	MH-SB-62	7/8/2014	0	< 18 J	< 18	< 74
	MH-SB-62	7/8/2014	1.5	< 97 J	< 97	< 390

Table 7d. AOI-5 Herbicides in Soil

Malibu High School 30215 Morning View Drive Malibu, California

Area of Interest			Depth	Herk	picides in µg	g/kg
(AOI)	Sample ID	Sample Date	(feet bgs)	2,4,5-T	2,4,5-TP	2,4-D
Residential	DTSC-Modifie	ed RSL or USEPA	RSL	620,000	490,000	690,000
	MH-SB-70	7/21/2014	0	< 20	< 20	< 79
	MH-SB-70	7/21/2014	1.5	< 20	< 20	< 80
	MH-SB-71	7/21/2014	0	< 20	< 20	< 79
	MH-SB-71	7/21/2014	1.5	< 20	< 20	< 79
	MH-SB-71	7/21/2014	1.5	< 20	< 20	< 80
	MH-SB-73	7/21/2014	0	< 20	< 20	< 79
	MH-SB-73	7/21/2014	1.5	< 20	< 20	< 79
	MH-SB-74	7/21/2014	0	< 20	< 20	< 79
~	MH-SB-74	7/21/2014	1.5	< 20	< 20	< 79
AOI-5 - Buildings Constructed Prior to 1981	MH-SB-75	7/21/2014	0	< 20	< 20	< 80
t	MH-SB-75	7/21/2014	0	< 20	< 20	< 79
io	MH-SB-75	7/21/2014	1.5	< 20	< 20	< 80
Ē	MH-SB-76	7/9/2014	0	< 20	< 20	< 80
stec	MH-SB-76	7/9/2014	1.5	< 20	< 20	< 80
l n	MH-SB-77	7/9/2014	0	< 20	< 20	< 80
nst	MH-SB-77	7/9/2014	1.5	< 20	< 20	< 80
ပိ	MH-SB-79	7/9/2014	0	< 20	< 20	< 80
sbu	MH-SB-79	7/9/2014	1.5	< 20	< 20	< 80
ldir	MH-SB-81	7/21/2014	0	< 20	< 20	< 80
Bui	MH-SB-81	7/21/2014	1.5	< 20	< 20	< 79
	MH-SB-82	7/21/2014	0	< 20 J	< 20	< 80
ĬÖ	MH-SB-82	7/21/2014	1.5	< 20 J	< 20	< 79
Ă	MH-SB-84	7/21/2014	0	< 20 J	< 20	< 79
	MH-SB-84	7/21/2014	1.5	< 20 J	< 20	< 80
	MH-SB-86	7/21/2014	0	< 20 J	< 20	< 79
	MH-SB-86	7/21/2014	1.5	< 20 J	< 20	< 80
	MH-SB-92	7/21/2014	0	< 20 J	< 20	< 79
	MH-SB-92	7/21/2014	1.5	< 20 J	< 20	< 79
	MH-SB-93	7/21/2014	0	< 20 J	< 20	< 79
	MH-SB-93	7/21/2014	0	< 20 J	< 20	< 80
	MH-SB-93	7/21/2014	1.5	< 20 J	< 20	< 80

Notes:

µg/kg - micrograms per kilogram DTSC - Department of Toxic Substances Control USEPA - United States Environmental Protection Agency Field duplicates are shown in italics **RSLs - Regional Screening Levels**

bgs - below ground surface

J - Results and/or reporting limits are estimated Herbicides by USEPA Method 8151A

Table 7e. AOI-5 Lead in Soil

Malibu High School 30215 Morning View Drive Malibu, California

Sample ID tial DTSC-Modified	Date	(TOOT DOC)	
	DEL OF LIGEDA DE	(feet bgs)	Lead in mg/kg
MH_SR_10			80 42
			18
			21
		-	17
			17
			4.5 J
			8.7
		-	3.6 J
			9.0
		•	3.9 J
			7.5
			3.6 J
			13
		•	3.7 J
			6.5
		•	< 3.9
			5.7
		-	3.6
			2.2
			3.2
			9.2
			< 3.9
			27
		-	4.1
			4.7
			7.8
			10
			29
			< 4.0
		<u>^</u>	36
			< 4.0
			8.1
			< 4.0
			< 4.0
			7.7
		-	4.5
			13
		-	10
			2.2
		-	3.3
	MH-SB-10 MH-SB-11 MH-SB-13 MH-SB-13 MH-SB-13 MH-SB-13 MH-SB-13 MH-SB-14 MH-SB-15 MH-SB-15 MH-SB-18 MH-SB-21 MH-SB-21 MH-SB-21 MH-SB-21 MH-SB-21 MH-SB-30 MH-SB-30 MH-SB-30 MH-SB-30 MH-SB-30 MH-SB-30 MH-SB-31 MH-SB-33 MH-SB-34 MH-SB-35 MH-SB-37 MH-SB-38 MH-SB-37 MH-SB-38 MH-SB-37 MH-SB-38 MH-SB-38 MH-SB-38 MH-SB-41 MH-SB-43 MH-SB-44 MH-SB-44 MH-SB-45 MH-SB-46 MH-SB-47 MH-SB-48 MH-SB-48 MH-SB-62	MH-SB-107/9/2014MH-SB-117/9/2014MH-SB-117/9/2014MH-SB-137/9/2014MH-SB-137/9/2014MH-SB-147/9/2014MH-SB-157/9/2014MH-SB-157/9/2014MH-SB-157/9/2014MH-SB-187/9/2014MH-SB-187/9/2014MH-SB-217/9/2014MH-SB-217/9/2014MH-SB-297/8/2014MH-SB-297/8/2014MH-SB-307/8/2014MH-SB-327/8/2014MH-SB-337/8/2014MH-SB-347/9/2014MH-SB-357/8/2014MH-SB-367/8/2014MH-SB-377/8/2014MH-SB-387/8/2014MH-SB-387/8/2014MH-SB-387/8/2014MH-SB-417/9/2014MH-SB-457/8/2014MH-SB-467/8/2014MH-SB-457/8/2014MH-SB-467/8/2014MH-SB-467/8/2014MH-SB-477/8/2014MH-SB-487/8/2014MH-SB-487/8/2014MH-SB-487/8/2014MH-SB-487/8/2014MH-SB-487/8/2014MH-SB-487/8/2014MH-SB-487/8/2014MH-SB-487/8/2014MH-SB-487/8/2014MH-SB-487/8/2014MH-SB-487/8/2014MH-SB-487/8/2014MH-SB-487/8/2014MH-SB-487/8/2014MH-SB-487/8/2014	MH-SB-10 7/9/2014 1.5 MH-SB-11 7/9/2014 0 MH-SB-13 7/9/2014 0 MH-SB-13 7/9/2014 0 MH-SB-13 7/9/2014 0 MH-SB-13 7/9/2014 0 MH-SB-14 7/9/2014 0 MH-SB-15 7/9/2014 0 MH-SB-15 7/9/2014 0 MH-SB-15 7/9/2014 0 MH-SB-18 7/9/2014 0 MH-SB-18 7/9/2014 0 MH-SB-18 7/9/2014 0 MH-SB-21 7/9/2014 0 MH-SB-21 7/9/2014 0 MH-SB-29 7/8/2014 0 MH-SB-30 7/8/2014 0 MH-SB-32 7/8/2014 0 MH-SB-33 7/8/2014 0 MH-SB-33 7/8/2014 0 MH-SB-33 7/8/2014 0 MH-SB-33 7/8/2014 0 MH-SB-34 7/9/2014

Table 7e. AOI-5 Lead in Soil

Malibu High School 30215 Morning View Drive Malibu, California

Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Lead in mg/kg
Residen		d RSL or USEPA RS	L	80
	MH-SB-70	7/21/2014	0	2.1
	MH-SB-70	7/21/2014	1.5	2.7
	MH-SB-71	7/21/2014	0	2.8
	MH-SB-71	7/21/2014	1.5	2.7
	MH-SB-71	7/21/2014	1.5	< 2.0
	MH-SB-73	7/21/2014	0	5.2
	MH-SB-73	7/21/2014	1.5	2.3
	MH-SB-74	7/21/2014	0	3.8
	MH-SB-74	7/21/2014	1.5	< 2.0
	MH-SB-75	7/21/2014	0	5.0
_	MH-SB-75	7/21/2014	0	5.4
981	MH-SB-75	7/21/2014	1.5	2.3
0 7	MH-SB-76	7/9/2014	0	15
AOI-5 - Buildings Constructed Prior to 1981	MH-SB-76	7/9/2014	1.5	2.0
Pric	MH-SB-77	7/9/2014	0	12
p	MH-SB-77	7/9/2014	1.5	5.6
rcte	MH-SB-79	7/9/2014	0	4.7
stru	MH-SB-79	7/9/2014	1.5	3.1 J
ü	MH-SB-81	7/21/2014	0	4.1
S	MH-SB-81	7/21/2014	1.5	3.7
ing	MH-SB-82	7/21/2014	0	2.7
ild	MH-SB-82	7/21/2014	1.5	4.9
Bu	MH-SB-84	7/21/2014	0	5.4
ι Υ	MH-SB-84	7/21/2014	1.5	2.0
ō	MH-SB-86	7/21/2014	0	4.9
4	MH-SB-86	7/21/2014	1.5	< 4.0
	MH-SB-92	7/21/2014	0	47
	MH-SB-92	7/21/2014	1.5	13
	MH-SB-93	7/21/2014	0	5.3
	MH-SB-93	7/21/2014	0	47
	MH-SB-93	7/21/2014	1.5	170 J
			out Sampling	
	MH-SB-93A	9/25/2014	0	37
	MH-SB-93A	9/25/2014	1.5	33
	MH-SB-93B	9/25/2014	0	49
	MH-SB-93B	9/25/2014	1.5	8.1

Notes:

mg/kg - milligrams per kilogram

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

J - Results and/or reporting limits are estimated

Bolded values exceed residential RSL

bgs - below ground surface RSLs - Regional Screening Levels Field duplicates are shown in italics Lead by USEPA Method 6010



Table 8a. AOI-6 PCBs in Soil Malibu High School 30215 Morning View Drive Malibu, California

Area of			Depth				PCBs in µg/kg			
Interest (AOI)	Sample ID	Sample Date	(feet bgs)	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Ar
Resi	dential DTSC-Mod	ified RSL or USEPA	RSL	4,000	150	150	240	240	240	
	MH-SB-40	7/8/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	
	MH-SB-40	7/8/2014	1.5	< 49	< 49	< 49	< 49	< 49	< 49	
	MH-SB-49	7/8/2014	0	< 49	< 49	< 49	< 49	< 49	< 49	
	MH-SB-49	7/8/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	
	MH-SB-50	7/7/2014	0	< 49	< 49	< 49	< 49	< 49	< 49	
	MH-SB-50	7/7/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	
	MH-SB-50	7/7/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	
	MH-SB-51	7/7/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	
	MH-SB-51	7/7/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	
	MH-SB-52	7/7/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	
	MH-SB-52	7/7/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	
is.	MH-SB-53	7/7/2014	0	< 50	< 50	< 50	< 50	< 50	61	
Arcadis	MH-SB-53	7/7/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	
Ar	MH-SB-54	7/9/2014	0	< 50	< 50	< 50	< 50	< 50	79	
- Areas Previously Excavated by	MH-SB-54	7/9/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	
ted	MH-SB-56	7/7/2014	0	< 49	< 49	< 49	< 49	< 49	< 49	
avat	MH-SB-56	7/7/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	
xcs	MH-SB-57	7/7/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	
м М М	MH-SB-57	7/7/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	
nsl	MH-SB-58	7/7/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	
ki	MH-SB-58	7/7/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	
Pre	MH-SB-59	7/7/2014	0	< 150	< 150	< 150	< 150	< 150	< 150	
s	MH-SB-59	7/7/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	
Are	MH-SB-60	7/7/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	
	MH-SB-60	7/7/2014	1.5	< 49	< 49	< 49	< 49	< 49	< 49	
AOI-6	MH-SB-61	7/7/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	
Ŭ Ă	MH-SB-61	7/7/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	
	MH-SB-63	7/8/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	
	MH-SB-63	7/8/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	
	MH-SB-64	7/8/2014	0	< 49	< 49	< 49	< 49	< 49	< 49	
	MH-SB-64	7/8/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	
	MH-SB-65	7/8/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	
	MH-SB-65	7/8/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	
I T	MH-SB-66	7/9/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	
l [MH-SB-66	7/9/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	
	MH-SB-67	7/9/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	
l [MH-SB-91	7/21/2014	0	< 49	< 49	< 49	< 49	< 49	84	
	MH-SB-91	7/21/2014	1.5	< 49	< 49	< 49	< 49	< 49	< 49	

<u>Notes:</u> µg/kg - micrograms per kilogram DTSC - Department of Toxic Substances Control USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Levels bgs - below ground surface Field duplicates are shown in italics

PCBs by USEPA Method 8082A PCBs - Polychlorinated biphenyls

DRAFT

Aroclor 1260
240
< 50
< 49
< 49
< 50
< 49
< 50
< 50
< 50
< 50
< 50
< 50
56
< 50
< 50
< 50
< 49
< 50
< 50
< 50
< 50
< 50
< 150
< 50
< 50
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< 50
< 50
< 50
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< 50 < 50
< 50 < 50
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< 49
< 49
N TU

RAMBOLL ENVIRON

Table 8b. AOI-6 Organochlorine Pesticides in SoilMalibu High School30215 Morning View DriveMalibu, California

								Pestic	cides (Organoc	hlorine) in µg/	kg			
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	4,4'-DDD	4,4'-DDE	4,4'-DDT	Aldrin	alpha-BHC	beta-BHC	Chlordane (total)	delta-BHC	Dieldrin	Endosulfan I	Endosulfan II
		ed RSL or USEPA R		2,200	1,600	1,900	31	. 85	300	1,800	NA	33	370,000	370,000
	MH-SB-40	7/8/2014	0	< 5.0	11	5.3	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
	MH-SB-40	7/8/2014	1.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9
	MH-SB-49	7/8/2014	0	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.8	< 4.9	< 4.9	< 4.9
	MH-SB-49	7/8/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
	MH-SB-50	7/7/2014	0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
	MH-SB-50	7/7/2014	0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
	MH-SB-50	7/7/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J	< 50	< 9.9	< 5.0	< 5.0	< 5.0
	MH-SB-51	7/7/2014	0	< 5.0	7.3	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
	MH-SB-51	7/7/2014	1.5	< 5.0 J	6.3 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 50 J	< 9.9 J	< 5.0 J	< 5.0 J	< 5.0 J
	MH-SB-52	7/7/2014	0	< 5.0	38	5.4	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
	MH-SB-52	7/7/2014	1.5	< 5.0	430	37	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
dis	MH-SB-53	7/7/2014	0	< 5.0	26	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
Arcadis	MH-SB-53	7/7/2014	1.5	< 5.0	22	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
	MH-SB-54	7/9/2014	0	< 5.0	8.4	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
yd I	MH-SB-54	7/9/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
xcavated	MH-SB-56	7/7/2014	0	< 5.0	37	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
ava	MH-SB-56	7/7/2014	1.5	< 5.0	11	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
	MH-SB-57	7/7/2014	0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
	MH-SB-57	7/7/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
Alsud	MH-SB-58	7/7/2014	0	< 4.9	8.2	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9
revior	MH-SB-58	7/7/2014	1.5	< 5.0	7.5	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
Pre	MH-SB-59	7/7/2014	0	< 4.9	9.3	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9
äs	MH-SB-59	7/7/2014	1.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9
Are	MH-SB-60	7/7/2014	0	< 4.9	6.1	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9
	MH-SB-60	7/7/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
AOI-6	MH-SB-61	7/7/2014	0	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9
Ā	MH-SB-61	7/7/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 10	< 5.0	< 5.0	< 5.0
	MH-SB-63	7/8/2014	0	< 5.0	5.8	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
	MH-SB-63	7/8/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
	MH-SB-64	7/8/2014	0	< 4.9	6.8	5.1	< 4.9	< 4.9	< 4.9	< 49	< 9.8	< 4.9	< 4.9	< 4.9
	MH-SB-64	7/8/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 10	< 5.0	< 5.0	< 5.0
	MH-SB-65	7/8/2014	0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 10	< 5.0	< 5.0	< 5.0
	MH-SB-65	7/8/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
	MH-SB-66	7/9/2014	0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 10	< 5.0	< 5.0	< 5.0
	MH-SB-66	7/9/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
	MH-SB-67	7/9/2014	0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
	MH-SB-91	7/21/2014	0	< 4.9 J	6.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 49 J	< 9.9 J	< 4.9 J	< 4.9 J	< 4.9 J
	MH-SB-91	7/21/2014	1.5	< 4.9	17	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9

Notes:

μg/kg - micrograms per kilogram DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

bgs - below ground surface NA - not available RSLs - Regional Screening Levels J - Results and/or reporting limits are estimated Field duplicates are shown in italics Pesticides by USEPA Method 8081A
 Table 8b. AOI-6 Organochlorine Pesticides in Soil
 Malibu High School 30215 Morning View Drive Malibu, California

						Р	esticides (Organo	ochlorine) in µg	g/kg			
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Endosulfan sulfate	Endrin	Endrin aldehyde	Endrin ketone	gamma-BHC	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene
Reside	ntial DTSC-Modifie	ed RSL or USEPA R	SL	370,000	18,000	18,000	18,000	560	120	59	310,000	480
	MH-SB-40	7/8/2014	0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	MH-SB-40	7/8/2014	1.5	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
	MH-SB-49	7/8/2014	0	< 9.8	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
	MH-SB-49	7/8/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	MH-SB-50	7/7/2014	0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	MH-SB-50	7/7/2014	0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	MH-SB-50	7/7/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	MH-SB-51	7/7/2014	0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	MH-SB-51	7/7/2014	1.5	< 9.9 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 200 J
	MH-SB-52	7/7/2014	0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	MH-SB-52	7/7/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
dis	MH-SB-53	7/7/2014	0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
cadis	MH-SB-53	7/7/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
Ar	MH-SB-54	7/9/2014	0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
by	MH-SB-54	7/9/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
ated	MH-SB-56	7/7/2014	0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
аvа	MH-SB-56	7/7/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
XC	MH-SB-57	7/7/2014	0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
У Ш	MH-SB-57	7/7/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
visu	MH-SB-58	7/7/2014	0	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
vio	MH-SB-58	7/7/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
Pre	MH-SB-59	7/7/2014	0	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
as	MH-SB-59	7/7/2014	1.5	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
Are	MH-SB-60	7/7/2014	0	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
4	MH-SB-60	7/7/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
AOI-6	MH-SB-61	7/7/2014	0	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
Ă	MH-SB-61	7/7/2014	1.5	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	MH-SB-63	7/8/2014	0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	MH-SB-63	7/8/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	MH-SB-64	7/8/2014	0	< 9.8	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
	MH-SB-64	7/8/2014	1.5	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	MH-SB-65	7/8/2014	0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	MH-SB-65	7/8/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	MH-SB-66	7/9/2014	0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	MH-SB-66	7/9/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	MH-SB-67	7/9/2014	0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	MH-SB-91	7/21/2014	0	< 9.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 200 J
	MH-SB-91	7/21/2014	1.5	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200 J

Notes:

µg/kg - micrograms per kilogram DTSC - Department of Toxic Substances Control USEPA - United States Environmental Protection Agency bgs - below ground surface NA - not available RSLs - Regional Screening Levels J - Results and/or reporting limits are estimated Field duplicates are shown in italics Pesticides by USEPA Method 8081A

Area of Interest (AOI) Resider	Sample ID	Sample		2-Butenoic acid, 3-						(Organophospl	133					
(AOI)		Sample		-				Demeton								
. ,			Depth	[(dimethoxy-				(Demeton O +						Ethyl P-Nitorphenyl		
Resider		Date	(feet bgs)	phosphinyl)oxy]-, m	Chlorpyrifos	Co-Ral	Dasanit	Demeton S)	Diazinon	Dichlorovos	Dimethoate	Disulfoton	Ethoprop	Benzenethiophosphate	Famphur	Fenthion
	ntial DTSC-Modifi	ed RSL or USEP	A RSL	NA	62,000	NA	NA	2,500	43,000	1,800	12,000	2,500	NA	620	NA	NA
	MH-SB-40	7/8/2014	0	< 33	< 33	< 33	< 33 J	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-40	7/8/2014	1.5	< 33	< 33	< 33	< 33 J	< 65 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-49	7/8/2014	0	< 14	< 19	< 12	< 24	< 37 J	< 21	< 22	< 21	< 46	< 14	< 12	< 12	< 32
	MH-SB-49	7/8/2014	1.5	< 15	< 20	< 13	< 25	< 38 J	< 22	< 23 J	< 22	< 47	< 15	< 13	< 13	< 32
	MH-SB-50	7/7/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-50	7/7/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-50	7/7/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-51	7/7/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-51	7/7/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-52	7/7/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-52	7/7/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
s	MH-SB-53	7/7/2014	0	< 33	< 33	< 33	< 33	< 65	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
Arcadis	MH-SB-53	7/7/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
Arc	MH-SB-54	7/9/2014	0	< 33	< 33	< 33	< 33	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33
λq	MH-SB-54	7/9/2014	1.5	< 33	< 33	< 33	< 33	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-56	7/7/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
cavated	MH-SB-56	7/7/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
k ca	MH-SB-57	7/7/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
È È	MH-SB-57	7/7/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
usly	MH-SB-58	7/7/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
vior	MH-SB-58	7/7/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-59	7/7/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
as F	MH-SB-59	7/7/2014	1.5	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
Vrea	MH-SB-60-	7/7/2014	0	< 33	< 33	< 33	< 33	< 66	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-60	7/7/2014 7/7/2014	1.5	< 33 < 33	< 33	< 33	< 33	< 66 < 66	< 33 < 33	< 33 < 33	< 33 < 33	< 33 < 33	< 33	< 33 < 33	< 33 < 33	< 33 < 33
A01-6	MH-SB-61		0		< 33	< 33	< 33			< 33			< 33			
¥ -	MH-SB-61 MH-SB-63	7/7/2014 7/8/2014	1.5 0	< 33 < 14	< 33 < 19	< 33 < 12	< 33 < 24	< 66 < 37 J	< 33 < 21	< 33 < 22 J	< 33 < 21	< 33 < 45	< 33 < 14	< 33 < 12	< 33 < 12	< 33 < 31
⊢	MH-SB-63	7/8/2014	1.5	< 14	< 19	< 12	< 24	< 37 J < 38 J	< 21	< 22 J < 22 J	< 21	< 45 < 47	< 14	< 12	< 12	< 31
Ⅰ ⊢	MH-SB-64	7/8/2014	0	< 15	< 19	< 13	< 24 < 25	< 38 J	< 21	< 22 J < 23 J	< 21	< 47 < 47	< 15	< 13	< 13	< 32
	MH-SB-64	7/8/2014	1.5	< 15	< 19	< 13	< 24	< 38 J	< 21	< 23 J	< 21	< 47	< 15	< 13	< 13	< 32
	MH-SB-65	7/8/2014	0	< 14	< 19	< 12	< 24	< 37 J	< 21	< 22 J	< 21	< 46	< 14	< 13	< 12	< 32
	MH-SB-65	7/8/2014	1.5	< 14	< 19	< 12	< 24	< 37 J	< 21	< 22 J	< 21	< 45	< 14	< 12	< 12	< 32
	MH-SB-66	7/9/2014	0	< 33	< 33	< 33	< 33 J	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-66	7/9/2014	1.5	< 33	< 33	< 33	< 33	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-67	7/9/2014	0	< 33	< 33	< 33	< 33	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33
Ⅰ ⊢	MH-SB-67	7/9/2014	1.5	< 33	< 33	< 33	< 33 J	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-91	7/21/2014	0	< 33	< 33 J	< 33	< 33 J	< 66 J	< 33	< 33 J	< 33	< 33 J	< 33	< 33	< 33	< 33
	MH-SB-91	7/21/2014	1.5	< 33	< 33 J	< 33	< 33 J	< 65 J	< 33	< 33 J	< 33	< 33 J	< 33	< 33	< 33	< 33

µg/kg - micrograms per kilogram

DTSC - Department of Toxic Substances Control USEPA- United States Environmental Protection Agency bgs - below ground surface NA - not available RSLs - Regional Screening Level J - Results and/or reporting limits are estimated Field duplicates are shown in italics Pesticides by USEPA Method 8141A

								Pesticides (O	rganophos	ohate) in µg	/kg					
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Guthion	Malathion	Methyl parathion	O,O,O-Triethyl phosphorothioate	O-Ethyl O-2,4,5- trichlorophenyl ethyl- phosphonothioate	Parathion	Phorate	Prothiophos	Ronnel	Stirophos	Sulfotepp	Sulprofos	Thionazin
Resid	lential DTSC-Modif	fied RSL or USEP	ARSL	NA	1,200,000	15,000	NA	NA	370,000	12,000	NA	3,100,000	22,000	31,000	NA	NA
	MH-SB-40	7/8/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-40	7/8/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-49	7/8/2014	0	< 12	< 14	< 19	< 37	< 19	< 17	< 19	< 19	< 44	< 19	< 19	< 12	< 17
	MH-SB-49	7/8/2014	1.5	< 13	< 15	< 20	< 38	< 20	< 18	< 20	< 20	< 45	< 20	< 20	< 13	< 18
_	MH-SB-50	7/7/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
_	MH-SB-50	7/7/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
_	MH-SB-50	7/7/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
_	MH-SB-51	7/7/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
_	MH-SB-51	7/7/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
_	MH-SB-52	7/7/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
_	MH-SB-52	7/7/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
s	MH-SB-53	7/7/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
Arcadis	MH-SB-53	7/7/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
Arc	MH-SB-54	7/9/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
þ	MH-SB-54	7/9/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
l þé	MH-SB-56	7/7/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
Excavated	MH-SB-56	7/7/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
car	MH-SB-57	7/7/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-57	7/7/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
Isly	MH-SB-58	7/7/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
Previously	MH-SB-58	7/7/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
re<	MH-SB-59	7/7/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-59	7/7/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
Areas	MH-SB-60-	7/7/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
Ā -	MH-SB-60	7/7/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
<u>9</u> -	MH-SB-61	7/7/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
AOI-6	MH-SB-61	7/7/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-63	7/8/2014	0	< 12	< 14	< 19	< 37	< 19	< 17	< 19	< 19	< 43	< 14	< 19	< 12	< 17
	MH-SB-63	7/8/2014	1.5	< 13	< 15	< 19	< 38	< 19	< 17	< 19	< 19	< 45	< 15	< 19	< 13	< 17
	MH-SB-64	7/8/2014	0	< 13	< 15	< 20	< 38	< 20	< 18	< 20	< 20	< 45	< 15	< 20	< 13	< 18
	MH-SB-64	7/8/2014	1.5	< 13	< 15	< 19	< 38	< 19	< 18	< 19	< 19	< 45	< 15	< 19	< 13	< 18
	MH-SB-65	7/8/2014	0	< 12	< 14	< 19	< 37	< 19	< 17	< 19	< 19	< 44	< 14	< 19	< 12	< 17
	MH-SB-65	7/8/2014	1.5	< 12	< 14	< 19	< 37	< 19	< 17	< 19	< 19	< 43	< 14	< 19	< 12	< 17
	MH-SB-66	7/9/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-66	7/9/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-67	7/9/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-67	7/9/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-91	7/21/2014	0	< 33 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-91	7/21/2014	1.5	< 33 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33

µg/kg - micrograms per kilogram

DTSC - Department of Toxic Substances Control USEPA- United States Environmental Protection Agency bgs - below ground surface NA - not available RSLs - Regional Screening Level J - Results and/or reporting limits are estimated Field duplicates are shown in italics Pesticides by USEPA Method 8141A

Table 8d. AOI-6 Herbicides in Soil

Malibu High School 30215 Morning View Drive

Malibu, California

Area of Interest	Comple ID	Sample	Depth	He	erbicides in µç	g/kg
(AOI)	Sample ID	Date	(feet bgs)	2,4,5-T	2,4,5-TP	2,4-D
Residentia	I DTSC-Modified	I RSL or USEP	A RSL	620,000	490,000	690,000
	MH-SB-40	7/8/2014	0	< 20	< 20	< 80
	MH-SB-40	7/8/2014	1.5	< 20	< 20	< 80
	MH-SB-49	7/8/2014	0	< 19 J	< 19	< 76
	MH-SB-49	7/8/2014	1.5	< 19 J	< 19	< 78
	MH-SB-50	7/7/2014	0	< 20	< 20	< 80
	MH-SB-50	7/7/2014	0	< 20	< 20	< 80
	MH-SB-50	7/7/2014	1.5	< 20	< 20	< 80
	MH-SB-51	7/7/2014	0	< 20	< 20	< 80
	MH-SB-51	7/7/2014	1.5	< 20	< 20	< 80
	MH-SB-52	7/7/2014	0	< 20	< 20	< 80
	MH-SB-52	7/7/2014	1.5	< 20	< 20	< 80
ú	MH-SB-53	7/7/2014	0	< 20	< 20	< 80
adis	MH-SB-53	7/7/2014	1.5	< 20	< 20	< 80
Vrce	MH-SB-54	7/9/2014	0	< 20	< 20	< 80
4 2	MH-SB-54	7/9/2014	1.5	< 20	< 20	< 80
P P	MH-SB-56	7/7/2014	0	< 20	< 20	< 79
ate	MH-SB-56	7/7/2014	1.5	< 20	< 20	< 80
cav	MH-SB-57	7/7/2014	0	< 20	< 20	< 80
AOI-6 - Areas Previously Excavated by Arcadis	MH-SB-57	7/7/2014	1.5	< 20	< 20	< 80
sly	MH-SB-58	7/7/2014	0	< 20	< 20	< 80
no	MH-SB-58	7/7/2014	1.5	< 20	< 20	< 80
evi	MH-SB-59	7/7/2014	0	< 20	< 20	< 80
Pr	MH-SB-59	7/7/2014	1.5	< 20	< 20	< 80
eas	MH-SB-60	7/7/2014	0	< 20	< 20	< 80
Ar	MH-SB-60	7/7/2014	1.5	< 20	< 20	< 80
- 9	MH-SB-61	7/7/2014	0	< 20	< 20	< 80
Ŏ	MH-SB-61	7/7/2014	1.5	< 20	< 20	< 80
•	MH-SB-63	7/8/2014	0	< 19 J	< 19	< 76
	MH-SB-63	7/8/2014	1.5	< 19 J	< 19	< 77
	MH-SB-64	7/8/2014	0	< 34 J	< 34	< 130
	MH-SB-64	7/8/2014	1.5	< 19 J	< 19	< 76
	MH-SB-65	7/8/2014	0	< 19 J	< 19	< 76
	MH-SB-65	7/8/2014	1.5	< 24 J	< 24	< 95
	MH-SB-66	7/9/2014	0	< 20	< 20	< 80
	MH-SB-66	7/9/2014	1.5	< 20	< 20	< 80
	MH-SB-67	7/9/2014	0	< 20	< 20	< 80
	MH-SB-67	7/9/2014	1.5	< 20	< 20	< 80
	MH-SB-91	7/21/2014	0	< 20 J	< 20	< 80
	MH-SB-91	7/21/2014	1.5	< 20 J	< 20	< 79

 $\mu g/kg$ - micrograms per kilogram

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Levels

bgs - below ground surface

J - Results and/or reporting limits are estimated Field duplicates are shown in italics Herbicides by USEPA Method 8151A



Table 9a. AOI-7 Organochlorine Pesticides in SoilMalibu High School30215 Morning View DriveMalibu, California

Area of								Pestic	ides (Organoch	lorine) in µg/kg				
Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	4,4'-DDD	4,4'-DDE	4,4'-DDT	Aldrin	alpha-BHC	beta-BHC	Chlordane (total)	delta-BHC	Dieldrin	Endosulfan I	Endosulfan II
Residen	tial DTSC-Modifie	d RSL or USI	EPA RSL	2,200	1,600	1,900	31	85	300	1,800	NA	33	370,000	370,000
	MH-SB-12	7/9/2014	0	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9
	MH-SB-12	7/9/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
	MH-SB-16	7/9/2014	0	< 5.0	10	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
	MH-SB-16	7/9/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
	MH-SB-17	7/9/2014	0	< 5.0	11	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
	MH-SB-19	7/9/2014	0	< 4.9	22	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9
	MH-SB-19	7/9/2014	0	< 4.9	23	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9
ý	MH-SB-19	7/9/2014	1.5	< 5.0	47	9.9	< 5.0	< 5.0	< 5.0	< 50	< 10	< 5.0	< 5.0	< 5.0
01-5	MH-SB-20	7/9/2014	0	< 5.0	18	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
n A	MH-SB-20	7/9/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
Within	MH-SB-22	7/9/2014	0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 10	< 5.0	< 5.0	< 5.0
-	MH-SB-22	7/9/2014	1.5	< 5.0	8.5	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
sbu	MH-SB-22	7/9/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
uildings	MH-SB-23	7/9/2014	0	< 4.9	7.0 J	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9
Bui	MH-SB-23	7/9/2014	1.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9
der	MH-SB-24	7/9/2014	0	< 5.0	5.5 J	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
old	MH-SB-24	7/9/2014	1.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9
en	MH-SB-25	7/9/2014	0	< 4.9	7.2	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9
wei	MH-SB-25	7/9/2014	1.5	< 4.9	11	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9
Bet	MH-SB-31	7/8/2014	0	< 5.0 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
'n	MH-SB-31	7/8/2014	1.5	< 5.0	7.2	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
pu	MH-SB-33	7/8/2014	0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
d a	MH-SB-33	7/8/2014	1.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9
und	MH-SB-34	7/8/2014	0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
Arc	MH-SB-34	7/8/2014	1.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.8	< 4.9	< 4.9	< 4.9
as	MH-SB-35	7/8/2014	0	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9
Are	MH-SB-35	7/8/2014	0	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9
ue, ne	MH-SB-35	7/8/2014	1.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9
Open	MH-SB-36	7/8/2014	0	< 4.9	60	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.8	< 4.9	< 4.9	< 4.9
	MH-SB-36	7/8/2014	1.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9
AOI-7	MH-SB-39	7/8/2014	0	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9
Ā	MH-SB-39	7/8/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
	MH-SB-42	7/9/2014	0	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9
	MH-SB-42	7/9/2014	1.5	< 4.9 J	34 J	< 4.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 49 J	< 9.9 J	< 4.9 J	< 4.9 J	< 4.9 J
	MH-SB-69	7/9/2014	0	< 5.0	19	5.2	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
	MH-SB-69	7/9/2014	1.5	< 5.0	9.7	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
	MH-SB-72	7/21/2014	0	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9
	MH-SB-72	7/21/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
	MH-SB-78	7/9/2014	0	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9

Table 9a. AOI-7 Organochlorine Pesticides in SoilMalibu High School30215 Morning View DriveMalibu, California

Area of								Pestic	ides (Organoch	lorine) in μg/kg				
Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	4,4'-DDD	4,4'-DDE	4,4'-DDT	Aldrin	alpha-BHC	beta-BHC	Chlordane (total)	delta-BHC	Dieldrin	Endosulfan I	Endosulfan II
Resider	tial DTSC-Modified	d RSL or USI	EPA RSL	2,200	1,600	1,900	31	85	300	1,800	NA	33	370,000	370,000
	MH-SB-78	7/9/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
er	MH-SB-78	7/9/2014	1.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9
Olde	MH-SB-80	7/21/2014	0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
en	MH-SB-80	7/21/2014	1.5	< 4.9	5.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9
Ň	MH-SB-83	7/21/2014	0	< 5.0	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
5 5	MH-SB-83	7/21/2014	1.5	< 4.9 J	16 J	< 4.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 49 J	< 9.9 J	< 4.9 J	< 4.9 J	< 4.9 J
ii O	MH-SB-83	7/21/2014	1.5	< 5.0	5.3	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
م ر	MH-SB-85	7/21/2014	0	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9
und an Within	MH-SB-85	7/21/2014	1.5	< 5.0	27	7.1	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
un N	MH-SB-87	7/21/2014	0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
Aro ngs	MH-SB-87	7/21/2014	1.5	< 5.0 J	23	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
reas	MH-SB-88	7/21/2014	0	< 5.0 J	43	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
Are Buil	MH-SB-88	7/21/2014	1.5	< 4.9 J	18	6.2	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9
L C	MH-SB-89	7/21/2014	0	< 5.0 J	40	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
a O D	MH-SB-89	7/21/2014	1.5	< 5.0 J	10	5.5	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
) - L	MH-SB-90	7/21/2014	0	< 4.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 49 J	< 9.9 J	< 4.9 J	< 4.9 J	< 4.9 J
1-10	MH-SB-90	7/21/2014	1.5	< 5.0 J	11	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
AO	MH-SB-94	7/21/2014	0	< 4.9 J	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9
	MH-SB-94	7/21/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0

Notes:

µg/kg - micrograms per kilogram

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Levels

bgs - below ground surface

NA - not available

J - Results and/or reporting limits are estimated

Field duplicates are shown in italics

Table 9a. AOI-7 Organochlorine Pesticides in Soil Malibu High School 30215 Morning View Drive Malibu, California

Area of							Pesticides	(Organochlorin	e) in µg/kg			
Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Endosulfan sulfate	Endrin	Endrin aldehyde	Endrin ketone	gamma-BHC	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene
Resident	tial DTSC-Modified	d RSL or USI	EPA RSL	370,000	18,000	18,000	18,000	560	120	59	310,000	480
	MH-SB-12	7/9/2014	0	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
	MH-SB-12	7/9/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	MH-SB-16	7/9/2014	0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	MH-SB-16	7/9/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	MH-SB-17	7/9/2014	0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	MH-SB-19	7/9/2014	0	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
	MH-SB-19	7/9/2014	0	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
01-5	MH-SB-19	7/9/2014	1.5	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
Ŋ	MH-SB-20	7/9/2014	0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
ii /	MH-SB-20	7/9/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
lith	MH-SB-22	7/9/2014	0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
× «	MH-SB-22	7/9/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
ibu	MH-SB-22	7/9/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
ildi	MH-SB-23	7/9/2014	0	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
Bu	MH-SB-23	7/9/2014	1.5	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
der	MH-SB-24	7/9/2014	0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
ŏ	MH-SB-24	7/9/2014	1.5	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
en	MH-SB-25	7/9/2014	0	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
twe	MH-SB-25	7/9/2014	1.5	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
Bei	MH-SB-31	7/8/2014	0	< 9.9	< 5.0	< 5.0 J	< 5.0 J	< 5.0	< 5.0	< 5.0	< 5.0 J	< 200
. 드	MH-SB-31	7/8/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
pue	MH-SB-33	7/8/2014	0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
q	MH-SB-33	7/8/2014	1.5	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
unc	MH-SB-34	7/8/2014	0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
Arc	MH-SB-34	7/8/2014	1.5	< 9.8	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
sas	MH-SB-35	7/8/2014	0	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
Are	MH-SB-35	7/8/2014	0	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9 J	< 200
ben	MH-SB-35	7/8/2014	1.5	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
ŏ	MH-SB-36	7/8/2014	0	< 9.8	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
- [MH-SB-36	7/8/2014	1.5	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
AOI-7	MH-SB-39	7/8/2014	0	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
۲ (MH-SB-39	7/8/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	MH-SB-42	7/9/2014	0	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
	MH-SB-42	7/9/2014	1.5	< 9.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 200 J
	MH-SB-69	7/9/2014	0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	MH-SB-69	7/9/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	MH-SB-72	7/21/2014	0	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
	MH-SB-72	7/21/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	MH-SB-78	7/9/2014	0	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200

Table 9a. AOI-7 Organochlorine Pesticides in SoilMalibu High School30215 Morning View DriveMalibu, California

Area of							Pesticides	(Organochlorin	e) in µg/kg			
Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Endosulfan sulfate	Endrin	Endrin aldehyde	Endrin ketone	gamma-BHC	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene
Resider	ntial DTSC-Modified	d RSL or USI	EPA RSL	370,000	18,000	18,000	18,000	560	120	59	310,000	480
	MH-SB-78	7/9/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
er	MH-SB-78	7/9/2014	1.5	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
Older	MH-SB-80	7/21/2014	0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
en	MH-SB-80	7/21/2014	1.5	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
we	MH-SB-83	7/21/2014	0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200 J
5 5	MH-SB-83	7/21/2014	1.5	< 9.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 200 J
in F Ol-	MH-SB-83	7/21/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
and in A	MH-SB-85	7/21/2014	0	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
und an Within	MH-SB-85	7/21/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
Mi	MH-SB-87	7/21/2014	0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
vreas Aro suildings	MH-SB-87	7/21/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
as	MH-SB-88	7/21/2014	0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
Area	MH-SB-88	7/21/2014	1.5	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
u u	MH-SB-89	7/21/2014	0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
Ope	MH-SB-89	7/21/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
,	MH-SB-90	7/21/2014	0	< 9.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 200 J
	MH-SB-90	7/21/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
AO	MH-SB-94	7/21/2014	0	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200
	MH-SB-94	7/21/2014	1.5	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200 J

Notes:

µg/kg - micrograms per kilogram

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Levels

bgs - below ground surface NA - not available J - Results and/or reporting limits are estimated Field duplicates are shown in italics Pesticides by USEPA Method 8081A

Table 9b. AOI-7 Organophosphate Pesticides in SoilMalibu High School30215 Morning View DriveMalibu, California

								Pesti	icides (Org	anophosphates) in µg/kg					
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	2-Butenoic acid, 3-[(dimethoxy- phosphinyl)oxy]-, m	Chlorpyrifos	Co-Ral	Dasanit	Demeton (Demeton O + Demeton S)	Diazinon		Dimethoate		Ethoprop	Ethyl P- Nitorphenyl Benzenethio phosphate	Famphur	
Resid	lential DTSC-Modif	fied RSL or USEP	A RSL	NA	62,000	NA	NA	2,500	43,000	1,800	12,000	2,500	NA	620	NA	NA
	MH-SB-12	7/9/2014	0	< 33	< 33	< 33	< 33 J	< 65 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-12	7/9/2014	1.5	< 33	< 33	< 33	< 33 J	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-16	7/9/2014	0	< 33	< 33	< 33	< 33 J	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-16	7/9/2014	1.5	< 33	< 33	< 33	< 33 J	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-17	7/9/2014	0	< 33	< 33	< 33	< 33	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-19	7/9/2014	0	< 33	< 33	< 33	< 33 J	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-19	7/9/2014	0	< 33	< 33	< 33	< 33	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-19	7/9/2014	1.5	< 33	< 33	< 33	< 33	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33
01-5	MH-SB-20	7/9/2014	0	< 33	< 33	< 33	< 33 J	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33
▼	MH-SB-20	7/9/2014	1.5	< 33	< 33	< 33	< 33 J	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33
nir	MH-SB-22	7/9/2014	0	< 33	< 33	< 33	< 33 J	< 66 J	< 33	< 33 J	< 33 J	< 33	< 33	< 33	< 33 J	< 33
Within	MH-SB-22	7/9/2014	1.5	< 33	< 33	< 33	< 33 J	< 65 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33
ds /	MH-SB-22	7/9/2014	1.5	< 33	< 33	< 33	< 33 J	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33
L	MH-SB-23	7/9/2014	0	< 33	< 33	< 33	< 33 J	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33
uildi	MH-SB-23	7/9/2014	1.5	< 33	< 33	< 33	< 33 J	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33
L B	MH-SB-24	7/9/2014	0	< 33	< 33	< 33	< 33	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33
lde	MH-SB-24	7/9/2014	1.5	< 33	< 33	< 33	< 33	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33
10 u	MH-SB-25 MH-SB-25	7/9/2014	0	< 33	< 33	< 33 < 33	< 33	< 66 J < 66 J	< 33 < 33	< 33 J	< 33	< 33	< 33	< 33	< 33 < 33	< 33
leel	MH-SB-25 MH-SB-31	7/9/2014 7/8/2014	1.5 0	< 33 < 15	< 33 < 19	< 33	< 33 J < 24	< 38 J	< 33	< 33 J < 22	< 33 < 21	< 33 < 47	< 33 < 15	< 33 < 13	< 13	< 33 < 32
etw	MH-SB-31 MH-SB-31	7/8/2014	1.5	< 15	< 19	< 13	< 24	< 38 J	< 21	< 22	< 21	< 47	< 15	< 13	< 13	< 32
B L	MH-SB-31 MH-SB-33	7/8/2014	0	< 15	< 19	< 13	< 24	< 38 J	< 21	< 22	< 21	< 47	< 13	< 13	< 13	< 32
id ii	MH-SB-33	7/8/2014	1.5	< 15	< 20	< 13	< 25	< 38 J	< 22	< 23 J	< 22	< 47	< 14	< 13	< 13	< 32
lan	MH-SB-34	7/8/2014	0	< 15	< 19	< 13	< 24	< 38 J	< 21	< 22 J	< 21	< 46	< 15	< 13	< 13	< 32
pun	MH-SB-34	7/8/2014	1.5	< 15	< 20	< 13	< 25	< 38 J	< 22	< 23 J	< 22	< 47	< 15	< 13	< 13	< 32
Aroi	MH-SB-35	7/8/2014	0	< 15	< 20	< 13	< 25	< 38 J	< 22	< 23 J	< 22	< 47	< 15	< 13	< 13	< 32
IS A	MH-SB-35	7/8/2014	0	< 14	< 19	< 13 J	< 24 J	< 38 J	< 21	< 22 J	< 21	< 46	< 14	< 13 J	< 13	< 32
rea	MH-SB-35	7/8/2014	1.5	< 15	< 20	< 13 J	< 25 J	< 39 J	< 22	< 23 J	< 22	< 48	< 15	< 13 J	< 13	< 33
n A	MH-SB-36	7/8/2014	0	< 15	< 20	< 13	< 25	< 39 J	< 22	< 23	< 22	< 48	< 15	< 13	< 13	< 33
be	MH-SB-36	7/8/2014	1.5	< 14	< 19	< 12	< 24	< 37 J	< 21	< 22	< 21	< 45	< 14	< 12	< 12	< 31
0	MH-SB-39	7/8/2014	0	< 33	< 33	< 33	< 33 J	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33
AOI-7	MH-SB-39	7/8/2014	1.5	< 33	< 33	< 33	< 33	< 65 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33
AC	MH-SB-42	7/9/2014	0	< 33	< 33	< 33	< 33	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-42	7/9/2014	1.5	< 33	< 33	< 33	< 33	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-69	7/9/2014	0	< 33	< 33	< 33	< 33 J	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-69	7/9/2014	1.5	< 33	< 33	< 33	< 33 J	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-72	7/21/2014	0	< 33	< 33 J	< 33 J	< 33 J	< 66 J	< 33	< 33 J	< 33	< 33 J	< 33	< 33	< 33	< 33
	MH-SB-72	7/21/2014	1.5	< 33	< 33 J	< 33 J	< 33 J	< 66 J	< 33	< 33 J	< 33	< 33 J	< 33	< 33	< 33	< 33
	MH-SB-78	7/9/2014	0	< 33	< 33	< 33	< 33 J	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-78	7/9/2014	1.5	< 33	< 33	< 33	< 33 J	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-78	7/9/2014	1.5	< 33	< 33	< 33	< 33 J	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33

Table 9b. AOI-7 Organophosphate Pesticides in Soil Malibu High School 30215 Morning View Drive

002101	norming view	Dire
Malibu,	California	

								Pesti	cides (Orga	anophosphates	s) in μg/kg					
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	2-Butenoic acid, 3-[(dimethoxy- phosphinyl)oxy]-, m	Chlorpyrifos	Co-Ral	Dasanit	Demeton (Demeton O + Demeton S)	Diazinon	Dichlorovos	Dimethoate	Disulfoton	Ethoprop	Ethyl P- Nitorphenyl Benzenethio phosphate	Famphur	Fenthion
Resid	lential DTSC-Mod	ified RSL or USEP	A RSL	NA	62,000	NA	NA	2,500	43,000	1,800	12,000	2,500	NA	620	NA	NA
ler	MH-SB-80	7/21/2014	0	< 33	< 33	< 33	< 33 J	< 66 J	< 33	< 33 J	< 33	< 33 J	< 33	< 33	< 33	< 33
PIO	MH-SB-80	7/21/2014	1.5	< 33	< 33	< 33	< 33 J	< 66 J	< 33	< 33 J	< 33	< 33 J	< 33	< 33	< 33	< 33
en	MH-SB-83	7/21/2014	0	< 33	< 33 J	< 33	< 33 J	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33
Me	MH-SB-83	7/21/2014	1.5	< 33	< 33	< 33	< 33 J	< 66 J	< 33	< 33 J	< 33	< 33 J	< 33	< 33	< 33	< 33
5 5	MH-SB-83	7/21/2014	1.5	< 33	< 33	< 33	< 33 J	< 66 J	< 33	< 33 J	< 33	< 33 J	< 33	< 33	< 33	< 33
in B OI-5	MH-SB-85	7/21/2014	0	< 33	< 33	< 33	< 33 J	< 66 J	< 33	< 33 J	< 33	< 33 J	< 33	< 33	< 33	< 33
~ ≺	MH-SB-85	7/21/2014	1.5	< 33	< 33	< 33	< 33 J	< 66 J	< 33	< 33 J	< 33	< 33 J	< 33	< 33	< 33	< 33
und and Within	MH-SB-87	7/21/2014	0	< 33	< 33 J	< 33	< 33 J	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33
nn Mi	MH-SB-87	7/21/2014	1.5	< 33	< 33 J	< 33	< 33 J	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33
Areas Aro Buildings	MH-SB-88	7/21/2014	0	< 33	< 33 J	< 33	< 33 J	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33
as	MH-SB-88	7/21/2014	1.5	< 33	< 33 J	< 33	< 33 J	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33
Area	MH-SB-89	7/21/2014	0	< 33	< 33 J	< 33	< 33 J	< 66 J	< 33	< 33 J	< 33	< 33 J	< 33	< 33	< 33	< 33
n /	MH-SB-89	7/21/2014	1.5	< 33	< 33 J	< 33	< 33 J	< 66 J	< 33	< 33 J	< 33	< 33 J	< 33	< 33	< 33	< 33
Эре	MH-SB-90	7/21/2014	0	< 33	< 33 J	< 33	< 33 J	< 66 J	< 33	< 33 J	< 33	< 33 J	< 33	< 33	< 33	< 33
	MH-SB-90	7/21/2014	1.5	< 33 J	< 33 J	< 33 J	< 33 J	< 66 J	< 33 J	< 33 J	< 33 J	< 33 J	< 33 J	< 33 J	< 33 J	< 33 J
2-10	MH-SB-94	7/21/2014	0	< 33	< 33 J	< 33	< 33 J	< 65 J	< 33	< 33 J	< 33	< 33 J	< 33	< 33	< 33	< 33
A(MH-SB-94	7/21/2014	1.5	< 33	< 33 J	< 33	< 33 J	< 66 J	< 33	< 33 J	< 33	< 33 J	< 33	< 33	< 33	< 33

Notes:

µg/kg - micrograms per kilogram

DTSC - Department of Toxic Substances Control

USEPA- United States Environmental Protection Agency

RSLs - Regional Screening Level

bgs - below ground surface Field duplicates are shown in italics NA - not available J - Results and/or reporting limits are estimated Pesticides by USEPA Method 8141A

Table 9b. AOI-7 Organophosphate Pesticides in SoilMalibu High School30215 Morning View DriveMalibu, California

								Pesticides	s (Organoph	osphates)	in µg/kg					
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)		Malathion	-	O,O,O-Triethyl phosphorothioate	O-Ethyl O-2,4,5- trichlorophenyl ethyl- phosphonothioate	Parathion		Prothiophos	Ronnel	Stirophos	Sulfotepp	Sulprofos	
Resid	lential DTSC-Modi		1	NA	1,200,000	15,000	NA	NA	370,000	12,000	NA	3,100,000	22,000	31,000	NA	NA
	MH-SB-12	7/9/2014	0	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-12	7/9/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-16	7/9/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-16	7/9/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-17 MH-SB-19	7/9/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33 < 33	< 33	< 33	< 33	< 33
	MH-SB-19 MH-SB-19	7/9/2014 7/9/2014	0	< 33 < 33	< 33 < 33	< 33 < 33	< 33 < 33	< 33 < 33	< 33 < 33	< 33 < 33	< 33 < 33	< 33	< 33 < 33	< 33 < 33	< 33 < 33	< 33 < 33
	MH-SB-19 MH-SB-19	7/9/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
ŝ	MH-SB-19 MH-SB-20	7/9/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
-b	MH-SB-20	7/9/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
A n	MH-SB-22	7/9/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
Withi	MH-SB-22	7/9/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-22	7/9/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
sɓu	MH-SB-23	7/9/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
ildi	MH-SB-23	7/9/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
Bu	MH-SB-24	7/9/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
der	MH-SB-24	7/9/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
ö	MH-SB-25	7/9/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
sen	MH-SB-25	7/9/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
itwe	MH-SB-31	7/8/2014	0	< 13	< 15	< 19	< 38	< 19	< 18	< 19	< 19	< 45	< 15	< 19	< 13	< 18
Be	MH-SB-31	7/8/2014	1.5	< 13	< 15	< 19	< 38	< 19	< 17	< 19	< 19	< 45	< 15	< 19	< 13	< 17
d i	MH-SB-33	7/8/2014	0	< 13	< 14	< 19	< 38	< 19	< 17	< 19	< 19	< 44	< 14	< 19	< 13	< 17
ano	MH-SB-33	7/8/2014	1.5	< 13	< 15	< 20	< 38	< 20	< 18	< 20	< 20	< 45	< 15	< 20	< 13	< 18
pu	MH-SB-34 MH-SB-34	7/8/2014 7/8/2014	0 1.5	< 13 < 13	< 15 < 15	< 19 < 20	< 38 < 38	< 19 < 20	< 17 < 18	< 19 < 20	< 19 < 20	< 45 < 45	< 15 < 15	< 19 < 20	< 13 < 13	< 17 < 18
Lot.	MH-SB-34 MH-SB-35	7/8/2014	0	< 13	< 15	< 20	< 38	< 20	< 18	< 20	< 20	< 45 < 45	< 15	< 20	< 13	< 18
s A	MH-SB-35	7/8/2014	0	< 13	< 14	< 19	< 38	< 19	< 17	< 19	< 19	< 44	< 15	< 19	< 13	< 17
rea	MH-SB-35	7/8/2014	1.5	< 13	< 15	< 20	< 39	< 20	< 18	< 20	< 20	< 46	< 15	< 20	< 13	< 18
A n	MH-SB-36	7/8/2014	0	< 13	< 15	< 20	< 39	< 20	< 18	< 20	< 20	< 46	< 15	< 20	< 13	< 18
bei	MH-SB-36	7/8/2014	1.5	< 12	< 14	< 19	< 37	< 19	< 17	< 19	< 19	< 44	< 14	< 19	< 12	< 17
0	MH-SB-39	7/8/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
0-7	MH-SB-39	7/8/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
AC	MH-SB-42	7/9/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-42	7/9/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-69	7/9/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-69	7/9/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-72	7/21/2014	0	< 33 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33	< 33 J	< 33	< 33	< 33
	MH-SB-72	7/21/2014	1.5	< 33 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33	< 33 J	< 33	< 33	< 33
	MH-SB-78	7/9/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-78	7/9/2014	1.5	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-78	7/9/2014	1.5	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33

Table 9b. AOI-7 Organophosphate Pesticides in SoilMalibu High School30215 Morning View DriveMalibu, California

								Pesticides	s (Organoph	osphates)) in µg/kg					
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)		Malathion	-	O,O,O-Triethyl phosphorothioate		Parathion		Prothiophos	Ronnel	Stirophos		Sulprofos	
Resid	lential DTSC-Modi	fied RSL or USEP	A RSL	NA	1,200,000	15,000	NA	NA	370,000	12,000	NA	3,100,000	22,000	31,000	NA	NA
ler	MH-SB-80	7/21/2014	0	< 33 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33	< 33 J	< 33	< 33	< 33
00	MH-SB-80	7/21/2014	1.5	< 33 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33	< 33 J	< 33	< 33	< 33
en	MH-SB-83	7/21/2014	0	< 33 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
we	MH-SB-83	7/21/2014	1.5	< 33 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33	< 33 J	< 33	< 33	< 33
5	MH-SB-83	7/21/2014	1.5	< 33 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33	< 33 J	< 33	< 33	< 33
in F Ol-	MH-SB-85	7/21/2014	0	< 33 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33	< 33 J	< 33	< 33	< 33
pu d	MH-SB-85	7/21/2014	1.5	< 33 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33	< 33 J	< 33	< 33	< 33
wind and Within A	MH-SB-87	7/21/2014	0	< 33 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
Mi	MH-SB-87	7/21/2014	1.5	< 33 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
Aro ngs	MH-SB-88	7/21/2014	0	< 33 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-88	7/21/2014	1.5	< 33 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
Areas Buildii	MH-SB-89	7/21/2014	0	< 33 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
A D B	MH-SB-89	7/21/2014	1.5	< 33 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
be	MH-SB-90	7/21/2014	0	< 33 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-90	7/21/2014	1.5	< 33 J	< 33 J	< 33 J	< 33 J	< 33 J	< 33 J	< 33 J	< 33 J	< 33 J	< 33 J	< 33 J	< 33 J	< 33 J
2-10	MH-SB-94	7/21/2014	0	< 33 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33	< 33 J	< 33	< 33	< 33
AC	MH-SB-94	7/21/2014	1.5	< 33 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33	< 33 J	< 33	< 33	< 33

Notes:

µg/kg - micrograms per kilogram

DTSC - Department of Toxic Substances Control

USEPA- United States Environmental Protection Agency

RSLs - Regional Screening Level

bgs - below ground surface Field duplicates are shown in italics NA - not available J - Results and/or reporting limits are estimated Pesticides by USEPA Method 8141A Table 9c. AOI-7 Herbicides in SoilMalibu High School30215 Morning View DriveMalibu, California

Area of Interest			Depth	He	rbicides in µg	/kg
(AOI)	Sample ID	Sample Date	(feet bgs)	2,4,5-T	2,4,5-TP	2,4-D
· · ·	al DTSC-Modified	-		620,000	490,000	690,000
	MH-SB-12	7/9/2014	0	< 20	< 20	< 80
	MH-SB-12 MH-SB-12	7/9/2014	1.5	< 20	< 20	< 80
	MH-SB-12 MH-SB-16	7/9/2014	0	< 20 J	< 20	< 80
	MH-SB-16	7/9/2014	1.5	< 20 J	< 20	< 80
	MH-SB-17	7/9/2014	0	< 20 3	< 20	< 80
	MH-SB-17 MH-SB-19	7/9/2014	0	< 20	< 20	< 80
	MH-SB-19 MH-SB-19	7/9/2014	0	< 20	< 20	< 80
	MH-SB-19 MH-SB-19	7/9/2014	1.5	< 20	< 20	< 80
	MH-SB-19 MH-SB-20	7/9/2014	0	< 20	< 20	< 80 < 80
			-			
	MH-SB-20	7/9/2014	1.5	< 20	< 20	< 80
	MH-SB-22	7/9/2014	0	< 20	< 20	< 80
	MH-SB-22	7/9/2014	1.5	< 20	< 20	< 80
	MH-SB-22	7/9/2014	1.5	< 20	< 20	< 80
	MH-SB-23	7/9/2014	0	< 20	< 20	< 80
	MH-SB-23	7/9/2014	1.5	< 20	< 20	< 80
	MH-SB-24	7/9/2014	0	< 20	< 20	< 80
10	MH-SB-24	7/9/2014	1.5	< 20	< 20	< 80
Ť	MH-SB-25	7/9/2014	0	< 20	< 20	< 80
A	MH-SB-25	7/9/2014	1.5	< 20	< 20	< 80
thir	MH-SB-31	7/8/2014	0	< 20 J	< 20	< 79
Nit Nit	MH-SB-31	7/8/2014	1.5	< 20 J	< 20	< 80
gs	MH-SB-33	7/8/2014	0	< 20 J	< 20	< 78
din	MH-SB-33	7/8/2014	1.5	< 20 J	< 20	< 78
Older Buildings Within AOI-5	MH-SB-34	7/8/2014	0	< 20 J	< 20	< 78
л Ш	MH-SB-34	7/8/2014	1.5	< 19 J	< 19	< 78
Jde	MH-SB-35	7/8/2014	0	< 19 J	< 19	< 76
-	MH-SB-35	7/8/2014	0	< 19 J	< 19	< 77
vee	MH-SB-35	7/8/2014	1.5	< 19 J	< 19	< 78
etv	MH-SB-36	7/8/2014	0	< 20 J	< 20	< 78
E E	MH-SB-36	7/8/2014	1.5	< 19 J	< 19	< 78
i p	MH-SB-39	7/8/2014	0	< 20	< 20	< 80
lan	MH-SB-39	7/8/2014	1.5	< 20	< 20	< 80
pur	MH-SB-42	7/9/2014	0	< 20	< 20	< 80
roi	MH-SB-42	7/9/2014	1.5	< 20	< 20	< 80
IS A	MH-SB-69	7/9/2014	0	< 20	< 20	< 80
rea	MH-SB-69	7/9/2014	1.5	< 20	< 20	< 80
AOI-7 - Open Areas Around and in Between	MH-SB-72	7/21/2014	0	< 20	< 20	< 80
bei	MH-SB-72	7/21/2014	1.5	< 20	< 20	< 80
0	MH-SB-78	7/9/2014	0	< 20	< 20	< 80
2-1	MH-SB-78	7/9/2014	1.5	< 20	< 20	< 80
AQ	MH-SB-78	7/9/2014	1.5	< 20	< 20	< 79
	MH-SB-80	7/21/2014	0	< 20	< 20	< 79
	MH-SB-80	7/21/2014	1.5	< 20	< 20	< 79
	MH-SB-83	7/21/2014	0	< 20 J	< 20	< 80
	MH-SB-83	7/21/2014	1.5	< 20 J	< 20	< 79
	MH-SB-83	7/21/2014	1.5	< 20 J	< 20	< 79
	MH-SB-85	7/21/2014	0	< 20 J	< 20	< 80
	MH-SB-85	7/21/2014	1.5	< 20 J	< 20	< 79
	MH-SB-87	7/21/2014	0	< 20 J	< 20	< 79
	MH-SB-87	7/21/2014	1.5	< 20 J	< 20	< 79
			<u> </u>			

MH-SB-87	7/21/2014	1.5	< 20 J	< 20	< 79
MH-SB-88	7/21/2014	0	< 20 J	< 20	< 79
MH-SB-88	7/21/2014	1.5	< 20 J	< 20	< 79
MH-SB-89	7/21/2014	0	< 20 J	< 20	< 80
MH-SB-89	7/21/2014	1.5	< 20 J	< 20	< 79
MH-SB-90	7/21/2014	0	< 20 J	< 20	< 79
MH-SB-90	7/21/2014	1.5	< 20 J	< 20	< 80
MH-SB-94	7/21/2014	0	< 20 J	< 20	< 79
MH-SB-94	7/21/2014	1.5	< 20 J	< 20	< 79
	MH-SB-88 MH-SB-88 MH-SB-89 MH-SB-89 MH-SB-90 MH-SB-90 MH-SB-94	MH-SB-88 7/21/2014 MH-SB-88 7/21/2014 MH-SB-89 7/21/2014 MH-SB-89 7/21/2014 MH-SB-90 7/21/2014 MH-SB-90 7/21/2014 MH-SB-90 7/21/2014 MH-SB-90 7/21/2014 MH-SB-91 7/21/2014	MH-SB-88 7/21/2014 0 MH-SB-88 7/21/2014 1.5 MH-SB-89 7/21/2014 0 MH-SB-89 7/21/2014 1.5 MH-SB-89 7/21/2014 1.5 MH-SB-90 7/21/2014 1.5 MH-SB-90 7/21/2014 0 MH-SB-91 7/21/2014 1.5 MH-SB-94 7/21/2014 0	MH-SB-88 7/21/2014 0 < 20 J MH-SB-88 7/21/2014 1.5 < 20 J	MH-SB-88 7/21/2014 0 < 20 J < 20 MH-SB-88 7/21/2014 1.5 < 20 J

Notes:

µg/kg - micrograms per kilogram

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Levels

bgs - below ground surface

J - Results and/or reporting limits are estimated

Field duplicates are shown in italics

Herbicides by USEPA Method 8151A



Table 9d. AOI-7 Metals in Soil

Malibu High School 30215 Morning View Drive Malibu, California

											Met	als in n	ng/kg							
Area of Interest		Sample	Depth						Chromiu											
(AOI)	Sample ID	Date	(feet bgs)	Antimony	Arsenic	Barium	Beryllium	Cadmium	m (total)	Cobalt	Copper	Lead	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Mercury
Resident	ial DTSC-Modif	ied RSL or U	SEPA RSL	31	12 ^a	15,000	16	4.6	120,000	23	3100	80	390	1500	390	390	0.78 ^b	390	23,000	23
	MH-SB-12	7/9/2014	0	< 10 J	4.0	100	< 0.50	2.3	58 J	13	23	< 2.0	2.4	59	< 3.0	< 1.5	< 10	60 J	56	0.049
	MH-SB-12	7/9/2014	1.5	< 10	3.8	93 J	< 0.50	2.1	63	12	23	2.6	2.8	52	< 3.0	< 1.5	< 10	69	53	0.048
	MH-SB-16	7/9/2014	0	< 10	4.4	130 J	< 0.50	1.9	60	10	24	8.0	2.1	47	< 3.0	< 1.5	< 10	58	73	0.059
	MH-SB-16	7/9/2014	1.5	< 10	5.2	130 J	< 0.50	2.0	66	13	26	< 2.0	2.2	53	< 3.0	< 1.5	< 10	76	44	0.057
	MH-SB-17	7/9/2014	0	< 9.9 J	4.2	110	< 0.50	0.90	31 J	7.7	19	13	< 2.0	17	< 3.0	< 1.5	< 9.9	33 J	63	0.085
	MH-SB-19	7/9/2014	0	< 9.9 J	3.5	100	< 0.50	1.4	44 J	9.1	20	9.3	< 2.0	37	< 3.0	< 1.5	< 9.9	46 J	56	0.083
ώ	MH-SB-19	7/9/2014	0	< 9.8 J	< 2.9	39	< 0.49	0.62	32 J	5.5	11	2.1	< 2.0	27	< 2.9	< 1.5	< 9.8	30 J	19	0.067
AOI-5	MH-SB-19	7/9/2014	1.5	< 20 R	< 5.9	41 J	< 0.99	< 0.99	28 J	5.9	4.0 J	< 3.9	< 3.9	27 J	< 5.9	< 3.0	< 20	27 J	22 J	0.050
	MH-SB-20	7/9/2014	0	< 10 J	6.5	180	< 0.50	1.9	48 J	10	32	14	< 2.0	40	< 3.0	< 1.5	< 10	50 J	120	0.075
Within	MH-SB-20	7/9/2014	1.5	< 20 J	< 6.0	110	< 1.0	1.8	63 J	17	23	< 4.0	< 4.0	65	< 6.0	< 3.0	< 20	59 J	46	0.039
	MH-SB-22	7/9/2014	0	< 10 J	7.9	280	< 0.50	2.5	47 J	7.8	20	2.1	3.3	46	< 3.0	< 1.5	< 10	65 J	71	0.054
รยิเ	MH-SB-22	7/9/2014	1.5	< 9.9 J	5.1	160	< 0.49	2.2	52	14	25	5.1	< 2.0	53	< 3.0	< 1.5	< 9.9	66	58	0.043
Building	MH-SB-22	7/9/2014	1.5	< 9.8 J	4.2	150	< 0.49	1.9	52	12	25	5.7	< 2.0	51	< 2.9	< 1.5	< 9.8	63	55	0.050
Bui	MH-SB-23	7/9/2014	0	< 10 J	5.7	200	< 0.50	2.3	49 J	11	26	9.1	2.4	52	< 3.0	< 1.5	< 10	56 J	91	0.067
er	MH-SB-23	7/9/2014	1.5	< 9.8 J	5.2	200	< 0.49	5.7	44 J	3.4	19	< 2.0	< 2.0	35	< 2.9	< 1.5	< 9.8	67 J	49	0.045
Older	MH-SB-24	7/9/2014	0	< 10 J	5.8	180	< 0.50	2.5	49 J	8.2	21	8.5	2.0	45	< 3.0	< 1.5	< 10	55 J	79	0.064
	MH-SB-24	7/9/2014	1.5	< 20 J	< 6.0	64	< 1.0	1.6	50 J	15	17	< 4.0	< 4.0	54	< 6.0	< 3.0	< 20	54 J	37	0.043
Between	MH-SB-25	7/9/2014	0	< 9.9 J	5.0	200	< 0.49	2.5	53 J	7.9	21	3.5	2.1	47	< 3.0	< 1.5	< 9.9	66 J	73	0.052
3et/	MH-SB-25	7/9/2014	1.5	< 10 J	6.9	130	< 0.50	2.2	64 J	13	26	2.4	2.2	62	< 3.0	< 1.5	< 10	72 J	54	0.048
in	MH-SB-31	7/8/2014	0	< 10 J	< 3.0	110 J	< 0.50	1.4	43	12	20	4.0	< 2.0	42	< 3.0 J	< 1.5	< 10	46	80 J	0.054
and	MH-SB-31	7/8/2014	1.5	< 9.9 J	< 3.0	73 J	< 0.49	1.2	44	15	18	2.7	< 2.0	47	< 3.0 J	< 1.5	< 9.9	46	27 J	0.025
d aı	MH-SB-33	7/8/2014	0	< 9.8 J	3.6	96 J	< 0.49	1.5	54	17	24	2.6	< 2.0	57	< 2.9 J	< 1.5	< 9.8	58	41 J	0.046
ouno	MH-SB-33	7/8/2014	1.5	< 9.9 J	3.5	160 J	< 0.50	1.8	51	13	22	4.6	< 2.0	48	< 3.0 J	< 1.5	< 9.9	68	57 J	0.18
Aro	MH-SB-34	7/8/2014	0	< 9.8 J	6.3	96 J	< 0.49	3.1	28	7.4	19	5.0	7.8	36	< 2.9 J	< 1.5	< 9.8	58	60 J	0.036
IS /	MH-SB-34	7/8/2014	1.5	< 20 J	< 6.0	84 J	< 1.0	1.5	57	19	25	< 4.0	< 4.0	70	< 6.0 J	< 3.0	< 20	66	51 J	0.043
rea	MH-SB-35	7/8/2014	0	< 10 J	< 3.0	56 J	< 0.50	0.54	18	5.0	10	3.7	< 2.0	13	< 3.0 J	< 1.5	< 10	24	45 J	0.032
A L	MH-SB-35	7/8/2014	0	< 9.9 J	< 3.0	41 J	< 0.49	< 0.49	14	4.5	7.7	2.5	< 2.0	12	< 3.0 J	< 1.5	< 9.9	19	31 J	0.049
be	MH-SB-35	7/8/2014	1.5	< 10 J	3.6	110 J	< 0.50	1.6	50	13	21	7.9	< 2.0	46	< 3.0 J	< 1.5	< 10	51	52 J	0.047
0	MH-SB-36	7/8/2014	0	< 10 J	4.1	95 J	< 0.50	2.0	65	12	26	28	< 2.0	43	< 3.0 J	< 1.5	< 10	46	180 J	0.11
AOI-7	MH-SB-36	7/8/2014	1.5	< 9.8 J	2.9	140 J	< 0.49	1.3	43	16	20	3.1	< 2.0	48	< 2.9 J	< 1.5	< 9.8	44	28 J	< 0.020
AO AO	MH-SB-39	7/8/2014	0	< 10 J	3.5	91 J	< 0.50	1.2	33	9.9	21	8.5	< 2.0	29	< 3.0 J	< 1.5	< 10	41	390 J	0.034
	MH-SB-39	7/8/2014	1.5	< 20 J	< 5.9	90 J	< 0.99	1.7	55	17	21	< 4.0	< 4.0	59	< 5.9 J	< 3.0	< 20	60	42 J	0.029
	MH-SB-42	7/9/2014	0	< 9.9 J	< 3.0	52	< 0.50	< 0.50	10 J	3.3	12	3.6	< 2.0	11	< 3.0	< 1.5	< 9.9	19 J	35	0.052
	MH-SB-42	7/9/2014	1.5	< 20 R	< 6.0	63 J	< 1.0	2.2	63 J	15	25 J	4.6	< 4.0	66 J	< 6.0	< 3.0	< 20	62 J	52 J	0.052
	MH-SB-69	7/9/2014	0	< 20	6.4	140 J	< 1.0	2.9	82	17	31	< 4.0	4.1	77	< 6.0	< 3.0	< 20	91	70	0.066
	MH-SB-69	7/9/2014	1.5	< 20 J	6.3	140	< 1.0	2.4	61 J	15	26	< 4.0	< 4.0	68	< 6.0	< 3.0	< 20	65 J	59	0.064
	MH-SB-72	7/21/2014	0	< 9.9 J	4.0	72 J	< 0.49	1.5	38	11	19	< 2.0	2.0	43	< 3.0	< 1.5	< 9.9	44 J	48 J	0.19
	MH-SB-72	7/21/2014	1.5	< 9.8 J	3.4	57 J	< 0.49	1.5	36	10	16	< 2.0	< 2.0	40	< 2.9	< 1.5	< 9.8	44 J	35 J	< 0.020

Table 9d. AOI-7 Metals in Soil

Malibu High School 30215 Morning View Drive Malibu, California

											Met	tals in r	ng/kg							
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromiu m (total)	Cobalt	Copper	Lead	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Mercury
Resident	tial DTSC-Modif	fied RSL or U	SEPA RSL	31	12 ^a	15,000	16	4.6	120,000	23	3100	80	390	1500	390	390	0.78 ^b	390	23,000	23
	MH-SB-78	7/9/2014	0	< 9.9	5.3	160 J	< 0.50	2.7	77	11	27	3.6	2.6	60	< 3.0	< 1.5	< 9.9	95	58	0.071
	MH-SB-78	7/9/2014	1.5	< 20	< 6.0	93 J	< 1.0	2.1	72	17	26	< 4.0	< 4.0	69	< 6.0	< 3.0	< 20	79	54	0.046
-	MH-SB-78	7/9/2014	1.5	< 20	7.1	88 J	< 1.0	1.8	62	14	23	< 4.0	< 4.0	59	< 6.0	< 3.0	< 20	67	47	0.051
een	MH-SB-80	7/21/2014	0	< 10 J	5.4	97 J	< 0.50	0.74	20	6.8	21	5.0	< 2.0	17	< 3.0	< 1.5	< 10	33 J	68 J	0.040
Betwo	MH-SB-80	7/21/2014	1.5	< 9.9 J	5.0	110 J	< 0.49	1.3	37	10	23	3.0	< 2.0	37	< 3.0	< 1.5	< 9.9	44 J	51 J	0.066
) B(MH-SB-83	7/21/2014	0	< 9.9 J	7.4	110 J	< 0.50	0.90	28	8.5	22	5.2	< 2.0	27	< 3.0	< 1.5	< 9.9	36 J	53 J	0.036
d in AOI	MH-SB-83	7/21/2014	1.5	< 10 J	4.7	100 J	< 0.50	2.0	62	17	26	3.7	2.9	63	< 3.0	< 1.5	< 10	62 J	55 J	0.039
und and Within A	MH-SB-83	7/21/2014	1.5	< 9.9 J	4.5	84 J	< 0.50	1.7	51	13	20	5.7	2.3	51	< 3.0	< 1.5	< 9.9	57 J	480 J	0.039
Vith	MH-SB-85	7/21/2014	0	< 10 J	5.1	87 J	< 0.50	0.54	15	6.2	18	4.5	< 2.0	13	< 3.0	< 1.5	< 10	30 J	160 J	0.16
	MH-SB-85	7/21/2014	1.5	< 10 J	3.8	68 J	< 0.50	1.4	42	12	19	3.1	< 2.0	43	< 3.0	< 1.5	< 10	47 J	66 J	0.035
	MH-SB-87	7/21/2014	0	< 10 J	11	140 J	< 0.50	0.50	19	9.9	30	5.9	< 2.0	17	< 3.0	< 1.5	< 10	42 J	66 J	0.10
reas uildir	MH-SB-87	7/21/2014	1.5	< 9.8 J	< 2.9	42 J	< 0.49	0.59	12	3.2	5.9	< 2.0	< 2.0	11	< 2.9	< 1.5	< 9.8	18 J	24 J	0.10
Ar Bu	MH-SB-88	7/21/2014	0	< 10 J	3.4	67 J	< 0.50	1.0	43	9.7	17	8.0	< 2.0	37	< 3.0	< 1.5	< 10	38 J	82 J	0.059
Open Older	MH-SB-88	7/21/2014	1.5	< 20 J	< 5.9	71 J	< 0.99	1.8	50	14	20	< 3.9	< 3.9	57	< 5.9	< 3.0	< 20	49 J	45 J	0.040
őö	MH-SB-89	7/21/2014	0	< 9.8 J	4.0	83 J	< 0.49	2.0	51	13	43	14	2.2	53	< 2.9	< 1.5	< 9.8	50 J	390 J	0.057
- 2-	MH-SB-89	7/21/2014	1.5	< 20 J	< 6.0	67 J	< 1.0	2.0	58	15	23	< 4.0	< 4.0	64	< 6.0	< 3.0	< 20	56 J	58 J	0.062
AOI-7	MH-SB-90	7/21/2014	0	< 9.9 J	3.5	80 J	< 0.49	1.5	41	11	16	2.8	< 2.0	41	< 3.0	< 1.5	< 9.9	43 J	41 J	0.028
	MH-SB-90	7/21/2014	1.5	< 10 J	3.7	46 J	< 0.50	< 0.50	7.2	2.6	6.6	< 2.0	< 2.0	6.9	< 3.0	< 1.5	< 10	15 J	18 J	< 0.020
	MH-SB-94	7/21/2014	0	< 9.9 J	4.5	70 J	< 0.49	2.3	38	3.6	25	50	< 2.0	14	< 3.0	< 1.5	< 9.9	17 J	140 J	0.18
	MH-SB-94	7/21/2014	1.5	< 10 J	4.0	73 J	< 0.50	1.0	30	6.8	19	19	< 2.0	23	< 3.0	< 1.5	< 10	31 J	60 J	0.071

Notes:

mg/kg - milligrams per kilogram

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Levels

bgs - below ground surface

J - Results and/or reporting limits are estimated

Field duplicates are shown in italics

Metals by USEPA Method 6010/7471

^a Arsenic occurs naturally in soil. An evaluation of arsenic soil data from school sites in Southern California found arsenic concentrations ranging from 0.15 mg/kg to 20 mg/kg, with an upper-bound background arsenic concentration of 12 mg/kg (Chernoff G, Bosan W, Oudiz D. 2008. Determination of a Southern California Regional Background Arsenic Concentration in Soil). Arsenic concentrations in soil samples collected at the site were conservatively screened against 12 mg/kg. Arsenic concentrations greater than 12 mg/kg were further evaluated in Section 9 of the PEA Report.

^b As specified in the DTSC-approved PEA Work Plan, the reporting limit for thallium exceeds the RSL. As all results are non-detect, values are not bolded.

												SVOCs in	μg/kg							
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,2-Diphenylhydrazine	1,3-Dichlorobenzene	1,4-Dichlorobenzene	2,2'-oxybis(1- Chloropropane)	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene	2-Chlorophenol	2-Methylnaphthalene	2-Methylphenol
Residentia	I DTSC-Modifi	ed RSL or U	SEPA RSL	24,000	1,800,000	670	530,000	2,600	4,900	6,200,000	6,900	180,000	1,200,000	120,000	1,700	360	6,300,000	63,000	230,000	3,100,000
8 - cation k	MH-SB-113	7/21/2014	1.5	< 1300	< 1300	< 1300	< 1300	< 1300	< 1300	< 1300	< 1300	< 1300	< 1300	< 2600	< 1300	< 1300	< 1300	< 1300	< 1300	< 1300
AOI-8 - utralizatic Tank	MH-SB-113	7/21/2014	4.5	< 1300	< 1300	< 1300	< 1300	< 1300	< 1300	< 1300	< 1300	< 1300	< 1300	< 2600	< 1300	< 1300	< 1300	< 1300	< 1300	< 1300
Š	MH-SB-113	7/21/2014	9.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 650	< 330	< 330	< 330	< 330	< 330	< 330

µg/kg - micrograms per kilogram

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Levels

bgs - below ground surface

NA - not available

SVOCs - Semi-Volatile Organic Compounds

												SVOC	cs in μg/	kg							
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	2-Nitroaniline	2-Nitrophenol	3&4-Methylphenol	3,3'-Dichlorobenzidine	3-Nitroaniline	4,6-Dinitro-2- methylphenol	4-Bromophenyl-phenyl ether	4-Chloro-3-methylphenol	4-Chloroaniline	4-Chlorophenyl-phenyl ether	4-Nitroaniline	4-Nitrophenol	Acenaphthene	Acenaphthylene	Aniline	Anthracene	Benzidine	Benzo(a)anthracene
Residentia	I DTSC-Modifi	ed RSL or U	SEPA RSL	610,000	NA	NA	1,200	18,000	4,900	NA	6,200,000	2,700	NA	27,000	NA	3,500,000	NA	93,000	17,000,000	1	150
8 - zation k	MH-SB-113	7/21/2014	1.5	< 1300	< 1300	< 1300	< 3300	< 1300	< 1700	< 1300	< 1300	< 1300	< 1300	< 3300	< 3300	< 1300	< 1300	< 1700	< 1300	< 5300 J	< 1300
AOI-8 - utralizati Tank	MH-SB-113	7/21/2014	4.5	< 1300	< 1300	< 1300	< 3300	< 1300	< 1700	< 1300	< 1300	< 1300	< 1300	< 3300	< 3300	< 1300	< 1300	< 1700	< 1300	< 5300 J	< 1300
S	MH-SB-113	7/21/2014	9.5	< 330	< 330	< 330	< 820	< 330	< 420	< 330	< 330	< 330	< 330	< 820	< 820	< 330	< 330	< 420	< 330	< 1300 J	< 330

µg/kg - micrograms per kilogram

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Levels

bgs - below ground surface

NA - not available

SVOCs - Semi-Volatile Organic Compounds

											SVO	Cs in µg/l	kg						
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl Alcohol	bis(2- Chloroethoxy)methane	bis(2-Chloroethyl) ether	bis(2- Ethylhexyl)phthalate	Butylbenzylphthalate	Chrysene	Dibenz(a,h)anthracene	Dibenzofuran	Diethylphthalate	Dimethylphthalate	Di-n-butylphthalate
Residentia	I DTSC-Modifi	ed RSL or U	SEPA RSL	15	150	NA	380	250,000,000	6,200,000	180,000	230	38,000	280,000	3,800	15	72,000	49,000,000	610,000,000	6,200,000
ation	MH-SB-113	7/21/2014	1.5	< 1300	< 1300	< 1300	< 1300	< 3300	< 1300	< 1300	< 1300	< 1300	< 1300	< 1300	< 1700	< 1300	< 1300	< 1300	< 1300
AOI-8 - utralizatic Tank	MH-SB-113	7/21/2014	4.5	< 1300	< 1300	< 1300	< 1300	< 3300	< 1300	< 1300	< 1300	< 1300	< 1300	< 1300	< 1700	< 1300	< 1300	< 1300	< 1300
Nei	MH-SB-113	7/21/2014	9.5	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330

µg/kg - micrograms per kilogram

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Levels

bgs - below ground surface

NA - not available

SVOCs - Semi-Volatile Organic Compounds

											SVO	Cs in µg/k	g							
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Di-n-octylphthalate	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadi ene	Hexachloroethane	Indeno(1,2,3-cd)pyrene	Isophorone	Naphthalene	Nitrobenzene	N-Nitroso-di-n- propylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
Residentia	I DTSC-Modifie	ed RSL or US	SEPA RSL	2,400,000	2,300,000	2,300,000	330	6,800	370,000	13,000	150	560,000	3,800	5,100	76	110,000	990	NA	18,000,000	1,700,000
8 - zation k	MH-SB-113	7/21/2014	1.5	< 1300	< 1300	< 1300	< 1300	< 1300	< 3300	< 1300	< 1300	< 1300	< 1300	< 1300	< 990	< 1300	< 3300	< 1300	< 1300	< 1300
AOI-8 - utralizatic Tank	MH-SB-113	7/21/2014	4.5	< 1300	< 1300	< 1300	< 1300	< 1300	< 3300	< 1300	< 1300	< 1300	< 1300	< 1300	< 990	< 1300	< 3300	< 1300	< 1300	< 1300
Ne	MH-SB-113	7/21/2014	9.5	< 330	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 820	< 330	< 330	< 330

µg/kg - micrograms per kilogram

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Levels

bgs - below ground surface

NA - not available

SVOCs - Semi-Volatile Organic Compounds

Table 10b. AOI-8 TPH in SoilMalibu High School30215 Morning View DriveMalibu, California

Area of							Gasoline Range (Organics in mg/kg	J		
Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Hydrocarbons (C04-C06)	Hydrocarbons (C06-C07)	Hydrocarbons (C07-C08)	Hydrocarbons (C08-C09)	Hydrocarbons (C09-C10)	Hydrocarbons (C10-C11)	Hydrocarbons (C11-C12)	Hydrocarbons (C12-C13)
ion	MH-SB-113	7/21/2014	1.5	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38
AOI-8 - tralizat Tank	MH-SB-113	7/21/2014	4.5	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39
Neu	MH-SB-113	7/21/2014	9.5	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39

Notes:

mg/kg - milligrams per kilogram TPH by USEPA Method 8015M USEPA - United States Environmental Protection Agency DTSC - Department of Toxic Substances Control RSLs - Regional Screening Levels bgs - below ground surface EFH - Extractable Fuel Hydrocarbon USEPA RSLs for Petroleum Hydrocarbons (results are compared to the most conservative value for the specified range) (USEPA 2015) Aliphatic Low, C5 - C8 520 mg/kg Aromatic Low, C6 - C8 82 mg/kg

Aromatic Low, C6 - C882 mg/kgAliphatic Medium, C9 - C1896 mg/kgAromatic Medium, C9 - C16110 mg/kgAliphatic High, C19 - C32230,000 mg/kgAromatic High, C17 - C322,500 mg/kg

Table 10b. AOI-8 TPH in SoilMalibu High School30215 Morning View DriveMalibu, California

Area of										Diesel Rar	nge Organio	s in mg/kg						
Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	EFH (C13-C14)	EFH (C15-C16)	EFH (C17-C18)	EFH (C19-C20)	EFH (C21-C22)	EFH (C23-C24)	EFH (C25-C26)	EFH (C27-C28)	EFH (C29-C30)	EFH (C31-C32)	EFH (C33-C34)	EFH (C35-C36)	EFH (C37-C38)	EFH (C39-C40)	EFH (C13-C40)
ion	MH-SB-113	7/21/2014	1.5	< 4.9	< 4.9	< 4.9	< 4.9	5.7	9.2	17	19	28	39	28	28	22	20	22
AOI-8 - ıtralizat Tank	MH-SB-113	7/21/2014	4.5	< 5.0	< 5.0	< 5.0	< 5.0	7.9	12	21	23	32	44	30	31	24	22	25
Neu	MH-SB-113	7/21/2014	9.5	< 14	< 14	< 14	< 14	< 14	< 14	< 14	20	25	30	27	28	25	26	22

Notes:

mg/kg - milligrams per kilogram TPH by USEPA Method 8015M USEPA - United States Environmental Protection Agency DTSC - Department of Toxic Substances Control RSLs - Regional Screening Levels bgs - below ground surface EFH - Extractable Fuel Hydrocarbon USEPA RSLs for Petroleum Hydrocarbons (results are compared to the most conservative value for the specified range) (USEPA 2015) Aliphatic Low, C5 - C8 520 mg/kg Aromatic Low, C6 - C8 82 mg/kg

 Aliphatic Medium, C9 - C18
 96 mg/kg

 Aromatic Medium, C9 - C16
 110 mg/kg

 Aliphatic High, C19 - C32
 230,000 mg/kg

 Aromatic High, C17 - C32
 2,500 mg/kg

Table 10c. AOI-8 Metals in SoilMalibu High School30215 Morning View DriveMalibu, California

Area of											Meta	als in m	g/kg							
Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium (total)	Cobalt	Copper	Lead	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Mercury
Residential	DTSC-Modifie	ed RSL or U	JSEPA RSL	31	12a	15,000	16	4	120,000	23	3,100	80	390	1,500	390	390	0.78b	390	23,000	23
fion	MH-SB-113	7/21/2014	1.5	< 9.9 J	3.6	78 J	< 0.50	1.6	53	14	21	2.9	< 2.0	54	< 3.0	< 1.5	< 9.9	54 J	44 J	0.041
AOI-8 utraliza Tank	MH-SB-113	7/21/2014	4.5	< 20	< 5.9	65	< 0.98	1.6	61	15	25	< 3.9 J	< 3.9	61	< 5.9	< 2.9	< 20	54	45	0.085
Neui	MH-SB-113	7/21/2014	9.5	< 20	< 5.9	83	< 0.99	2.2	68	20	32	< 4.0 J	< 4.0	82	< 5.9	< 3.0	< 20	66	57	0.047

Notes:

mg/kg - milligrams per kilogram

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Levels

bgs - below ground surface

J - Results and/or reporting limits are estimated

Metals by USEPA Method 6010/7471

a - Arsenic occurs naturally in soil. An evaluation of arsenic soil data from school sites in Southern California found arsenic concentrations ranging from 0.15 mg/kg to 20 mg/kg, with an upper-bound background arsenic concentration of 12 mg/kg (Chernoff G, Bosan W, Oudiz D. 2008. Determination of a Southern California Regional Background Arsenic Concentration in Soil). Arsenic concentrations in soil samples collected at the site were conservatively screened against 12 mg/kg. Arsenic concentrations greater than 12 mg/kg were further evaluated in Section 9 of the PEA Report.

^b - As specified in the DTSC-approved PEA Work Plan, the reporting limit for thallium exceeds the RSL. As all results are non-detect, values are not bolded.



Table 10d. AOI-8 pH in Soil

Malibu High School 30215 Morning View Drive Malibu, California

Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	рН
ı Tank	MH-SB-113	7/21/2014	1.5	8.52
AOI-8 - Neutralization	MH-SB-113	7/21/2014	4.5	8.52
	MH-SB-113	7/21/2014	9.5	8.29

Notes

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Levels

bgs - below ground surface

pH by USEPA Method 9045



														VOCs in µg/l											
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	,1,2,2-Tetrachloroethane	l,1,2-Trichloro-1,2,2- rifluoroethane	,1,2-Trichloroethane	,1-Dichloroethane	,1-Dichloroethene	,1-Dichloropropene	,2,3-Trichlorobenzene	,2,3-Trichloropropane	,2,4-Trichlorobenzene	,2,4-Trimethylbenzene	,,2-Dibromo-3- chloropropane	,2-Dibromoethane	,2-Dichlorobenzene	,2-Dichloroethane	,2-Dichloropropane	,3,5-Trimethylbenzene	, 3-Dichlorobenzene	, 3-Dichloropropane		
Residential	Soil Gas Scree	ning Level for 5	feet bgs or less ^b	0.33	1,040	0.04	31,000	0.18	1.52	73	NA	2.1	0.0001112a	2.1	7.3	0.00017a	0.0047	210	0.11	0.28	36.5	NA	NA		
tion	MH-SV-21	7/29/2014	6	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008		
AOI-8 - utralizatior Tank	MH-SV-21	7/29/2014	9.5	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008		
/ Neut	MH-SV-21	7/29/2014	9.5	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008		

<u>Notes:</u> µg/l - micrograms per liter

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Level

bgs - below ground surface

Field duplicates are shown in italics

VOCs - Volatile Organic Compounds VOCs by USEPA Method 8260B

NA - Not available

^a As specified in the DTSC-approved PEA Work Plan, the reporting limit for 1,2,3-trichloropropane and 1,2-dibromo-3chloropropane exceed the RSL. As all results are non-detect, values are not bolded.

^b Soil gas screening levels are calculated as the ratio of DTSC-Modified RSL (Cal/EPA 2014) or USEPA RSL (USEPA 2014) for residential air to a default attenuation factor of 0.001 for future residential building, as recommended by CalEPA (2013). This screening evaluation does not take into account sample depth.

Soil gas screening levels are applicable to soil gas data collected at 5 feet bgs or less.

													VOC	s in µg/L									
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	1,4-Dichlorobenzene	2,2-Dichloropropane	2-Chlorotoluene	4-Chlorotoluene	Benzene	Bromobenzene	Bromodichloromethane	Bromoform	Carbon Tetrachloride	Chlorobenzene	Chloroform	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Cumene	Dibromochloromethane	Dibromomethane	Dichlorodifluoromethane	Diisopropyl ether	Ethyl Benzene	Ethyl tert-butyl ether
Residential	Soil Gas Scree	ning Level for 5	feet bgs or less ^b	0.26	NA	NA	NA	0.08	63	0.07	2.21	0.06	52	0.12	7.3	0.15	420	0.09	4.2	100	730	1.1	NA
tion	MH-SV-21	7/29/2014	6	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.04
AOI-8 - utralization Tank	MH-SV-21	7/29/2014	9.5	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.04
/ Neui	MH-SV-21	7/29/2014	9.5	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.04

<u>Notes:</u> µg/l - micrograms per liter

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RSLs - Regional Screening Level

bgs - below ground surface

Field duplicates are shown in italics

VOCs - Volatile Organic Compounds

VOCs by USEPA Method 8260B

NA - Not available

^a As specified in the DTSC-approved PEA Work Plan, the reporting limit for 1,2,3-trichloropropane and 1,2-dibromo-3chloropropane exceed the RSL. As all results are non-detect, values are not bolded.

^b Soil gas screening levels are calculated as the ratio of DTSC-Modified RSL (Cal/EPA 2014) or USEPA RSL (USEPA 2014) for residential air to a default attenuation factor of 0.001 for future residential building, as recommended by CalEPA (2013). This screening evaluation does not take into account sample depth.

Soil gas screening levels are applicable to soil gas data collected at 5 feet bgs or less.

													VOC	s in µg	/L								
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Hexachlorobutadiene	Methyl tert-butyl ether	Methylene Chloride	Naphthalene	n-Butylbenzene	n-Propylbenzene	p-Cymene	sec-Butylbenzene	Styrene	t-Amyl methyl ether	tert Butyl alcohol	tert-Butylbenzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	Trichloroethene	Trichlorofluoromethane	Vinyl Chloride	Xylenes (total)
Residentia	Soil Gas Scree	ning Level for 5	i feet bgs or less ^b	0.11	11	0.69	0.08	183	1,000	NA	183	939	NA	NA	183	0.41	313	7.3	0.15	0.48	730	0.03	100
tion	MH-SV-21	7/29/2014	6	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.04	< 0.4	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
AOI-8 - utralization Tank	MH-SV-21	7/29/2014	9.5	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.04	< 0.4	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
/ Neut	MH-SV-21	7/29/2014	9.5	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.04	< 0.4	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008

<u>Notes:</u> µg/l - micrograms per liter

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Level

bgs - below ground surface

Field duplicates are shown in italics

VOCs - Volatile Organic Compounds VOCs by USEPA Method 8260B

NA - Not available

^a As specified in the DTSC-approved PEA Work Plan, the reporting limit for 1,2,3-trichloropropane and 1,2-dibromo-3chloropropane exceed the RSL. As all results are non-detect, values are not bolded.

^b Soil gas screening levels are calculated as the ratio of DTSC-Modified RSL (Cal/EPA 2014) or USEPA RSL (USEPA 2014) for residential air to a default attenuation factor of 0.001 for future residential building, as recommended by CalEPA (2013). This screening evaluation does not take into account sample depth.

Soil gas screening levels are applicable to soil gas data collected at 5 feet bgs or less.

							Gasoline Range (Drganics in mg/kg			
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Petroleum Hydrocarbons (C04-C06)	Petroleum Hydrocarbons (C06-C07)	Petroleum Hydrocarbons (C07-C08)	Petroleum Hydrocarbons (C08-C09)	Petroleum Hydrocarbons (C09-C10)	Petroleum Hydrocarbons (C10-C11)	Petroleum Hydrocarbons (C11-C12)	Petroleum Hydrocarbons (C12-C13)
	MH-SB-95	7/29/2014	9.5	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37
	MH-SB-95	7/29/2014	19.5	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39
	MH-SB-95	7/29/2014	29.5	<0. 37	<0. 37	<0. 37	<0.37	<0. 37	<0. 37	<0. 37	<0. 37
	MH-SB-95	7/29/2014	39.5	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
	MH-SB-95	7/29/2014	49.5	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
	MH-SB-96	7/28/2014	9.5	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39
o	MH-SB-96	7/28/2014	19.5	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
JSTs	MH-SB-96	7/28/2014	29.5	< 150	< 150	< 150	160	150	< 150	< 150	< 150
er U	MH-SB-96	7/28/2014	39.5	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39
Ĕ	MH-SB-96	7/28/2014	49.5	< 0.4J							
Pol	MH-SB-97	7/28/2014	9.5	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39
6	MH-SB-97	7/28/2014	19.5	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
AOI-9	MH-SB-97	7/28/2014	29.5	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39
Ā	MH-SB-97	7/28/2014	39.5	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
	MH-SB-97	7/28/2014	49.5	< 0.39J							
	MH-SB-98	7/29/2014	9.5	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37
	MH-SB-98	7/29/2014	19.5	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38
	MH-SB-98	7/29/2014	29.5	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39
	MH-SB-98	7/29/2014	39.5	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39
	MH-SB-98	7/29/2014	49.5	< 1.9	< 1.9	< 1.9	6.8	2.6	2.8	< 1.9	< 1.9

Notes:

mg/kg - milligrams per kilogram

TPH by USEPA Method 8015M

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bgs - below ground surface

EFH - Extractable Fuel Hydrocarbon

J - Results and/or reporting limits are estimated

USEPA RSLs for Petroleum Hydrocarbons (results are compared to the most conservative value for the specified range) (USEPA 2015)

Aliphatic Low, C5 - C8520 mg/kgAromatic Low, C6 - C882 mg/kgAliphatic Medium, C9 - C1896 mg/kgAromatic Medium, C9 - C16110 mg/kgAliphatic High, C19 - C32230,000 mg/kgAromatic High, C17 - C322,500 mg/kg

										Diesel Ra	nge Organi	cs in mg/kg						
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	EFH (C13-C14)	EFH (C15-C16)	EFH (C17-C18)	EFH (C19-C20)	EFH (C21-C22)	EFH (C23-C24)	EFH (C25-C26)	EFH (C27-C28)	EFH (C29-C30)	EFH (C31-C32)	EFH (C33-C34)	EFH (C35-C36)	EFH (C37-C38)	EFH (C39-C40)	EFH (C13-C40)
. ,	MH-SB-95	7/29/2014	9.5	< 29	< 29	< 29	< 29	< 29	< 29	< 29	< 29	< 29	< 29	< 29	< 29	< 29	< 29	< 29
	MH-SB-95	7/29/2014	19.5	< 14	54	250	180	87	39	32	37	40	40	31	28	21	18	860
	MH-SB-95	7/29/2014	29.5	< 14	< 14	< 14	< 14	< 14	< 14	< 14	< 14	< 14	< 14	< 14	< 14	< 14	< 14	< 14
	MH-SB-95	7/29/2014	39.5	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15
	MH-SB-95	7/29/2014	49.5	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15
	MH-SB-96	7/28/2014	9.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
ຸທ	MH-SB-96	7/28/2014	19.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
JSTs	MH-SB-96	7/28/2014	29.5	16	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	11
л. С	MH-SB-96	7/28/2014	39.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ĕ	MH-SB-96	7/28/2014	49.5	< 5.0	< 5.0	9.8	10	13	16	14	14	21	19	10	7.5	< 5.0	< 5.0	150
Р Р	MH-SB-97	7/28/2014	9.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
- 6	MH-SB-97	7/28/2014	19.5	< 9.9	< 9.9	< 9.9	< 9.9	< 9.9	< 9.9	< 9.9	< 9.9	< 9.9	< 9.9	< 9.9	< 9.9	< 9.9	< 9.9	< 9.9
AOI-9	MH-SB-97	7/28/2014	29.5	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
< <	MH-SB-97	7/28/2014	39.5	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	MH-SB-97	7/28/2014	49.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
	MH-SB-98	7/29/2014	9.5	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15
	MH-SB-98	7/29/2014	19.5	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15
	MH-SB-98	7/29/2014	29.5	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15
	MH-SB-98	7/29/2014	39.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	5.1
	MH-SB-98	7/29/2014	49.5	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	30

Notes:

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										VOCs in µg/l						
Area of Interest (AOI)	Sample ID	Sample date	Depth (feet bgs)	1,1,1,2- Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2- Tetrachloroethane	1,1,2-Trichloro-1,2,2- trifluoroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3- Trichlorobenzene	1,2,3- Trichloropropane	1,2,4- Trichlorobenzene	1,2,4- Trimethylbenzene	1,2-Dibromo-3- chloropropane
Residential S	Soil Gas Screening	J Level for 5 feet b	ogs or less ^b	0.33	1040	0.04	31000	0.18	1.52	73	NA	2.1	0.0001112 ^a	2.1	7.3	0.00017 ^a
	MH-SV-1	7/31/2014	5	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	0.584	< 0.008
	MH-SV-1	7/31/2014	20	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	0.135	< 0.008
	MH-SV-1	7/31/2014	35	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	0.113	< 0.008
	MH-SV-2	7/31/2014	5	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	14.8	< 0.008
	MH-SV-2	7/31/2014	21	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	10.4	< 0.008
س	MH-SV-2	7/31/2014	36	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	40.3	< 0.008
USTs	MH-SV-3	7/31/2014	5	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	0.877	< 0.008
ier (MH-SV-3	7/31/2014	20	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	0.275	< 0.008
E	MH-SV-4	7/31/2014	5	< 0.008 J	< 0.008 J	< 0.008 J	< 0.04 J	< 0.008 J	< 0.008 J	< 0.008 J	< 0.008 J	< 0.008 J	< 0.008 J	< 0.008 J	3.31 J	< 0.008 J
L I	MH-SV-4	7/31/2014	20	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	10.2	< 0.008
AOI-9	MH-SV-4	7/31/2014	34	< 0.008 J	< 0.008 J	< 0.008 J	< 0.04 J	< 0.008 J	< 0.008 J	< 0.008 J	< 0.008 J	< 0.008 J	< 0.008 J	< 0.008 J	12.2 J	< 0.008 J
Ă	MH-SV-5	7/30/2014	5	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-5	7/30/2014	33	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-5	7/30/2014	21	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-6	7/30/2014	21	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-6	7/30/2014	5	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-6	7/30/2014	36	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008

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Field duplicates are shown in italics

VOCs - Volatile Organic Compounds

VOCs by USEPA Method 8260B

^a As specified in the DTSC-approved PEA Work Plan, the reporting limit for 1,2,3-trichloropropane and 1,2-dibromo-3-chloropropane exceed the RSL. As all results are non-detect, values are not bolded.

									I	/OCs in µg/L	-					
Area of Interest (AOI)	Sample ID	Sample date	Depth (feet bgs)	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5- Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane	2-Chlorotoluene	4-Chlorotoluene	Benzene	Bromobenzene
Residential S	oil Gas Screening	J Level for 5 feet b	ogs or less ^b	0.0047	210	0.11	0.28	36.5	NA	NA	0.26	NA	NA	NA	0.08	63
	MH-SV-1	7/31/2014	5	< 0.008	< 0.008	< 0.008	< 0.008	0.21	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	0.043	< 0.008
	MH-SV-1	7/31/2014	20	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-1	7/31/2014	35	< 0.008	< 0.008	< 0.008	< 0.008	0.049	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	0.027	< 0.008
	MH-SV-2	7/31/2014	5	< 0.008	< 0.008	< 0.008	< 0.008	4.83	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	0.227	< 0.008
	MH-SV-2	7/31/2014	21	< 0.008	< 0.008	< 0.008	< 0.008	4.4	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	0.277	< 0.008
o.	MH-SV-2	7/31/2014	36	< 0.008	< 0.008	< 0.008	< 0.008	16.4	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	16.9	< 0.008
- ISU	MH-SV-3	7/31/2014	5	< 0.008	< 0.008	< 0.008	< 0.008	0.315	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	0.114	< 0.008
ler (MH-SV-3	7/31/2014	20	< 0.008	< 0.008	< 0.008	< 0.008	0.096	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	0.08	< 0.008
e e e e e e e e e e e e e e e e e e e	MH-SV-4	7/31/2014	5	< 0.008 J	< 0.008 J	< 0.008 J	< 0.008 J	1.302 J	< 0.008 J	< 0.008 J	< 0.008 J	< 0.008 J	< 0.008 J	< 0.008 J	0.684 J	< 0.008 J
L L	MH-SV-4	7/31/2014	20	< 0.008	< 0.008	< 0.008	< 0.008	3.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	6.28	< 0.008
AOI-9	MH-SV-4	7/31/2014	34	< 0.008 J	< 0.008 J	< 0.008 J	< 0.008 J	5.29 J	< 0.008 J	< 0.008 J	< 0.008 J	< 0.008 J	< 0.008 J	< 0.008 J	11.9 J	< 0.008 J
Ă	MH-SV-5	7/30/2014	5	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-5	7/30/2014	33	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-5	7/30/2014	21	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-6	7/30/2014	21	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-6	7/30/2014	5	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-6	7/30/2014	36	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008

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VOCs by USEPA Method 8260B

^a As specified in the DTSC-approved PEA Work Plan, the reporting limit for 1,2,3-trichloropropane and 1,2-dibromo-3-chloropropane exceed the RSL. As all results are non-detect, values are not bolded.

									,	VOCs in µg/L						
Area of Interest (AOI)	Sample ID	Sample date	Depth (feet bgs)	Bromodichlorometha ne	Bromoform	Carbon Tetrachloride	Chlorobenzene	Chloroform	cis-1,2- Dichloroethene	cis-1,3- Dichloropropene	Cumene	Dibromochlorometha ne	Dibromomethane	Dichlorodifluorometh ane	Diisopropyl ether	Ethyl Benzene
Residential S	Soil Gas Screening	J Level for 5 feet b	ogs or less ^b	0.07	2.21	0.06	52	0.12	7.3	0.15	420	0.09	4.2	100	730	1.1
	MH-SV-1	7/31/2014	5	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.04	0.481
	MH-SV-1	7/31/2014	20	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	0.029	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008
	MH-SV-1	7/31/2014	35	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	0.025	< 0.008	< 0.008	< 0.008	< 0.04	0.107
	MH-SV-2	7/31/2014	5	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	0.708	< 0.008	< 0.008	< 0.008	< 0.04	13.5
	MH-SV-2	7/31/2014	21	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	0.864	< 0.008	< 0.008	< 0.008	< 0.04	13.7
ν	MH-SV-2	7/31/2014	36	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	3.84	< 0.008	< 0.008	< 0.008	< 0.04	77.3
USTs	MH-SV-3	7/31/2014	5	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	0.061	< 0.008	< 0.008	< 0.008	< 0.04	0.76
ler –	MH-SV-3	7/31/2014	20	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	0.029	< 0.008	< 0.008	< 0.008	< 0.04	0.201
L L	MH-SV-4	7/31/2014	5	< 0.008 J	< 0.008 J	< 0.008 J	< 0.008 J	< 0.008 J	< 0.008 J	< 0.008 J	0.182 J	< 0.008 J	< 0.008 J	< 0.008 J	< 0.04 J	2.27 J
L ·	MH-SV-4	7/31/2014	20	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	0.455	< 0.008	< 0.008	< 0.008	< 0.04	7.03
A0I-9	MH-SV-4	7/31/2014	34	< 0.008 J	< 0.008 J	< 0.008 J	< 0.008 J	< 0.008 J	< 0.008 J	< 0.008 J	1.26 J	< 0.008 J	< 0.008 J	< 0.008 J	< 0.04 J	14.6 J
Ă	MH-SV-5	7/30/2014	5	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008
	MH-SV-5	7/30/2014	33	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008
	MH-SV-5	7/30/2014	21	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008
	MH-SV-6	7/30/2014	21	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008
	MH-SV-6	7/30/2014	5	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008
	MH-SV-6	7/30/2014	36	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008

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VOCs by USEPA Method 8260B

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										VOCs in µg/l	_					
Area of Interest (AOI)	Sample ID	Sample date	Depth (feet bgs)	Ethyl tert-butyl ether	Hexachlorobutadiene	Methyl tert-butyl ether	Methylene Chloride	Naphthalene	n-Butylbenzene	n-Propylbenzene	p-Cymene	sec-Butylbenzene	Styrene	t-Amyl methyl ether	tert Butyl alcohol	tert-Butylbenzene
Residential S	oil Gas Screening	Level for 5 feet b	ogs or less ^b	NA	0.11	11	0.69	0.08	183	1000	NA	183	939	NA	NA	183
	MH-SV-1	7/31/2014	5	< 0.04	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	0.026	0.375	0.478	< 0.008	< 0.04	< 0.4	< 0.008
	MH-SV-1	7/31/2014	20	< 0.04	< 0.008	< 0.04	< 0.008	0.06	< 0.008	0.017	< 0.008	0.048	< 0.008	< 0.04	< 0.4	< 0.008
	MH-SV-1	7/31/2014	35	< 0.04	< 0.008	< 0.04	< 0.008	0.041	0.957	< 0.008	0.057	0.086	< 0.008	< 0.04	< 0.4	< 0.008
	MH-SV-2	7/31/2014	5	< 0.04	< 0.008	< 0.04	< 0.008	1.73	0.443	2.63	0.218	0.158	< 0.008	< 0.04	< 0.4	< 0.008
	MH-SV-2	7/31/2014	21	< 0.04	< 0.008	< 0.04	< 0.008	0.425	0.73	2.9	0.261	0.218	< 0.008	< 0.04	< 0.4	< 0.008
o.	MH-SV-2	7/31/2014	36	< 0.04	< 0.008	< 0.04	< 0.008	< 0.008	1.91	10.4	0.713	0.587	< 0.008	< 0.04	< 0.4	< 0.008
USTs	MH-SV-3	7/31/2014	5	< 0.04	< 0.008	< 0.04	< 0.008	0.06	0.044	0.105	0.054	0.066	< 0.008	< 0.04	< 0.4	< 0.008
ler (MH-SV-3	7/31/2014	20	< 0.04	< 0.008	< 0.04	< 0.008	0.054	0.018	< 0.008	0.045	0.058	< 0.008	< 0.04	< 0.4	< 0.008
	MH-SV-4	7/31/2014	5	< 0.04 J	< 0.008 J	< 0.04 J	< 0.008 J	0.199 J	0.213 J	0.629 J	0.095 J	0.1 J	< 0.008 J	< 0.04 J	< 0.4 J	< 0.008 J
ш́ '	MH-SV-4	7/31/2014	20	< 0.04	< 0.008	< 0.04	< 0.008	2.02	0.315	1.79	0.152	0.123	< 0.008	< 0.04	< 0.4	< 0.008
AOI-9	MH-SV-4	7/31/2014	34	< 0.04 J	< 0.008 J	< 0.04 J	< 0.008 J	0.357 J	0.978 J	4.13 J	0.325 J	0.306 J	< 0.008 J	< 0.04 J	< 0.4 J	< 0.008 J
Ă I	MH-SV-5	7/30/2014	5	< 0.040	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.040	< 0.400	< 0.008
	MH-SV-5	7/30/2014	33	< 0.040	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.040	< 0.400	< 0.008
	MH-SV-5	7/30/2014	21	< 0.040	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.040	< 0.400	< 0.008
	MH-SV-6	7/30/2014	21	< 0.040	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.040	< 0.400	< 0.008
	MH-SV-6	7/30/2014	5	< 0.040	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.040	< 0.400	< 0.008
	MH-SV-6	7/30/2014	36	< 0.040	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.040	< 0.400	< 0.008

μg/L - micrograms per liter

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Level

bgs - below ground surface

J - Results and/or reporting limits are estimated

Field duplicates are shown in italics

VOCs - Volatile Organic Compounds

VOCs by USEPA Method 8260B

^a As specified in the DTSC-approved PEA Work Plan, the reporting limit for 1,2,3-trichloropropane and 1,2-dibromo-3-chloropropane exceed the RSL. As all results are non-detect, values are not bolded.

							VOCs	in µg/L			
Area of Interest (AOI)	Sample ID	Sample date	Depth (feet bgs)	Tetrachloroethene	Toluene	trans-1,2- Dichloroethene	trans-1,3- Dichloropropene	Trichloroethene	Trichlorofluorometha ne	Vinyl Chloride	Xylenes (total)
Residential S	Soil Gas Screening	g Level for 5 feet b	ogs or less ^b	0.41	313	7.3	0.15	0.48	730	0.03	100
	MH-SV-1	7/31/2014	5	< 0.008	2.02	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	2.95
	MH-SV-1	7/31/2014	20	< 0.008	0.82	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	0.249
	MH-SV-1	7/31/2014	35	< 0.008	0.627	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	0.524
	MH-SV-2	7/31/2014	5	< 0.008	33	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	103
	MH-SV-2	7/31/2014	21	< 0.008	67.6	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	109
o.	MH-SV-2	7/31/2014	36	< 0.008	727	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	575
TSL	MH-SV-3	7/31/2014	5	< 0.008	2.75	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	4.68
ier (MH-SV-3	7/31/2014	20	< 0.008	0.835	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	1.11
orm	MH-SV-4	7/31/2014	5	< 0.008 J	1.53 J	< 0.008 J	< 0.008 J	< 0.008 J	< 0.008 J	< 0.008 J	10.3 J
AOI-9 - Former USTs	MH-SV-4	7/31/2014	20	< 0.008	5.01	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	31
6-IC	MH-SV-4	7/31/2014	34	< 0.008 J	9.61 J	< 0.008 J	< 0.008 J	< 0.008 J	< 0.008 J	< 0.008 J	40.4 J
Ă	MH-SV-5	7/30/2014	5	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-5	7/30/2014	33	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-5	7/30/2014	21	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-6	7/30/2014	21	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-6	7/30/2014	5	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-6	7/30/2014	36	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008

μg/L - micrograms per liter

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Level

bgs - below ground surface

J - Results and/or reporting limits are estimated

Field duplicates are shown in italics

VOCs - Volatile Organic Compounds

VOCs by USEPA Method 8260B

^a As specified in the DTSC-approved PEA Work Plan, the reporting limit for 1,2,3-trichloropropane and 1,2-dibromo-3-chloropropane exceed the RSL. As all results are non-detect, values are not bolded.

^b Soil gas screening levels are calculated as the ratio of DTSC-Modified RSL (Cal/EPA 2014) or USEPA RSL (USEPA 2014) for residential air to a default attenuation factor of 0.001 for future residential building, as recommended by CalEPA (2013). Soil gas screening levels are applicable to soil gas data collected at 5 feet bgs or less.

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Table 11c. AOI-9 TPH in Groundwater

Malibu High School 30215 Morning View Drive Malibu, California

					TPH in mg/l	
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	GRO (C4-C12)	DRO (C13-C22)	ORO (C23-C40)
9 - USTs	MH-SB-96	7/28/2014	62.5	<0.05	0.96	1.7
AOI-9 - Former US	MH-SB-97	7/28/2014	61.5	< 0.05	< 0.50	0.74
For	MH-SB-97	7/28/2014	61.5	< 0.05	< 0.48	0.67

Notes:

mg/L - milligrams per liter

USEPA - United States Environmental Protection Agency

bgs - below ground surface

TPH by USEPA Method 8015M

Duplicate samples are shown in italics

GRO - Gasoline range organics

DRO - Diesel range organics

ORO - Oil Range Organics



														VOCs	in µg/L	-									
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3- chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane	2-Butanone
Californ	ia and/or US	EPA MCL (µg/	L)	NA	200	1	5	5	6	NA	NA	NA	5	NA	NA	NA	600	0.5	5	NA	NA	NA	5	NA	NA
STS	MH-SB-96	7/28/2014	62.5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 5.0
AOI-9 - Former USTs	MH-SB-97	7/28/2014	61.5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 5.0
For	MH-SB-97	7/28/2014	61.5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 5.0

µg/L - micrograms per kilogram

USEPA - United States Environmental Protection Agency

MCLs - Maximum Contaminant Levels

bgs - below ground surface

J - Results and/or reporting limits are estimated

Field duplicates are shown in italics

VOCs - Volatile Organic Compounds

VOCs by USEPA Method 8260B

NA - Not available

														VOCs i	n µg/L										
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	2-Chlorotoluene	4-Chlorotoluene	Benzene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Cumene	Dibromochloromethane	Dibromomethane	Dichlorodifluoromethane	Ethyl Benzene	Hexachlorobutadiene	m,p-xylene
Californ	ia and/or US	EPA MCL (µg/	L)	NA	NA	1	NA	NA	NA	NA	NA	0.5	NA	NA	NA	NA	6	NA	NA	NA	NA	NA	300	NA	1750
STs	MH-SB-96	7/28/2014	62.5	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0
AOI-9 - Former USTs	MH-SB-97	7/28/2014	61.5	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0
For	MH-SB-97	7/28/2014	61.5	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0

µg/L - micrograms per kilogram

USEPA - United States Environmental Protection Agency

MCLs - Maximum Contaminant Levels

bgs - below ground surface

J - Results and/or reporting limits are estimated

Field duplicates are shown in italics

VOCs - Volatile Organic Compounds

VOCs by USEPA Method 8260B

NA - Not available

											VO	Cs in µ	g/L							
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Methyl tert-butyl ether	Methylene Chloride	Naphthalene	n-Butylbenzene	n-Propylbenzene	ortho-xylene	p-Cymene	sec-Butylbenzene	Styrene	tert-Butylbenzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	Trichloroethene	Trichlorofluoromethane	Vinyl Chloride
Californ	ia and/or US	EPA MCL (µg/	L)	13	5	NA	NA	NA	NA	NA	260	100	NA	5	150	10	NA	5	150	0.5
STS	MH-SB-96	7/28/2014	62.5	< 0.50	< 5.0 J	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.6	< 1.0	< 0.50	< 1.0	< 1.0	< 0.50
AOI-9 - rmer US	MH-SB-97	7/28/2014	61.5	< 0.50	< 5.0 J	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0	< 0.50
For	MH-SB-97	7/28/2014	61.5	< 0.50	< 5.0 J	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0	< 0.50

µg/L - micrograms per kilogram

USEPA - United States Environmental Protection Agency

MCLs - Maximum Contaminant Levels

bgs - below ground surface

J - Results and/or reporting limits are estimated

Field duplicates are shown in italics

VOCs - Volatile Organic Compounds

VOCs by USEPA Method 8260B

NA - Not available



							Gasoline Range C	Drganics in mg/kg			
	0	0	Danith	Petroleum	Petroleum Hydrocarbons						
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Hydrocarbons (C04-C06)	Hydrocarbons (C06-C07)	Hydrocarbons (C07-C08)	Hydrocarbons (C08-C09)	Hydrocarbons (C09-C10)	Hydrocarbons (C10-C11)	Hydrocarbons (C11-C12)	(C12-C13)
AOI-10 - Bus Barn Stockpile	MH-SB-5	7/10/2014	0	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4

Notes:

mg/kg - milligrams per kilogram

TPH by USEPA Method 8015M

USEPA - United States Environmental Protection Agency

DTSC - Department of Toxic Substances Control

RSLs - Regional Screening Levels

bgs - below ground surface

EFH - Extractable Fuel Hydrocarbon

USEPA RSLs for Petroleum Hydrocarbons (results are

compared to the most conservative value for the specified

range) (USEPA 2015)

Aliphatic Low, C5 - C8520 mg/kgAromatic Low, C6 - C882 mg/kgAliphatic Medium, C9 - C1896 mg/kgAromatic Medium, C9 - C16110 mg/kgAliphatic High, C19 - C32230,000 mg/kgAromatic High, C17 - C322,500 mg/kg

										Diesel Ran	ge Organic	s in mg/kg						
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	EFH (C13-C14)	EFH (C15-C16)	EFH (C17-C18)	EFH (C19-C20)	EFH (C21-C22)	EFH (C23-C24)	EFH (C25-C26)	EFH (C27-C28)	EFH (C29-C30)	EFH (C31-C32)	EFH (C33-C34)	EFH (C35-C36)	EFH (C37-C38)	EFH (C39-C40)	EFH (C13-C40)
AOI-10 - Bus Barn Stockpile	MH-SB-5	7/10/2014	0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	5.5	5.1	< 5.0	< 5.0	< 5.0	35

Notes:

mg/kg - milligrams per kilogram

TPH by USEPA Method 8015M

USEPA - United States Environmental Protection Agency

DTSC - Department of Toxic Substances Control

RSLs - Regional Screening Levels

bgs - below ground surface

EFH - Extractable Fuel Hydrocarbon

USEPA RSLs for Petroleum Hydrocarbons (results are

compared to the most conservative value for the specified

range) (USEPA 2015)

Aliphatic Low, C5 - C8520 mg/kgAromatic Low, C6 - C882 mg/kgAliphatic Medium, C9 - C1896 mg/kgAromatic Medium, C9 - C16110 mg/kgAliphatic High, C19 - C32230,000 mg/kgAromatic High, C17 - C322,500 mg/kg

							Gasoline Range C	Drganics in mg/kg			
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Petroleum Hydrocarbons (C04-C06)	Petroleum Hydrocarbons (C06-C07)	Petroleum Hydrocarbons (C07-C08)	Petroleum Hydrocarbons (C08-C09)	Petroleum Hydrocarbons (C09-C10)	Petroleum Hydrocarbons (C10-C11)	Petroleum Hydrocarbons (C11-C12)	Petroleum Hydrocarbons (C12-C13)
-11 - Is Shop	MH-SB-6	7/21/2014	0	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	<0.4	<0.4
AOI	MH-SB-6	7/21/2014	1.5	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38

Notes:

mg/kg - milligrams per kilogram

TPH by USEPA Method 8015M

USEPA - United States Environmental Protection Agency

DTSC - Department of Toxic Substances Control

RSLs - Regional Screening Levels

bgs - below ground surface

EFH - Extractable Fuel Hydrocarbon

USEPA RSLs for Petroleum Hydrocarbons (results are compared to the most conservative value for the specified

range) (USEPA 2015)

Aliphatic Low, C5 - C8	520 mg/kg
Aromatic Low, C6 - C8	82 mg/kg
Aliphatic Medium, C9 - C18	96 mg/kg
Aromatic Medium, C9 - C16	110 mg/kg
Aliphatic High, C19 - C32	230,000 mg/kg
Aromatic High, C17 - C32	2,500 mg/kg



										Diesel Ran	ige Organio	cs in mg/kg						
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	EFH (C13-C14)	EFH (C15-C16)	EFH (C17-C18)	EFH (C19-C20)	EFH (C21-C22)	EFH (C23-C24)	EFH (C25-C26)	EFH (C27-C28)	EFH (C29-C30)	EFH (C31-C32)	EFH (C33-C34)	EFH (C35-C36)	EFH (C37-C38)	EFH (C39-C40)	EFH (C13-C40)
-11 - s Shop	MH-SB-6	7/21/2014	0	< 14	< 14	< 14	< 14	< 14	15	25	40	47	58	48	45	36	35	360
AOI	MH-SB-6	7/21/2014	1.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	5.1	5.9	5.5	5.0	< 4.9	< 4.9	37

Notes:

mg/kg - milligrams per kilogram

TPH by USEPA Method 8015M

USEPA - United States Environmental Protection Agency

DTSC - Department of Toxic Substances Control

RSLs - Regional Screening Levels

bgs - below ground surface

EFH - Extractable Fuel Hydrocarbon

USEPA RSLs for Petroleum Hydrocarbons (results are compared to the most conservative value for the specified

range) (USEPA 2015)

Aliphatic Low, C5 - C8	520 mg/kg
Aromatic Low, C6 - C8	82 mg/kg
Aliphatic Medium, C9 - C18	96 mg/kg
Aromatic Medium, C9 - C16	110 mg/kg
Aliphatic High, C19 - C32	230,000 mg/kg
Aromatic High, C17 - C32	2,500 mg/kg



Table 13b. AOI-11 Organochlorine Pesticides in SoilMalibu High School30215 Morning View DriveMalibu, California

					Pesticides (Organochlorine) in µg/kg									
Area of Interest		Sample	Depth							Chlordane				
(AOI)	Sample ID	Date	(feet bgs)	4,4'-DDD	4,4'-DDE	4,4'-DDT	Aldrin	alpha-BHC	beta-BHC	(total)	delta-BHC	Dieldrin	Endosulfan I	Endosulfan II
Residential	DTSC-Modified	RSL or USEP	A RSL	2,200	1,600	1,900	31	85	300	1,800	NA	33	370,000	370,000
-11 - op	MH-SB-6	7/21/2014	0	< 5.0 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0
AOI. Grou Sh	MH-SB-6	7/21/2014	1.5	< 4.9 J	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	60	< 9.9	< 4.9	< 4.9	< 4.9

Notes:

µg/kg - micrograms per kilogram

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Levels

bgs - below ground surface

NA- not available

Pesticides by USEPA Method 8081A



Table 13b. AOI-11 Organochlorine Pesticides in Soil Malibu High School 30215 Morning View Drive Malibu, California

							Pesticides	s (Organochlorir	in µg/kg			
Area of Interest		Sample	Depth									
(AOI)	Sample ID	Date	(feet bgs)	Endosulfan sulfate	Endrin	Endrin aldehyde	Endrin ketone	gamma-BHC	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene
Residential	DTSC-Modified	RSL or USEP	A RSL	370,000	18,000	18,000	18,000	560	120	59	310,000	480
-11 - unds op	MH-SB-6	7/21/2014	0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
AOI. Grot Sh	MH-SB-6	7/21/2014	1.5	< 9.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200

Notes:

μg/kg - micrograms per kilogram DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Levels

bgs - below ground surface

NA- not available

Pesticides by USEPA Method 8081A



Table 13c. AOI-11 Organophosphate Pesticides in SoilMalibu High School30215 Morning View DriveMalibu, California

								P	esticides (Organophosph	nates) in µg/kɑ	g				
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	2-Butenoic acid, 3-[(dimethoxy- phosphinyl)oxy]-, m	Chlorpyrifos	Co-Ral	Dasanit	Demeton (Demeton O + Demeton S)	Diazinon	Dichlorovos	Dimethoate	Disulfoton	Ethoprop	Ethyl P-Nitorphenyl Benzenethiophosphate	Famphur	Fenthion
Residential	DTSC-Modifie	ed RSL or U	SEPA RSL	NA	62,000	NA	NA	2,500	43,000	1,800	12,000	2,500	NA	620	NA	NA
-11 - unds oop	MH-SB-6	7/21/2014	0	< 33	< 33 J	< 33	< 33 J	< 65 J	< 33	< 33 J	< 33	< 33 J	< 33	< 33	< 33	< 33
AOI- Grou Sh	MH-SB-6	7/21/2014	1.5	< 33	< 33 J	< 33	< 33 J	< 66 J	< 33	< 33 J	< 33	< 33 J	< 33	< 33	< 33	< 33

Notes:

 μ g/kg - micrograms per kilogram

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Levels

bgs - below ground surface

NA - not available

J - Results and/or reporting limits are estimated

Pesticides by USEPA Method 8141A



Table 13c. AOI-11 Organophosphate Pesticides in SoilMalibu High School30215 Morning View DriveMalibu, California

								Pesticides (C	rganophos	phates) in	μ g/kg					
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Guthion	Malathion	Methyl parathion	O,O,O-Triethyl phosphorothioate	O-Ethyl O-2,4,5- trichlorophenyl ethyl- phosphonothioate	Parathion	Phorate	Prothiophos	Ronnel	Stirophos	Sulfotepp	Sulprofos	Thionazin
Residential	DTSC-Modifie	ed RSL or U	SEPA RSL	NA	1,200,000	15,000	NA	NA	370,000	12,000	NA	3,100,000	22,000	31,000	NA	NA
-11 - unds iop	MH-SB-6	7/21/2014	0	< 33 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33	< 33 J	< 33	< 33	< 33
AOI- Grou Sh	MH-SB-6	7/21/2014	1.5	< 33 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33	< 33 J	< 33	< 33	< 33

Notes:

 μ g/kg - micrograms per kilogram

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Levels

bgs - below ground surface

NA - not available

J - Results and/or reporting limits are estimated

Pesticides by USEPA Method 8141A



Table 13d. AOI-11 Herbicides in Soil Malibu High School

30215 Morning View Drive Malibu, California

		Sample	Depth	Hei	rbicides in µg	/kg
Area of Interest (AOI)	Sample ID	Date	(feet bgs)	2,4,5-T	2,4,5-TP	2,4-D
Residential DTS	SC-Modified R	SL or USEPA	RSL	620,000	490,000	690,000
AOI-11 - bunds Shop	MH-SB-6	7/21/2014	0	< 20 J	< 20	< 80
AOI-1 Grounds	MH-SB-6	7/21/2014	1.5	< 20 J	< 20	< 79

Notes:

µg/kg - micrograms per kilogram

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Levels

bgs - below ground surface

J - Results and/or reporting limits are estimated

Herbicides by USEPA Method 8151



Table 13e. AOI-11 pH in Soil

Malibu High School 30215 Morning View Drive Malibu, California

Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	рН
AOI-11 - Grounds Shop	MH-SB-6	7/21/2014	0	7.83

<u>Notes</u>

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Levels

bgs - below ground surface

pH by USEPA Method 9045



Table 14a. AOI-12 SVOCs in Soil Malibu High School 30215 Morning View Drive

Malibu, California

											S	SVOCs in	µg/kg							
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,2-Diphenylhydrazine	1,3-Dichlorobenzene	1,4-Dichlorobenzene	2,2'-oxybis (1-Chloropropane)	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene	2-Chlorophenol	2-Methylnaphthalene	2-Methylphenol
Residential	DTSC-Modifie	d RSL or US	EPA RSL	24,000	1,800,000	670	530,000	2,600	4,900	6,200,000	6,900	180,000	1,200,000	120,000	1,700	360	6,300,000	63,000	230,000	3,100,000
	MH-SB-99	7/29/2014	9.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 660	< 330	< 330	< 330	< 330	< 330	< 330
	MH-SB-99	7/29/2014	19.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 650	< 330	< 330	< 330	< 330	< 330	< 330
	MH-SB-99	7/29/2014	29.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 650	< 330	< 330	< 330	< 330	< 330	< 330
	MH-SB-100	7/17/2014	4.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 660	< 330	< 330	< 330	< 330	< 330	< 330
	MH-SB-100	7/17/2014	14.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 650	< 330	< 330	< 330	< 330	< 330	< 330
	MH-SB-100	7/17/2014	24.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 650	< 330	< 330	< 330	< 330	< 330	< 330
	MH-SB-100	7/17/2014	34.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 660	< 330	< 330	< 330	< 330	< 330	< 330
	MH-SB-100	7/24/2014	44.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 660	< 330	< 330	< 330	< 330	< 330	< 330
	MH-SB-100	7/24/2014	54.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 660	< 330	< 330	< 330	< 330	< 330	< 330
7	MH-SB-101	7/24/2014	4.5	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 650	< 320	< 320	< 320	< 320	< 320	< 320
and 1	MH-SB-101	7/24/2014	14.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 660	< 330	< 330	< 330	< 330	< 330	< 330
	MH-SB-101	7/24/2014	24.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 650	< 330	< 330	< 330	< 330	< 330	< 330
,4,5,6,	MH-SB-101	7/24/2014	34.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 650	< 330	< 330	< 330	< 330	< 330	< 330
4,	MH-SB-101	7/24/2014	44.5	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 640	< 320	< 320	< 320	< 320	< 320	< 320
1,3	MH-SB-101	7/24/2014	54.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 660	< 330	< 330	< 330	< 330	< 330	< 330
su	MH-SB-102	7/17/2014	4.5	< 650	< 650	< 650	< 650	< 650	< 650	< 650	< 650	< 650	< 650	< 1300	< 650	< 650	< 650	< 650	< 650	< 650
stems	MH-SB-102	7/17/2014	14.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 650	< 330	< 330	< 330	< 330	< 330	< 330
Sys	MH-SB-102	7/17/2014	24.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 650	< 330	< 330	< 330	< 330	< 330	< 330
ptic	MH-SB-102	7/17/2014	34.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 650	< 330	< 330	< 330	< 330	< 330	< 330
ebt	MH-SB-102	7/18/2014	44.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 660	< 330	< 330	< 330	< 330	< 330	< 330
Ś,	MH-SB-102		54.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 660	< 330	< 330	< 330	< 330	< 330	< 330
-12	MH-SB-103		4.5	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 650	< 320	< 320	< 320	< 320	< 320	< 320
AOI-1	MH-SB-103	7/25/2014	14.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 650	< 330	< 330	< 330	< 330	< 330	< 330
∢			24.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 650	< 330	< 330	< 330	< 330	< 330	< 330
	MH-SB-103		34.5	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 650	< 320	< 320	< 320	< 320	< 320	< 320
	MH-SB-103		44.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 650	< 330	< 330	< 330	< 330	< 330	< 330
	MH-SB-103	7/25/2014	54.5	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 650	< 320	< 320	< 320	< 320	< 320	< 320
	MH-SB-104		4.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 660	< 330	< 330	< 330	< 330	< 330	< 330
	MH-SB-104		14.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 660	< 330	< 330	< 330	< 330	< 330	< 330
	MH-SB-104	7/25/2014	24.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 660	< 330	< 330	< 330	< 330	< 330	< 330
	MH-SB-104		34.5	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 640	< 320	< 320	< 320	< 320	< 320	< 320
	MH-SB-104		44.5	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 640	< 320	< 320	< 320	< 320	< 320	< 320
	MH-SB-104	7/25/2014	54.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 650	< 330	< 330	< 330	< 330	< 330	< 330

RAMECLL ENVIRON

											S	VOCs in	μg/kg							
				()																
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,2-Diphenylhydrazine	1,3-Dichlorobenzene	1,4-Dichlorobenzene	2,2'-oxybis (1-Chloropropane)	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene	2-Chlorophenol	2-MethyInaphthalene	2-Methylphenol
Residential	DTSC-Modifie	d RSL or US	EPA RSL	24,000	1,800,000	670	530,000	2,600	4,900	6,200,000	6,900	180,000	1,200,000	120,000	1,700	360	6,300,000	63,000	230,000	3,100,000
	MH-SB-105	7/22/2014	4.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 650	< 330	< 330	< 330	< 330	< 330	< 330
	MH-SB-105	7/22/2014	14.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 650	< 330	< 330	< 330	< 330	< 330	< 330
	MH-SB-105	7/22/2014	24.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 650	< 330	< 330	< 330	< 330	< 330	< 330
	MH-SB-105	7/22/2014	34.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 650	< 330	< 330	< 330	< 330	< 330	< 330
	MH-SB-105	7/22/2014	39.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 650	< 330	< 330	< 330	< 330	< 330	< 330
	MH-SB-106	7/22/2014	4.5	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 650	< 320	< 320	< 320	< 320	< 320	< 320
	MH-SB-106	7/23/2014	14.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 650	< 330	< 330	< 330	< 330	< 330	< 330
	MH-SB-106	7/23/2014	24.5	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 650	< 320	< 320	< 320	< 320	< 320	< 320
7	MH-SB-106	7/23/2014	34.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 660	< 330	< 330	< 330	< 330	< 330	< 330
and	MH-SB-106	7/23/2014	39.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 650	< 330	< 330	< 330	< 330	< 330	< 330
	MH-SB-107	7/23/2014	4.5	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 650	< 320	< 320	< 320	< 320	< 320	< 320
,3,4,5,6,	MH-SB-107	7/23/2014	14.5	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 650	< 320	< 320	< 320	< 320	< 320	< 320
,3,6	MH-SB-107	7/23/2014	24.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 660	< 330	< 330	< 330	< 330	< 330	< 330
а Т	MH-SB-107	7/23/2014	34.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 650	< 330	< 330	< 330	< 330	< 330	< 330
System	MH-SB-107	7/23/2014	39.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 660	< 330	< 330	< 330	< 330	< 330	< 330
	MH-SB-108	7/24/2014	4.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 660	< 330	< 330	< 330	< 330	< 330	< 330
tic	MH-SB-108	7/24/2014	14.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 660	< 330	< 330	< 330	< 330	< 330	< 330
Septic	MH-SB-108	7/24/2014	24.5	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 650	< 320	< 320	< 320	< 320	< 320	< 320
2 - 2	MH-SB-108	7/24/2014	34.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 660	< 330	< 330	< 330	< 330	< 330	< 330
	MH-SB-108	7/24/2014	39.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 660	< 330	< 330	< 330	< 330	< 330	< 330
AOI-1	MH-SB-109	7/24/2014	4.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 660	< 330	< 330	< 330	< 330	< 330	< 330
	MH-SB-109	7/24/2014	14.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 660	< 330	< 330	< 330	< 330	< 330	< 330
	MH-SB-109	7/24/2014	24.5	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 320	< 650	< 320	< 320	< 320	< 320	< 320	< 320
	MH-SB-109	7/24/2014	34.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 650 J	< 330	< 330	< 330	< 330	< 330	< 330
	MH-SB-109	7/24/2014	39.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 660	< 330	< 330	< 330	< 330	< 330	< 330
	MH-SB-110	7/16/2014	4.5	< 2200	< 2200	< 2200	< 2200	< 2200	< 2200	< 2200	< 2200	< 2200	< 2200	< 4300	< 2200	< 2200	< 2200	< 2200	< 2200	< 2200
	MH-SB-110	7/16/2014	14.5	< 2100	< 2100	< 2100	< 2100	< 2100	< 2100	< 2100	< 2100	< 2100	< 2100	< 4100	< 2100	< 2100	< 2100	< 2100	< 2100	< 2100
	MH-SB-110	7/16/2014	24.5	< 2200	< 2200	< 2200	< 2200	< 2200	< 2200	< 2200	< 2200	< 2200	< 2200	< 4300	< 2200	< 2200	< 2200	< 2200	< 2200	< 2200
	MH-SB-110	7/16/2014	34.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 650	< 330	< 330	< 330	< 330	< 330	< 330

RAMECLL ENVIRON

											S	SVOCs in	µg/kg							
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	1,2,4-Trichlorobenzene	I,2-Dichlorobenzene	1,2-Diphenylhydrazine	I,3-Dichlorobenzene	I,4-Dichlorobenzene	2,2'-oxybis (1-Chloropropane)	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene	2-Chlorophenol	2-MethyInaphthalene	2-Methylphenol
	DTSC-Modifie	d RSL or US		24,000	1,800,000	670	530,000	2,600	4,900	6,200,000	6,900	180,000	1,200,000	120,000	1,700	360	6,300,000	63,000	230,000	3,100,000
E	MH-SB-111	7/16/2014	4.5	< 2400	< 2400	< 2400	< 2400	< 2400	< 2400	< 2400	< 2400	< 2400	< 2400	< 4900	< 2400	< 2400	< 2400	< 2400	< 2400	< 2400
/ste 11	MH-SB-111	7/16/2014	14.5	< 2300	< 2300	< 2300	< 2300	< 2300	< 2300	< 2300	< 2300	< 2300	< 2300	< 4500	< 2300	< 2300	< 2300	< 2300	< 2300	< 2300
S) Jd	MH-SB-111	7/16/2014	24.5	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 660	< 330	< 330	< 330	< 330	< 330	< 330
ptic , ar	MH-SB-111	7/16/2014	34.5	< 2200	< 2200	< 2200	< 2200	< 2200	< 2200	< 2200	< 2200	< 2200	< 2200	< 4400	< 2200	< 2200	< 2200	< 2200	< 2200	< 2200
Sel 5,6	MH-SB-112	7/16/2014	4.5	< 2500	< 2500	< 2500	< 2500	< 2500	< 2500	< 2500	< 2500	< 2500	< 2500	< 4900	< 2500	< 2500	< 2500	< 2500	< 2500	< 2500
3,4,	MH-SB-112	7/16/2014	14.5	< 2500	< 2500	< 2500	< 2500	< 2500	< 2500	< 2500	< 2500	< 2500	< 2500	< 4900	< 2500	< 2500	< 2500	< 2500	< 2500	< 2500
<u> </u>	MH-SB-112	7/16/2014	24.5	< 2200	< 2200	< 2200	< 2200	< 2200	< 2200	< 2200	< 2200	< 2200	< 2200	< 4500	< 2200	< 2200	< 2200	< 2200	< 2200	< 2200
AC	MH-SB-112	7/17/2014	34.5	< 980	< 980	< 980	< 980	< 980	< 980	< 980	< 980	< 980	< 980	< 2000	< 980	< 980	< 980	< 980	< 980	< 980

Notes:

µg/kg - micrograms per kilogram

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Levels

bgs - below ground surface

NA - not available

SVOCs - Semi-Volatile Organic Compounds

SVOCs by USEPA Method 8270

Table 14a. AOI-12 SVOCs in SoilMalibu High School30215 Morning View Drive

Malibu, California

												SVO	Cs in µg/	′kg							
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	2-Nitroaniline	2-Nitrophenol	3&4-Methylphenol	3,3'-Dichlorobenzidine	3-Nitroaniline	4,6-Dinitro-2- methylphenol	4-Bromophenyl -phenyl ether	4-Chloro-3- methylphenol	4-Chloroaniline	4-Chlorophenyl -phenyl ether	4-Nitroaniline	4-Nitrophenol	Acenaphthene	Acenaphthylene	Aniline	Anthracene	Benzidine	Benzo(a)anthracene
Residential	DTSC-Modifie	d RSL or US	EPA RSL	610,000	NA	NA	1,200	18,000	4,900	NA	6,200,000	2,700	NA	27,000	NA	3,500,000	NA	93,000	17,000,000	1	150
	MH-SB-99	7/29/2014	9.5	< 330	< 330	< 330	< 830	< 330	< 420	< 330	< 330	< 330	< 330	< 830	< 830	< 330	< 330	< 420	< 330	< 1300 J	< 330
	MH-SB-99	7/29/2014	19.5	< 330	< 330	< 330	< 820	< 330	< 410	< 330	< 330	< 330	< 330	< 820	< 820	< 330	< 330	< 410	< 330	< 1300 J	< 330
	MH-SB-99	7/29/2014	29.5	< 330	< 330	< 330	< 820	< 330	< 420	< 330	< 330	< 330	< 330	< 820	< 820	< 330	< 330	< 420	< 330	< 1300 J	< 330
	MH-SB-100	7/17/2014	4.5	< 330	< 330	< 330	< 820	< 330	< 420	< 330	< 330	< 330	< 330	< 820	< 820	< 330	< 330	< 420	< 330	< 1300 J	< 330
	MH-SB-100	7/17/2014	14.5	< 330	< 330	< 330	< 820	< 330	< 420	< 330	< 330	< 330	< 330	< 820	< 820	< 330	< 330	< 420	< 330	< 1300 J	< 330
	MH-SB-100	7/17/2014	24.5	< 330	< 330	< 330	< 820	< 330	< 420	< 330	< 330	< 330	< 330	< 820	< 820	< 330	< 330	< 420	< 330	< 1300 J	< 330
	MH-SB-100	7/17/2014	34.5	< 330	< 330	< 330	< 820	< 330	< 420	< 330	< 330	< 330	< 330	< 820	< 820	< 330	< 330	< 420	< 330	< 1300 J	< 330
	MH-SB-100	7/24/2014	44.5	< 330	< 330	< 330	< 830	< 330	< 420	< 330	< 330	< 330	< 330	< 830	< 830 J	< 330	< 330	< 420	< 330	< 1300 J	< 330
	MH-SB-100	7/24/2014	54.5	< 330	< 330	< 330	< 830	< 330	< 420	< 330	< 330	< 330	< 330	< 830	< 830 J	< 330	< 330	< 420	< 330	< 1300 J	< 330
	MH-SB-101	7/24/2014	4.5	< 320	< 320	< 320	< 820	< 320	< 410	< 320	< 320	< 320	< 320	< 820	< 820 J	< 320	< 320	< 410	< 320	< 1300 J	< 320
d 1	MH-SB-101	7/24/2014	14.5	< 330	< 330	< 330	< 830	< 330	< 420	< 330	< 330	< 330	< 330	< 830	< 830 J	< 330	< 330	< 420	< 330	< 1300 J	< 330
and	MH-SB-101	7/24/2014	24.5	< 330	< 330	< 330	< 820	< 330	< 410	< 330	< 330	< 330	< 330	< 820	< 820 J	< 330	< 330	< 410	< 330	< 1300 J	< 330
,5,6,	MH-SB-101	7/24/2014	34.5	< 330	< 330	< 330	< 820	< 330	< 410	< 330	< 330	< 330	< 330	< 820	< 820 J	< 330	< 330	< 410	< 330	< 1300 J	< 330
4	MH-SB-101	7/24/2014	44.5	< 320	< 320	< 320	< 810	< 320	< 410	< 320	< 320	< 320	< 320	< 810	< 810 J	< 320	< 320	< 410	< 320	< 1300 J	< 320
1,3	MH-SB-101	7/24/2014	54.5	< 330	< 330	< 330	< 830	< 330	< 420	< 330	< 330	< 330	< 330	< 830	< 830 J	< 330	< 330	< 420	< 330	< 1300 J	< 330
su	MH-SB-102	7/17/2014	4.5	< 650	< 650	< 650	< 1600	< 650	< 830	< 650	< 650	< 650	< 650	< 1600	< 1600	< 650	< 650	< 830	< 650	< 2700 J	< 650
ster	MH-SB-102	7/17/2014	14.5	< 330	< 330	< 330	< 820	< 330	< 420	< 330	< 330	< 330	< 330	< 820	< 820	< 330	< 330	< 420	< 330	< 1300 J	< 330
Sys	MH-SB-102	7/17/2014	24.5	< 330	< 330	< 330	< 820	< 330	< 410	< 330	< 330	< 330	< 330	< 820	< 820	< 330	< 330	< 410	< 330	< 1300 J	< 330
ptic	MH-SB-102	7/17/2014	34.5	< 330	< 330	< 330	< 820	< 330	< 420	< 330	< 330	< 330	< 330	< 820	< 820	< 330	< 330	< 420	< 330	< 1300 J	< 330
ept	MH-SB-102	7/18/2014	44.5	< 330	< 330	< 330	< 830	< 330	< 420	< 330	< 330	< 330	< 330	< 830	< 830	< 330	< 330	< 420	< 330	< 1300 J	< 330
S '	MH-SB-102	7/23/2014	54.5	< 330	< 330	< 330	< 830	< 330	< 420	< 330	< 330	< 330	< 330	< 830	< 830	< 330	< 330	< 420	< 330	< 1300 J	< 330
12	MH-SB-103	7/25/2014	4.5	< 320	< 320	< 320	< 810	< 320	< 410	< 320	< 320	< 320	< 320	< 810	< 810 J	< 320	< 320	< 410	< 320	< 1300 J	< 320
AOI-1	MH-SB-103	7/25/2014	14.5	< 330	< 330	< 330	< 820	< 330	< 420	< 330	< 330	< 330	< 330	< 820	< 820 J	< 330	< 330	< 420	< 330	< 1300 J	< 330
▲	MH-SB-103	7/25/2014	24.5	< 330	< 330	< 330	< 820	< 330	< 410	< 330	< 330	< 330	< 330	< 820	< 820 J	< 330	< 330	< 410	< 330	< 1300 J	< 330
	MH-SB-103	7/25/2014	34.5	< 320	< 320	< 320	< 810	< 320	< 410	< 320	< 320	< 320	< 320	< 810	< 810 J	< 320	< 320	< 410	< 320	< 1300 J	< 320
	MH-SB-103	7/25/2014	44.5	< 330	< 330	< 330	< 820	< 330	< 420	< 330	< 330	< 330	< 330	< 820	< 820 J	< 330	< 330	< 420	< 330	< 1300 J	< 330
	MH-SB-103	7/25/2014	54.5	< 320	< 320	< 320	< 810	< 320	< 410	< 320	< 320	< 320	< 320	< 810	< 810 J	< 320	< 320	< 410	< 320	< 1300 J	< 320
	MH-SB-104	7/25/2014	4.5	< 330	< 330	< 330	< 830	< 330	< 420	< 330	< 330	< 330	< 330	< 830	< 830 J	< 330	< 330	< 420	< 330	< 1300 J	< 330
	MH-SB-104	7/25/2014	14.5	< 330	< 330	< 330	< 830	< 330	< 420	< 330	< 330	< 330	< 330	< 830	< 830 J	< 330	< 330	< 420	< 330	< 1300 J	< 330
	MH-SB-104	7/25/2014	24.5	< 330	< 330	< 330	< 830	< 330	< 420	< 330	< 330	< 330	< 330	< 830	< 830 J	< 330	< 330	< 420	< 330	< 1300 J	< 330
	MH-SB-104	7/25/2014	34.5	< 320	< 320	< 320	< 810	< 320	< 410	< 320	< 320	< 320	< 320	< 810	< 810 J	< 320	< 320	< 410	< 320	< 1300 J	< 320
	MH-SB-104	7/25/2014	44.5	< 320	< 320	< 320	< 810	< 320	< 410	< 320	< 320	< 320	< 320	< 810	< 810 J	< 320	< 320	< 410	< 320	< 1300 J	< 320
	MH-SB-104	7/25/2014	54.5	< 330	< 330	< 330	< 820	< 330	< 420	< 330	< 330	< 330	< 330	< 820	< 820 J	< 330	< 330	< 420	< 330	< 1300 J	< 330

RAMECLL ENVIRON

Table 14a. AOI-12 SVOCs in SoilMalibu High School30215 Morning View Drive

Malibu, California

												SVO	Cs in μg/	′kg							
Area of Interest (AOI)	Sample ID DTSC-Modifie	Sample Date	Depth (feet bgs)	2-Nitroaniline	2-Nitrophenol	3&4-Methylphenol	3,3'-Dichlorobenzidine	3-Nitroaniline	4,6-Dinitro-2- methylphenol	4-Bromophenyl	4-Chloro-3- methylphenol	4-Chloroaniline	4-Chlorophenyl	4-Nitroaniline	4-Nitrophenol	Acenaphthene	Acenaphthylene	Aniline	Anthracene	Benzidine	Benzo(a)anthracene
Residential	MH-SB-105	7/22/2014	4.5	610,000 < 330	NA < 330	NA < 330	1,200 < 820	18,000 < 330	4,900 < 420	NA < 330	6,200,000 < 330	2,700 < 330	NA < 330	27,000 < 820	NA < 820	3,500,000 < 330	NA < 330	93,000 < 420	17,000,000 < 330	< 1300 R	150 < 330
	MH-SB-105 MH-SB-105	7/22/2014	4.5	< 330	< 330	< 330	< 820	< 330	< 420	< 330	< 330	< 330	< 330	< 820	< 820	< 330	< 330	< 420	< 330	< 1300 K	< 330
	MH-SB-105 MH-SB-105	7/22/2014	24.5	< 330	< 330	< 330	< 820	< 330	< 420	< 330	< 330	< 330	< 330	< 820	< 820	< 330	< 330	< 420	< 330	< 1300 J	< 330
	MH-SB-105	7/22/2014	34.5	< 330	< 330	< 330	< 820	< 330	< 420	< 330	< 330	< 330	< 330	< 820	< 820	< 330	< 330	< 420	< 330	< 1300 J	< 330
	MH-SB-105	7/22/2014	39.5	< 330	< 330	< 330	< 820	< 330	< 420	< 330	< 330	< 330	< 330	< 820	< 820	< 330	< 330	< 420	< 330	< 1300 J	< 330
	MH-SB-106	7/22/2014	4.5	< 320	< 320	< 320	< 820	< 320	< 410	< 320	< 320	< 320	< 320	< 820	< 820	< 320	< 320	< 410	< 320	< 1300 J	< 320
	MH-SB-106	7/23/2014	14.5	< 330	< 330	< 330	< 820	< 330	< 420	< 330	< 330	< 330	< 330	< 820	< 820	< 330	< 330	< 420	< 330	< 1300 J	< 330
	MH-SB-106	7/23/2014	24.5	< 320	< 320	< 320	< 810	< 320	< 410	< 320	< 320	< 320	< 320	< 810	< 810	< 320	< 320	< 410	< 320	< 1300 J	< 320
7	MH-SB-106	7/23/2014	34.5	< 330	< 330	< 330	< 830	< 330	< 420	< 330	< 330	< 330	< 330	< 830	< 830	< 330	< 330	< 420	< 330	< 1300 J	< 330
and 1	MH-SB-106	7/23/2014	39.5	< 330	< 330	< 330	< 820	< 330	< 420	< 330	< 330	< 330	< 330	< 820	< 820	< 330	< 330	< 420	< 330	< 1300 J	< 330
	MH-SB-107	7/23/2014	4.5	< 320	< 320	< 320	< 820	< 320	< 410	< 320	< 320	< 320	< 320	< 820	< 820	< 320	< 320	< 410	< 320	< 1300 J	< 320
,4,5,6,	MH-SB-107	7/23/2014	14.5	< 320	< 320	< 320	< 810	< 320	< 410	< 320	< 320	< 320	< 320	< 810	< 810	< 320	< 320	< 410	< 320	< 1300 J	< 320
,3,4	MH-SB-107	7/23/2014	24.5	< 330	< 330	< 330	< 830	< 330	< 420	< 330	< 330	< 330	< 330	< 830	< 830	< 330	< 330	< 420	< 330	< 1300 J	< 330
~	MH-SB-107	7/23/2014	34.5	< 330	< 330	< 330	< 820	< 330	< 420	< 330	< 330	< 330	< 330	< 820	< 820	< 330	< 330	< 420	< 330	< 1300 J	< 330
stem	MH-SB-107	7/23/2014	39.5	< 330	< 330	< 330	< 830	< 330	< 420	< 330	< 330	< 330	< 330	< 830	< 830	< 330	< 330	< 420	< 330	< 1300 J	< 330
Sys	MH-SB-108	7/24/2014	4.5	< 330	< 330	< 330	< 830	< 330	< 420	< 330	< 330	< 330	< 330	< 830	< 830	< 330	< 330	< 420	< 330	< 1300 R	< 330
	MH-SB-108	7/24/2014	14.5	< 330	< 330	< 330	< 830	< 330	< 420	< 330	< 330	< 330	< 330	< 830	< 830	< 330	< 330	< 420	< 330	< 1300 J	< 330
Septic	MH-SB-108	7/24/2014	24.5	< 320	< 320	< 320	< 810	< 320	< 410	< 320	< 320	< 320	< 320	< 810	< 810	< 320	< 320	< 410	< 320	< 1300 J	< 320
1	MH-SB-108	7/24/2014	34.5	< 330	< 330	< 330	< 830	< 330	< 420	< 330	< 330	< 330	< 330	< 830	< 830	< 330	< 330	< 420	< 330	< 1300 J	< 330
-12	MH-SB-108		39.5	< 330	< 330	< 330	< 830	< 330		< 330	< 330	< 330	< 330	< 830	< 830	< 330	< 330	< 420	< 330	< 1300 J	
AOL	MH-SB-109		4.5	< 330	< 330	< 330	< 830	< 330	< 420	< 330	< 330	< 330	< 330	< 830	< 830	< 330	< 330	< 420	< 330	< 1300 J	< 330
	MH-SB-109	7/24/2014	14.5	< 330	< 330	< 330	< 830	< 330	< 420	< 330	< 330	< 330	< 330	< 830	< 830 J	< 330	< 330	< 420	< 330	< 1300 J	< 330
	MH-SB-109	7/24/2014	24.5	< 320	< 320	< 320	< 810	< 320	< 410	< 320	< 320	< 320	< 320	< 810	< 810 J	< 320	< 320	< 410	< 320	< 1300 J	< 320
	MH-SB-109	7/24/2014	34.5	< 330	< 330	< 330	< 820	< 330	< 420 J	< 330	< 330	< 330	< 330	< 820	< 820	< 330	< 330	< 420	< 330	< 1300 J	< 330
	MH-SB-109	7/24/2014	39.5	< 330	< 330	< 330	< 830	< 330	< 420	< 330	< 330	< 330	< 330	< 830	< 830 J	< 330	< 330	< 420	< 330	< 1300 J	< 330
	MH-SB-110	7/16/2014	4.5	< 2200	< 2200	< 2200	< 5400	< 2200	< 2800	< 2200	< 2200	< 2200	< 2200	< 5400	< 5400	< 2200	< 2200	< 2800	< 2200	< 8800 J	< 2200
	MH-SB-110	7/16/2014	14.5	< 2100	< 2100	< 2100	< 5200	< 2100	< 2600	< 2100	< 2100	< 2100	< 2100	< 5200	< 5200	< 2100	< 2100	< 2600	< 2100	< 8400 J	< 2100
	MH-SB-110	7/16/2014	24.5	< 2200	< 2200	< 2200	< 5400	< 2200	< 2800	< 2200	< 2200	< 2200	< 2200	< 5400	< 5400	< 2200	< 2200	< 2800	< 2200	< 8800 J	< 2200
	MH-SB-110	7/16/2014	34.5	< 330	< 330	< 330	< 820	< 330	< 420	< 330	< 330	< 330	< 330	< 820	< 820	< 330	< 330	< 420	< 330	< 1300 J	< 330

RAMECLL ENVIRON

												SVO	Cs in µg	/kg							
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	2-Nitroaniline	2-Nitrophenol	3&4-Methylphenol	3,3'-Dichlorobenzidine	3-Nitroaniline	4,6-Dinitro-2- methylphenol	4-Bromophenyl -phenyl ether	4-Chloro-3- methylphenol	4-Chloroaniline	4-Chlorophenyl -phenyl ether	4-Nitroaniline	4-Nitrophenol	Acenaphthene	Acenaphthylene	Aniline	Anthracene	Benzidine	Benzo(a)anthracene
Residential	DTSC-Modifie	d RSL or US	EPA RSL	610,000	NA	NA	1,200	18,000	4,900	NA	6,200,000	2,700	NA	27,000	NA	3,500,000	NA	93,000	17,000,000	1	150
E	MH-SB-111	7/16/2014	4.5	< 2400	< 2400	< 2400	< 6100	< 2400	< 3100	< 2400	< 2400	< 2400	< 2400	< 6100	< 6100	< 2400	< 2400	< 3100	< 2400	< 9900 J	< 2400
/ste 11	MH-SB-111	7/16/2014	14.5	< 2300	< 2300	< 2300	< 5700	< 2300	< 2900	< 2300	< 2300	< 2300	< 2300	< 5700	< 5700	< 2300	< 2300	< 2900	< 2300	< 9200 J	< 2300
s, s, pr	MH-SB-111	7/16/2014	24.5	< 330	< 330	< 330	< 830	< 330	< 420	< 330	< 330	< 330	< 330	< 830	< 830	< 330	< 330	< 420	< 330	< 1300 J	< 330
ptic , ar	MH-SB-111	7/16/2014	34.5	< 2200	< 2200	< 2200	< 5500	< 2200	< 2800	< 2200	< 2200	< 2200	< 2200	< 5500	< 5500	< 2200	< 2200	< 2800	< 2200	< 8900 J	< 2200
Ser	MH-SB-112	7/16/2014	4.5	< 2500	< 2500	< 2500	< 6200	< 2500	< 3100	< 2500	< 2500	< 2500	< 2500	< 6200	< 6200	< 2500	< 2500	< 3100	< 2500	< 10000 J	< 2500
3,4,	MH-SB-112	7/16/2014	14.5	< 2500	< 2500	< 2500	< 6200	< 2500	< 3100	< 2500	< 2500	< 2500	< 2500	< 6200	< 6200	< 2500	< 2500	< 3100	< 2500	< 10000 J	< 2500
	MH-SB-112	7/16/2014	24.5	< 2200	< 2200	< 2200	< 5600	< 2200	< 2900	< 2200	< 2200	< 2200	< 2200	< 5600	< 5600	< 2200	< 2200	< 2900	< 2200	< 9100 J	< 2200
AC	MH-SB-112	7/17/2014	34.5	< 980	< 980	< 980	< 2500	< 980	< 1300	< 980	< 980	< 980	< 980	< 2500	< 2500	< 980	< 980	< 1300	< 980	< 4000 J	< 980

Notes:

µg/kg - micrograms per kilogram

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Levels

bgs - below ground surface

NA - not available

SVOCs - Semi-Volatile Organic Compounds

SVOCs by USEPA Method 8270

Table 14a. AOI-12 SVOCs in SoilMalibu High School

Malibu High School 30215 Morning View Drive Malibu, California

												SVOCs i	in μg/kg							
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl Alcohol	bis(2- Chloroethoxy)methane	bis(2-Chloroethyl) ether	bis(2- Ethylhexyl)phthalate	Butylbenzylphthalate	Chrysene	Dibenz(a,h)anthracene	Dibenzofuran	Diethylphthalate	Dimethylphthalate	Di-n-butylphthalate	Di-n-octylphthalate
Residential	DTSC-Modifie	ed RSL or US	EPA RSL	15	150	NA	380	250,000,000	6,200,000	180,000	230	38,000	280,000	3,800	15	72,000	49,000,000	610,000,000	6,200,000	2,400,000
	MH-SB-99	7/29/2014	9.5	< 330	< 330	< 330	< 330	< 830	< 330	< 330	< 330	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330
	MH-SB-99	7/29/2014	19.5	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330	< 330	< 330	< 330	< 410	< 330	< 330	< 330	< 330	< 330
	MH-SB-99	7/29/2014	29.5	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330
	MH-SB-100	7/17/2014	4.5	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330
	MH-SB-100	7/17/2014	14.5	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330
	MH-SB-100	7/17/2014	24.5	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330
	MH-SB-100	7/17/2014	34.5	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330
	MH-SB-100	7/24/2014	44.5	< 330	< 330	< 330	< 330	< 830	< 330	< 330	< 330	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330
	MH-SB-100	7/24/2014	54.5	< 330	< 330	< 330	< 330	< 830	< 330	< 330	< 330	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330
7	MH-SB-101	7/24/2014	4.5	< 320	< 320	< 320	< 320	< 820	< 320	< 320	< 320	< 320	< 320	< 320	< 410	< 320	< 320	< 320	< 320	< 320
and	MH-SB-101	7/24/2014	14.5	< 330	< 330	< 330	< 330	< 830	< 330	< 330	< 330	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330
	MH-SB-101	7/24/2014	24.5	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330	< 330	< 330	< 330	< 410	< 330	< 330	< 330	< 330	< 330
,5,6,	MH-SB-101	7/24/2014	34.5	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330	< 330	< 330	< 330	< 410	< 330	< 330	< 330	< 330	< 330
4	MH-SB-101	7/24/2014	44.5	< 320	< 320	< 320	< 320	< 810	< 320	< 320	< 320	< 320	< 320	< 320	< 410	< 320	< 320	< 320	< 320	< 320
1,3	MH-SB-101	7/24/2014	54.5	< 330	< 330	< 330	< 330	< 830	< 330	< 330	< 330	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330
ems	MH-SB-102	7/17/2014	4.5	< 650	< 650	< 650	< 650	< 1600	< 650	< 650	< 650	< 650	< 650	< 650	< 830	< 650	< 650	< 650	< 650	< 650
ste	MH-SB-102	7/17/2014	14.5	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330
Sy	MH-SB-102	7/17/2014	24.5	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330	< 330	< 330	< 330	< 410	< 330	< 330	< 330	< 330	< 330
eptic	MH-SB-102	7/17/2014	34.5	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330
Sep	MH-SB-102	7/18/2014	44.5	< 330	< 330	< 330	< 330	< 830	< 330	< 330	< 330	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330
-	MH-SB-102		54.5	< 330	< 330	< 330	< 330	< 830	< 330	< 330	< 330	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330
-12	MH-SB-103 MH-SB-103	7/25/2014	4.5	< 320	< 320	< 320	< 320	< 810	< 320	< 320	< 320	< 320	< 320	< 320	< 410	< 320	< 320	< 320	< 320	< 320
AOI-1		7/25/2014	14.5	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330
	MH-SB-103 MH-SB-103	7/25/2014 7/25/2014	24.5 34.5	< 330 < 320	< 330 < 320	< 330 < 320	< 330 < 320	< 820 < 810	< 330 < 320	< 330	< 330 < 320	< 330	< 330	< 330	< 410	< 330 < 320	< 330 < 320	< 330 < 320	< 330 < 320	< 330 < 320
	MH-SB-103 MH-SB-103	7/25/2014	34.5 44.5	< 320	< 320	< 320	< 320	< 810	< 320	< 320 < 330	< 320	< 320 < 330	< 320 < 330	< 320 < 330	< 410 < 420	< 320	< 320	< 320	< 320	< 320
	MH-SB-103 MH-SB-103	7/25/2014	44.5 54.5	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 320	< 330
	MH-SB-103 MH-SB-104	7/25/2014	4.5	< 320	< 320	< 330	< 320	< 830	< 320	< 320	< 330	< 320	< 320	< 320	< 410	< 320	< 320	< 320	< 320	< 320
	MH-SB-104 MH-SB-104	7/25/2014	4.5	< 330	< 330	< 330	< 330	< 830	< 330	< 330	< 330	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330
	MH-SB-104 MH-SB-104	7/25/2014	24.5	< 330	< 330	< 330	< 330	< 830	< 330	< 330	< 330	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330
	MH-SB-104 MH-SB-104	7/25/2014	34.5	< 320	< 320	< 320	< 320	< 810	< 320	< 320	< 320	< 320	< 320	< 320	< 410	< 320	< 320	< 320	< 320	< 320
	MH-SB-104	7/25/2014	44.5	< 320	< 320	< 320	< 320	< 810	< 320	< 320	< 320	< 320	< 320	< 320	< 410	< 320	< 320	< 320	< 320	< 320
	MH-SB-104	7/25/2014	54.5	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330
			0.110						1000										1000	

Table 14a. AOI-12 SVOCs in Soil Malibu High School 30215 Morning View Drive

Malibu, California

											;	SVOCs i	in μg/kg							
Area of Interest (AOI)	Sample ID DTSC-Modifie	Sample Date	Depth (feet bgs)	다 Benzo(a)pyrene	당 Benzo(b)fluoranthene	Benzo(g,h,i)perylene	88 Benzo(k)fluoranthene	Benzoic Acid 250,000,000	Benzyl Alcohol	8 bis(2- 6 Chloroethoxy)methane	ରୁ bis(2-Chloroethyl) ether	ଝ bis(2- ଟି Ethylhexyl)phthalate	00 00 00 00 00 00 00 00	chrysene	다 Dibenz(a,h)anthracene	Dibenzofuran	66 00 00 00 00 00	000000 Dimethylphthalate	900 Di-n-butylphthalate	000 ⁶⁰ Di-n-octylphthalate
Recracina	MH-SB-105	7/22/2014	4.5	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330
	MH-SB-105	7/22/2014	14.5	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330
	MH-SB-105	7/22/2014	24.5	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330
	MH-SB-105	7/22/2014	34.5	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330
	MH-SB-105	7/22/2014	39.5	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330
	MH-SB-106	7/22/2014	4.5	< 320	< 320	< 320	< 320	< 820	< 320	< 320	< 320	< 320	< 320	< 320	< 410	< 320	< 320	< 320	< 320	< 320
	MH-SB-106	7/23/2014	14.5	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330
	MH-SB-106	7/23/2014	24.5	< 320	< 320	< 320	< 320	< 810	< 320	< 320	< 320	< 320	< 320	< 320	< 410	< 320	< 320	< 320	< 320	< 320
7	MH-SB-106	7/23/2014	34.5	< 330	< 330	< 330	< 330	< 830	< 330	< 330	< 330	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330
and	MH-SB-106	7/23/2014	39.5	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330
ů, a	MH-SB-107	7/23/2014	4.5	< 320	< 320	< 320	< 320	< 820	< 320	< 320	< 320	< 320	< 320	< 320	< 410	< 320	< 320	< 320	< 320	< 320
4,5,6,	MH-SB-107	7/23/2014	14.5	< 320	< 320	< 320	< 320	< 810	< 320	< 320	< 320	< 320	< 320	< 320	< 410	< 320	< 320	< 320	< 320	< 320
,3,4	MH-SB-107	7/23/2014	24.5	< 330	< 330	< 330	< 330	< 830	< 330	< 330	< 330	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330
Ē	MH-SB-107	7/23/2014	34.5	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330
System	MH-SB-107	7/23/2014	39.5	< 330	< 330	< 330	< 330	< 830	< 330	< 330	< 330	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330
	MH-SB-108	7/24/2014	4.5	< 330	< 330	< 330	< 330	< 830	< 330	< 330	< 330	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330
tic	MH-SB-108	7/24/2014	14.5	< 330	< 330	< 330	< 330	< 830	< 330	< 330	< 330	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330
Septic	MH-SB-108	7/24/2014	24.5	< 320	< 320	< 320	< 320	< 810	< 320	< 320	< 320	< 320	< 320	< 320	< 410	< 320	< 320	< 320	< 320	< 320
- 7	MH-SB-108	7/24/2014	34.5	< 330	< 330	< 330	< 330	< 830	< 330	< 330	< 330	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330
	MH-SB-108	7/24/2014	39.5	< 330	< 330	< 330	< 330	< 830	< 330	< 330	< 330	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330
AOI-1	MH-SB-109	7/24/2014	4.5	< 330	< 330	< 330	< 330	< 830	< 330	< 330	< 330	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330
	MH-SB-109	7/24/2014	14.5	< 330	< 330	< 330	< 330	< 830	< 330	< 330	< 330	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330
	MH-SB-109	7/24/2014	24.5	< 320	< 320	< 320	< 320	< 810	< 320	< 320	< 320	< 320	< 320	< 320	< 410	< 320	< 320	< 320	< 320	< 320
	MH-SB-109	7/24/2014	34.5	< 330	< 330	< 330	< 330	< 820 J	< 330	< 330	< 330	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330
	MH-SB-109	7/24/2014	39.5	< 330	< 330	< 330	< 330	< 830	< 330	< 330	< 330	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330
	MH-SB-110	7/16/2014	4.5	< 2200	< 2200	< 2200	< 2200	< 5400	< 2200	< 2200	< 2200	< 2200	< 2200	< 2200	< 2800	< 2200	< 2200	< 2200	< 2200	< 2200
	MH-SB-110	7/16/2014	14.5	< 2100	< 2100	< 2100	< 2100	< 5200	< 2100	< 2100	< 2100	< 2100	< 2100	< 2100	< 2600	< 2100	< 2100	< 2100	< 2100	< 2100
	MH-SB-110	7/16/2014	24.5	< 2200	< 2200	< 2200	< 2200	< 5400	< 2200	< 2200	< 2200	< 2200	< 2200	< 2200	< 2800	< 2200	< 2200	< 2200	< 2200	< 2200
	MH-SB-110	7/16/2014	34.5	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330

RAMECLL ENVIRON

											1	SVOCs i	n μg/kg							
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl Alcohol	bis(2- Chloroethoxy)methane	bis(2-Chloroethyl) ether	bis(2- Ethylhexyl)phthalate	Butylbenzylphthalate	Chrysene	Dibenz(a,h)anthracene	Dibenzofuran	Diethylphthalate	Dimethylphthalate	Di-n-butylphthalate	Di-n-octylphthalate
Residential	DTSC-Modifie	d RSL or US	EPA RSL	15	150	NA	380	250,000,000	6,200,000	180,000	230	38,000	280,000	3,800	15	72,000	49,000,000	610,000,000	6,200,000	2,400,000
Ш.	MH-SB-111	7/16/2014	4.5	< 2400	< 2400	< 2400	< 2400	< 6100	< 2400	< 2400	< 2400	< 2400	< 2400	< 2400	< 3100	< 2400	< 2400	< 2400	< 2400	< 2400
/ste 11	MH-SB-111	7/16/2014	14.5	< 2300	< 2300	< 2300	< 2300	< 5700	< 2300	< 2300	< 2300	< 2300	< 2300	< 2300	< 2900	< 2300	< 2300	< 2300	< 2300	< 2300
S) v br	MH-SB-111	7/16/2014	24.5	< 330	< 330	< 330	< 330	< 830	< 330	< 330	< 330	< 330	< 330	< 330	< 420	< 330	< 330	< 330	< 330	< 330
ptic , an	MH-SB-111	7/16/2014	34.5	< 2200	< 2200	< 2200	< 2200	< 5500	< 2200	< 2200	< 2200	< 2200	< 2200	< 2200	< 2800	< 2200	< 2200	< 2200	< 2200	< 2200
Sel ,5,6	MH-SB-112	7/16/2014	4.5	< 2500	< 2500	< 2500	< 2500	< 6200	< 2500	< 2500	< 2500	< 2500	< 2500	< 2500	< 3100	< 2500	< 2500	< 2500	< 2500	< 2500
12 - ,3,4,	MH-SB-112	7/16/2014	14.5	< 2500	< 2500	< 2500	< 2500	< 6200	< 2500	< 2500	< 2500	< 2500	< 2500	< 2500	< 3100	< 2500	< 2500	< 2500	< 2500	< 2500
-1	MH-SB-112	7/16/2014	24.5	< 2200	< 2200	< 2200	< 2200	< 5600	< 2200	< 2200	< 2200	< 2200	< 2200	< 2200	< 2900	< 2200	< 2200	< 2200	< 2200	< 2200
AC	MH-SB-112	7/17/2014	34.5	< 980	< 980	< 980	< 980	< 2500	< 980	< 980	< 980	< 980	< 980	< 980	< 1300	< 980	< 980	< 980	< 980	< 980

Notes:

µg/kg - micrograms per kilogram

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Levels

bgs - below ground surface

NA - not available

SVOCs - Semi-Volatile Organic Compounds

SVOCs by USEPA Method 8270

											SV	OCs in µ	ıg/kg						
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachloro- cyclopentadiene	Hexachloroethane	Indeno(1,2,3-cd)pyrene	Isophorone	Naphthalene	Nitrobenzene	N-Nitroso-di-n- propylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
Residential	DTSC-Modifie	d RSL or US	SEPA RSL	2,300,000	2,300,000	330	6,800	370,000	13,000	150	560,000	3,800	5,100	76	110,000	990	NA	18,000,000	1,700,000
	MH-SB-99	7/29/2014	9.5	< 330	< 330	< 330	< 330	< 830	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 830	< 330	< 330	< 330
	MH-SB-99	7/29/2014	19.5	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 820	< 330	< 330	< 330
	MH-SB-99	7/29/2014	29.5	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 820	< 330	< 330	< 330
	MH-SB-100	7/17/2014	4.5	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 820	< 330	< 330	< 330
	MH-SB-100	7/17/2014	14.5	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 820	< 330	< 330	< 330
	MH-SB-100	7/17/2014	24.5	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 820	< 330	< 330	< 330
	MH-SB-100	7/17/2014	34.5	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 820	< 330	< 330	< 330
	MH-SB-100	7/24/2014	44.5	< 330	< 330	< 330	< 330	< 830	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 830	< 330	< 330	< 330
	MH-SB-100	7/24/2014	54.5	< 330	< 330	< 330	< 330	< 830	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 830	< 330	< 330	< 330
7	MH-SB-101	7/24/2014	4.5	< 320	< 320	< 320	< 320	< 820	< 320	< 320	< 320	< 320	< 320	< 250	< 320	< 820	< 320	< 320	< 320
σ	MH-SB-101	7/24/2014	14.5	< 330	< 330	< 330	< 330	< 830	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 830	< 330	< 330	< 330
, an	MH-SB-101	7/24/2014	24.5	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 820	< 330	< 330	< 330
5,6	MH-SB-101	7/24/2014	34.5	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 820	< 330	< 330	< 330
,3,4,5,6,	MH-SB-101	7/24/2014	44.5	< 320	< 320	< 320	< 320	< 810	< 320	< 320	< 320	< 320	< 320	< 240	< 320	< 810	< 320	< 320	< 320
-	MH-SB-101	7/24/2014	54.5	< 330	< 330	< 330	< 330	< 830	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 830	< 330	< 330	< 330
Systems	MH-SB-102	7/17/2014	4.5	< 650	< 650	< 650	< 650	< 1600	< 650	< 650	< 650	< 650	< 650	< 500	< 650	< 1600	< 650	1200	< 650
ste	MH-SB-102	7/17/2014	14.5	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 820	< 330	< 330	< 330
Sy	MH-SB-102	7/17/2014	24.5	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 820	< 330	< 330	< 330
eptic	MH-SB-102	7/17/2014	34.5	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 820	< 330	< 330	< 330
Sep	MH-SB-102	7/18/2014	44.5	< 330	< 330	< 330	< 330	< 830	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 830	< 330	< 330	< 330
1	MH-SB-102 MH-SB-103		54.5	< 330	< 330	< 330	< 330	< 830	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 830	< 330	< 330	< 330
A0I-12	MH-SB-103 MH-SB-103	7/25/2014 7/25/2014	4.5	< 320 < 330	< 320	< 320	< 320	< 810	< 320	< 320	< 320	< 320	< 320	< 250	< 320 < 330	< 810 < 820	< 320	< 320	< 320
AO	MH-SB-103 MH-SB-103	7/25/2014	14.5 24.5	< 330	< 330 < 330	< 330 < 330	< 330 < 330	< 820 < 820	< 330 < 330	< 330 < 330	< 330 < 330	< 330 < 330	< 330 < 330	< 250 < 250	< 330	< 820	< 330 < 330	< 330 < 330	< 330 < 330
	MH-SB-103 MH-SB-103	7/25/2014	34.5	< 320	< 320	< 320	< 320	< 810	< 320	< 320	< 330	< 320	< 320	< 240	< 320	< 810	< 330	< 330	< 320
	MH-SB-103	7/25/2014	44.5	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 320	< 330	< 330	< 250	< 330	< 820	< 320	< 320	< 330
	MH-SB-103	7/25/2014	54.5	< 320	< 320	< 320	< 320	< 810	< 320	< 320	< 320	< 320	< 320	< 240	< 320	< 810	< 320	< 320	< 320
	MH-SB-103 MH-SB-104	7/25/2014	4.5	< 330	< 330	< 330	< 330	< 830	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 830	< 330	< 330	< 330
	MH-SB-104	7/25/2014	14.5	< 330	< 330	< 330	< 330	< 830	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 830	< 330	< 330	< 330
	MH-SB-104	7/25/2014	24.5	< 330	< 330	< 330	< 330	< 830	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 830	< 330	< 330	< 330
	MH-SB-104	7/25/2014	34.5	< 320	< 320	< 320	< 320	< 810	< 320	< 320	< 320	< 320	< 320	< 240	< 320	< 810	< 320	< 320	< 320
	MH-SB-104	7/25/2014	44.5	< 320	< 320	< 320	< 320	< 810	< 320	< 320	< 320	< 320	< 320	< 240	< 320	< 810	< 320	< 320	< 320
	MH-SB-104	7/25/2014	54.5	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 820	< 330	< 330	< 330
		.,_0,_0,1												00					

RAMECLL ENVIRON

											SV	OCs in µ	.g/kg						
Area of Interest (AOI)	Sample ID DTSC-Modifie	Sample Date	Depth (feet bgs)	Eluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	25 26 26 20 20 20 20 20 20 20 20 20 20 20 20 20	Hexachloroethane	당 Indeno(1,2,3-cd)pyrene	Isophorone	8 Naphthalene	Nitrobenzene	N-Nitroso-di-n-	000 00 00 00 00 00 00 00 00 00 00 00 00	Bentachlorophenol	Z Phenanthrene	Bhenol	Pyrene
Residential	MH-SB-105	7/22/2014	4.5	2,300,000 < 330	2,300,000 < 330	330 < 330	6,800 < 330	< 820	13,000 < 330	< 330	560,000 < 330	3,800 < 330	5,100 < 330	76 < 250	< 330	990 < 820	< 330	18,000,000 < 330	1,700,000 < 330
	MH-SB-105	7/22/2014	4.5	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 820	< 330	< 330	< 330
	MH-SB-105	7/22/2014	24.5	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 820	< 330	< 330	< 330
	MH-SB-105	7/22/2014	34.5	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 820	< 330	< 330	< 330
	MH-SB-105 MH-SB-105	7/22/2014	39.5	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 820	< 330	< 330	< 330
	MH-SB-105	7/22/2014	4.5	< 320	< 320	< 320	< 320	< 820	< 320	< 320	< 320	< 320	< 320	< 250	< 320	< 820	< 320	< 320	< 320
	MH-SB-100 MH-SB-106	7/23/2014	14.5	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 820	< 330	< 330	< 330
	MH-SB-100 MH-SB-106	7/23/2014	24.5	< 320	< 320	< 320	< 320	< 810	< 320	< 320	< 320	< 320	< 320	< 240	< 320	< 810	< 320	< 320	< 320
7	MH-SB-106	7/23/2014	34.5	< 330	< 330	< 320	< 320	< 830	< 330	< 330	< 320	< 330	< 330	< 250	< 330	< 830	< 320	< 330	< 320
	MH-SB-106	7/23/2014	39.5	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 820	< 330	< 330	< 330
and	MH-SB-100	7/23/2014	4.5	< 320	< 330	< 320		< 820		< 320		< 320	< 320		< 320	< 820	< 320	< 320	
,4,5,6,	MH-SB-107 MH-SB-107	7/23/2014	4.5 14.5	< 320	< 320	< 320	< 320 < 320	< 820 < 810	< 320 < 320	< 320	< 320 < 320	< 320	< 320	< 250 < 250	< 320	< 820	< 320	< 320	< 320 < 320
,4,	MH-SB-107 MH-SB-107																		
1,3	MH-SB-107 MH-SB-107	7/23/2014 7/23/2014	24.5 34.5	< 330 < 330	< 330 < 330	< 330 < 330	< 330 < 330	< 830 < 820	< 330	< 330 < 330	< 330	< 330 < 330	< 330 < 330	< 250 < 250	< 330 < 330	< 830 < 820	< 330 < 330	< 330 < 330	< 330 < 330
stem									< 330		< 330								
yst	MH-SB-107	7/23/2014	39.5	< 330	< 330	< 330	< 330	< 830	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 830	< 330	< 330	< 330
c Sy	MH-SB-108	7/24/2014	4.5	< 330	< 330	< 330	< 330	< 830	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 830	< 330	< 330	< 330
Septic	MH-SB-108	7/24/2014	14.5	< 330	< 330	< 330	< 330	< 830	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 830	< 330	< 330	< 330
Se	MH-SB-108	7/24/2014	24.5	< 320	< 320	< 320	< 320	< 810	< 320	< 320	< 320	< 320	< 320	< 250	< 320	< 810	< 320	< 320	< 320
5	MH-SB-108	7/24/2014	34.5	< 330	< 330	< 330	< 330	< 830	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 830	< 330	< 330	< 330
AOI-1			39.5	< 330	< 330	< 330	< 330	< 830	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 830	< 330	< 330	< 330
AC	MH-SB-109	7/24/2014	4.5	< 330	< 330	< 330	< 330	< 830	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 830	< 330	< 330	< 330
	MH-SB-109	7/24/2014	14.5	< 330	< 330	< 330	< 330	< 830	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 830	< 330	< 330	< 330
	MH-SB-109	7/24/2014	24.5	< 320	< 320	< 320	< 320	< 810	< 320	< 320	< 320	< 320	< 320	< 240	< 320	< 810	< 320	< 320	< 320
	MH-SB-109	7/24/2014	34.5	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 820	< 330	< 330	< 330
	MH-SB-109	7/24/2014	39.5	< 330	< 330	< 330	< 330	< 830	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 830	< 330	< 330	< 330
	MH-SB-110	7/16/2014	4.5	< 2200	< 2200	< 2200	< 2200	< 5400	< 2200	< 2200	< 2200	< 2200	< 2200	< 1600	< 2200	< 5400	< 2200	< 2200	< 2200
	MH-SB-110	7/16/2014	14.5	< 2100	< 2100	< 2100	< 2100	< 5200	< 2100	< 2100	< 2100	< 2100	< 2100	< 1600	< 2100	< 5200	< 2100	< 2100	< 2100
	MH-SB-110	7/16/2014	24.5	< 2200	< 2200	< 2200	< 2200	< 5400	< 2200	< 2200	< 2200	< 2200	< 2200	< 1600	< 2200	< 5400	< 2200	4400	< 2200
	MH-SB-110	7/16/2014	34.5	< 330	< 330	< 330	< 330	< 820	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 820	< 330	< 330	< 330

RAMECLL ENVIRON

											SV	OCs in μ	g/kg						
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachloro- cyclopentadiene	Hexachloroethane	Indeno(1,2,3-cd)pyrene	lsophorone	Naphthalene	Nitrobenzene	N-Nitroso-di-n- propylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
Residential	DTSC-Modifie	d RSL or US	EPA RSL	2,300,000	2,300,000	330	6,800	370,000	13,000	150	560,000	3,800	5,100	76	110,000	990	NA	18,000,000	1,700,000
E,	MH-SB-111	7/16/2014	4.5	< 2400	< 2400	< 2400	< 2400	< 6100	< 2400	< 2400	< 2400	< 2400	< 2400	< 1800	< 2400	< 6100	< 2400	< 2400	< 2400
yste 11	MH-SB-111	7/16/2014	14.5	< 2300	< 2300	< 2300	< 2300	< 5700	< 2300	< 2300	< 2300	< 2300	< 2300	< 1700	< 2300	< 5700	< 2300	< 2300	< 2300
σÑ	MH-SB-111	7/16/2014	24.5	< 330	< 330	< 330	< 330	< 830	< 330	< 330	< 330	< 330	< 330	< 250	< 330	< 830	< 330	< 330	< 330
otio , a	MH-SB-111	7/16/2014	34.5	< 2200	< 2200	< 2200	< 2200	< 5500	< 2200	< 2200	< 2200	< 2200	< 2200	< 1700	< 2200	< 5500	< 2200	< 2200	< 2200
Ser ,5,6	MH-SB-112	7/16/2014	4.5	< 2500	< 2500	< 2500	< 2500	< 6200	< 2500	< 2500	< 2500	< 2500	< 2500	< 1900	< 2500	< 6200	< 2500	< 2500	< 2500
2 - 3,4	MH-SB-112	7/16/2014	14.5	< 2500	< 2500	< 2500	< 2500	< 6200	< 2500	< 2500	< 2500	< 2500	< 2500	< 1900	< 2500	< 6200	< 2500	< 2500	< 2500
1.	MH-SB-112	7/16/2014	24.5	< 2200	< 2200	< 2200	< 2200	< 5600	< 2200	< 2200	< 2200	< 2200	< 2200	< 1700	< 2200	< 5600	< 2200	< 2200	< 2200
AC	MH-SB-112	7/17/2014	34.5	< 980	< 980	< 980	< 980	< 2500	< 980	< 980	< 980	< 980	< 980	< 750	< 980	< 2500	< 980	< 980	< 980

µg/kg - micrograms per kilogram

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Levels

bgs - below ground surface

NA - not available

SVOCs - Semi-Volatile Organic Compounds

SVOCs by USEPA Method 8270

Area of Interest (AOI) Sample				Gasoline Range Organics in mg/kg								
		Sample Date		Petroleum Hydrocarbons (C04-C06)	Petroleum Hydrocarbons (C06-C07)	Petroleum Hydrocarbons (C07-C08)	Petroleum Hydrocarbons (C08-C09)	Petroleum Hydrocarbons (C09-C10)	Petroleum Hydrocarbons (C10-C11)	Petroleum Hydrocarbons (C11-C12)		
(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	MH-SB-99	7/29/2014	9.5	<0. 40	<0. 40	<0. 40	<0. 40	<0.40	<0.40	<0.40	╈	
	MH-SB-99	7/29/2014	19.5	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	t	
	MH-SB-99	7/29/2014	29.5	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	t	
	MH-SB-100	7/17/2014	4.5	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	t	
	MH-SB-100	7/17/2014	14.5	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	t	
	MH-SB-100	7/17/2014	24.5	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	t	
	MH-SB-100	7/17/2014	34.5	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	t	
	MH-SB-100	7/24/2014	44.5	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	Ť	
	MH-SB-100	7/24/2014	54.5	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.371	t	
	MH-SB-101	7/24/2014	4.5	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.372	T	
	MH-SB-101	7/24/2014	14.5	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.373	T	
	MH-SB-101	7/24/2014	24.5	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	<0.374	Ť	
and 11	MH-SB-101	7/24/2014	34.5	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.375	Ť	
	MH-SB-101	7/24/2014	44.5	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.376	T	
	MH-SB-101	7/24/2014	54.5	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.377	Ť	
	MH-SB-102	7/17/2014	4.5	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.378	T	
	MH-SB-102	7/17/2014	14.5	< 0.38	< 0.380	< 0.380	< 0.380	< 0.380	< 0.380	< 0.379	T	
	MH-SB-102	7/17/2014	24.5	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.38	T	
,3,4,5,6,	MH-SB-102	7/17/2014	34.5	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.381	T	
1,3,	MH-SB-102	7/18/2014	44.5	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.382	T	
SU	MH-SB-102	7/23/2014	54.5	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.383	T	
iten	MH-SB-103	7/25/2014	4.5	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.384	Τ	
Systems	MH-SB-103	7/25/2014	14.5	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.385		
ic	MH-SB-103	7/25/2014	24.5	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.386		
Septic	MH-SB-103	7/25/2014	34.5	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.387		
	MH-SB-103	7/25/2014	44.5	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	<0.388		
AOI-12	MH-SB-103	7/25/2014	54.5	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.389		
Ĩ	MH-SB-104	7/25/2014	4.5	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39		
4	MH-SB-104	7/25/2014	14.5	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.391		
	MH-SB-104	7/25/2014	24.5	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.392		
	MH-SB-104	7/25/2014	34.5	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.393		
	MH-SB-104	7/25/2014	44.5	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.394		
	MH-SB-104	7/25/2014	54.5	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.395		
	MH-SB-105	7/22/2014	4.5	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.396		
	MH-SB-105	7/22/2014	14.5	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.397		
	MH-SB-105	7/22/2014	24.5	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.398		
	MH-SB-105	7/22/2014	34.5	< 0.37	< 037	< 037	< 037	< 037	< 037	< 0.399	\perp	
	MH-SB-105	7/22/2014	39.5	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.4	Ļ	
	MH-SB-106	7/22/2014	4.5	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.401	\perp	
	MH-SB-106	7/23/2014	14.5	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.402		
	MH-SB-106	7/23/2014	24.5	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.403		
	MH-SB-106	7/23/2014	34.5	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.404	⊥	
	MH-SB-106	7/23/2014	39.5	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.405		

Ţ	Petroleum
	Hydrocarbons
	(C12-C13)
	<0. 40
+	< 0.38
ļ	< 0.37
ļ	
	< 0.39
	< 0.39
	< 0.39
	< 0.37
	< 0.38
	< 0.38
ĺ	< 0.38
	< 0.37
	<0.38
	< 0.39
	<0.39
	< 0.39
	< 0.38
	< 0.39
	< 0.4
	< 0.39
	< 0.39
	< 0.39
	< 0.39
	< 0.4
	< 0.4
	< 0.39
	< 0.38
	< 0.39
	< 0.38
	< 0.37
	< 0.39
	<0.37
	< 0.39
	< 0.4
	< 0.39
Í	< 0.37
Í	< 0.37
Í	< 0.39
Í	< 0.38
Í	< 0.4
Í	< 0.39
Í	< 0.39
	< 0.39



							Gasoline Range C	Drganics in mg/kg			
Area of Interest (AOI)	Sample ID	Sample ID Date	Depth (feet bgs)	Petroleum Hydrocarbons (C04-C06)	Petroleum Hydrocarbons (C06-C07)	Petroleum Hydrocarbons (C07-C08)	Petroleum Hydrocarbons (C08-C09)	Petroleum Hydrocarbons (C09-C10)	Petroleum Hydrocarbons (C10-C11)	Petroleum Hydrocarbons (C11-C12)	
	MH-SB-107	7/23/2014	4.5	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.406	Ι
	MH-SB-107	7/23/2014	14.5	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.407	T
	MH-SB-107	7/23/2014	24.5	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.408	T
	MH-SB-107	7/23/2014	34.5	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.409	T
	MH-SB-107	7/23/2014	39.5	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.410	T
	MH-SB-108	7/24/2014	4.5	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.411	T
_	MH-SB-108	7/24/2014	14.5	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.412	T
11	MH-SB-108	7/24/2014	24.5	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.413	T
,6, and	MH-SB-108	7/24/2014	34.5	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.414	T
	MH-SB-108	7/24/2014	39.5	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.415	T
,3,4,5,6,	MH-SB-109	7/24/2014	4.5	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.416	T
1,3,	MH-SB-109	7/24/2014	14.5	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.417	T
, st	MH-SB-109	7/24/2014	24.5	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.418	T
ten	MH-SB-109	7/24/2014	34.5	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.419	T
Septic Systems	MH-SB-109	7/24/2014	39.5	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.420	T
ic	MH-SB-110	7/16/2014	4.5	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.421	T
ept	MH-SB-110	7/16/2014	14.5	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.422	Γ
	MH-SB-110	7/16/2014	24.5	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.423	T
AOI-12	MH-SB-110	7/16/2014	34.5	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.424	T
ō	MH-SB-111	7/16/2014	4.5	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.425	T
∢	MH-SB-111	7/16/2014	14.5	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	<0.426	T
	MH-SB-111	7/16/2014	24.5	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.427	T
	MH-SB-111	7/16/2014	34.5	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	T
	MH-SB-112	7/16/2014	4.5	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.429	T
	MH-SB-112	7/16/2014	14.5	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.430	T
	MH-SB-112	7/16/2014	24.5	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.431	T
	MH-SB-112	7/17/2014	34.5	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.432	Ť

520 mg/kg

82 mg/kg

96 mg/kg

110 mg/kg 230,000 mg/kg

2,500 mg/kg

Notes:

mg/kg - milligrams per kilogramAliphatic Low, C5 - C8TPH by USEPA Method 8015MAromatic Low, C6 - C8USEPA - United States Environmental Protection AgencyAliphatic Medium, C9 - C18DTSC - Department of Toxic Substances ControlAromatic Medium, C9 - C16RSLs - Regional Screening LevelsAliphatic High, C19 - C32bgs - below ground surfaceAromatic High, C17 - C32EFH - Extractable Fuel HydrocarbonFerence

J - Results and/or reporting limits are estimated

USEPA RSLs for Petroleum Hydrocarbons (results are compared to the most conservative value for the specified range) (USEPA 2015)

	Petroleum
5	Hydrocarbons
	(C12-C13)
	< 0.39
	< 0.39
	< 0.39
	< 0.39
	< 0.39
	< 0.39
	< 0.4
	< 0.4
	< 0.38
	< 0.38
	< 0.39
	< 0.37
	< 0.38
	< 0.37
	< 0.38
	< 0.4
	< 0.39
	< 0.37
	< 0.38
	< 0.39
	< 0.4
	< 0.37
	< 0.37
	< 0.38
	< 0.36
	<0.38
	< 0.39



										Diesel Ra	nge Organic	s in mg/kg						
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	EFH (C13-C14)	EFH (C15-C16)	EFH (C17-C18)	EFH (C19-C20)	EFH (C21-C22)	EFH (C23-C24)	EFH (C25-C26)	EFH (C27-C28)	EFH (C29-C30)	EFH (C31-C32)	EFH (C33-C34)	EFH (C35-C36)	EFH (C37-C38)	EFH (C39-C40)	EFH (C13-C40)
	MH-SB-99	7/29/2014	9.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
	MH-SB-99	7/29/2014	19.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
	MH-SB-99	7/29/2014	29.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	18
	MH-SB-100	7/17/2014	4.5	< 5.0 J														
	MH-SB-100	7/17/2014	14.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
	MH-SB-100	7/17/2014	24.5	< 4.9 J														
	MH-SB-100	7/17/2014	34.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
	MH-SB-100	7/24/2014	44.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
	MH-SB-100	7/24/2014	54.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9
	MH-SB-101	7/24/2014	4.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	7.6
	MH-SB-101	7/24/2014	14.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	5.9
	MH-SB-101	7/24/2014	24.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9
	MH-SB-101	7/24/2014	34.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9
	MH-SB-101	7/24/2014	44.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9
.	MH-SB-101	7/24/2014	54.5	< 14	< 14	< 14	< 14	< 14	< 14	< 14	< 14	< 14	< 14	< 14	< 14	< 14	< 14	< 14
d 11	MH-SB-102	7/17/2014	4.5	< 4.8 J	4.8 J	6.0 J	6.4 J	7.4 J	6.3 J	6.5 J	6.0 J	7.0 J	58 J					
and	MH-SB-102	7/17/2014	14.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
6,6,	MH-SB-102	7/17/2014	24.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
,4,5	MH-SB-102	7/17/2014	34.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	8.9
1,3	MH-SB-102	7/18/2014	44.5	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	4.8
su	MH-SB-102	7/23/2014	54.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
ster	MH-SB-103	7/25/2014	4.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9
Sys	MH-SB-103	7/25/2014	14.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9
tic	MH-SB-103	7/25/2014	24.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9
Septic	MH-SB-103	7/25/2014	34.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
	MH-SB-103	7/25/2014	44.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
01-12	MH-SB-103	7/25/2014	54.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
AOI	MH-SB-104	7/25/2014	4.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
	MH-SB-104	7/25/2014	14.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
	MH-SB-104		24.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
	MH-SB-104	7/25/2014	34.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
	MH-SB-104	7/25/2014	44.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9
	MH-SB-104	7/25/2014	54.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
	MH-SB-105		4.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9
	MH-SB-105		14.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9
	MH-SB-105		24.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
	MH-SB-105	7/22/2014	34.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
	MH-SB-105		39.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9
	MH-SB-106	7/22/2014	4.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	6.0
	MH-SB-106		14.5	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15
	MH-SB-106	7/23/2014	24.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
	MH-SB-106		34.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
	MH-SB-106	7/23/2014	39.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0

										Diesel Rai	nge Organic	s in mg/kg						
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	EFH (C13-C14)	EFH (C15-C16)	EFH (C17-C18)	EFH (C19-C20)	EFH (C21-C22)	EFH (C23-C24)	EFH (C25-C26)	EFH (C27-C28)	EFH (C29-C30)	EFH (C31-C32)	EFH (C33-C34)	EFH (C35-C36)	EFH (C37-C38)	EFH (C39-C40)	EFH (C13-C40)
	MH-SB-107	7/23/2014	4.5	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15
	MH-SB-107	7/23/2014	14.5	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15
	MH-SB-107	7/23/2014	24.5	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15
	MH-SB-107	7/23/2014	34.5	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15
	MH-SB-107	7/23/2014	39.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
	MH-SB-108	7/24/2014	4.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	8.7
_	MH-SB-108	7/24/2014	14.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
11	MH-SB-108	7/24/2014	24.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	6.1
and	MH-SB-108	7/24/2014	34.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	6.5
ۍ ص	MH-SB-108	7/24/2014	39.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	11
4,5,0	MH-SB-109	7/24/2014	4.5	9.0	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	18
, 3°,	MH-SB-109	7/24/2014	14.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9
, st	MH-SB-109	7/24/2014	24.5	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15
Systems	MH-SB-109	7/24/2014	34.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
ŷ	MH-SB-109	7/24/2014	39.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
	MH-SB-110	7/16/2014	4.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
eptic	MH-SB-110	7/16/2014	14.5	< 5.0 J														
Ň	MH-SB-110	7/16/2014	24.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
12	MH-SB-110	7/16/2014	34.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	6.6
0-1	MH-SB-111	7/16/2014	4.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
A	MH-SB-111	7/16/2014	14.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
	MH-SB-111	7/16/2014	24.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
	MH-SB-111	7/16/2014	34.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9
	MH-SB-112	7/16/2014	4.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	6.2
	MH-SB-112	7/16/2014	14.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	7.3
	MH-SB-112	7/16/2014	24.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
	MH-SB-112	7/17/2014	34.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0

Notes:

mg/kg - milligrams per kilogram TPH by USEPA Method 8015M USEPA - United States Environmental Protection Agency Aliphatic Medium, C9 - C18 DTSC - Department of Toxic Substances Control RSLs - Regional Screening Levels bgs - below ground surface EFH - Extractable Fuel Hydrocarbon

Aliphatic Low, C5 - C8

Aromatic Low, C6 - C8

Aromatic Medium, C9 - C16

Aliphatic High, C19 - C32

Aromatic High, C17 - C32

520 mg/kg

82 mg/kg

96 mg/kg 110 mg/kg

230,000 mg/kg

2,500 mg/kg

J - Results and/or reporting limits are estimated

USEPA RSLs for Petroleum Hydrocarbons (results are compared to the most conservative value for the specified range) (USEPA 2015)

Area of											Meta	als in n	ng/kg							
Interest		Sample	Depth						Chromium											
(AOI)	Sample ID	Date	(feet bgs)	Antimony	Arsenic	Barium	Beryllium	Cadmium	(total)	Cobalt	Copper	Lead	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Mercury
Residenti	ial DTSC-Modif	ied RSL or U		31	12 ^a	15,000	16	5	120,000	23	3,100	80	390	1,500	390	390	0.78 ^b	390	23,000	23
	MH-SB-99	7/29/2014	9.5	< 20	< 6.0	70 J	< 1.0	1.7	60	12	17	< 4.0	< 4.0	46	< 6.0	< 3.0	< 20	69	42	0.039
	MH-SB-99	7/29/2014	19.5	< 20	18	76 J	< 0.99	3.3	61	12	12	< 3.9	3.9	60	< 5.9	< 3.0	< 20	75	36	0.058
	MH-SB-99	7/29/2014	29.5	< 20	< 6.0	88 J	< 1.0	1.4	96	16	29	< 4.0	< 4.0	68	< 6.0	< 3.0	< 20	85	53	0.058
	MH-SB-100	7/17/2014	4.5	< 20	< 5.9	110	< 0.99	2.6	58	18	25	< 3.9	< 3.9	67	< 5.9	< 3.0	< 20	66	58	0.044
	MH-SB-100	7/17/2014	14.5	< 20	< 5.9	66	< 0.98	1.9	62	15	21	< 3.9	< 3.9	64	< 5.9	< 2.9	< 20	56	47	0.056
	MH-SB-100	7/17/2014	24.5	< 20	< 5.9	120	< 0.99	2.4	72	21	28	< 3.9	< 3.9	80	< 5.9	< 3.0	< 20	66	55	0.037
	MH-SB-100	7/17/2014	34.5	< 9.9	5.6	120	< 0.50	2.1	61	15	24	2.9	< 2.0	60	< 3.0	< 1.5	< 9.9	53	42	0.024
	MH-SB-100	7/24/2014	44.5	< 9.8	8.3	210	< 0.49	8.3	53	9.6	31	2	5.3	67	< 2.9	< 1.5	< 9.8	52	42	0.028
	MH-SB-100	7/24/2014	54.5	< 9.9	13	260	< 0.49	1.7	57	5.8	23	< 2.0	4.6	57	< 3.0	< 1.5	< 9.9	58	55	0.03
	MH-SB-101	7/24/2014	4.5	< 9.8	4.9	110	< 0.49	2	59	13	27	2.5	2.2	60	< 2.9	< 1.5	< 9.8	63	47	0.059
	MH-SB-101	7/24/2014	14.5	< 10	3.6	61	< 0.50	1.2	58	17	26	< 2.0	< 2.0	59	3.1	< 1.5	< 10	54	41	0.06
	MH-SB-101	7/24/2014	24.5	< 9.9	< 3.0	59	< 0.49	0.98	63	16	27	< 2.0	< 2.0	60	< 3.0	< 1.5	< 9.9	62	42	0.066
	MH-SB-101	7/24/2014	34.5	< 10	3.8	73	< 0.50	1.8	54	14	22	2	< 2.0	55	< 3.0	< 1.5	< 10	56	36	0.067
7	MH-SB-101	7/24/2014	44.5	< 10	7.2	160	< 0.50	3	52	11	27	2.4	< 2.0	54	< 3.0	< 1.5	< 10	55	44	0.048
and	MH-SB-101	7/24/2014	54.5	< 10	7	230	< 0.50	2.7	66	14	29	2.7	2.4	61	3	< 1.5	< 10	64	46	0.052
	MH-SB-102	7/17/2014	4.5	< 20	< 5.9	120	< 0.99	2.3	65	16	27	< 3.9	3.9	71	< 5.9	< 3.0	< 20	69	60	0.033
,5,6,	MH-SB-102	7/17/2014	14.5	< 20	< 5.9	120	< 0.98	2.1	74	17	27	< 3.9	< 3.9	73	< 5.9	< 2.9	< 20	66	53	0.035
,3,4,	MH-SB-102	7/17/2014	24.5	< 9.9	12	130	< 0.49	2.5	54	13	32	2.1	3.5	65	< 3.0	< 1.5	< 9.9	73	51	0.057
-	MH-SB-102	7/17/2014	34.5	< 10	12	270	< 0.50	2.6	36	11	22	2.3	5	55	< 3.0	< 1.5	< 10	38	46	0.027
stems	MH-SB-102	7/18/2014	44.5	< 9.9	16	250	< 0.49	3.2	52	8	35	< 2.0	6.5	60	< 3.0	< 1.5	< 9.9	67	69	0.06
vste	MH-SB-102	7/23/2014	54.5	< 9.9 J	11	230	< 0.50	1	86	17	28	< 2.0	6.5	150	< 3.0	< 1.5	< 9.9	36	28	0.055
c Sy	MH-SB-103 MH-SB-103	7/25/2014 7/25/2014	4.5	< 9.9 J	5 < 6.0	72 100	< 0.49	1.6	54 64	13	29	2.4	2.7	59	< 3.0	< 1.5	< 9.9 < 20	57	45	0.058 0.12
Septic			14.5	< 20 J			< 1.0	2.2		16	25	< 4.0	< 4.0	69	< 6.0	< 3.0		64	50	
Se	MH-SB-103 MH-SB-103	7/25/2014 7/25/2014	24.5 34.5	< 9.9 J	< 3.0	72 160	< 0.50 < 0.50	3.1 3.2	12 59	1.7	4.5	< 2.0 2.5	< 2.0 6.3	17 73	< 3.0	< 1.5	< 9.9	25	15	< 0.020 0.037
5				< 9.9 J	31	270				15	30				< 3.0	< 1.5	< 9.9	46	70	
01	MH-SB-103 MH-SB-103	7/25/2014 7/25/2014	44.5 54.5	< 10 J < 10 J	10 11	170	< 0.50 < 0.50	1.2 2.1	53 40	6.2 12	28 59	< 2.0 < 2.0	6.4 5.6	55 49	< 3.0 < 3.0	< 1.5 < 1.5	< 10 < 10	38 43	49 38	0.077 0.025
AC	MH-SB-103 MH-SB-104	7/25/2014	4.5	< 10 J	< 5.9	62	< 0.99	1.8	58		23	< 4.0	< 4.0	49 65	< 5.9	< 3.0	< 20		49	0.025
	MH-SB-104 MH-SB-104	7/25/2014	4.5	< 20 J	< 5.9 3.1	64	< 0.99	1.0	56	16 14	19	< 2.0	2.4	56	< 3.0	< 1.5	< 20 < 10	55 51	49	0.086
	MH-SB-104 MH-SB-104	7/25/2014	24.5	< 9.9 J	4.1	65	< 0.50	1.7	62	14	20	< 2.0	2.4	59	< 3.0	< 1.5	< 9.9	55	39	0.000
	MH-SB-104 MH-SB-104	7/25/2014	34.5	< 9.9 J	3.3	67	< 0.50	1.5	45	13	20	< 2.0	3	45	< 3.0	< 1.5	< 9.9	50	33	0.12
	MH-SB-104 MH-SB-104	7/25/2014	44.5	< 9.9 J	< 5.9	54	< 0.99	1.8	-45 59	13	20	< 3.9	< 3.9	63	< 5.9	< 3.0	< 20	55	47	0.030
	MH-SB-104	7/25/2014	54.5	< 20 J	< 6.0	99	< 1.0	2	71	17	28	< 4.0	< 4.0	77	< 6.0	< 3.0	< 20	62	57	0.03
	MH-SB-105	7/22/2014	4.5	< 9.9	< 3.0	110	< 0.50	1.5	49	17	17	< 2.0	< 2.0	50	< 3.0	< 1.5	< 9.9	52	39	0.033
	MH-SB-105	7/22/2014	14.5	< 20	< 6.0	26	< 1.0	< 1.0	56	10	22	< 4.0	< 4.0	63	< 6.0	< 3.0	< 20	65	43	0.029
	MH-SB-105	7/22/2014	24.5	< 9.8	< 2.9	20	< 0.49	< 0.49	38	3.9	6.3	< 2.0	< 2.0	25	< 2.9	< 1.5	< 9.8	18	18	0.020
	MH-SB-105	7/22/2014	34.5	< 9.8	3.6	910	< 0.49	< 0.49	30	1.4	12	< 2.0	3.2	18	< 2.9	< 1.5	< 9.8	41	31	0.025 J
	MH-SB-105	7/22/2014	39.5	< 10	3.6	1000	< 0.50	< 0.50	25	1.8	9.1	< 2.0	5.1	15	< 3.0	< 1.5	< 10	23	27	< 0.020 J
	MH-SB-106	7/22/2014	4.5	< 9.8	3	280	< 0.49	1.4	48	13	16	2.1	< 2.0	46	< 2.9	< 1.5	< 9.8	49	37	< 0.020 J
	MH-SB-106	7/23/2014	14.5	< 20 J	< 5.9	47	< 0.98	1.3	59	17	22	< 3.9	< 3.9	59	< 5.9	< 2.9	< 20	52	48	< 0.020 J
	MH-SB-106	7/23/2014	24.5	< 9.9 J	< 3.0	25	< 0.49	0.82	23	4.1	10	3.2	< 2.0	28	< 3.0	< 1.5	< 9.9	24	30	0.024 J
		1,20,2014	24.0	<u> </u>	. 0.0	20	€ 0.+0	0.02	20	I	10	5.2	× 2.0	20	\$ 0.0	1.0	× 0.0	4 7	00	0.02-10

Area of											Meta	als in r	mg/kg							
Interest		Sample	Depth						Chromium											
(AOI)	Sample ID	Date		Antimony	Arsenic	Barium	Beryllium	Cadmium	(total)	Cobalt	Copper	Lead	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Mercury
Resident	al DTSC-Modif	ied RSL or U	ISEPA RSL	31	12 ^a	15,000	16	5	120,000	23	3,100	80	390	1,500	390	390	0.78 ^b	390	23,000	23
	MH-SB-106	7/23/2014	34.5	< 10 J	3.6	230	< 0.50	0.67	23	1.2	9.4	< 2.0	2.1	12	< 3.0	< 1.5	< 10	16	22	0.047
	MH-SB-106	7/23/2014	39.5	< 9.9 J	4.8	210	< 0.49	3.5	61	2.4	16	< 2.0	< 2.0	43	< 3.0	< 1.5	< 9.9	120	57	0.025
	MH-SB-107	7/23/2014	4.5	< 9.9 J	4	120	< 0.50	1.7	51	16	22	3.4	< 2.0	53	< 3.0	< 1.5	< 9.9	57	34	0.021
	MH-SB-107	7/23/2014	14.5	< 9.9 J	< 3.0	24	< 0.50	< 0.50	26	4	5.5	< 2.0	< 2.0	19	< 3.0	< 1.5	< 9.9	27	18	0.028
	MH-SB-107	7/23/2014	24.5	< 9.9 J	19	200	< 0.50	0.91	57	3.5	46	< 2.0	7.3	63	< 3.0	< 1.5	< 9.9	56	100	0.1
	MH-SB-107	7/23/2014	34.5	< 10 J	< 3.0	110	< 0.50	3.6	55	1.9	21	< 2.0	< 2.0	25	< 3.0	< 1.5	< 10	60	49	0.031
	MH-SB-107	7/23/2014	39.5	< 20 J	< 5.9	370	< 0.99	5.2	40	< 2.0	7.1	< 3.9	< 3.9	27	< 5.9	< 3.0	< 20	52	34	0.074
.	MH-SB-108	7/24/2014	4.5	< 9.9	< 3.0	69	< 0.50	1.5	54	16	24	3.2	< 2.0	57	< 3.0	< 1.5	< 9.9	59	40	0.022
d 11	MH-SB-108	7/24/2014	14.5	< 9.9	< 3.0	110	< 0.49	0.61	46	3.8	41	2.8	< 2.0	74	< 3.0	< 1.5	< 9.9	31	63	0.055
and	MH-SB-108	7/24/2014	24.5	< 9.9	3.6	110	< 0.50	2.3	40	1.5	22	< 2.0	< 2.0	27	< 3.0	< 1.5	< 9.9	56	53	0.088
5,6,	MH-SB-108	7/24/2014	34.5	< 9.9	< 3.0	330	< 0.50	2.3	44	1.8	30	< 2.0	2.4	37	< 3.0	3.3	< 9.9	81	58	0.18
,4,5,	MH-SB-108	7/24/2014	39.5	< 9.9	< 3.0	90	< 0.50	3.9	37	1.4	21	< 2.0	2.9	23	< 3.0	< 1.5	< 9.9	57	42	0.03
1,3,	MH-SB-109	7/24/2014	4.5	< 10	< 3.0	58	< 0.50	1.1	48	15	19	3.2	< 2.0	49	< 3.0	< 1.5	< 10	51	31	0.027
Systems	MH-SB-109	7/24/2014	14.5	< 9.9	3.8	82	< 0.49	0.68	29	3.8	17	4.1	2.9	47	< 3.0	< 1.5	< 9.9	27	65	0.022
stei	MH-SB-109	7/24/2014	24.5	< 9.9	5	260	< 0.50	2.5	48	3.3	19	< 2.0	4.3	37	< 3.0	< 1.5	< 9.9	68	55	0.071
Sys	MH-SB-109	7/24/2014	34.5	< 9.9 J	< 3.0	240	< 0.50	2	44	1.8	17	< 2.0	< 2.0	35	< 3.0	< 1.5	< 9.9	67	56	0.1
Septic	MH-SB-109	7/24/2014	39.5	< 9.9 J	4.1	130	< 0.49	4.2	45	1.6	9.6	< 2.0	< 2.0	28	< 3.0	< 1.5	< 9.9	60	56	0.15
)ep	MH-SB-110	7/16/2014	4.5	< 10 J	< 3.0	98	< 0.50	1.2	49 J	8.5	18	2.6 J	< 2.0	42	< 3.0	< 1.5	< 10	44 J	35	0.021
•	MH-SB-110	7/16/2014	14.5	< 10 J	3.6	250	< 0.50	1.8	69 J	5.1	24	2.7 J	< 2.0	56	< 3.0	< 1.5	< 10	64 J	59	0.036
79	MH-SB-110	7/16/2014	24.5	< 9.9 J	< 3.0	160	< 0.49	0.64	22 J	< 0.99	9.9	5.9	2.4	14	< 3.0	< 1.5	< 9.9	31 J	22	0.028
AOI-13	MH-SB-110	7/16/2014	34.5	< 50 J	24	180	< 2.5	3.9	250 J	16	220	11	54	170	< 15	< 7.4	< 50	95 J	100	0.03
	MH-SB-111	7/16/2014	4.5	< 10 J	5.6	210	< 0.50	2	71 J	7.9	34	2.9 J	2	66	< 3.0	< 1.5	< 10	63 J	68	0.025
	MH-SB-111	7/16/2014	14.5	< 9.9 J	< 3.0	98	< 0.49	1.3	72 J	6.6	50	2.9 J	< 2.0	77	< 3.0	< 1.5	< 9.9	49 J	140	0.086
	MH-SB-111	7/16/2014	24.5	< 9.9 J	< 3.0	64	< 0.49	1.5	17 J	1.4	10	< 2.0	< 2.0	14	< 3.0	< 1.5	< 9.9	20 J	17	0.029
	MH-SB-111	7/16/2014	34.5	< 9.8 J	< 2.9	480	< 0.49	2.6	41 J	2.1	11	< 2.0	< 2.0	30	< 2.9	< 1.5	< 9.8	87 J	46	0.053
	MH-SB-112	7/16/2014	4.5	< 10 J	4.3	200	0.55	2	77 J	10	34	3.4 J	< 2.0	70	< 3.0	< 1.5	< 10	66 J	66	0.025
	MH-SB-112	7/16/2014	14.5	< 9.9 J	3.3	240	< 0.49	1.3	71 J	6.5	28	2.0 J	< 2.0	54	< 3.0	< 1.5	< 9.9	58 J	55	0.14
	MH-SB-112	7/16/2014	24.5	< 9.9 J	6.3	670	< 0.49	1.5	37 J	1.7	12	3.5 J	3.8	25	< 3.0	< 1.5	< 9.9	55 J	32	0.068
	MH-SB-112	7/17/2014	34.5	< 10 J	9.4	190	< 0.50	2.1	68 J	3.2	41	2.7	3.6	71	3	< 1.5	< 10	93 J	87 J	0.13

Notes:

mg/kg - milligrams per kilogram

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Levels

bgs - below ground surface

Metals by USEPA Method 6010/7471

^a - Arsenic occurs naturally in soil. An evaluation of arsenic soil data from school sites in Southern California found arsenic concentrations ranging from 0.15 mg/kg to 20 mg/kg, with an upper-bound background arsenic concentration of 12 mg/kg (Chernoff G, Bosan W, Oudiz D. 2008. Determination of a Southern California Regional Background Arsenic Concentration in Soil). Arsenic concentrations in soil samples collected at the site were conservatively screened against 12 mg/kg. Arsenic concentrations greater than 12 mg/kg were further evaluated in Section 9 of the PEA Report.

^b - As specified in the DTSC-approved PEA Work Plan, the reporting limit for thallium exceeds the RSL. As all results are non-detect, values are not bolded.

												VOCs in	µg/L							
Area of Interest (AOI)	Sample ID	Sample date	Depth (feet bgs)	1,1,1,2- Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2- Tetrachloroethane	1,1,2-Trichloro-1,2,2- trifluoroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3- chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane
Residenti			5 feet bgs or less ^b	0.33	1,040	0.04	31,000	0.18	1.52	73	NA	2.1	0.0001112 ^a	2.1		0.00017 ^a	0.0047	210	0.11	0.28
	MH-SV-7	7/31/2014	10	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	0.091	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-7	7/31/2014	15	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-7	7/31/2014	15	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-7	7/31/2014	25	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-8	7/29/2014	6	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-8	7/30/2014	24	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-8	7/30/2014	54	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-9	7/30/2014	5	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-9	7/30/2014	24	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
~	MH-SV-9	7/30/2014	56	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
-	MH-SV-10	7/30/2014	6	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
and	MH-SV-10	7/30/2014	26	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
, e,	MH-SV-10	7/30/2014	54	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
4,5,	MH-SV-11	7/30/2014	25	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
1,3,	MH-SV-11	7/30/2014	6	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-11 MH-SV-11	7/30/2014 7/30/2014	6	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
stems	MH-SV-11 MH-SV-12	7/29/2014	54	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.008 < 0.008	< 0.008	< 0.008 < 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008 < 0.008	< 0.008	< 0.008	< 0.008	< 0.008
Sys	MH-SV-12 MH-SV-12	7/29/2014	<u>6</u> 22	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008		< 0.008	< 0.008	< 0.008 < 0.008	< 0.008	< 0.008 < 0.008	< 0.008 < 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008 < 0.008
	MH-SV-12 MH-SV-12	7/29/2014	50	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008 < 0.008	< 0.008 < 0.008	< 0.008 < 0.008	< 0.008	< 0.008	< 0.008 < 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008 < 0.008	< 0.008	< 0.008
eptic	MH-SV-12 MH-SV-13	7/29/2014	_	< 0.008		< 0.008		< 0.008		< 0.008			< 0.008	< 0.008		< 0.008	< 0.008			< 0.008
S '	MH-SV-13	7/29/2014	20	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
-12	MH-SV-13	7/29/2014	40	< 0.008	< 0.008		< 0.04	< 0.008	< 0.008	< 0.008	< 0.008		< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
AOI-1	MH-SV-14	7/29/2014	5	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-14	7/29/2014	20	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-14	7/29/2014	40	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-14	7/29/2014	40	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-15	7/29/2014	5	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-15	7/29/2014	20	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	
	MH-SV-15	7/29/2014	40	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-16	7/29/2014	5	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-16	7/29/2014	20	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-16	7/29/2014	30	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-17	7/30/2014	5	< 0.008	< 0.008	< 0.008		< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	
		., 00, 2011	, ,			. 0.000			1 01000				101000					101000		

												VOCs in	µg/L							
Area of Interest (AOI)	Sample ID	Sample date	Depth (feet bgs)	1,1,1,2- Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2- Tetrachloroethane	1,1,2-Trichloro-1,2,2- trifluoroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3- chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane
Residenti	al Soil Gas Scre	ening Level for t	5 feet bgs or less ^b	0.33	1,040	0.04	31,000	0.18	1.52	73	NA	2.1	0.0001112 ^a	2.1	7.3	0.00017 ^a	0.0047	210	0.11	0.28
-	MH-SV-17	7/30/2014	5	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
d 1	MH-SV-17	7/30/2014	20	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
an	MH-SV-17	7/30/2014	40	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
i, 6,	MH-SV-18	7/23/2014	6	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
4,5	MH-SV-18	7/23/2014	6	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
1,3,	MH-SV-18	7/23/2014	20	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
S	MH-SV-18	7/23/2014	35	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
stem	MH-SV-18	7/23/2014	20	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
Sys	MH-SV-18	7/23/2014	20	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
ptic (MH-SV-19	7/23/2014	5	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
d)	MH-SV-19	7/23/2014	20	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
Š.	MH-SV-19	7/23/2014	35	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
-12	MH-SV-20	7/23/2014	7	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
AOI	MH-SV-20	7/23/2014	35	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
٩	MH-SV-20	7/23/2014	35	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008

											VC	OCs in µg	J/L							
Area of Interest (AOI)	Sample ID	Sample date	Depth (feet bgs)	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane	2-Chlorotoluene	4-Chlorotoluene	Benzene	Bromobenzene	Bromodichloromethane	Bromoform	Carbon Tetrachloride	Chlorobenzene	Chloroform	cis-1,2-Dichloroethene	cis-1,3- Dichloropropene	Cumene
Residenti		-	5 feet bgs or less ^b	36.5	NA	NA	0.26	NA	NA	NA	0.08	63	0.07	2.21	0.06	52	0.12	7.3	0.15	420
	MH-SV-7	7/31/2014	10	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	0.137	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	0.046
	MH-SV-7	7/31/2014	15	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	0.021	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	0.019
	MH-SV-7	7/31/2014	15	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	0.014	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	0.018
	MH-SV-7	7/31/2014	25	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	0.08	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-8	7/29/2014	6	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-8	7/30/2014	24	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-8	7/30/2014	54	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-9	7/30/2014	5	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-9 MH-SV-9	7/30/2014	24	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
-	MH-SV-9 MH-SV-10	7/30/2014 7/30/2014	56 6	< 0.008 < 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008 < 0.008
d 1	MH-SV-10 MH-SV-10	7/30/2014	26	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
and	MH-SV-10	7/30/2014	54	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
,5, 6,	MH-SV-10 MH-SV-11	7/30/2014	25	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
,4,5	MH-SV-11	7/30/2014	6	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
1,3,4	MH-SV-11	7/30/2014	6	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
sm	MH-SV-11	7/30/2014	54	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
stems	MH-SV-12	7/29/2014	6	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
Sy	MH-SV-12	7/29/2014	22	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
eptic	MH-SV-12	7/29/2014	50	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
Sep	MH-SV-13	7/29/2014	5	< 0.008		< 0.008			< 0.008		0.000				< 0.008		< 0.008			< 0.008
' S	MH-SV-13	7/29/2014	20	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008		< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	
AOI-1	MH-SV-13	7/29/2014	40	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
AC	MH-SV-14	7/29/2014	5	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	0.098	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	0.079	< 0.008	< 0.008	< 0.008
	MH-SV-14	7/29/2014	20	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-14	7/29/2014	40	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-14	7/29/2014	40	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-15	7/29/2014	5	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-15	7/29/2014	20	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-15	7/29/2014	40	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-16	7/29/2014	5	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	0.089	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-16	7/29/2014	20	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	0.087	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-16	7/29/2014	30	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	0.104	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-17	7/30/2014	5	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008

											V	OCs in µg	j/L							
Area of Interest (AOI)	Sample ID	Sample date	Depth (feet bgs)	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane	2-Chlorotoluene	4-Chlorotoluene	Benzene	Bromobenzene	Bromodichloromethane	Bromoform	Carbon Tetrachloride	Chlorobenzene	Chloroform	cis-1,2-Dichloroethene	cis-1,3- Dichloropropene	Cumene
Residenti	al Soil Gas Scre		5 feet bgs or less ^b	36.5	NA	NA	0.26	NA	NA	NA	0.08	63	0.07	2.21	0.06	52	0.12	7.3	0.15	420
7	MH-SV-17	7/30/2014	5	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
and 1	MH-SV-17	7/30/2014	20	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
, an	MH-SV-17	7/30/2014	40	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
.0	MH-SV-18	7/23/2014	6	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
,4,5	MH-SV-18	7/23/2014	6	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
1,3	MH-SV-18	7/23/2014	20	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
su	MH-SV-18	7/23/2014	35	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
ystems	MH-SV-18	7/23/2014	20	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
Sys	MH-SV-18	7/23/2014	20	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-19	7/23/2014	5	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
Septic	MH-SV-19	7/23/2014	20	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
s '	MH-SV-19	7/23/2014	35	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
-12	MH-SV-20	7/23/2014	7	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
AOI	MH-SV-20	7/23/2014	35	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
4	MH-SV-20	7/23/2014	35	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008

											V	OCs in µg	g/L							
Area of Interest (AOI)	Sample ID	Sample date	Depth (feet bgs)	Dibromochloromethane	Dibromomethane	Dichlorodifluoro- methane	Diisopropyl ether	Ethyl Benzene	Ethyl tert-butyl ether	Hexachlorobutadiene	Methyl tert-butyl ether	Methylene Chloride	Naphthalene	n-Butylbenzene	n-Propylbenzene	p-Cymene	sec-Butylbenzene	Styrene	t-Amyl methyl ether	tert Butyl alcohol
Residenti	al Soil Gas Scre	ening Level for	5 feet bgs or less ^b	0.09	4.2	100	730	1.1	NA	0.11	11	0.69	0.08	183	1,000	NA	183	939	NA	NA
	MH-SV-7	7/31/2014	10	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.04	< 0.008	< 0.04	< 0.008	0.064	< 0.008	0.014	0.284	< 0.008	< 0.008	< 0.04	< 0.4
	MH-SV-7	7/31/2014	15	< 0.008	< 0.008	< 0.008	< 0.04	0.038	< 0.04	< 0.008	< 0.04	< 0.008	0.043	< 0.008	< 0.008	0.17	0.055	< 0.008	< 0.04	< 0.4
	MH-SV-7	7/31/2014	15	< 0.008	< 0.008	< 0.008	< 0.04	0.019	< 0.04	< 0.008	< 0.04	< 0.008	0.036	< 0.008	< 0.008	0.179	0.054	< 0.008	< 0.04	< 0.4
	MH-SV-7	7/31/2014	25	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.04	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.04	< 0.4
	MH-SV-8	7/29/2014	6	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.04	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.04	< 0.4
	MH-SV-8	7/30/2014	24	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.040	< 0.40
	MH-SV-8	7/30/2014	54	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.040	< 0.400
	MH-SV-9	7/30/2014	5	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.040	< 0.400
	MH-SV-9 MH-SV-9	7/30/2014	24	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.040	< 0.400
-	MH-SV-9 MH-SV-10	7/30/2014 7/30/2014	56 6	< 0.008 < 0.008	< 0.008	< 0.008	< 0.040 < 0.040	< 0.008 < 0.008	< 0.040 < 0.040	< 0.008	< 0.040 < 0.040	< 0.008	< 0.008 < 0.008	< 0.008 < 0.008	< 0.008 < 0.008	< 0.008 < 0.008	< 0.008 < 0.008	< 0.008	< 0.040 < 0.040	< 0.400 < 0.400
d 1	MH-SV-10 MH-SV-10	7/30/2014	26	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.040	< 0.400
and	MH-SV-10 MH-SV-10	7/30/2014	54	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.040	< 0.400
6, 6,	MH-SV-10 MH-SV-11	7/30/2014	25	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.040	< 0.400
,4,5	MH-SV-11	7/30/2014	6	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.040	< 0.400
1,3	MH-SV-11	7/30/2014	6	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.040	< 0.400
sm	MH-SV-11	7/30/2014	54	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.040	< 0.400
stems	MH-SV-12	7/29/2014	6	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.04	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.04	< 0.4
Sy	MH-SV-12	7/29/2014	22	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.04	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.04	< 0.4
eptic	MH-SV-12	7/29/2014	50	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.04	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.04	< 0.4
Sep	MH-SV-13	7/29/2014	5	< 0.008			< 0.04	< 0.008	< 0.04	< 0.008	< 0.04		< 0.008		< 0.008	< 0.008	< 0.008		< 0.04	< 0.4
2 -	MH-SV-13	7/29/2014	20	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.04	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.04	< 0.4
0-1	MH-SV-13	7/29/2014	40	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.04	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.04	< 0.4
AC	MH-SV-14	7/29/2014	5	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.04	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.04	< 0.4
	MH-SV-14	7/29/2014	20	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.04	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.04	< 0.4
	MH-SV-14	7/29/2014	40	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.04	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.04	< 0.4
	MH-SV-14	7/29/2014	40	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.04	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.04	< 0.4
	MH-SV-15	7/29/2014	5	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.04	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.04	< 0.4
	MH-SV-15	7/29/2014	20	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.04	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.04	< 0.4
	MH-SV-15	7/29/2014	40	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.04	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.04	< 0.4
	MH-SV-16	7/29/2014	5	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.04	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.04	< 0.4
	MH-SV-16	7/29/2014	20	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.04	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.04	< 0.4
	MH-SV-16	7/29/2014	30	< 0.008	< 0.008	< 0.008	< 0.04	< 0.008	< 0.04	< 0.008	< 0.04	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.04	< 0.4
	MH-SV-17	7/30/2014	5	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.040	< 0.400

											VC	OCs in µg	g/L							
Area of Interest (AOI)	Sample ID	Sample date	Depth (feet bgs)	Dibromochloromethane	Dibromomethane	Dichlorodifluoro- methane	Diisopropyl ether	Ethyl Benzene	Ethyl tert-butyl ether	Hexachlorobutadiene	Methyl tert-butyl ether	Methylene Chloride	Naphthalene	n-Butylbenzene	n-Propylbenzene	p-Cymene	sec-Butylbenzene	Styrene	t-Amyl methyl ether	tert Butyl alcohol
Residenti		ening Level for t	5 feet bgs or less ^b	0.09	4.2	100	730	1.1	NA	0.11	11	0.69	0.08	183	1,000	NA	183	939	NA	NA
7	MH-SV-17	7/30/2014	5	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.040	< 0.400
	MH-SV-17	7/30/2014	20	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.040	< 0.400
and	MH-SV-17	7/30/2014	40	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.040	< 0.400
Ű.	MH-SV-18	7/23/2014	6	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.040	< 0.400
4,5	MH-SV-18	7/23/2014	6	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.040	< 0.400
1,3,	MH-SV-18	7/23/2014	20	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	0.092	< 0.008	< 0.008	< 0.008	< 0.040	< 0.400
	MH-SV-18	7/23/2014	35	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	0.065	< 0.008	< 0.008	< 0.040	< 0.400
iystems	MH-SV-18	7/23/2014	20	< 0.008	< 0.008	< 0.008	< 0.040	0.024	< 0.040	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	0.244	< 0.008	< 0.008	< 0.008	< 0.040	< 0.400
Sys	MH-SV-18	7/23/2014	20	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	0.076	< 0.008	< 0.008	< 0.008	< 0.040	< 0.400
ic	MH-SV-19	7/23/2014	5	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.040	< 0.400
eptic	MH-SV-19	7/23/2014	20	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.040	< 0.400
S '	MH-SV-19	7/23/2014	35	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.040	< 0.400
-12	MH-SV-20	7/23/2014	7	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.040	< 0.400
AOL	MH-SV-20	7/23/2014	35	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.040	< 0.400
	MH-SV-20	7/23/2014	35	< 0.008	< 0.008	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.040	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.040	< 0.400

							V	OCs in µg	/L			
Area of Interest (AOI)	Sample ID	Sample date	Depth (feet bgs)	tert-Butylbenzene	Tetrachloroethene	Toluene	trans-1,2- Dichloroethene	trans-1,3- Dichloropropene	Trichloroethene	Trichlorofluoromethane	Vinyl Chloride	Xylenes (total)
Residenti			5 feet bgs or less ^b	183	0.41	313	7.3	0.15	0.48	730	0.03	100
	MH-SV-7	7/31/2014	10	< 0.008	< 0.008	0.933	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	0.359
	MH-SV-7	7/31/2014	15	< 0.008	< 0.008	0.302	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-7	7/31/2014	15	< 0.008	< 0.008	0.258	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-7	7/31/2014	25	< 0.008	< 0.008	0.445	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-8	7/29/2014	6	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-8	7/30/2014	24	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-8	7/30/2014	54	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-9	7/30/2014	5	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-9	7/30/2014	24	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
-	MH-SV-9	7/30/2014	56	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
and 11	MH-SV-10	7/30/2014	6	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
an	MH-SV-10 MH-SV-10	7/30/2014 7/30/2014	26 54	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
, 6,	MH-SV-11	7/30/2014	25	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
Septic Systems 1,3,4,5,	MH-SV-11	7/30/2014	6	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
1,3,	MH-SV-11	7/30/2014	6	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
su	MH-SV-11	7/30/2014	54	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
iter	MH-SV-12	7/29/2014	6	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
Sys	MH-SV-12 MH-SV-12	7/29/2014	22	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
tic	MH-SV-12 MH-SV-12	7/29/2014	50	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
ept	MH-SV-13	7/29/2014	5	< 0.008		< 0.008		< 0.008	< 0.008			< 0.008
1	MH-SV-13	7/29/2014	20	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
A01-12	MH-SV-13	7/29/2014	40	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
AOI	MH-SV-14	7/29/2014	5	< 0.008	< 0.008	0.249	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-14	7/29/2014	20	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-14	7/29/2014	40	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-14	7/29/2014	40	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-15	7/29/2014	5	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-15	7/29/2014	20	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-15	7/29/2014	40	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-16	7/29/2014	5	< 0.008	< 0.008	0.225	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-16	7/29/2014	20	< 0.008	< 0.008	0.262	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-16	7/29/2014	30	< 0.008	< 0.008	0.404	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-17	7/30/2014	5	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008

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							V	OCs in µg	J/L			
Area of Interest (AOI)	Sample ID	Sample date	Depth (feet bgs)	tert-Butylbenzene	Tetrachloroethene	Toluene	trans-1,2- Dichloroethene	trans-1,3- Dichloropropene	Trichloroethene	Trichlorofluoromethane	Vinyl Chloride	Xylenes (total)
Residenti			5 feet bgs or less ^b	183	0.41	313	7.3	0.15	0.48	730	0.03	100
7	MH-SV-17	7/30/2014	5	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
and 11	MH-SV-17	7/30/2014	20	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
, ar	MH-SV-17	7/30/2014	40	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
i, 6,	MH-SV-18	7/23/2014	6	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
4,5	MH-SV-18	7/23/2014	6	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
1,3,4,5,	MH-SV-18	7/23/2014	20	< 0.008	< 0.008	0.102	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
su	MH-SV-18	7/23/2014	35	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
ten	MH-SV-18	7/23/2014	20	< 0.008	< 0.008	0.177	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	0.074
Sys	MH-SV-18	7/23/2014	20	< 0.008	< 0.008	0.078	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
tic (MH-SV-19	7/23/2014	5	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
Septic Systems	MH-SV-19	7/23/2014	20	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
	MH-SV-19	7/23/2014	35	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
-12	MH-SV-20	7/23/2014	7	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
AOI-12	MH-SV-20	7/23/2014	35	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008
4	MH-SV-20	7/23/2014	35	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008	< 0.008

µg/kg - micrograms per kilogram

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screeing Level

bgs - below ground surface

Field duplicates are shown in italics

VOCs - Volatile Organic Compounds

VOCs by USEPA Method 8260B

^a As specified in the DTSC-approved PEA Work Plan, the reporting limit for 1,2,3-trichloropropane and 1,2-dibromo-3-chloropropane exceed the RSL. As all results are non-detect, values are not bolded. ^b Soil gas screening levels are calculated as the ratio of DTSC-Modified RSL (Cal/EPA 2014) or USEPA RSL (USEPA 2014) for residential air to a default attenuation factor of 0.001 for

future residential building, as recommended by CalEPA (2013).

Soil gas screening levels are applicable to soil gas data collected at 5 feet bgs or less.

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										М	etals in m	ig/L							
Area of Interest (AOI)	Sample ID	Sample Date		Arsenic	Barium	Beryllium	Cadmium	Chromium (total)		Copper	Lead	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Mercury
California and/o	or USEPA	MCLs	0.006	0.01	1	0.004	0.005	0.05	NA	1.3 ^a	0.015 ^ª	NA	0.1	0.05	NA	0.002	NA	NA	0.002
otic 1,5,6,	MW-5	8/1/2014	< 0.010 J	< 0.010	0.039	< 0.0020	< 0.0050	0.021	< 0.010	< 0.010	< 0.0050	0.062	0.048	< 0.010	< 0.010	< 0.010	0.013	< 0.020	< 0.00020
- Sep 1,3,4, 11	MW-7	8/1/2014	< 0.010 J	< 0.010	0.046	< 0.0020	< 0.0050	0.010	< 0.010	< 0.010	< 0.0050	0.050	0.043	< 0.010	< 0.010	< 0.010	0.036	< 0.020	< 0.00020
OI-12 tems ano	MW-10	7/31/2014	< 0.010	< 0.010	0.037	< 0.0020	< 0.0050	< 0.0050	< 0.010	< 0.010	< 0.0050	0.094	0.086	< 0.010	< 0.010	< 0.010	0.062	< 0.020	< 0.00020
A(Sys	MW-11	7/31/2014	< 0.010	< 0.010	0.11	< 0.0020	< 0.0050	< 0.0050	< 0.010	< 0.010	< 0.0050	0.096	0.069	< 0.010	< 0.010	< 0.010	0.11	< 0.020	< 0.00020

mg/L - milligrams per liter

USEPA - United States Environmental Protection Agency

MCLs - Maximum Contaminant Levels

J - Results and/or reporting limits are estimated

Metals by USEPA Method 6010/7470

^a - Values referred to as MCLs for lead and copper are not actually MCLs; instead they are called "Action Levels"

^b - As specified in the DTSC-approved PEA Work Plan, the reporting limit for antimony and thallium exceeds the RSL. As all results are non-detect, values are not bolded.

NA - Not available

Table 14f. AOI-12 TPH in Groundwater

Malibu High School 30215 Morning View Drive Malibu, California

Area of Interest	Sample	Sample		TPH in mg/L	
(AOI)	ID	Date	GRO C04 - C12	DRO C13 - C22	ORO C23 - C40
itic ,5,6,	MW-5	8/1/2014	< 0.05	< 0.48	< 0.48
- Septic 1,3,4,5,6	MW-7	8/1/2014	< 0.05	< 0.48	< 0.48
AOI-12 - Systems	MW-10	7/31/2014	< 0.05	< 0.48	< 0.48
AC Sysi	MW-11	7/31/2014	< 0.05	< 0.48	< 0.48

Notes:

mg/L - milligrams per liter

USEPA - United States Environmental Protection Agency

MCLs - Maximum Contaminant Levels

TPH by USEPA Method 8015M

GRO - Gasoline range organics

DRO - Diesel range organics

ORO - Oil Range Organics



Table 14g. AOI-12 VOCs in GroundwaterMalibu High School30215 Morning View DriveMalibu, California

														VOCs	in µg/L	-								
Area of Interest (AOI)	Sample ID	Sample Date	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3- chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	1, 3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane	2-Butanone
Califor	nia and/or USEPA	MCL	NA	200	1	5	5	6	NA	NA	NA	5	NA	NA	NA	600	1	5	NA	NA	NA	5	NA	NA
tic ,5,6,	MW-5	8/1/2014	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 5.0
- Septic 1,3,4,5,6,	MW-7	8/1/2014	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 5.0
01-12 - tems and	MW-10	7/31/2014	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 5.0
AC Syst	MW-11	7/31/2014	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 5.0

Notes:

µg/L - micrograms per liter

USEPA - United States Environmental Protection Agency

MCLs - Maximum Contaminant Levels

VOCs - Volatile Organic Compounds

VOCs by USEPA Method 8260B

NA - Not available

													VC	OCs in	µg/L										
Area of Interest (AOI)	Sample ID	Sample Date	2-Chlorotoluene	4-Chlorotoluene	Benzene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Cumene	Dibromochloromethane	Dibromomethane	Dichlorodifluoromethane	Ethyl Benzene	Hexachlorobutadiene	m,p-xylene	Methyl tert-butyl ether
Califor	nia and/or USEPA	MCL	NA	NA	1	NA	NA	NA	NA	NA	1	NA	NA	NA	NA	6	NA	NA	NA	NA	NA	300	NA	1,750	13
,5,6,	MW-5	8/1/2014	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 2.0 J	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0 J	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 0.50
- Septic 1,3,4,5,6,	MW-7	8/1/2014	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 2.0 J	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0 J	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 0.50
01-12 - tems 1 and	MW-10	7/31/2014	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 2.0 J	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 0.50
AO	MW-11	7/31/2014	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 2.0 J	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 0.50

µg/L - micrograms per liter

USEPA - United States Environmental Protection Agency

MCLs - Maximum Contaminant Levels

VOCs - Volatile Organic Compounds

VOCs by USEPA Method 8260B

NA - Not available

										VOC	s in µg	J/L						
Area of Interest (AOI)	Sample ID	Sample Date	Methylene Chloride	Naphthalene	n-Butylbenzene	n-Propylbenzene	ortho-xylene	p-Cymene	sec-Butylbenzene	Styrene	tert-Butylbenzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	Trichloroethene	Trichlorofluoromethane	Vinyl Chloride
Califor	rnia and/or USEPA	MCL	5	NA	NA	NA	NA	NA	260	100	NA	5	150	10	NA	5	150	1
,5,6,	MW-5	8/1/2014	< 5.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0	< 0.5
- Septic 1,3,4,5,6,	MW-7	8/1/2014	< 5.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0	< 0.5
AOI-12 - Systems	MW-10	7/31/2014	< 5.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0	< 0.5
AC Syst	MW-11	7/31/2014	< 5.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0	< 0.5

µg/L - micrograms per liter

USEPA - United States Environmental Protection Agency

MCLs - Maximum Contaminant Levels

VOCs - Volatile Organic Compounds

VOCs by USEPA Method 8260B

NA - Not available

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Table 14h. AOI-12 SVOCs in GroundwaterMalibu High School30215 Morning View DriveMalibu, California

													S١	/OCs i	in µg/L											
Area of Interest (AOI)	Sample	Sample Date	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,2-Diphenylhydrazine	1,3-Dichlorobenzene	1,4-Dichlorobenzene	2,2'-oxybis(1-Chloropropane)	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene	2-Chlorophenol	2-Methylnaphthalene	2-Methylphenol	2-Nitroaniline	2-Nitrophenol	3&4-Methylphenol	3,3'-Dichlorobenzidine	3-Nitroaniline	4,6-Dinitro-2-methylphenol	4-Bromophenyl-phenyl ether
stems 11	MW-5	8/1/2014	< 0.95	< 0.48	< 0.95	< 0.48	< 0.48	< 0.48	< 1.9	< 0.95	< 1.9	< 1.9	< 4.8	< 4.8	< 4.8	< 0.48	< 0.95	< 0.95	< 1.9	< 4.8	< 1.9	< 4.8	< 4.8	< 4.8	< 4.8	< 0.95
- Septic Systems 4, 5, 6, and 11	MW-7	8/1/2014	< 0.95	< 0.48	< 0.95	< 0.48	< 0.48	< 0.48	< 1.9	< 0.95	< 1.9	< 1.9	< 4.8	< 4.8	< 4.8	< 0.48	< 0.95	< 0.95	< 1.9	< 4.8	< 1.9	< 4.8	< 4.8	< 4.8	< 4.8	< 0.95
2 - Sep , 4, 5, .	MW-10	7/31/2014	< 0.95	< 0.48	< 0.95	< 0.48	< 0.48	< 0.48	< 1.9	< 0.95	< 1.9	< 1.9	< 4.8	< 4.8	< 4.8	< 0.48	< 0.95	< 0.95	< 1.9	< 4.8	< 1.9	< 4.8	< 4.8	< 4.8	< 4.8	< 0.95
AOI-12 1, 3,	MW-11	7/31/2014	< 0.95	< 0.47	< 0.95	< 0.47	< 0.47	< 0.47	< 1.9	< 0.95	< 1.9	< 1.9	< 4.7	< 4.7	< 4.7	< 0.47	< 0.95	< 0.95	< 1.9	< 4.7	< 1.9	< 4.7	< 4.7	< 4.7	< 4.7	< 0.95

Notes:

μg/L - micrograms per liter SVOCs - Semi-Volatile Organic Compounds SVOCs by USEPA Method 8270

Table 14h. AOI-12 SVOCs in GroundwaterMalibu High School30215 Morning View DriveMalibu, California

													ļ	SVOC	s in µg	/L										
Area of Interest (AOI)	Sample ID	Sample Date	4-Chloro-3-methylphenol	4-Chloroaniline	4-Chlorophenyl-phenyl ether	4-Nitroaniline	4-Nitrophenol	Acenaphthene	Acenaphthylene	Aniline	Anthracene	Benzidine	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic Acid	Benzyl Alcohol	bis(2-Chloroethoxy)methane	bis(2-Chloroethyl) ether	bis(2-Ethylhexyl)phthalate	Butylbenzylphthalate	Chrysene	Dibenz(a,h)anthracene	Dibenzofuran
stems 11	MW-5	8/1/2014	< 1.9	< 1.9	< 0.48	< 4.8	< 4.8	< 0.48	< 0.48	< 9.5	< 0.48	< 9.5 J	< 4.8	< 1.9	< 1.9	< 4.8	< 0.48	< 4.8	< 4.8	< 0.48	< 0.48	< 4.8	< 4.8	< 0.48	< 0.48	< 0.48
- Septic Systems 4, 5, 6, and 11	MW-7	8/1/2014	< 1.9	< 1.9	< 0.48	< 4.8	< 4.8	< 0.48	< 0.48	< 9.5	< 0.48	< 9.5 J	< 4.8	< 1.9	< 1.9	< 4.8	< 0.48	< 4.8	< 4.8	< 0.48	< 0.48	< 4.8	< 4.8	< 0.48	< 0.48	< 0.48
2 - Sep , 4, 5, (MW-10	7/31/2014	< 1.9	< 1.9	< 0.48	< 4.8	< 4.8	< 0.48	< 0.48	< 9.5	< 0.48	< 9.5 J	< 4.8	< 1.9	< 1.9	< 4.8	< 0.48	< 4.8	< 4.8	< 0.48	< 0.48	< 4.8	< 4.8	< 0.48	< 0.48	< 0.48
AOI-12 1, 3,	MW-11	7/31/2014	< 1.9	< 1.9	< 0.47	< 4.7	< 4.7	< 0.47	< 0.47	< 9.5	< 0.47	< 9.5 J	< 4.7	< 1.9	< 1.9	< 4.7	< 0.47	< 4.7	< 4.7	< 0.47	< 0.47	< 4.7	< 4.7	< 0.47	< 0.47	< 0.47

Notes:

μg/L - micrograms per liter SVOCs - Semi-Volatile Organic Compounds SVOCs by USEPA Method 8270

Table 14h. AOI-12 SVOCs in GroundwaterMalibu High School30215 Morning View DriveMalibu, California

								_	-	_		svoc	s in µg	J/L		_	-	-				
Area of Interest (AOI)	Sample ID	Sample Date	Diethylphthalate	Dimethylphthalate	Di-n-butylphthalate	Di-n-octylphthalate	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-cd)pyrene	lsophorone	Naphthalene	Nitrobenzene	N-Nitroso-di-n-propylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene
stems 11	MW-5	8/1/2014	< 0.95	< 0.48	< 1.9	< 4.8	< 0.48	< 0.48	< 0.95	< 1.9	< 4.8	< 2.9	< 1.9	< 0.95	< 0.95	< 0.95	< 1.9	< 0.95	< 1.9	< 0.48	< 0.95	< 0.48
eptic Sys 5, 6, and	MW-7	8/1/2014	< 0.95	< 0.48	< 1.9	< 4.8	< 0.48	< 0.48	< 0.95	< 1.9	< 4.8	< 2.9	< 1.9	< 0.95	< 0.95	< 0.95	< 1.9	< 0.95	< 1.9	< 0.48	< 0.95	< 0.48
, 4 , 0	MW-10	7/31/2014	< 0.95	< 0.48	< 1.9	< 4.8	< 0.48	< 0.48	< 0.95	< 1.9	< 4.8	< 2.9	< 1.9	< 0.95	< 0.95	< 0.95	< 1.9	< 0.95	< 1.9	< 0.48	0.95	< 0.48
AOI-12 1, 3	MW-11	7/31/2014	< 0.95	< 0.47	< 1.9	< 4.7	< 0.47	< 0.47	< 0.95	< 1.9	< 4.7	< 2.8	< 1.9	< 0.95	< 0.95	< 0.95	< 1.9	< 0.95	< 1.9	< 0.47	< 0.95	< 0.47

Notes:

μg/L - micrograms per liter SVOCs - Semi-Volatile Organic Compounds SVOCs by USEPA Method 8270



												SVOC	Cs in µg/kg								
Area of Interest (AOI)	Sample	Sample Date	Depth (feet bgs)	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,2-Diphenylhydrazine	1, 3-Dichlorobenzene	1,4-Dichlorobenzene	2,2'-oxybis(1-Chloropropane)	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene	2-Chlorophenol	2-Methylnaphthalene	2-Methylphenol	2-Nitroaniline
Residential DTS	SC-Modified	RSL or US	SEPA RSL	24,000	1,800,000	670	530,000	2,600	4,900	6,200,000	6,900	180,000	1,200,000	120,000	1,700	360	6,300,000	63,000	230,000	3,100,000	610,000
AOI-13 - Retention Basin	MH-SB-7	7/10/2014	0	< 6500	< 6500	< 6500	< 6500	< 6500	< 6500	< 6500	< 6500	< 6500	< 6500	< 13000	< 6500	< 6500	< 6500	< 6500	< 6500	< 6500	< 6500

Notes:

μg/kg - micrograms per kilogram DTSC - Department of Toxic Substances Control USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Levels bgs - below ground surface

NA - not available

SVOCs - Semi-Volatile Organic Compounds SVOCs by USEPA Method 8270

													SVOCs ir	n μg/kg								
Area of Interest (AOI)	Sample	Sample Date	Depth (feet bgs)	2-Nitrophenol	3&4-Methylphenol	3,3'-Dichlorobenzidine	3-Nitroaniline	4,6-Dinitro-2-methylphenol	4-Bromophenyl-phenyl ether	4-Chloro-3-methylphenol	4-Chloroaniline	4-Chlorophenyl-phenyl ether	4-Nitroaniline	4-Nitrophenol	Acenaphthene	Acenaphthylene	Aniline	Anthracene	Benzidine	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene
Residential DT	SC-Modified	RSL or US	SEPA RSL	NA	NA	1,200	18,000	4,900	NA	6,200,000	2,700	NA	27,000	NA	3,500,000	NA	93,000	17,000,000	1	150	15	150
AOI-13 - Retention Basin	MH-SB-7	7/10/2014	0	< 6500	< 6500	< 16000	< 6500	< 8300	< 6500	< 6500	< 6500	< 6500	< 16000	< 16000	< 6500	< 6500	< 8300	< 6500	< 27000 J	< 6500	< 6500	< 6500

Notes:

μg/kg - micrograms per kilogram DTSC - Department of Toxic Substances Control USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Levels bgs - below ground surface

NA - not available

SVOCs - Semi-Volatile Organic Compounds SVOCs by USEPA Method 8270

											SVC	DCs in μ	g/kg				-			
Area of Interest (AOI)	Sample	Sample Date	Depth (feet bgs)	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	3enzoic Acid	3enzyl Alcohol	ois(2-Chloroethoxy)methane	ois(2-Chloroethyl) ether	ois(2-Ethylhexyl)phthalate	3utylbenzylphthalate	Chrysene	Dibenz(a,h)anthracene	Dibenzofuran	Diethylphthalate	Dimethylphthalate	Di-n-butyIphthalate	Di-n-octylphthalate	-Iuoranthene	-luorene
Residential DTS	SC-Modified	d RSL or US		NA	380	250,000,000	6,200,000	180,000	230	38,000	280,000	3,800	15	72,000	49,000,000	610,000,000	6,200,000	2,400,000	2,300,000	2,300,000
AOI-13 - Retention Basin	MH-SB-7	7/10/2014	0	< 6500	< 6500	< 16000	< 6500	< 6500	< 6500	< 6500	< 6500	< 6500	< 8300	< 6500	< 6500	< 6500	< 6500	< 6500	< 6500	< 6500

Notes:

μg/kg - micrograms per kilogram DTSC - Department of Toxic Substances Control USEPA - United States Environmental Protection Agency RSLs - Regional Screening Levels bgs - below ground surface

NA - not available

SVOCs - Semi-Volatile Organic Compounds SVOCs by USEPA Method 8270

					-				S	VOCs in	µg/kg					
Area of Interest (AOI)	Sample	Sample Date	Depth (feet bgs)	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-cd)pyrene	lsophorone	Naphthalene	Nitrobenzene	N-Nitroso-di-n-propylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol
Residential DTS	SC-Modified	d RSL or US	SEPA RSL	330	6,800	370,000	13,000	150	560,000	3,800	5,100	76	110,000	990	NA	18,000,000
AOI-13 - Retention Basin	MH-SB-7	7/10/2014	0	< 6500	< 6500	< 16000	< 6500	< 6500	< 6500	< 6500	< 6500	< 5000	< 6500	< 16000	< 6500	< 6500

Notes:

μg/kg - micrograms per kilogram DTSC - Department of Toxic Substances Control USEPA - United States Environmental Protection Agency RSLs - Regional Screening Levels bgs - below ground surface

NA - not available

SVOCs - Semi-Volatile Organic Compounds SVOCs by USEPA Method 8270

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							Gasoline Range	Organics in mg/k	g	
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Petroleum Hydrocarbons (C04-C06)	Petroleum Hydrocarbons (C06-C07)	Petroleum Hydrocarbons (C07-C08)	Petroleum Hydrocarbons (C08-C09)	Petroleum Hydrocarbons (C09-C10)	Petroleum Hydrocarbons (C10-C11)	Petroleum Hydrocarbons (C11-C12)
AOI-13 - Retention Basin	MH-SB-7	7/10/2014	0	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39

Notes:

mg/kg - milligrams per kilogram

TPH by USEPA Method 8015M

USEPA - United States Environmental Protection Agency

DTSC - Department of Toxic Substances Control

RSLs - Regional Screening Levels

bgs - below ground surface

EFH - Extractable Fuel Hydrocarbon

J - Results and/or reporting limits are estimated

USEPA RSLs for Petroleum Hydrocarbons (results are compared to the most conservative value for the specified range) (USEPA 2015)

Aliphatic Low, C5 - C8520 mg/kgAromatic Low, C6 - C882 mg/kgAliphatic Medium, C9 - C1896 mg/kgAromatic Medium, C9 - C16110 mg/kgAliphatic High, C19 - C32230,000 mg/kgAromatic High, C17 - C322,500 mg/kg

Petroleum Hydrocarbons (C12-C13)	
< 0.39	



										Diese	el Range Or	ganics in n	n g/kg						
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	EFH (C12-C13)	EFH (C13-C14)	EFH (C15-C16)	EFH (C17-C18)	EFH (C19-C20)	EFH (C21-C22)	EFH (C23-C24)	EFH (C25-C26)	EFH (C27-C28)	EFH (C29-C30)	EFH (C31-C32)	EFH (C33-C34)	EFH (C35-C36)	EFH (C37-C38)	EFH (C39-C40)	EFH (C13-C40)
AOI-13 - Retention Basin	MH-SB-7	7/10/2014	0	< 390	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 390

mg/kg - milligrams per kilogram

TPH by USEPA Method 8015M

USEPA - United States Environmental Protection Agency

DTSC - Department of Toxic Substances Control

RSLs - Regional Screening Levels

bgs - below ground surface

EFH - Extractable Fuel Hydrocarbon

J - Results and/or reporting limits are estimated

USEPA RSLs for Petroleum Hydrocarbons (results are compared to the most conservative value for the specified range) (USEPA 2015)

Aliphatic Low, C5 - C8	520 mg/kg
Aromatic Low, C6 - C8	82 mg/kg
Aliphatic Medium, C9 - C18	96 mg/kg
Aromatic Medium, C9 - C16	110 mg/kg
Aliphatic High, C19 - C32	230,000 mg/kg
Aromatic High, C17 - C32	2,500 mg/kg



Area of											Met	als in m	g/kg							
Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium (total)		Copper	Lead	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Mercury
	al DTSC-Modifi			31	12 ^a	15,000	16	5	120,000	23	3,100	80	390	1,500	390	390	0.78 ^b	390	23,000	23
AOI-13 - Retention Basin	MH-SB-7	7/10/2014	0	< 9.9 J	3.4	60	< 0.50	0.66	16	4.8	16	7.4	< 2.0	21	< 3.0	< 1.5	< 9.9	35	110	0.032

Notes:

mg/kg - milligrams per kilogram

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Levels

bgs - below ground surface

J - Results and/or reporting limits are estimated

Metals by USEPA Method 6010/7471

a - Arsenic occurs naturally in soil. An evaluation of arsenic soil data from school sites in Southern California found arsenic concentrations ranging from 0.15 mg/kg to 20 mg/kg, with an upper-bound background arsenic concentration of 12 mg/kg (Chernoff G, Bosan W, Oudiz D. 2008. Determination of a Southern California Regional Background Arsenic Concentration in Soil). Arsenic concentrations in soil samples collected at the site were conservatively screened against 12 mg/kg. Arsenic concentrations greater than 12 mg/kg were further evaluated in Section 9 of the PEA Report.

^b - As specified in the DTSC-approved PEA Work Plan, the reporting limit for thallium exceeds the RSL. As all results are non-detect, values are not bolded.



Table 16a. AOI-14 Organochlorine Pesticides in SoilMalibu High School30215 Morning View DriveMalibu, California

Area of									Pesticides	s (Organochlo	orine) in µg/k	g			
Interest		Sample	Depth							Chlordane					Endosulfan
(AOI)	Sample ID	Date	(feet bgs)	4,4'-DDD	4,4'-DDE	4,4'-DDT	Aldrin	alpha-BHC	beta-BHC	(total)	delta-BHC	Dieldrin	Endosulfan I	Endosulfan II	sulfate
Re	sidential DTSC-Modified I	RSL or USEPA	RSL	2,200	1,600	1,900	31	85	300	1,800	NA	33	370,000	370,000	370,000
	MH-IS-BASEBALL-A	7/14/2014	0	< 1.6	< 1.6	< 16	< 1.6	< 1.6	< 1.6	< 24	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6
ield	MH-IS-BASEBALL-B	7/14/2014	0	< 1.7	< 1.7	< 17	< 1.7	< 1.7	< 1.7	< 24	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7
Ш О	MH-IS-BASEBALL-C	7/14/2014	0	< 1.7	< 1.7	< 17	< 1.7	< 1.7	< 1.7	< 25	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7
leti	MH-IS-FOOTBALL-A	7/11/2014	0	< 1.7	6.0	< 17	< 1.7	< 1.7	< 1.7	< 24	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7
Ath	MH-IS-FOOTBALL-B	7/11/2014	0	< 1.6	5.3	< 16	< 1.6	< 1.6	< 1.6	< 24	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6
-	MH-IS-FOOTBALL-C	7/15/2014	0	< 1.6	8.5 J	< 16	< 1.6	< 1.6	< 1.6	< 24	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6
-14	MH-IS-SOFTBALL-A	7/15/2014	0	< 1.7	< 1.7	< 17	< 1.7	< 1.7	< 1.7	< 25	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7
AO	MH-IS-SOFTBALL-B	7/15/2014	0	< 1.7	< 1.7	< 17	< 1.7	< 1.7	< 1.7	< 24	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7
_	MH-IS-SOFTBALL-C	7/15/2014	0	< 1.6	< 1.6	< 16	< 1.6	< 1.6	< 1.6	< 24	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6

Notes:

µg/kg - micrograms per kilogram

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Levels

bgs - below ground surface

Field duplicates are shown in italics

NA - not available

Pesticides by USEPA Method 8081A

J - Results and/or reporting limits are estimated

Table 16a. AOI-14 Organochlorine Pesticides in SoilMalibu High School30215 Morning View DriveMalibu, California

Area of							Pesticides (Org	janochlorine)) in µg/kg		
Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Endrin	Endrin aldehyde	Endrin ketone	gamma-BHC	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene
Re	sidential DTSC-Modified	RSL or USEPA	RSL	18,000	18,000	18,000	560	120	59	310,000	480
	MH-IS-BASEBALL-A	7/14/2014	0	< 1.6	< 1.6	< 16	< 1.6	< 16	< 1.6	< 31	< 630
ield	MH-IS-BASEBALL-B	7/14/2014	0	< 1.7	< 17	< 17	< 1.7	< 17	< 1.7	< 32	< 660
Ш С	MH-IS-BASEBALL-C	7/14/2014	0	< 1.7	< 1.7	< 17	< 1.7	< 17	< 1.7	< 32	< 660
letio	MH-IS-FOOTBALL-A	7/11/2014	0	< 1.7	< 1.7	< 17	< 1.7	< 17	< 1.7	< 32	< 650
Athl	MH-IS-FOOTBALL-B	7/11/2014	0	< 1.6	< 1.6	< 16	< 1.6	< 16	< 1.6	< 32	< 640
-	MH-IS-FOOTBALL-C	7/15/2014	0	< 1.6	< 1.6	< 16	< 1.6	< 16	< 1.6	< 32	< 650
-14	MH-IS-SOFTBALL-A	7/15/2014	0	< 1.7	< 1.7	< 17	< 1.7	< 17	< 1.7	< 33	< 670
AO	MH-IS-SOFTBALL-B	7/15/2014	0	< 1.7	< 1.7	< 17	< 1.7	< 17	< 1.7	< 32	< 650
	MH-IS-SOFTBALL-C	7/15/2014	0	< 1.6	< 1.6	< 16	< 1.6	< 16	< 1.6	< 32	< 650

Notes:

µg/kg - micrograms per kilogram

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bgs - below ground surface

Field duplicates are shown in italics

NA - not available

Pesticides by USEPA Method 8081A

J - Results and/or reporting limits are estimated

								Pesti	cides (Orga	nophosphates	s) in µg/kg				
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	2-Butenoic acid, 3-[(dimethoxy- phosphinyl)oxy]-, m	Chlorpyrifos	Co-Ral	Dasanit	Demeton (Demeton O + Demeton S)	Diazinon	Dichlorovos	Dimethoate	Disulfoton	Ethoprop	Ethyl P-Nitorphenyl Benzenethiophosphate	Famphur
Resi	idential DTSC-Modified R	SL or USEP	A RSL	NA	62,000	NA	NA	2,500	43,000	1,800	12,000	2,500	NA	620	NA
_	MH-IS-BASEBALL-A	7/14/2014	0	< 15	< 19	< 13	< 24	< 38	< 21	< 22	< 21	< 47	< 15	< 13	< 13
ield	MH-IS-BASEBALL-B	7/14/2014	0	< 14	< 19	< 13	< 24	< 38	< 21	< 22	< 21	< 46	< 14	< 13	< 13
Ш С	MH-IS-BASEBALL-C	7/14/2014	0	< 15	< 20	< 13	< 24	< 38	< 22	< 23	< 22	< 47	< 15	< 13	< 13
leti	MH-IS-FOOTBALL-A	7/11/2014	0	< 14	< 19	< 12	< 24	< 37	< 21	< 22	< 21	< 46	< 14	< 12	< 12
Ath	MH-IS-FOOTBALL-B	7/11/2014	0	< 15	< 20	< 13	< 25	< 39	< 22	< 23	< 22	< 48	< 15	< 13	< 13
/ - 1	MH-IS-FOOTBALL-C	7/15/2014	0	< 14	< 19	< 12	< 24	< 37	< 21	< 22	< 21	< 46	< 14	< 12	< 12
I-17	MH-IS-SOFTBALL-A	7/15/2014	0	< 15	< 20	< 13	< 25	< 39	< 22	< 23	< 22	< 47	< 15	< 13	< 13
AO	MH-IS-SOFTBALL-B	7/15/2014	0	< 15	< 20	< 13	< 25	< 39	< 22	< 23	< 22	< 48	< 15	< 13	< 13
	MH-IS-SOFTBALL-C	7/15/2014	0	< 15	< 20	< 13	< 25	< 39	< 22	< 23	< 22	< 48	< 15	< 13	< 13

µg/kg - micrograms per kilogram

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USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Level

bgs - below ground surface

Field duplicates are shown in italics

NA - not available

Pesticides by USEPA Method 8141A

									Pesticides (Orgar	nophosphate	es) in µg/k	g					
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Fenthion	Guthion	Malathion	Methyl parathion	O,O,O-Triethyl phosphorothioate	O-Ethyl O-2,4,5- trichlorophenyl ethyl- phosphonothioate	Parathion	Phorate	Prothiophos	Ronnel	Stirophos	Sulfotepp	Sulprofos	Thionazin
Res	idential DTSC-Modified R	SL or USEP	A RSL	NA	NA	1,200,000	15,000	NA	NA	370,000	12,000	NA	3,100,000	22,000	31,000	NA	NA
_	MH-IS-BASEBALL-A	7/14/2014	0	< 32	< 13	< 15	< 19	< 38	< 19	< 17	< 19	< 19	< 45	< 19	< 13	< 15	< 17
ield	MH-IS-BASEBALL-B	7/14/2014	0	< 32	< 13	< 14	< 19	< 38	< 19	< 17	< 19	< 19	< 44	< 19	< 13	< 14	< 17
Е O	MH-IS-BASEBALL-C	7/14/2014	0	< 32	< 13	< 15	< 20	< 38	< 20	< 18	< 20	< 20	< 45	< 20	< 13	< 15	< 18
leti	MH-IS-FOOTBALL-A	7/11/2014	0	< 32	< 12	< 14	< 19	< 37	< 19	< 17	< 19	< 19	< 44	< 19	< 12	< 14	< 17
Ath	MH-IS-FOOTBALL-B	7/11/2014	0	< 33	< 13	< 15	< 20	< 39	< 20	< 18	< 20	< 20	< 46	< 20	< 13	< 15	< 18
	MH-IS-FOOTBALL-C	7/15/2014	0	< 31	< 12	< 14	< 19	< 37	< 19	< 17	< 19	< 19	< 44	< 19	< 12	< 14	< 17
-14	MH-IS-SOFTBALL-A	7/15/2014	0	< 33	< 13	< 15	< 20	< 39	< 20	< 18	< 20	< 20	< 45	< 20	< 13	< 15	< 18
AO	MH-IS-SOFTBALL-B	7/15/2014	0	< 33	< 13	< 15	< 20	< 39	< 20	< 18	< 20	< 20	< 46	< 20	< 13	< 15	< 18
	MH-IS-SOFTBALL-C	7/15/2014	0	< 33	< 13	< 15	< 20	< 39	< 20	< 18	< 20	< 20	< 46	< 20	< 13	< 15	< 18

µg/kg - micrograms per kilogram

DTSC - Department of Toxic Substances Control

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RSLs - Regional Screening Level

bgs - below ground surface

Field duplicates are shown in italics

NA - not available

Pesticides by USEPA Method 8141A

Table 16c. AOI-14 Herbicides in SoilMalibu High School

30215 Morning View Drive Malibu, California

Area of				Herl	picides in µ	g/kg
Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	2,4,5-T	2,4,5-TP	2,4-D
Res	idential DTSC-Modified R	RSL or USEPA R	SL	620,000	490,000	690,000
	MH-IS-BASEBALL-A	7/14/2014	0	< 19	< 19	< 77
Field	MH-IS-BASEBALL-B	7/14/2014	0	< 19	< 19	< 78
	MH-IS-BASEBALL-C	7/14/2014	0	< 77	< 77	< 310
leti	MH-IS-FOOTBALL-A	7/11/2014	0	< 19	< 19	< 78
Athletic	MH-IS-FOOTBALL-B	7/11/2014	0	< 20	< 20	< 80
	MH-IS-FOOTBALL-C	7/15/2014	0	< 19	< 19	< 77
AOI-14	MH-IS-SOFTBALL-A	7/15/2014	0	< 20	< 20	< 79
AO	MH-IS-SOFTBALL-B	7/15/2014	0	< 19	< 19	< 77
	MH-IS-SOFTBALL-C	7/15/2014	0	< 20	< 20	< 79

Notes:

µg/kg - micrograms per kilogram

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Levels

bgs - below ground surface

Field duplicates are shown in italics

Herbicides by USEPA Method 8151A

Area of											Metals	s in mg/	/kg							
Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium (total)	Cobalt	Copper	Lead	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Mercury
Re	sidential DTSC-Modifie	d RSL or USEPA	RSL	31	12 ^a	15,000	16	4.6	120,000	23	3,100	80	390	1,500	390	390	0.78 ^b	390	23,000	23
	MH-IS-BASEBALL-A	7/14/2014	0	< 1.5	4.8	110	< 0.50	0.91	49	11	21	5.6	< 2.0	42	< 1.3	< 0.99	< 1.2	49	56	0.035
eld	MH-IS-BASEBALL-B	7/14/2014	0	< 1.4	4.6 J	96 J	< 0.48	0.88	47	11 J	21	5.4	< 1.9	39	< 1.2	< 0.95	< 1.1	48	62 J	0.038
і Ц	MH-IS-BASEBALL-C	7/14/2014	0	< 1.4	4.2 J	110 J	< 0.47	0.87	48	11 J	20	5.1	< 1.9	40 J	< 1.2	< 0.94	< 1.1	50	54 J	0.032
letio	MH-IS-FOOTBALL-A	7/11/2014	0	< 1.4	3.3 J	66 J	< 0.48	0.64	29	7.7 J	19	5.4	< 1.9	38 J	< 1.2	< 0.95	< 1.1	33	44 J	0.035
Athl	MH-IS-FOOTBALL-B	7/11/2014	0	< 1.5	3.6 J	73 J	< 0.50	0.71	25	5.8 J	14	5.3	< 2.0	21 J	< 1.3	< 0.99	< 1.2	34	43 J	0.038
1-1	MH-IS-FOOTBALL-C	7/15/2014	0	< 1.5	3.7 J	71 J	< 0.49	0.63	31	6.3 J	15	6.0	< 2.0	25 J	< 1.3	< 0.98	< 1.2	31	59 J	0.039
I-14	MH-IS-SOFTBALL-A	7/15/2014	0	< 1.5	4.4 J	77 J	< 0.49	1.3	65	14 J	25	4.6	2.3	56 J	< 1.3	< 0.97	< 1.2	62	57 J	0.039
AO	MH-IS-SOFTBALL-B	7/15/2014	0	< 1.4	3.9 J	68 J	< 0.48	1.1	55	12 J	22	4.3	< 1.9	50 J	< 1.2	< 0.96	< 1.1	51	47 J	0.039
•	MH-IS-SOFTBALL-C	7/15/2014	0	< 1.5	4.2 J	70 J	< 0.50	1.3	63	13 J	24	4.2	2.2	56 J	< 1.3	< 0.99	< 1.2	55	52 J	0.046

Notes:

mg/kg - milligrams per kilogram

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USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Levels

bgs - below ground surface

Field duplicates are shown in italics

Metals by USEPA Method 6010/7471

^a - Arsenic occurs naturally in soil. An evaluation of arsenic soil data from school sites in Southern California found arsenic concentrations ranging from 0.15 mg/kg to 20 mg/kg, with an upper-bound background arsenic concentration of 12 mg/kg (Chernoff G, Bosan W, Oudiz D. 2008. Determination of a Southern California Regional Background Arsenic Concentration in Soil). Arsenic concentrations in soil samples collected at the site were conservatively screened against 12 mg/kg. Arsenic concentrations greater than 12 mg/kg were further evaluated in Section 9 of the PEA Report.

^b - As specified in the DTSC-approved PEA Work Plan, the reporting limit for thallium exceeds the RSL. As all results are non-detect, values are not bolded.

J - Results and/or reporting limits are estimated



Table 17a. AOI-15 Organochlorine Pesticides in SoilMalibu High School30215 Morning View DriveMalibu, California

Area of										Pestic	ides (Organo	ochlorine)	in µg/kg				
Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	4,4'-DDD	4,4'-DDE	4,4'-DDT	Aldrin	alpha-BHC	beta-BHC	Chlordane (total)	delta-BHC	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulfate	Endrin	Endrin aldehyde
Reside	ential DTSC-Mo	odified RSL or US	SEPA RSL	2,200	1,600	1,900	31	85	300	1,800	NA	33	370,000	370,000	370,000	18,000	18,000
	MH-SB-1	7/9/2014	0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 10	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0
Dia	MH-SB-1	7/9/2014	1.5	< 5.0	49	8.5	< 5.0	< 5.0	< 5.0	< 50	< 10	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0
los	MH-SB-2	7/10/2014	0	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 50 J	< 9.9 J	< 5.0 J	< 5.0 J	< 5.0 J	< 9.9 J	< 5.0 J	< 5.0 J
n	MH-SB-2	7/10/2014	1.5	< 5.0	5.1	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0	< 5.0
S	MH-SB-3	7/10/2014	0	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 50 J	< 9.9 J	< 5.0 J	< 5.0 J	< 5.0 J	< 9.9 J	< 5.0 J	< 5.0 J
- 22	MH-SB-3	7/10/2014	1.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9	< 9.9	< 4.9	< 4.9
	MH-SB-4	7/10/2014	0	< 4.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 49 J	< 9.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 9.9 J	< 4.9 J	< 4.9 J
AC	MH-SB-4	7/10/2014	0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0	< 5.0
	MH-SB-4	7/10/2014	1.5	< 5.0 J	< 5.0	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0	< 50	< 9.9	< 5.0 J	< 5.0 J	< 5.0 J	< 9.9 J	< 5.0 J	< 5.0 J

Notes:

µg/kg - micrograms per kilogram

Field duplicates are shown in italics

Pesticides by USEPA Method 8081A

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Levels

bgs - below ground surface

NA - not available

J - Results and/or reporting limits are estimated

Table 17a. AOI-15 Organochlorine Pesticides in SoilMalibu High School30215 Morning View DriveMalibu, California

Area of				Pesticides (Organochlorine) in µg/kg									
Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Endrin ketone	gamma-BHC	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene				
Residential DTSC-Modified RSL or USEPA RSL				18,000	560	120	59	310,000	480				
nucopia	MH-SB-1	7/9/2014	0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200				
	MH-SB-1	7/9/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200				
	MH-SB-2	7/10/2014	0	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 200 J				
	MH-SB-2	7/10/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200				
Co	MH-SB-3	7/10/2014	0	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 200 J				
AOI-15 - (MH-SB-3	7/10/2014	1.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200				
	MH-SB-4	7/10/2014	0	< 4.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 4.9 J	< 200 J				
	MH-SB-4	7/10/2014	0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200				
	MH-SB-4	7/10/2014	1.5	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0	< 200				

Notes:

µg/kg - micrograms per kilogram

Field duplicates are shown in italics

Pesticides by USEPA Method 8081A

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RSLs - Regional Screening Levels

bgs - below ground surface

NA - not available

J - Results and/or reporting limits are estimated

DRAFT

RAMECLL ENVIRON

				Pesticides (Organophosphates) in µg/kg											
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	2-Butenoic acid, 3-[(dimethoxy- phosphinyl)oxy]-, m	Chlorpyrifos	Co-Ral	Dasanit	Demeton (Demeton O + Demeton S)	Diazinon	Dichlorovos	Dimethoate	Disulfoton	Ethoprop	Ethyl P-Nitorphenyl Benzenethio-phosphate	Famphur
Residential DTSC-Modified RSL or USEPA RSL		NA	62,000	NA	NA	2,500	43,000	1,800	12,000	2,500	NA	620	NA		
AOI-15 - Cornucopia	MH-SB-1	7/9/2014	0	< 33	< 33	< 33	< 33 J	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33
	MH-SB-1	7/9/2014	1.5	< 33	< 33	< 33	< 33 J	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33
	MH-SB-2	7/10/2014	0	< 33	< 33	< 33	< 33	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33 J	< 33
	MH-SB-2	7/10/2014	1.5	< 33	< 33	< 33	< 33	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33 J	< 33
	MH-SB-3	7/10/2014	0	< 33	< 33	< 33	< 33	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33 J	< 33
	MH-SB-3	7/10/2014	1.5	< 33	< 33	< 33	< 33	< 65 J	< 33	< 33 J	< 33	< 33	< 33	< 33 J	< 33
	MH-SB-4	7/10/2014	0	< 33	< 33	< 33	< 33	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33 J	< 33
	MH-SB-4	7/10/2014	0	< 33	< 33	< 33	< 33	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33 J	< 33
	MH-SB-4	7/10/2014	1.5	< 33	< 33	< 33	< 33	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33 J	< 33

µg/kg - micrograms per kilogram

Field duplicates are shown in italics

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USEPA- United States Environmental Protection Agency

RSLs - Regional Screening Level

Pesticides by USEPA Method 8141A

bgs - below ground surface

NA - not available

J - Results and/or reporting limits are estimated

									Pesticides (Organop	hosphates)	in µg/kg						
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Fenthion	Guthion	Malathion	Methyl parathion	O,O,O-Triethyl phosphorothioate	O-Ethyl O-2,4,5- trichlorophenyl ethyl- phosphonothioate	Parathion	Phorate	Prothiophos	Ronnel	Stirophos	Sulfotepp	Sulprofos	Thionazin
Residentia	I DTSC-Modi	fied RSL or l	JSEPA RSL	NA	NA	1,200,000	15,000	NA	NA	370,000	12,000	NA	3,100,000	22,000	31,000	NA	NA
	MH-SB-1	7/9/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
oia	MH-SB-1	7/9/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
Ś	MH-SB-2	7/10/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
nu	MH-SB-2	7/10/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
Ō	MH-SB-3	7/10/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
2-	MH-SB-3	7/10/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-4	7/10/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
AC	MH-SB-4	7/10/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
	MH-SB-4	7/10/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33

Notes:

µg/kg - micrograms per kilogram

Field duplicates are shown in italics

DTSC - Department of Toxic Substances Control

USEPA- United States Environmental Protection Agence

RSLs - Regional Screening Level

Pesticides by USEPA Method 8141A

bgs - below ground surface

NA - not available

Table 17c. AOI-15 Herbicides in SoilMalibu High School

30215 Morning View Drive Malibu, California

Area of Interest			Depth	Her	bicides in µ	g/kg
(AOI)	Sample ID	Sample Date	(feet bgs)	2,4,5-T	2,4,5-TP	2,4-D
Residential DTSC-Mo	dified RSL or USEI	PA RSL		620,000	490,000	690,000
	MH-SB-1	7/9/2014	0	< 20	< 20	< 80
pia	MH-SB-1	7/9/2014	1.5	< 20	< 20	< 80
Cornucopia	MH-SB-2	7/10/2014	0	< 20	< 20	< 80
rnu	MH-SB-2	7/10/2014	1.5	< 20	< 20	< 80
Co	MH-SB-3	7/10/2014	0	< 20	< 20	< 80
2 -	MH-SB-3	7/10/2014	1.5	< 20	< 20	< 79
A0I-15	MH-SB-4	7/10/2014	0	< 20	< 20	< 80
AC	MH-SB-4	7/10/2014	0	< 20	< 20	< 80
	MH-SB-4	7/10/2014	1.5	< 20	< 20	< 80

Notes:

µg/kg - micrograms per kilogram

Field duplicates are shown in italics

Herbicides by USEPA Method 8151A

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Levels

bgs - below ground surface



Table 17d. AOI-15 Metals in SoilMalibu High School30215 Morning View DriveMalibu, California

Area of											Meta	als in m	g/kg							
Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium (total)	Cobalt	Copper	Lead	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Mercury
Residen	tial DTSC-Modif	ied RSL or US	EPA RSL	31	12 ^a	15,000	16	4.6	120,000	23	3,100	80	390	1,500	390	390	0.78 ^b	390	23,000	23
	MH-SB-1	7/9/2014	0	< 10	6.5	220 J	< 0.50	2.1	68	10	27	2.5	2.9	60	< 3.0	< 1.5	< 10	83	53	0.061
oia	MH-SB-1	7/9/2014	1.5	< 9.9 J	5.9	84	< 0.50	1.4	54 J	14	18	4.5	< 2.0	49	< 3.0	< 1.5	< 9.9	55 J	30	0.030 J
los	MH-SB-2	7/10/2014	0	< 9.9 R	5.0	120	< 0.50	2.3	60	16	28	4.7	2.3	62	< 3.0	< 1.5	< 9.9	60	69	0.045
'nu	MH-SB-2	7/10/2014	1.5	< 9.9 R	15	120	< 0.49	1.6	36	9.1	82	4.4	3.6	37	< 3.0	1.5	< 9.9	39	95	0.28
Col	MH-SB-3	7/10/2014	0	< 9.9 R	4.3	74	< 0.50	1.9	46	14	22	< 2.0	2.0	51	< 3.0	< 1.5	< 9.9	51	56	0.084
- 2	MH-SB-3	7/10/2014	1.5	< 9.9 R	3.8	87	< 0.50	1.9	55	16	22	2.6	2.3	59	< 3.0	< 1.5	< 9.9	51	46	0.056
1-1	MH-SB-4	7/10/2014	0	< 10 R	17	120	< 0.50	1.5	32	7.7	110	7.3	2.7	31	< 3.0	2.3	< 10	33	140	0.33
AC	MH-SB-4	7/10/2014	0	< 10 R	13	110	< 0.50	1.4	34	8.0	75	5.7	< 2.0	31	< 3.0	< 1.5	< 10	33	110	0.23
	MH-SB-4	7/10/2014	1.5	< 20 R	< 6.0	71 J	< 1.0	1.6	49 J	14 J	24 J	< 4.0	< 4.0 J	55 J	< 6.0 J	< 3.0 J	< 20	48	49 J	0.067

Notes:

mg/kg - milligrams per kilogram

Field duplicates are shown in italics

Metals by USEPA Method 6010/7471

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Levels

bgs - below ground surface

J - Results and/or reporting limits are estimated

R - Data are Unusable

^a - Arsenic occurs naturally in soil. An evaluation of arsenic soil data from school sites in Southern California found arsenic concentrations ranging from 0.15 mg/kg to 20 mg/kg, with an upper-bound background arsenic concentration of 12 mg/kg (Chernoff G, Bosan W, Oudiz D. 2008. Determination of a Southern California Regional Background Arsenic Concentration in Soil). Arsenic concentrations in soil samples collected at the site were conservatively screened against 12 mg/kg. Arsenic concentrations greater than 12 mg/kg were further evaluated in Section 9 of the PEA Report.

^b - As specified in the DTSC-approved PEA Work Plan, the reporting limit for thallium exceeds the RSL. As all results are non-detect, values are not bolded.



Table 17e: AOI-15 Arsenic in Incremental Soil Step-Out

Malibu High School - Cornucopia 30215 Morning View Drive Malibu, California

			Arsenic
Sample ID	Date	Depth	mg/kg
DTSC's Backgrour	nd Soil Concent	ration	12 ^a
Decis	ion Unit 1 - Plai	nting Beds	
MH-IS-PLANTER-A	9/24/2014	0	8.7
MH-IS-PLANTER-A	9/24/2014	0	8.7
MH-IS-PLANTER-A	9/24/2014	1.5	4.3
MH-IS-PLANTER-B	9/24/2014	0	8.8
MH-IS-PLANTER-B	9/24/2014	1.5	4.3
MH-IS-PLANTER-C	9/24/2014	0	8.4
MH-IS-PLANTER-C	9/24/2014	1.5	5.2
Decision Un	it 2 - Area Outsi	de Planting Bed	S
MH-IS-CORNUCOPIA-A	9/25/2014	0	6.5
MH-IS-CORNUCOPIA-A	9/25/2014	1.5	6.4
MH-IS-CORNUCOPIA-B	9/25/2014	0	14
MH-IS-CORNUCOPIA-B	9/25/2014	1.5	4.4
MH-IS-CORNUCOPIA-C	9/25/2014	0	6.9
MH-IS-CORNUCOPIA-C	9/25/2014	1.5	5.4

Notes:

Duplicate sample is shown in italics

mg/kg - milligrams per kilogram

^a Arsenic occurs naturally in soil; DTSC has determined that the Southern California regional background soil concentration for arsenic is 12 mg/kg. (Chernoff G, Bosan W, Oudiz D. 2008. Determination of a Southern California Regional Background Arsenic Concentration in Soil)." According to DTSC, metals present at levels equivalent to background can be eliminated as chemicals of potential concern (COPCs) and need not be considered in the screening evaluation (PEA 2013).

Bolded values exceed background soil concentrations



Area of													Pesticide	s (Organochl	orine) in µg/k	g							
Interest	Sample	Sample	Depth					alpha-		Chlordane			Endosulfan	Endosulfan			Endrin		gamma-		Heptachlor	-	
(AOI)	ID	Date	(feet bgs)	4,4'-DDD	4,4'-DDE	4,4'-DDT	Aldrin	BHC	BHC	(total)	BHC	Dieldrin	I	=	sulfate	Endrin	aldehyde	ketone	BHC	Heptachlor	epoxide	hlor	Toxaphene
Reside		C-Modified PA RSL	RSL or	2,200	1,600	1,900	31	85	300	1,800	NA	33	370,000	370,000	370,000	18,000	18,000	18,000	560	120	59	310,000	480
Area E and Field	MH-SB- 26	7/9/2014	0	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 50 J	< 9.9 J	< 5.0 J	< 5.0 J	< 5.0 J	< 9.9 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 200 J
-16 - een ball	MH-SB-55	7/9/2014	0	< 5.0	7.3	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
AOI- betw Foot	MH-SB-68	7/9/2014	0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200

Notes:

µg/kg - micrograms per kilogram

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Levels

bgs - below ground surface

Field duplicates are shown in italics

NA - not available

Pesticides by USEPA Method 8081A

Table 18b. AOI-16 Organophosphate Pesticides in SoilMalibu High School30215 Morning View DriveMalibu, California

								Pest	icides (Org	anophosphate	s) in µg/kg				
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	2-Butenoic acid, 3-[(dimethoxy- phosphinyl)oxy]-, m	Chlorpyrifos	Co-Ral	Dasanit	Demeton (Demeton O + Demeton S)	Diazinon	Dichlorovos	Dimethoate	Disulfoton	Ethoprop	Ethyl P-Nitorphenyl Benzenethio-phosphate	Famphur
Residential	I DTSC-Modifie	d RSL or USE	EPA RSL	NA	62,000	NA	NA	2,500	43,000	1,800	12,000	2,500	NA	620	NA
Area E and Field	MH-SB-26	7/9/2014	0	< 33	< 33	< 33	< 33	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33
l-16 - A /een E tball F	MH-SB-55	7/9/2014	0	< 33	< 33	< 33	< 33	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33
AOI- betw Foot	MH-SB-68	7/9/2014	0	< 33	< 33	< 33	< 33 J	< 65 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33

Notes:

µg/kg - micrograms per kilogram

Field duplicates are shown in italics

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Level

Pesticides by USEPA Method 8141A

bgs - below ground surface

NA - not available

Table 18b. AOI-16 Organophosphate Pesticides in SoilMalibu High School30215 Morning View DriveMalibu, California

									Pesticides (Organ	ophosphate	es) in µg/k	g	-		-	-	
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Fenthion	Guthion	Malathion	Methyl parathion	O,O,O-Triethyl phosphorothioate	O-Ethyl O-2,4,5- trichlorophenyl ethyl- phosphonothioate		Phorate	Prothiophos	Ronnel	Stirophos	Sulfotepp	Sulprofos	Thionazin
Residentia	I DTSC-Modifie	d RSL or USI	EPA RSL	NA	NA	1,200,000	15,000	NA	NA	370,000	12,000	NA	3,100,000	22,000	31,000	NA	NA
Area E and Field	MH-SB-26	7/9/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
-16 - A een E ball F	MH-SB-55	7/9/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
AOI- betw Foot	MH-SB-68	7/9/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33

Notes:

µg/kg - micrograms per kilogram

Field duplicates are shown in italics

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Level

Pesticides by USEPA Method 8141A

bgs - below ground surface

NA - not available

Table 18c. AOI-16 Herbicides in Soil

Malibu High School 30215 Morning View Drive Malibu, California

Area of Interest			Depth	Herk	picides in µ	g/kg
(AOI)	Sample ID	Sample Date	(feet bgs)	2,4,5-T	2,4,5-TP	2,4-D
Residentia	al DTSC-Modified	RSL or USEPA F	RSL	620,000	490,000	690,000
Area E and Field	MH-SB-26	7/9/2014	0	< 20	< 20	< 80
'	MH-SB-55	7/9/2014	0	< 20	< 20	< 80
AOI-16 between Footbal	MH-SB-68	7/9/2014	0	< 20	< 20	< 80

Notes:

 $\mu g/kg$ - micrograms per kilogram

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Levels

bgs - below ground surface

Field duplicates are shown in italics

Herbicides by USEPA Method 8151A



Table 18d. AOI-16 Metals in SoilMalibu High School30215 Morning View DriveMalibu, California

											Ме	tals in m	ig/kg							·
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium (total)	Cobalt	Copper	Lead	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Mercury
Residentia	I DTSC-Modif	ied RSL or USEF	PA RSL	31	12 ^a	15,000	16	4.6	120,000	23	3,100	80	390	1,500	390	390	0.78 ^b	390	23,000	23
vrea and ield	MH-SB-26	7/9/2014	0	< 10 J	4.2	60	< 0.50	1.2	43 J	10	16	3.6	< 2.0	38	< 3.0	< 1.5	< 10	45 J	55	0.047
l-16 - A /een E /tball F	MH-SB-55	7/9/2014	0	< 9.9 J	4.0	130	< 0.49	2.2	53 J	12	20	2.5	2.1	49	< 3.0	< 1.5	< 9.9	55 J	53	0.058
AOI betw Foo	MH-SB-68	7/9/2014	0	< 10	4.5	59 J	< 0.50	2.0	71	14	21	4.1	2.1	53	< 3.0	< 1.5	< 10	69	51	0.057

Notes:

mg/kg - milligrams per kilogram

Field duplicates are shown in italics

Metals by USEPA Method 6010/7471

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Levels

bgs - below ground surface

J - Results and/or reporting limits are estimated

^a - Arsenic occurs naturally in soil. An evaluation of arsenic soil data from school sites in Southern California found arsenic concentrations ranging from 0.15 mg/kg to 20 mg/kg, with an upper-bound background arsenic concentration of 12 mg/kg (Chernoff G, Bosan W, Oudiz D. 2008. Determination of a Southern California Regional Background Arsenic Concentration in Soil). Arsenic concentrations in soil samples collected at the site were conservatively screened against 12 mg/kg. Arsenic concentrations greater than 12 mg/kg were further evaluated in Section 9 of the PEA Report.

^b - As specified in the DTSC-approved PEA Work Plan, the reporting limit for thallium exceeds the RSL. As all results are non-detect, values are not bolded.



Table 19. AOI-17 PCBs in SoilMalibu High School30215 Morning View DriveMalibu, California

							PCBs in µg/k	g		
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260
Residential DTS	6C-Modified RS	L or USEPA	RSL	4,000	150	150	240	240	240	240
	MH-SB-8	7/9/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Š	MH-SB-8	7/9/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50
ше	MH-SB-9	7/9/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	< 50
for	MH-SB-9	7/9/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50
ans	MH-SB-27A	7/8/2014	0	< 49	< 49	< 49	< 49	< 49	< 49	< 49
Ĕ	MH-SB-27A	7/8/2014	1.5	< 49	< 49	< 49	< 49	< 49	< 49	< 49
cal	MH-SB-27B	7/8/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	< 50
ctri	MH-SB-27B	7/8/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Ē	MH-SB-28A	7/8/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	< 50
2	MH-SB-28A	7/8/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50
AOI-1	MH-SB-28B	7/8/2014	0	< 50 J						
A(MH-SB-28B	7/8/2014	0	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	MH-SB-28B	7/8/2014	1.5	< 50	< 50	< 50	< 50	< 50	< 50	< 50

Notes:

µg/kg - micrograms per kilogram

PCBs - Polychlorinated biphenyls

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Levels

bgs - below ground surface

Field duplicates are shown in italics

PCBs by USEPA Method 8082A

Table 20a. AOI-18 Organochlorine Pesticides in SoilMalibu High School30215 Morning View DriveMalibu, California

Area of									Pe	sticides (Org	anochlorine) in µg/kg				
Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	4,4'-DDD	4 4'-DDE	4,4'-DDT	Aldrin	alpha-BHC	beta-BHC	Chlordane (total)	delta-BHC	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulfate	Endrin
	•	fied RSL or USE	(2,200	1,600	1,900	31	85	300	1,800	NA	33	370,000	370,000	370,000	18,000
itteetuet	MH-CS-1	7/10/2014	0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0
eas	MH-CS-1	7/10/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0
t Ar	MH-CS-2	7/10/2014	0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0
-18 - nen	MH-CS-2	7/10/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0
AOI-	MH-CS-3	7/10/2014	0	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 50 J	< 9.9 J	< 5.0 J	< 5.0 J	< 5.0 J	< 9.9 J	< 5.0 J
⊿ ∋vel	MH-CS-3	7/10/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0
Rede	MH-CS-4	7/16/2014	0	< 5.0	14	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 9.9	< 5.0	< 5.0	< 5.0	< 9.9	< 5.0
4	MH-CS-4	7/16/2014	1.5	< 4.9	27	5.5	< 4.9	< 4.9	< 4.9	< 49	< 9.9	< 4.9	< 4.9	< 4.9	< 9.9	< 4.9

Notes:

µg/kg - micrograms per kilogram

Field duplicates are shown in italics

Pesticides by USEPA Method 8081A

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Levels

bgs - below ground surface

NA - not available

Table 20a. AOI-18 Organochlorine Pesticides in SoilMalibu High School30215 Morning View DriveMalibu, California

Area of						Pesticides	(Organochlo	rine) in µg/kg		
Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Endrin aldehyde	Endrin ketone	gamma-BHC	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene
Resider	ntial DTSC-Mod	ified RSL or USE	PA RSL	18,000	18,000	560	120	59	310,000	480
	MH-CS-1	7/10/2014	0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
Areas	MH-CS-1	7/10/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
't A	MH-CS-2	7/10/2014	0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
	MH-CS-2	7/10/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
AOI-18 elopme	MH-CS-3	7/10/2014	0	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 5.0 J	< 200 J
Š	MH-CS-3	7/10/2014	1.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200
Redev	MH-CS-4	7/16/2014	0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200 J
Ľ.	MH-CS-4	7/16/2014	1.5	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 200 J

Notes:

µg/kg - micrograms per kilogram

Field duplicates are shown in italics

Pesticides by USEPA Method 8081A

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Levels

bgs - below ground surface

NA - not available

J - Results and/or reporting limits are estimated

DRAFT



Table 20b. AOI-18 Organophosphate Pesticides in SoilMalibu High School30215 Morning View DriveMalibu, California

					Pesticides (Organophosphates) in µg/kg										
Area of Interest (AOI)) Sample ID	Sample Date	Depth (feet bgs)	2-Butenoic acid, 3-[(dimethoxy- phosphinyl)oxy]-, m	Chlorpyrifos	Co-Ral	Dasanit	Demeton (Demeton O + Demeton S)	Diazinon	Dichlorovos	Dimethoate	Disulfoton	Ethoprop	Ethyl P-Nitorphenyl Benzenethio-phosphate	Famphur
Resident	tial DTSC-Modifi	ed RSL or USE	PA RSL	NA	62,000	NA	NA	2,500	43,000	1,800	12,000	2,500	NA	620	NA
Ś	MH-CS-1	7/10/2014	0	< 33	< 33	< 33	< 33	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33 J	< 33
rea:	MH-CS-1	7/10/2014	1.5	< 33	< 33	< 33	< 33	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33 J	< 33
it A	MH-CS-2	7/10/2014	0	< 33	< 33	< 33	< 33	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33 J	< 33
-18 . nen	MH-CS-2	7/10/2014	1.5	< 33	< 33	< 33	< 33	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33 J	< 33
	MH-CS-3	7/10/2014	0	< 33	< 33	< 33	< 33	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33 J	< 33
t evel	MH-CS-3	7/10/2014	1.5	< 33	< 33	< 33	< 33	< 66 J	< 33	< 33 J	< 33	< 33	< 33	< 33 J	< 33
Rede	MH-CS-4	7/16/2014	0	< 33	< 33 J	< 33	< 33 J	< 66 J	< 33	< 33 J	< 33 J	< 33 J	< 33	< 33	< 33
	MH-CS-4	7/16/2014	1.5	< 33	< 33 J	< 33	< 33 J	< 66 J	< 33	< 33 J	< 33 J	< 33 J	< 33	< 33	< 33

Notes:

µg/kg - micrograms per kilogram

Field duplicates are shown in italics

DTSC - Department of Toxic Substances Control

USEPA- United States Environmental Protection Agency

RSLs - Regional Screening Level

Pesticides by USEPA Method 8141A

bgs - below ground surface

NA - not available

					Pesticides (Organophosphates) in µg/kg												
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Fenthion	Guthion	Malathion	Methyl parathion	O,O,O-Triethyl phosphorothioate	O-Ethyl O-2,4,5- trichlorophenyl ethyl- phosphonothioate		Phorate	Prothiophos	Ronnel	Stirophos	Sulfotepp	Sulprofos	Thionazin
Resident	ial DTSC-Modifi	ed RSL or USE	PA RSL	NA	NA	1,200,000	15,000	NA	NA	370,000	12,000	NA	3,100,000	22,000	31,000	NA	NA
(0	MH-CS-1	7/10/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
rea:	MH-CS-1	7/10/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
rt A	MH-CS-2	7/10/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
-18 ner	MH-CS-2	7/10/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
Iopi	MH-CS-3	7/10/2014	0	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
evel /	MH-CS-3	7/10/2014	1.5	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
Rede	MH-CS-4	7/16/2014	0	< 33	< 33 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33	< 33 J	< 33	< 33	< 33
Ľ.	MH-CS-4	7/16/2014	1.5	< 33	< 33 J	< 33	< 33 J	< 33	< 33	< 33	< 33	< 33	< 33	< 33 J	< 33	< 33	< 33

Notes:

µg/kg - micrograms per kilogram

Field duplicates are shown in italics

DTSC - Department of Toxic Substances Control

USEPA- United States Environmental Protection Agency

RSLs - Regional Screening Level

Pesticides by USEPA Method 8141A

bgs - below ground surface

NA - not available



Table 20c. AOI-18 Herbicides in Soil

Malibu High School 30215 Morning View Drive Malibu, California

Area of	Sample ID	Sample Date	Depth	Herbicides in µg/kg						
Interest (AOI)	Cample ID	Cample Date	(feet bgs)	2,4,5-T	2,4,5-TP	2,4-D				
Resider	ntial DTSC-Modifie	RSL	620,000	490,000	690,000					
st	MH-CS-1	7/10/2014	0	< 20	< 20	< 80				
Vreas	MH-CS-1	7/10/2014	1.5	< 20	< 20	< 80				
8 - ent A	MH-CS-2	7/10/2014	0	< 20	< 20	< 80				
-18 nei	MH-CS-2	7/10/2014	1.5	< 20	< 20	< 80				
AOI-18	MH-CS-3	7/10/2014	0	< 20	< 20	< 80				
, rel	MH-CS-3	7/10/2014	1.5	< 20	< 20	< 80				
AOI-1 Redevelopm	MH-CS-4	7/16/2014	0	< 20	< 20	< 80				
Ř	MH-CS-4	7/16/2014	1.5	< 20	< 20	< 80				

Notes:

µg/kg - micrograms per kilogram

Field duplicates are shown in italics

Herbicides by USEPA Method 8151A

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Levels

bgs - below ground surface



Table 20d. AOI-18 Metals in SoilMalibu High School30215 Morning View DriveMalibu, California

											Met	als in m	ng/kg							
Area of Interest (AOI)	Sample ID	Sample Date	Depth (feet bgs)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium (total)		Copper	Lead	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Mercury
Residential	DTSC-Modifie	ed RSL or US	EPA RSL	31	12 ^a	15,000	16	4.6	120,000	23	3,100	80	390	1,500	390	390	0.78 ^b	390	23,000	23
It	MH-CS-1	7/10/2014	0	< 9.9 J	3.7	140	< 0.49	2.3	54	12	25	8.0	< 2.0	77	< 3.0	< 1.5	< 9.9	51	49	0.045
me	MH-CS-1	7/10/2014	1.5	< 20 J	< 5.9	90	< 0.99	1.4	57	17	26	< 4.0	< 4.0	120	< 5.9	< 3.0	< 20	40	47	0.033
dole	MH-CS-2	7/10/2014	0	< 20 R	< 6.0	97	< 1.0	2.2	81	23	36	< 4.0	< 4.0	150	< 6.0	< 3.0	< 20	58	63	0.035
leve	MH-CS-2	7/10/2014	1.5	< 20 R	< 5.9	85	< 0.99	2.0	70	22	79	< 4.0	< 4.0	100	< 5.9	< 3.0	< 20	58	71	0.041
Red Are	MH-CS-3	7/10/2014	0	< 20 J	< 6.0	82	< 1.0	2.4	62	17	24	< 4.0	< 4.0	69	< 6.0	< 3.0	< 20	61	52	0.071
× ∞	MH-CS-3	7/10/2014	1.5	< 20 J	< 6.0	98	< 1.0	2.3	65	24	26	< 4.0	< 4.0	76	< 6.0	< 3.0	< 20	65	58	0.043
9-	MH-CS-4	7/16/2014	0	< 10 J	3.5	120	< 0.50	1.9	59 J	17	25	3.5 J	2.1	63	< 3.0	< 1.5	< 10	59 J	45	0.055
Ă	MH-CS-4	7/16/2014	1.5	< 20 J	< 6.0	110	< 1.0	2.2	75 J	21	31	< 4.0 J	< 4.0	78	< 6.0	< 3.0	< 20	72 J	54	0.037

Notes:

mg/kg - milligrams per kilogram

Field duplicates are shown in italics

Metals by USEPA Method 6010/7471

DTSC - Department of Toxic Substances Control

USEPA - United States Environmental Protection Agency

RSLs - Regional Screening Levels

bgs - below ground surface

J - Results and/or reporting limits are estimated

^a - An evaluation of arsenic soil data from school sites in Southern California found arsenic concentrations ranging from 0.15 mg/kg to 20 mg/kg, with an upper-bound background arsenic concentration of 12 mg/kg (Chernoff G, Bosan W, Oudiz D. 2008. Determination of a Southern California Regional Background Arsenic Concentration in Soil). Arsenic concentrations in soil samples collected at the site were conservatively screened against 12 mg/kg. Arsenic concentrations greater than 12 mg/kg were further evaluated in Section 9 of the PEA Report.

^b - As specified in the DTSC-approved PEA Work Plan, the reporting limit for thallium exceeds the RSL. As all results are non-detect, values are not bolded.



Table 21. Background Metals in SoilJuan Cabrillo Elementary and Malibu High School 30237 and 30215 Morning View Drive Malibu, California

					Metals in mg/kg														
Location	Sample ID	Sample Date	Start Depth	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium (total)	Cobalt	Copper	Lead	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
	BKRD-1	7/7/2014	0	< 9.9 J	< 3.0	91	< 0.50	1.2	39	14	16	9.4	< 2.0	39	< 3.0	< 1.5	< 9.9	45	38
1050	BKRD-2	7/7/2014	0	< 9.9 J	< 3.0	140	< 0.49	< 0.49	24	4.1	10	3.0	< 2.0	21	< 3.0	< 1.5	< 9.9	24	25
JCES	BKRD-3	7/7/2014	0	< 10 J	< 3.0	170	< 0.50	0.56	26	4.7	12	3.7	< 2.0	25	< 3.0	< 1.5	< 10	29	30
	BKRD-4	7/7/2014	0	< 9.9 J	8.5	120	0.50	1.3	71	17	26	5.8	< 2.0	72	< 3.0	< 1.5	< 9.9	58	68
	BKRD-5	7/10/2014	0	< 20 R	< 6.0	75	< 1.0	1.3	100	17	23	< 4.0	< 4.0	61	< 6.0	< 3.0	< 20	48	51
	BKRD-6	7/10/2014	0	< 20 R	< 6.0	38	< 1.0	1.8	56	21	21	< 4.0	< 4.0	72	< 6.0	< 3.0	< 20	58	44
	BKRD-7	7/10/2014	0	< 20 R	< 5.9	66	< 0.99	2.5	53	18	21	< 3.9	< 3.9	68	< 5.9	< 3.0	< 20	57	49
MHS	BKRD-8	7/10/2014	0	< 10 R	< 3.0	69	< 0.50	1.6	57	14	21	3.9	2.4	60	< 3.0	< 1.5	< 10	52	48
	BKRD-8	7/10/2014	0	< 20 R	< 5.9	83	< 0.98	2.2	56	16	23	4.5	8.0	71	< 5.9	< 2.9	< 20	59	65
	BKRD-9	7/10/2014	0	< 10 R	6.3	280	0.53	2.5	72	12	22	2.3	< 2.0	79	< 3.0	< 1.5	< 10	71	60
	BKRD-10	7/10/2014	0	< 9.9 R	4.6	77	< 0.49	1.4	38	13	17	5.2	< 2.0	47	< 3.0	< 1.5	< 9.9	42	27

Notes:

mg/kg - milligrams per kilogram

bgs - below ground surface

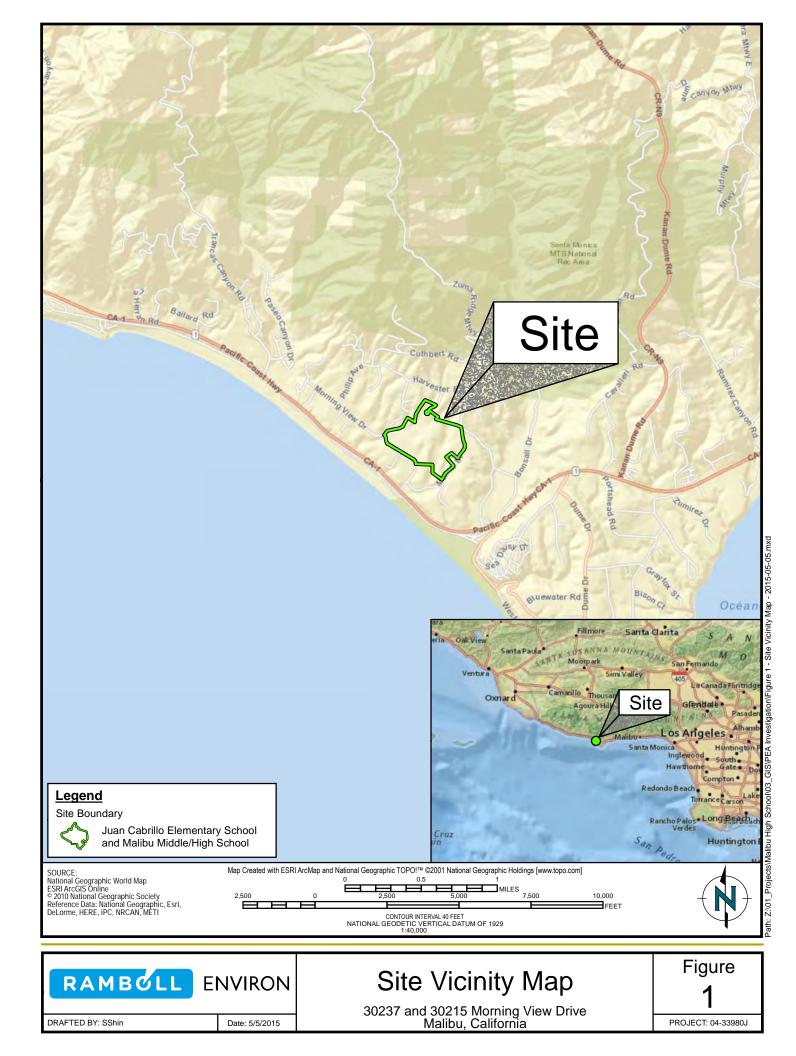
J - Results and/or reporting limits are estimated

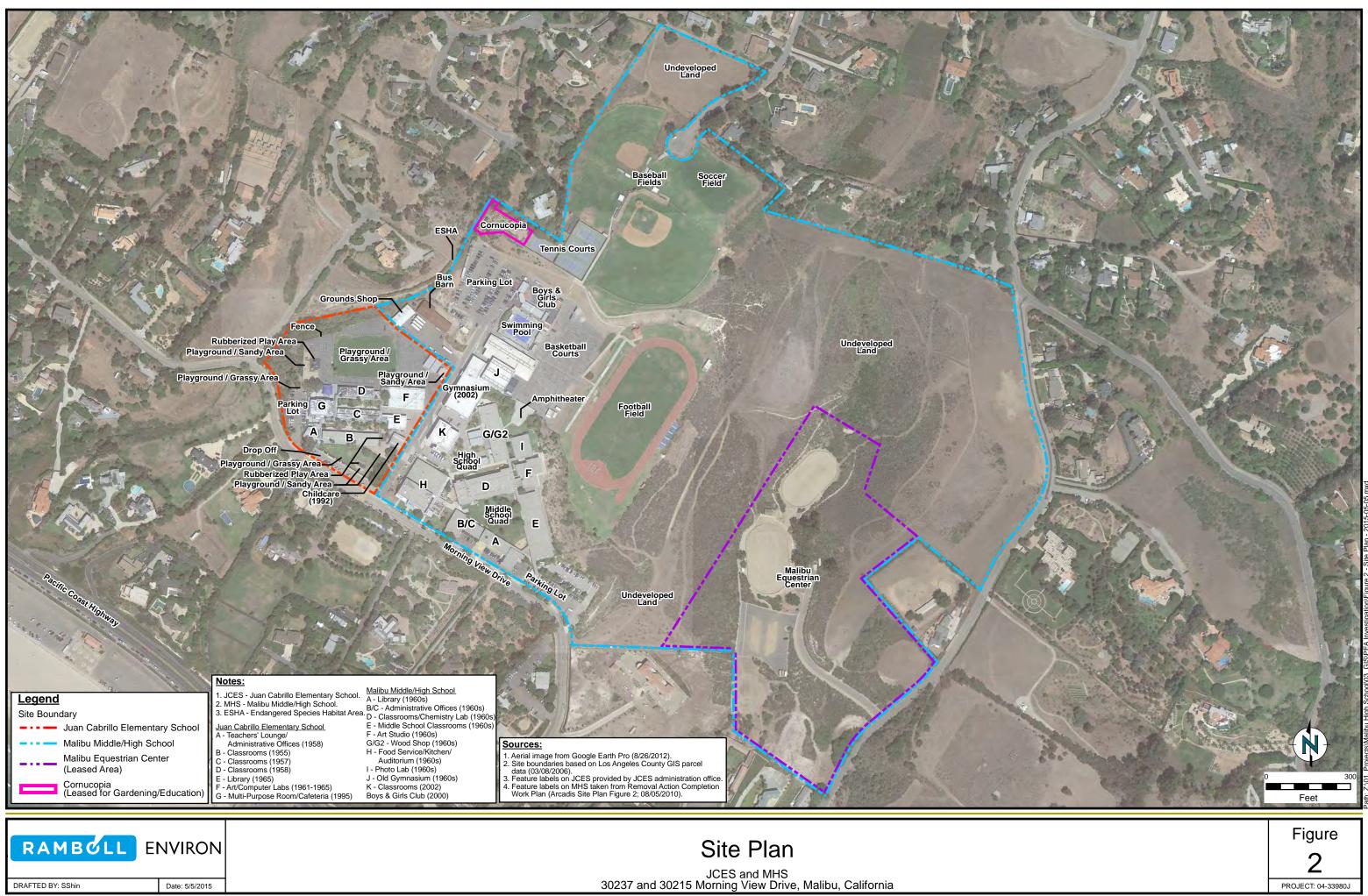
Metals by USEPA Method 6010/7000

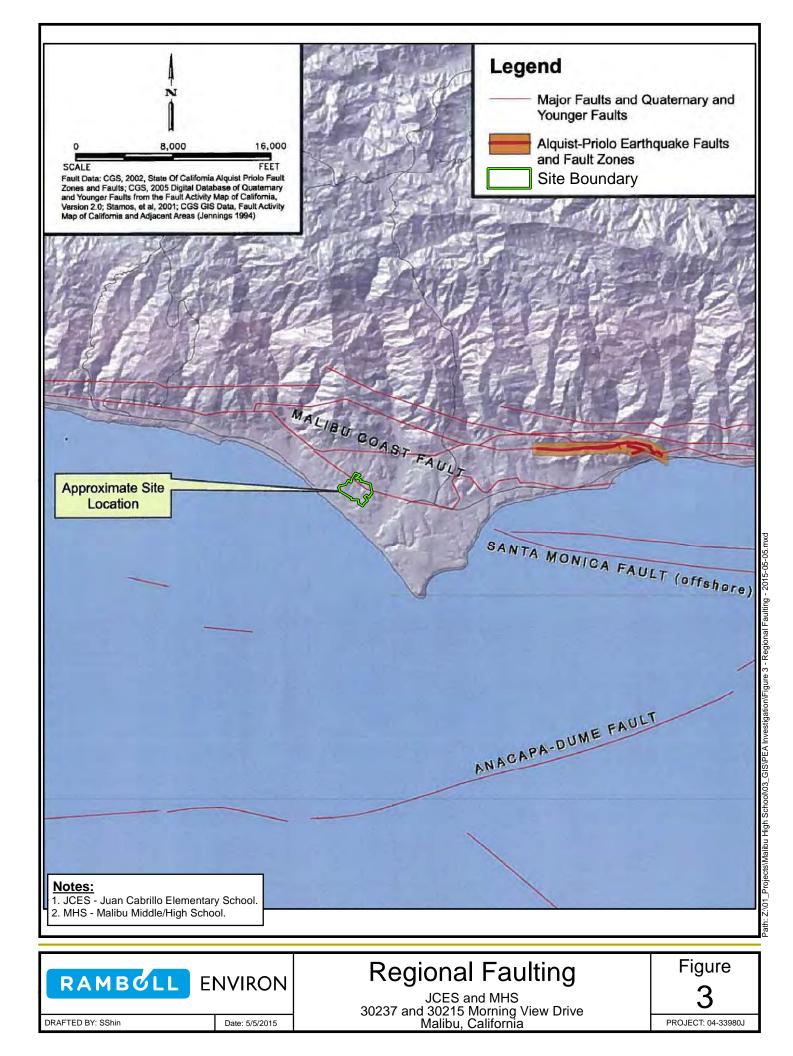
JCES - Juan Cabrillo Elementary School

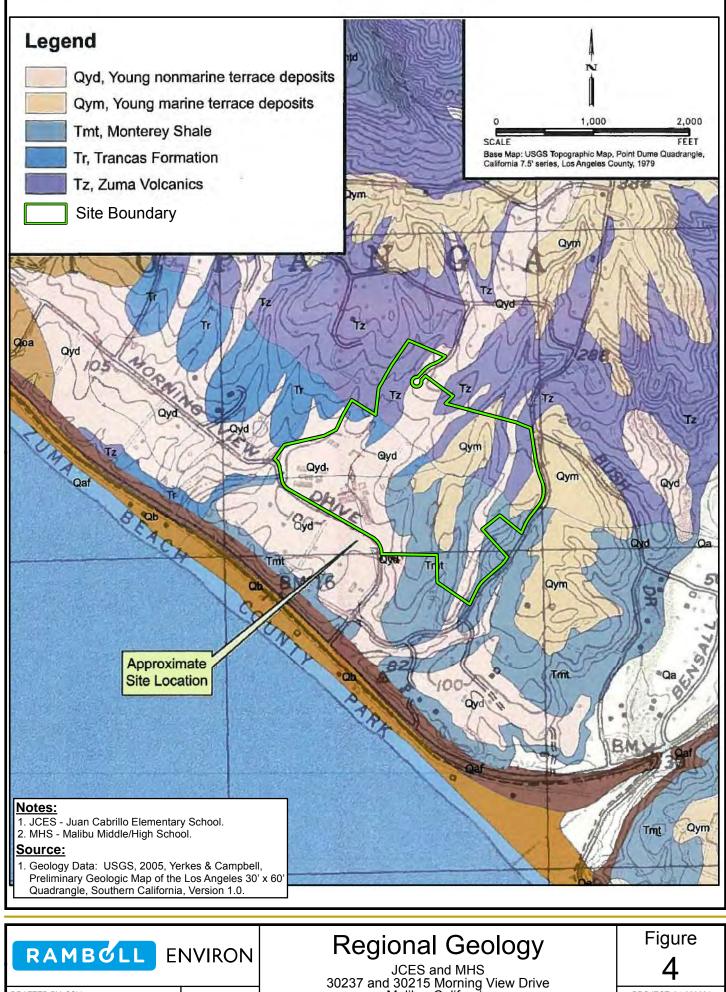
MHS - Malibu High School

Figures





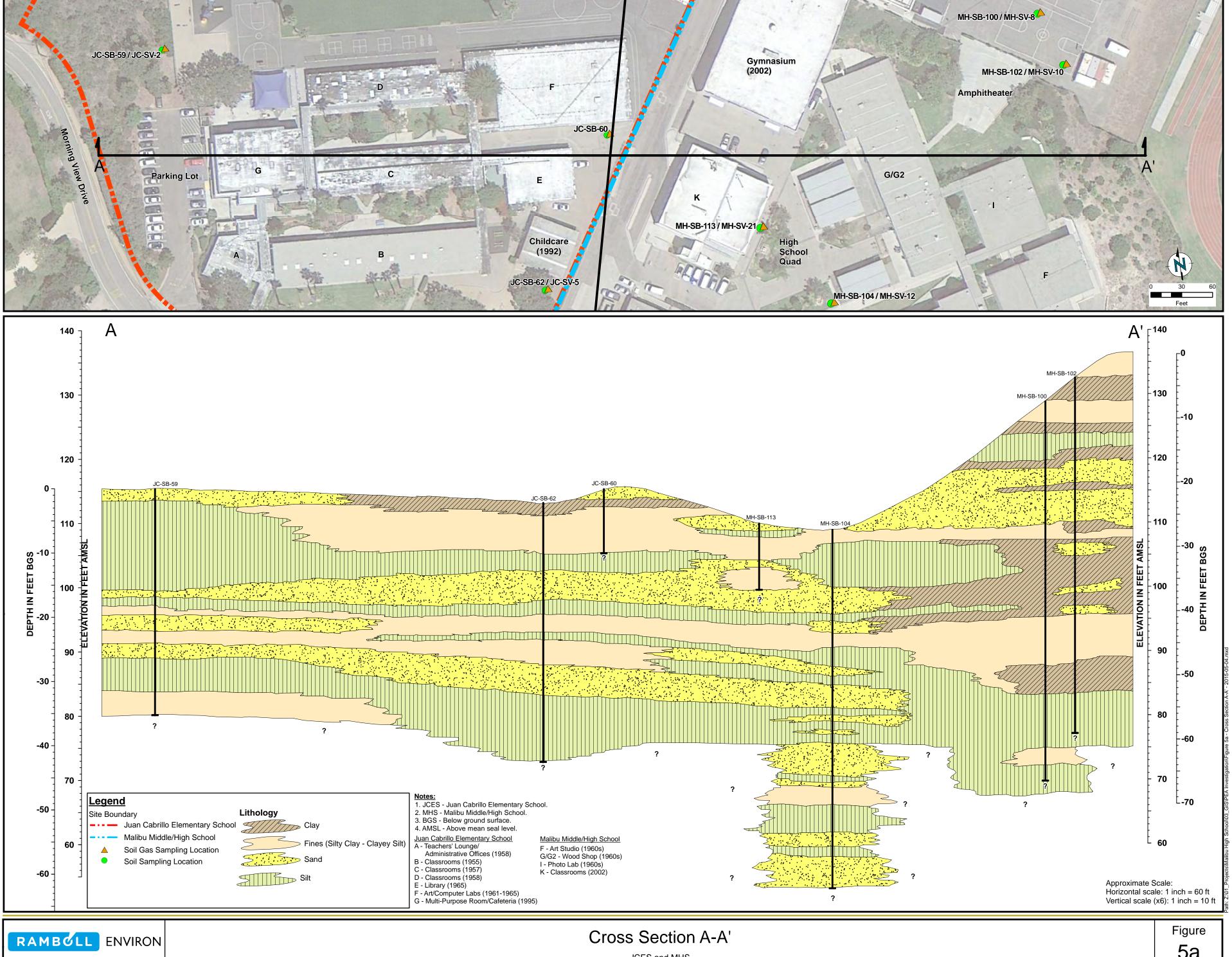


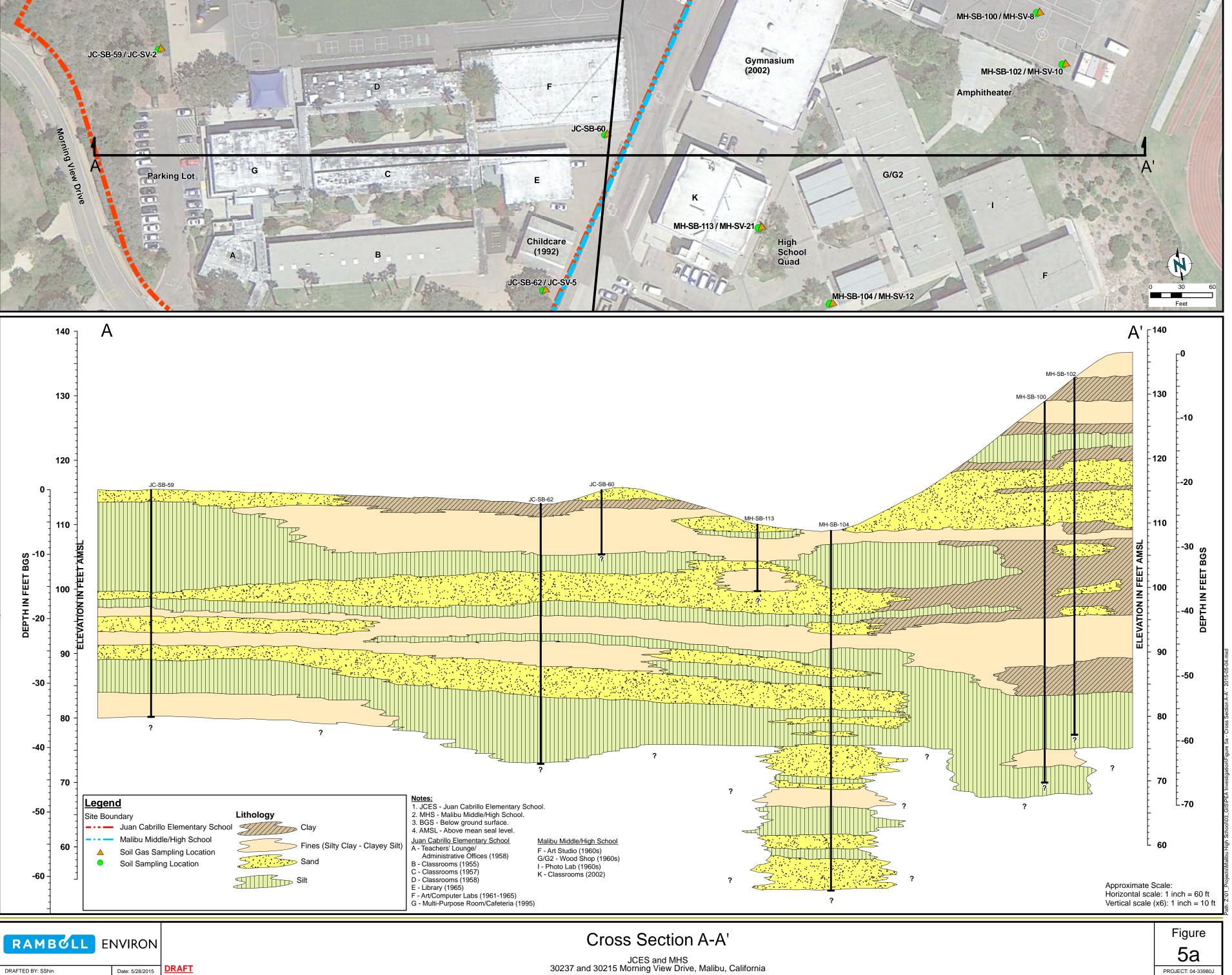


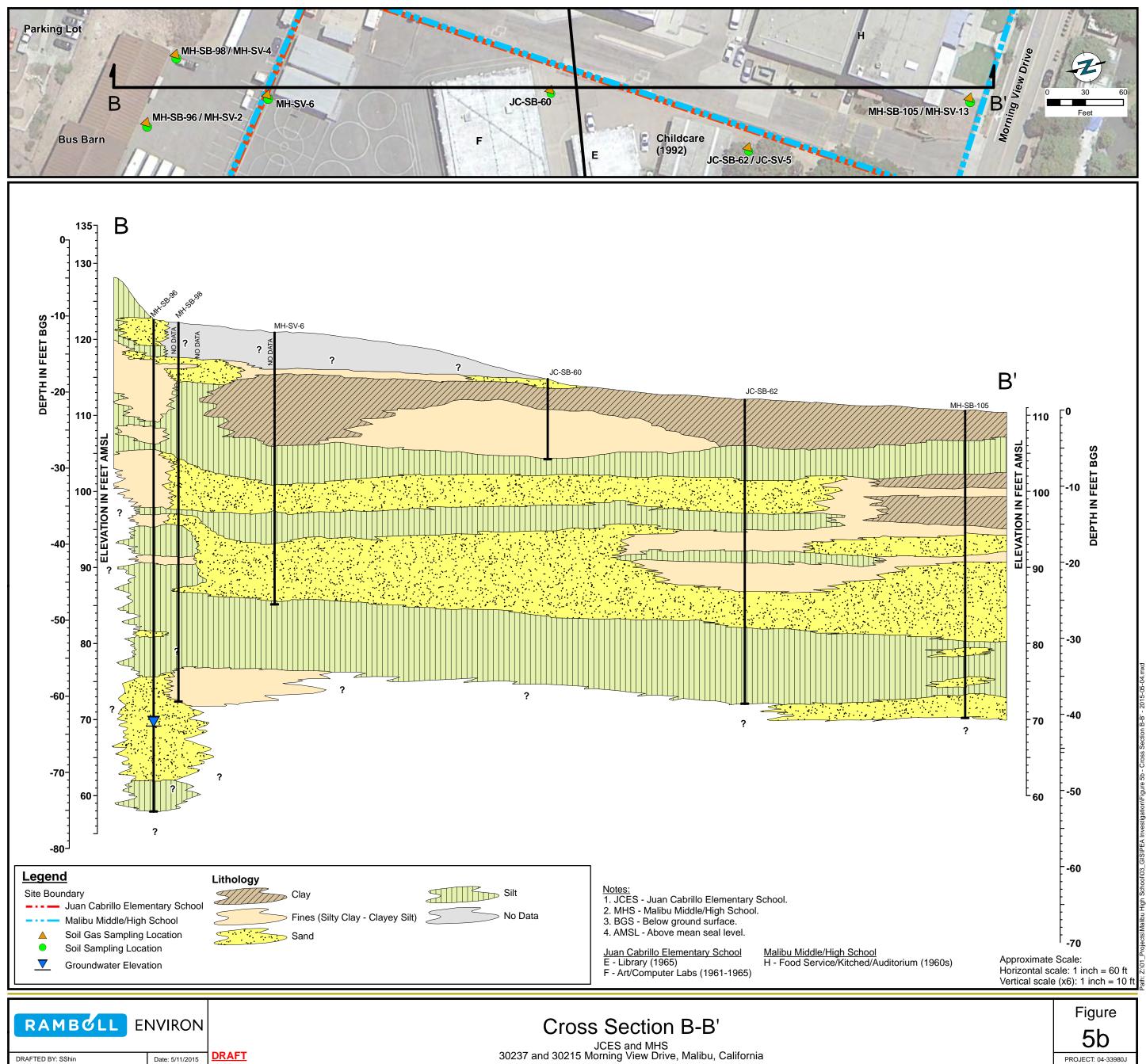
Malibu, California

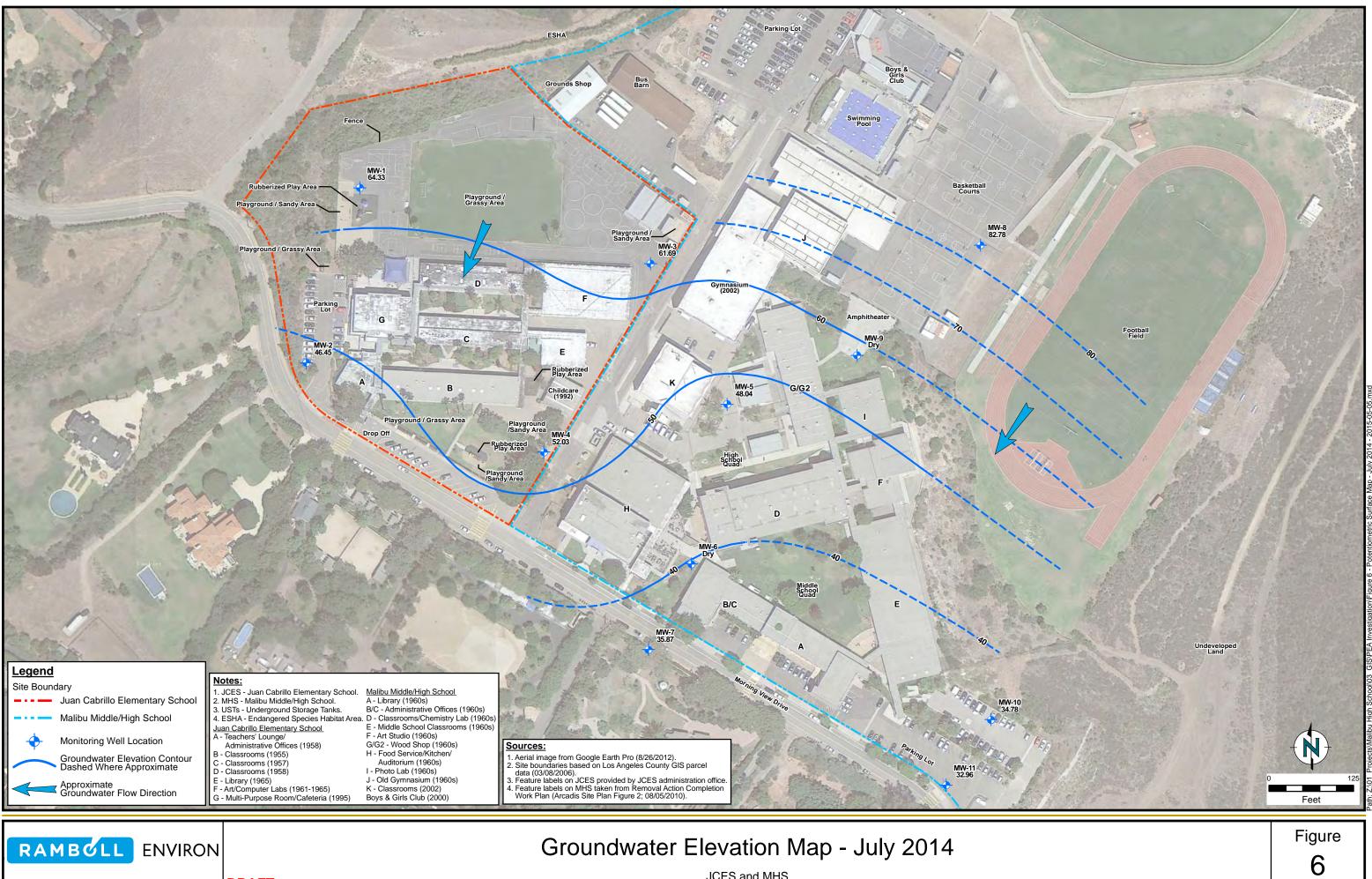
DRAFTED BY: SShin

Date: 5/5/2015





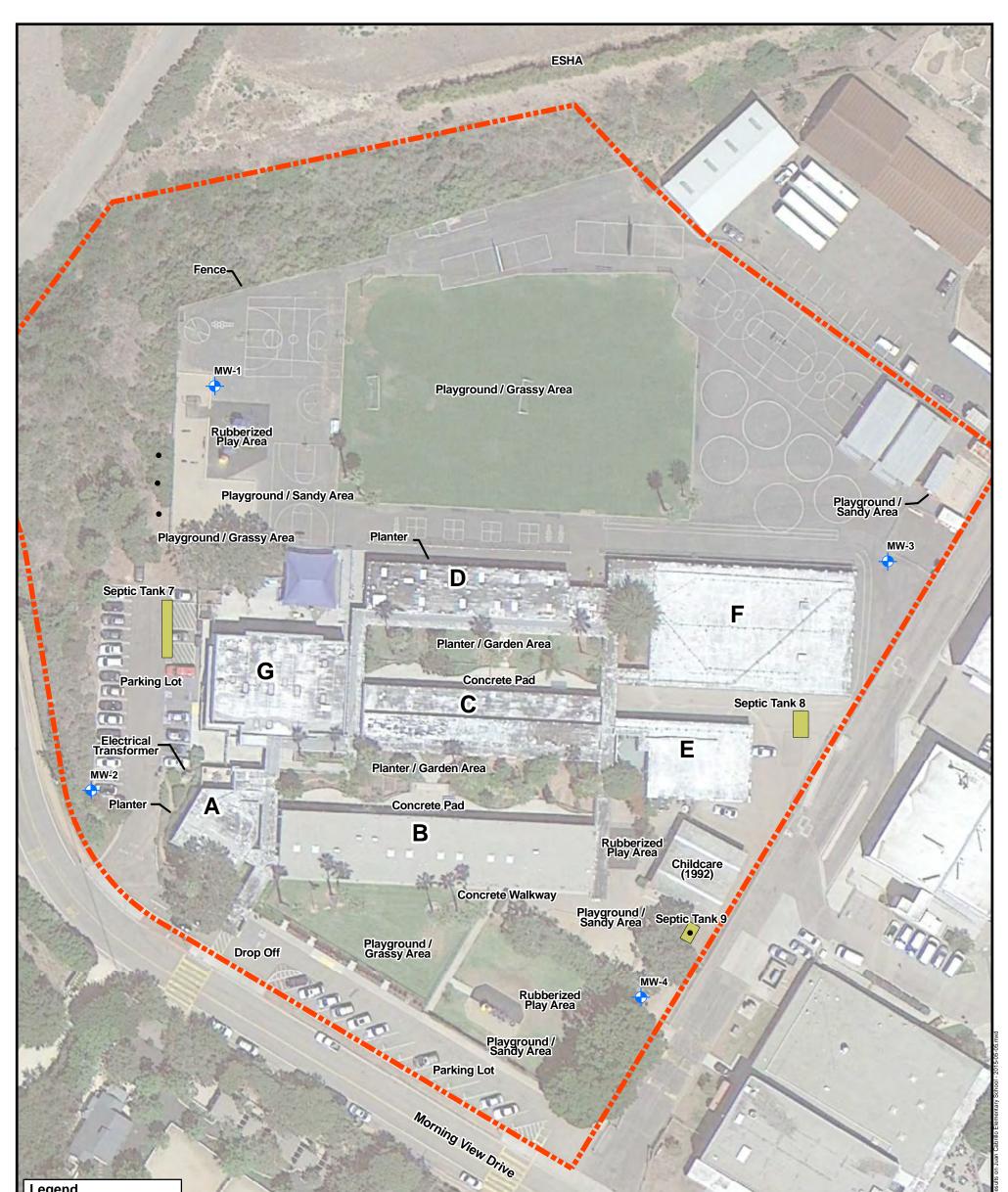




JCES and MHS 30237 and 30215 Morning View Drive, Malibu, California

DRAFTED BY: SShin

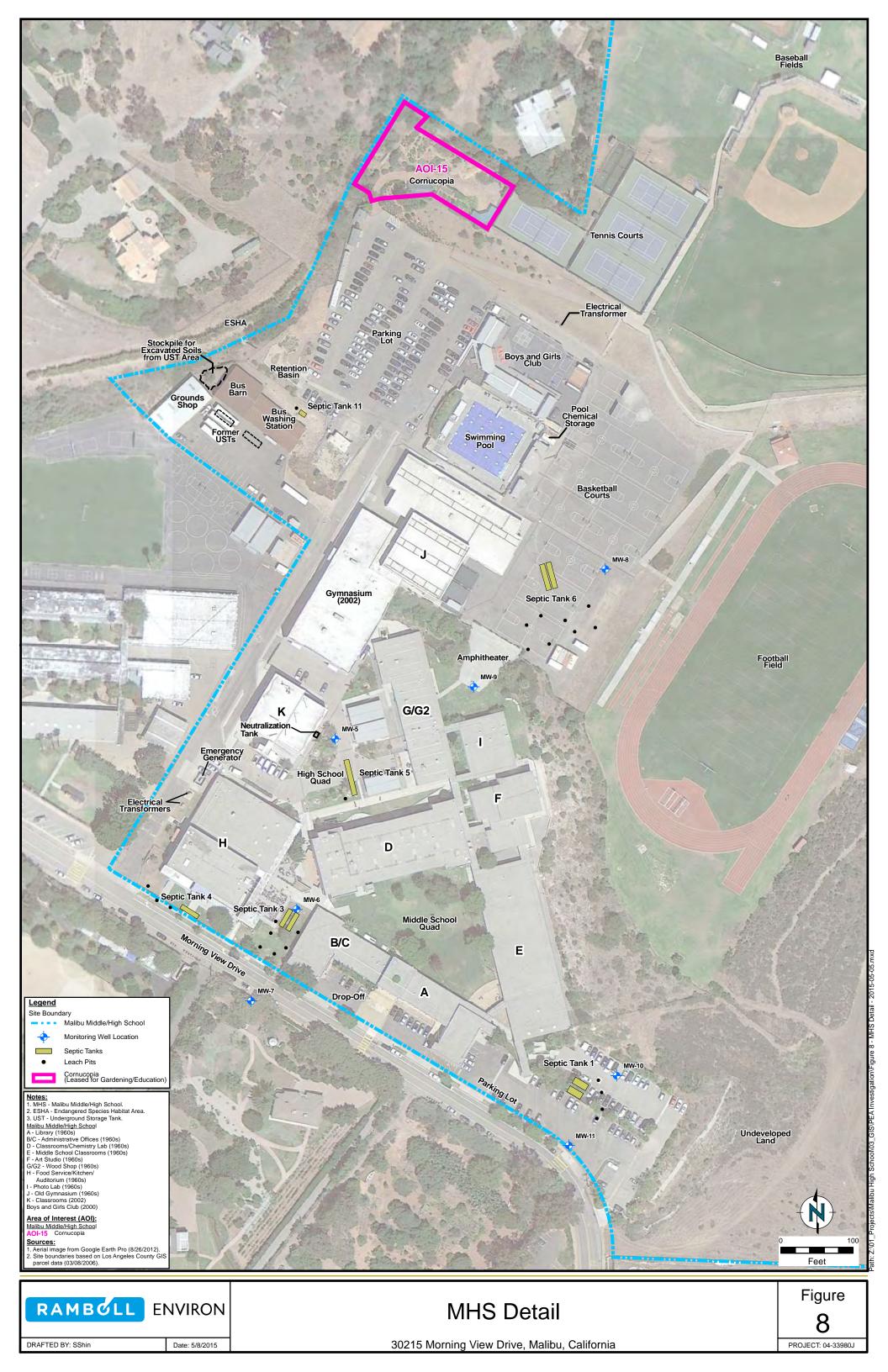
<u>DRAFT</u> Date: 5/28/2015

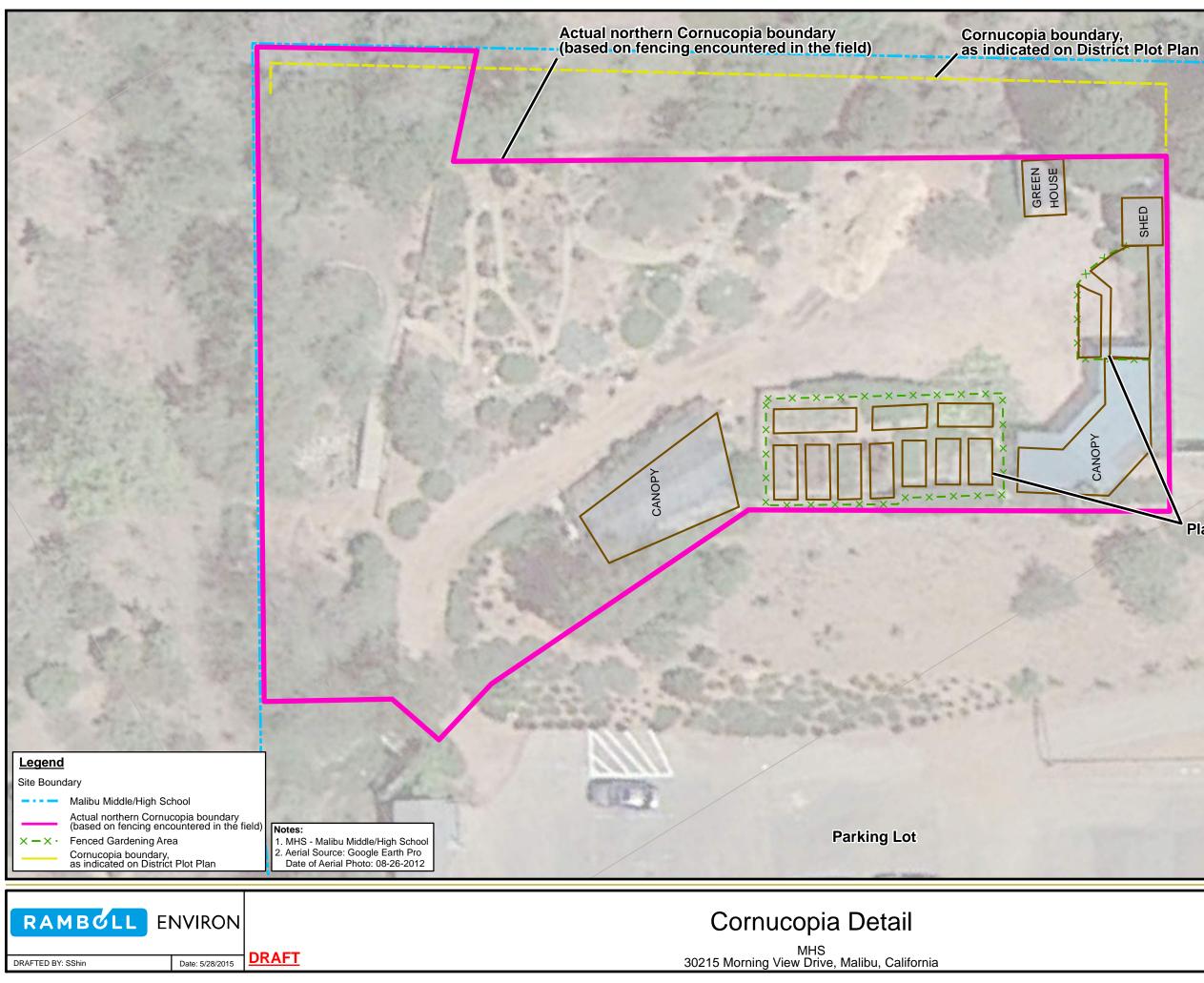


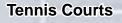


Notes: 1. JCES - Juan Cabrillo Eleme 2. ESHA - Endangered Specie 3. UST - Underground Storage Juan Cabrillo Elementary Sch A - Teachers' Lounge/ Adminis B - Classrooms (1955) C - Classrooms (1957)	es Habitat Area e Tank. <u>ool</u>			1
D - Classrooms (1958) E - Library (1965) F - Art/Computer Labs (1961- G - Multi-Purpose Room/Cafe Sources: 1. Aerial image from Google E 2. Site boundary based on Los 3. Feature labels on JCES pro-	teria (1995) Earth Pro (8/26/ s Angeles Cou	ty GIS parcel data (03/08/2006).		60 Feet
	NVIRON		JCES Detail	Figure 7
RAFTED BY: SShin	Date: 5/27/2015		30237 Morning View Drive, Malibu, California	PROJECT: 04-33980J

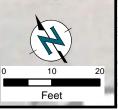
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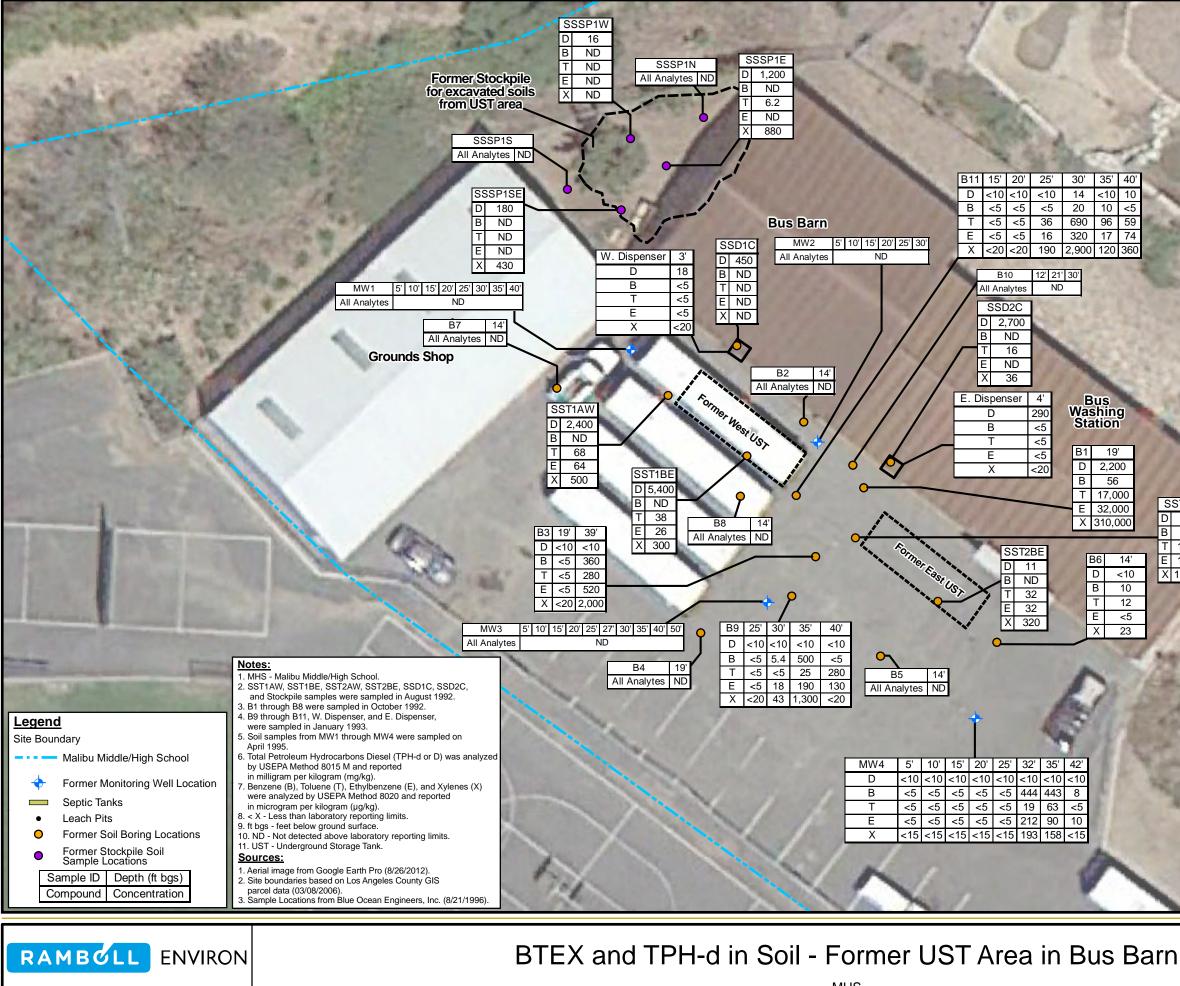


Planting Beds



Figure

9



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Date: 5/11/2015

MHS 30215 Morning View Drive, Malibu, California

Parking Lot

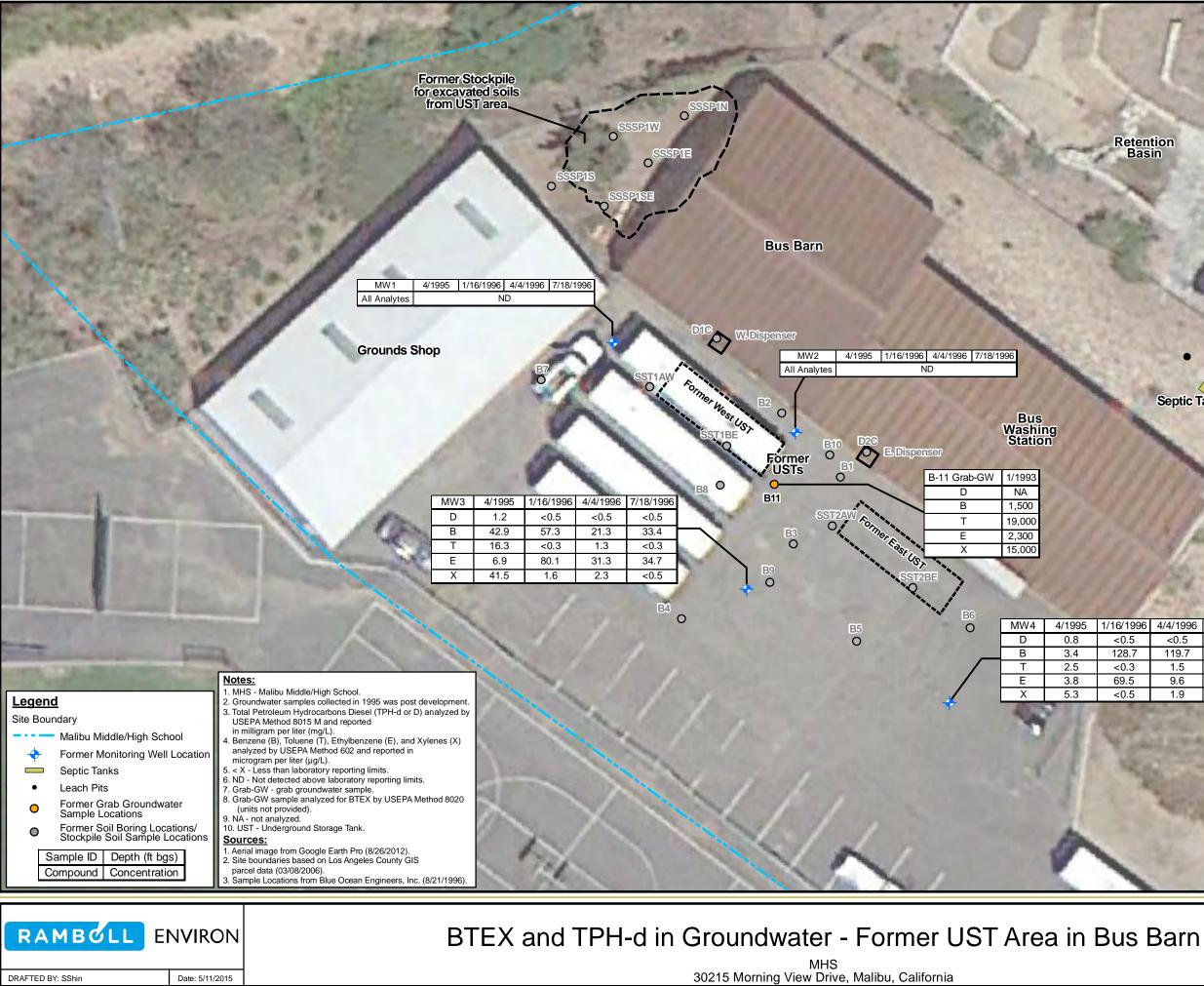


Septic Tank 11

	S	ST2AW
	D	5,800
ſ	В	ND
	Т	10,000
	Е	15,000
	Х	130,000
		The state



Feet



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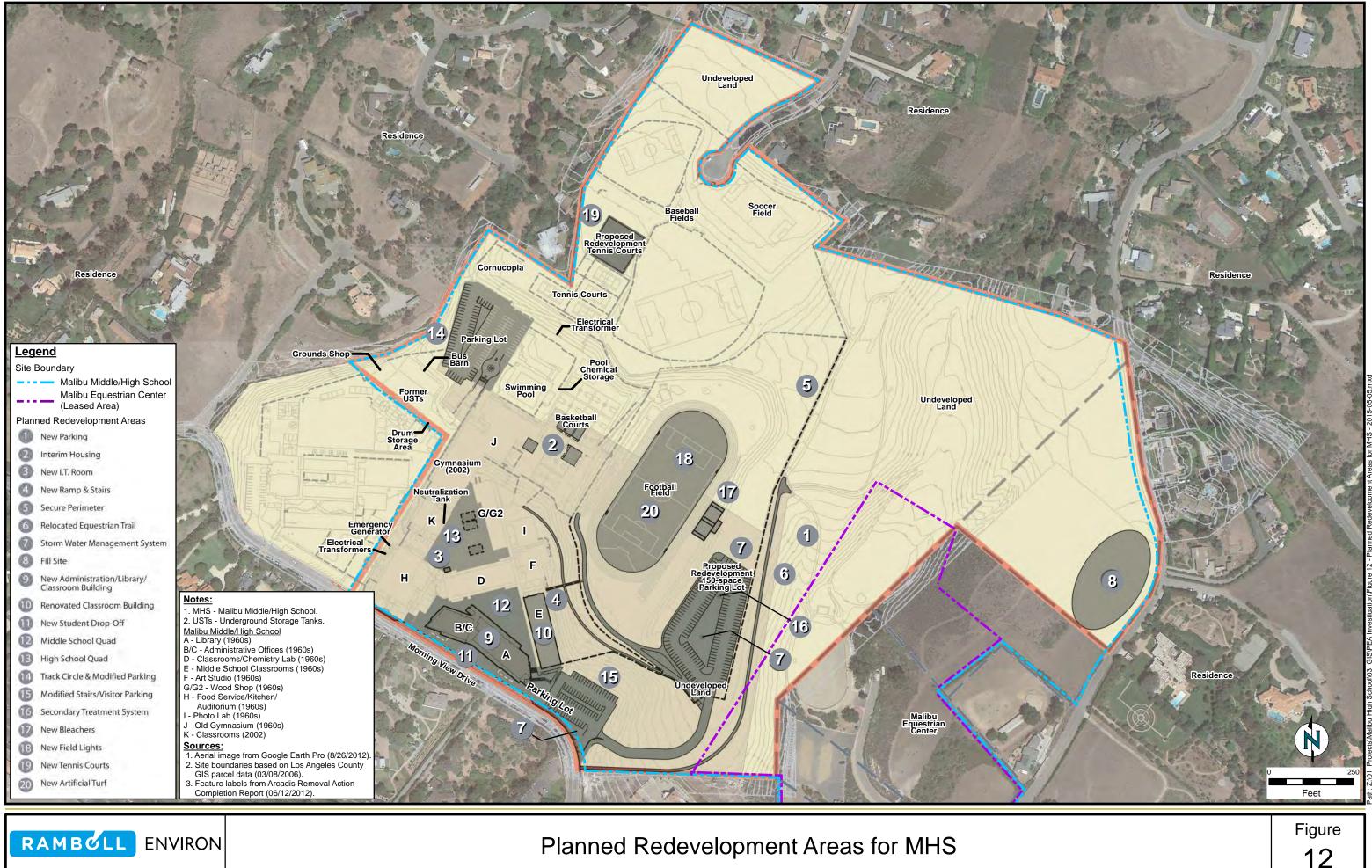


Feet

Parking Lot

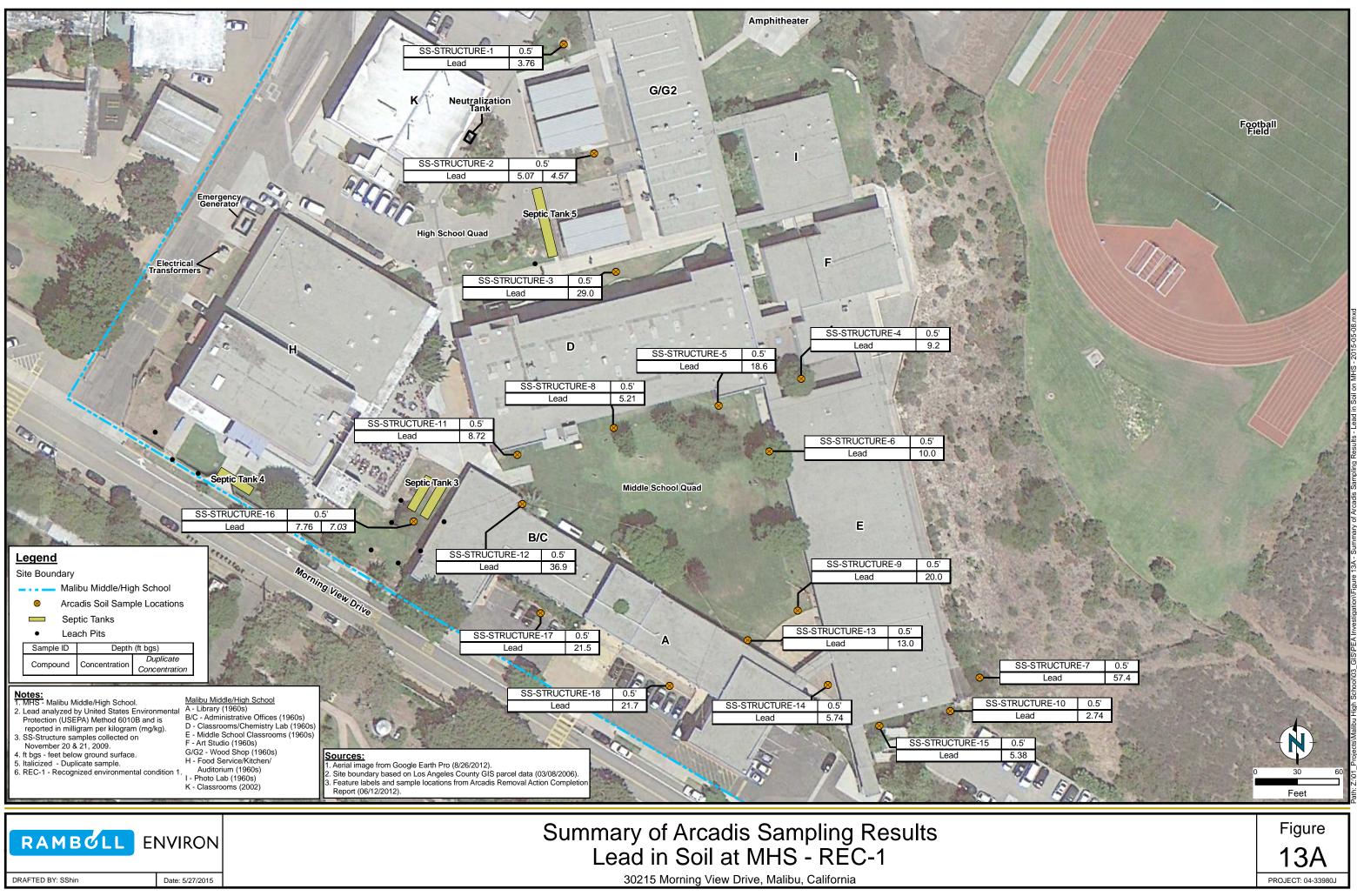
Septic Tank 11

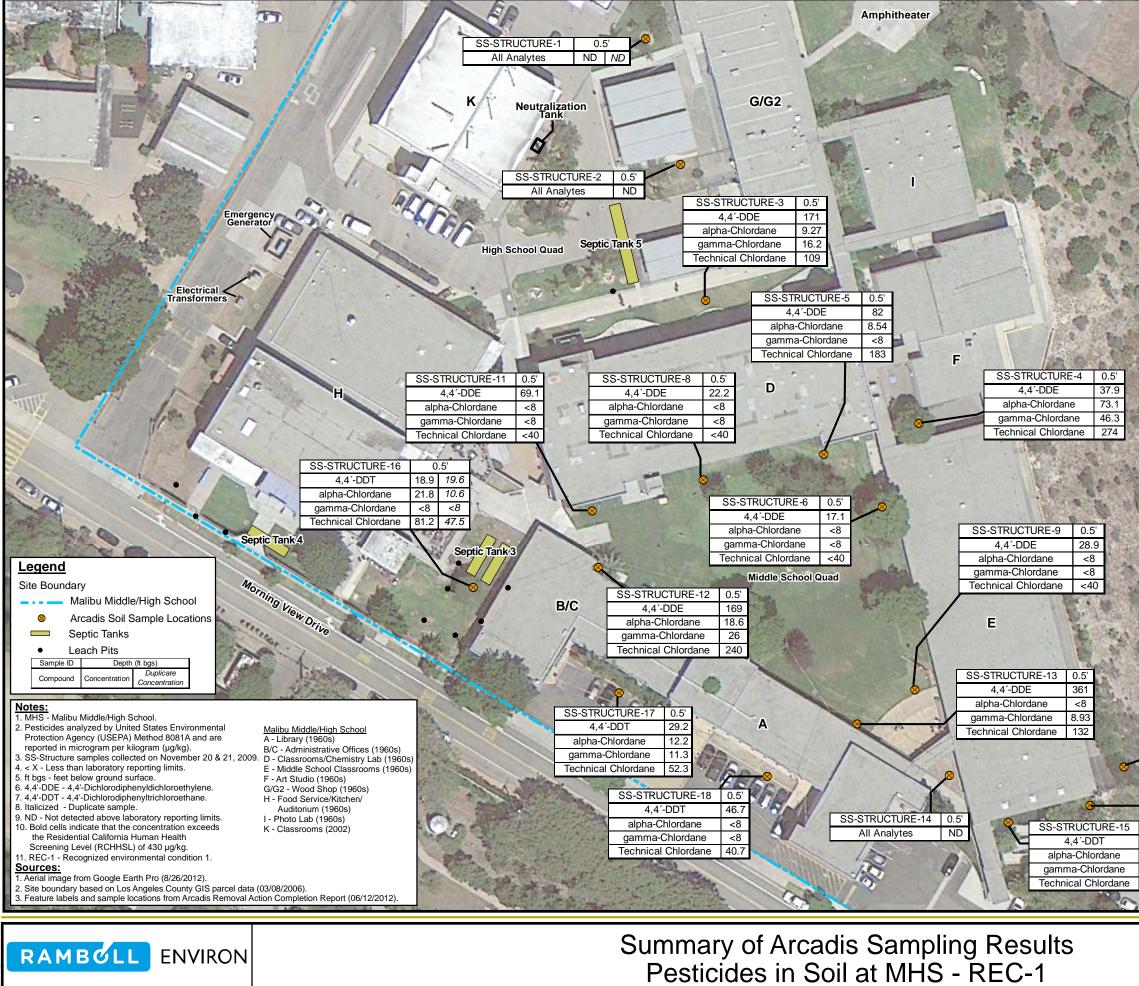
16/1996	4/4/1996	7/18/1996
<0.5	<0.5	<0.5
128.7	119.7	<0.3
<0.3	1.5	<0.3
69.5	9.6	<0.3
<0.5	1.9	< 0.5



Date: 5/27/2015

30215 Morning View Drive, Malibu, California



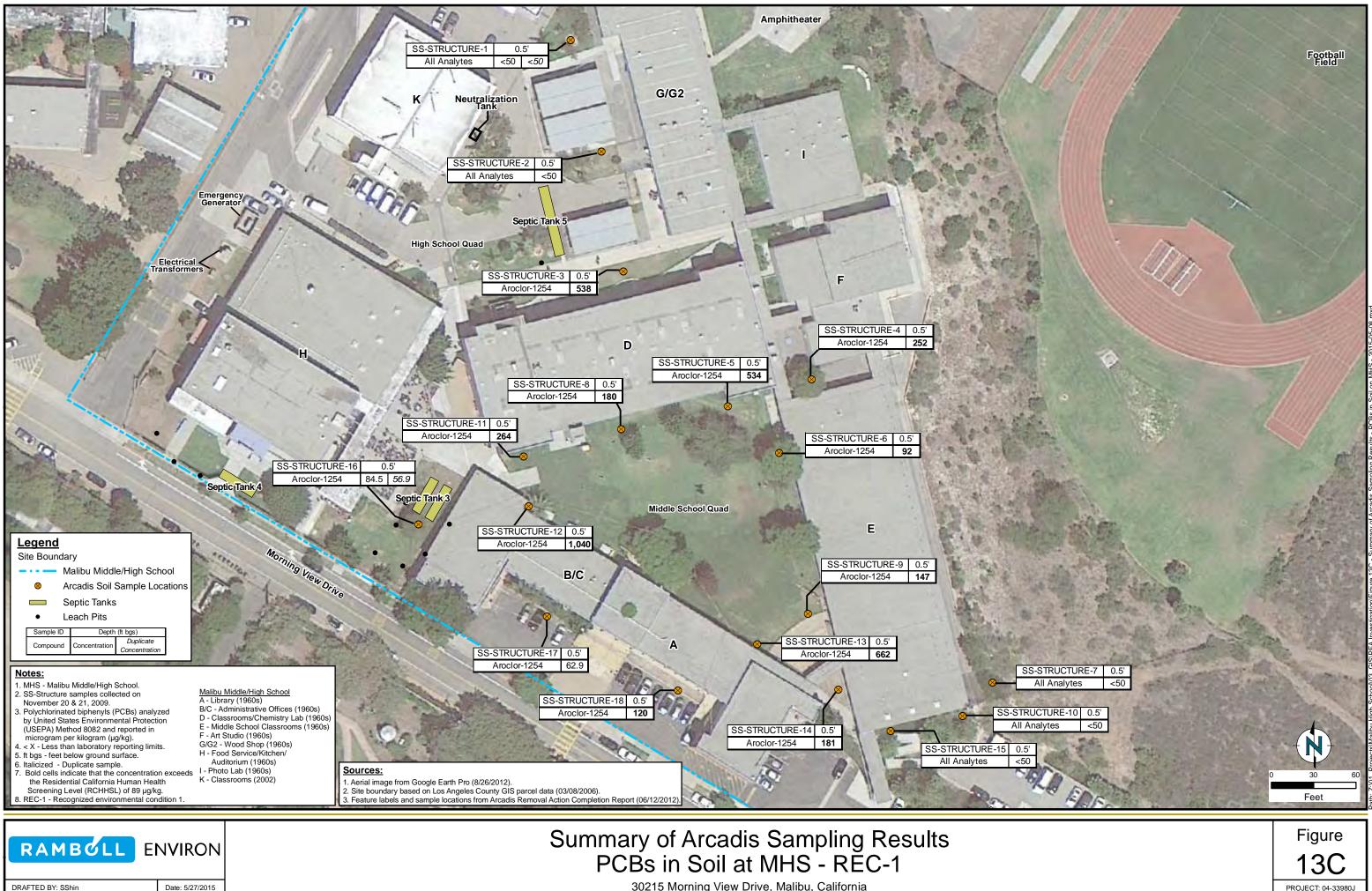


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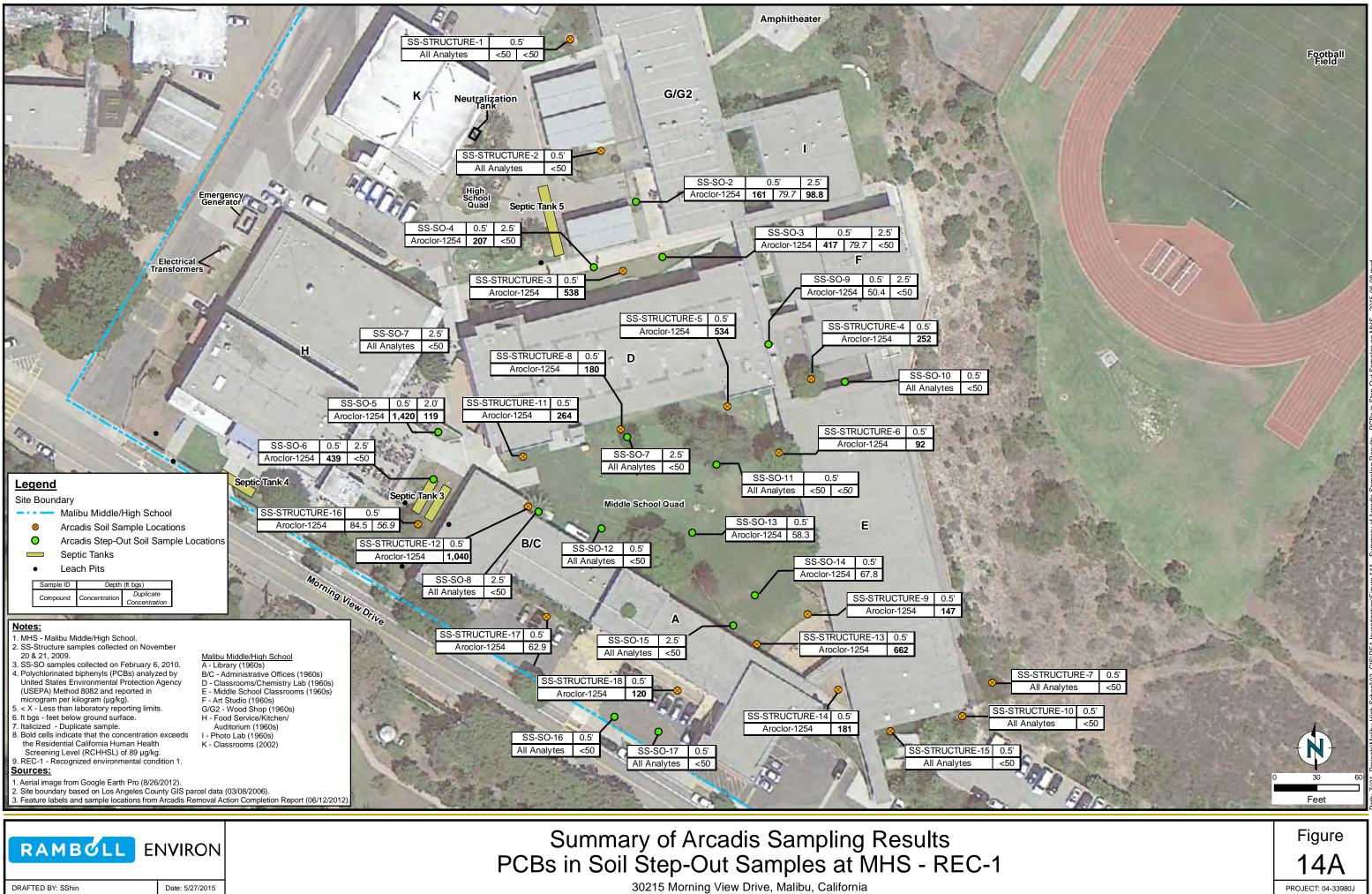
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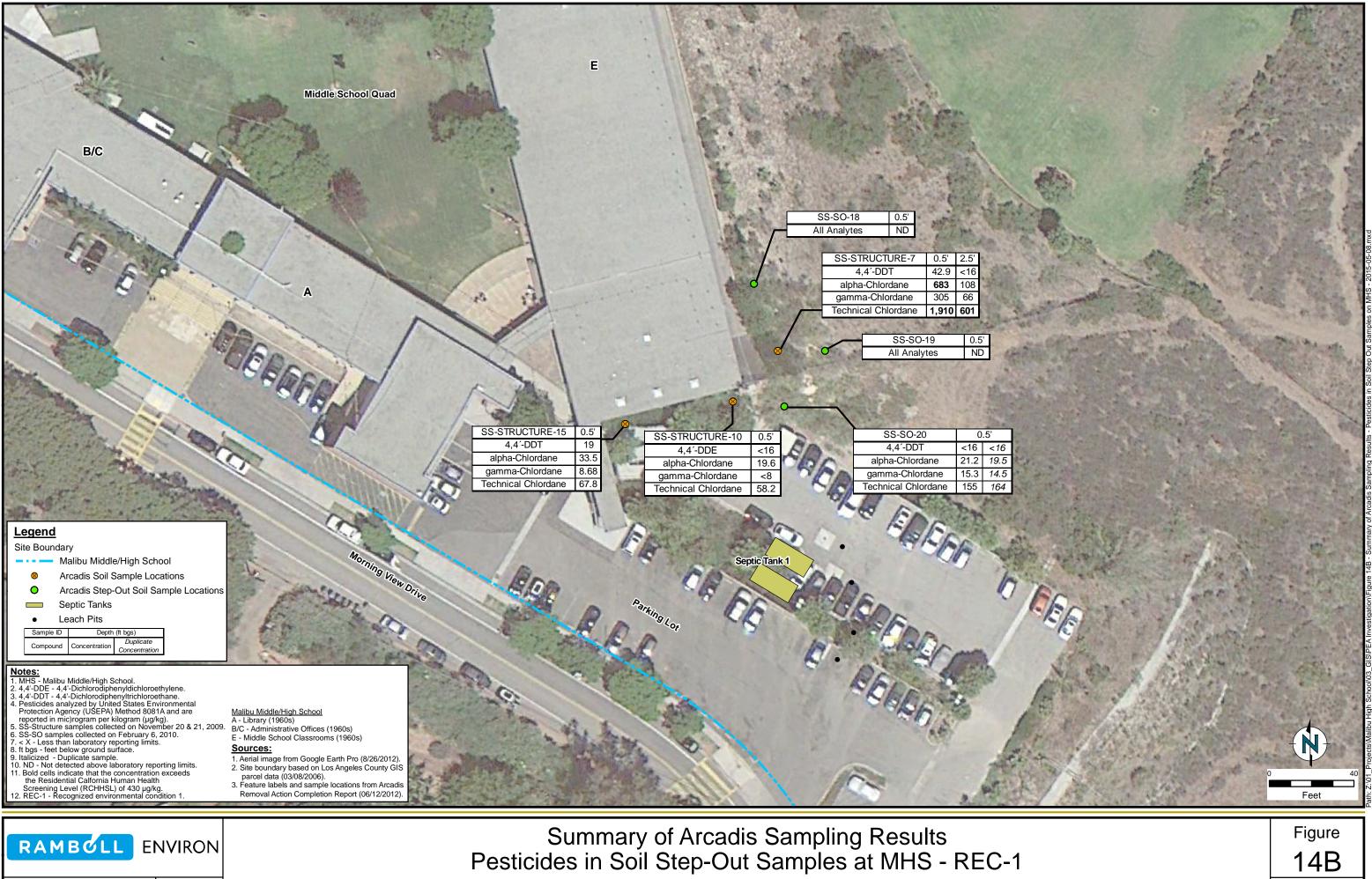
30215 Morning View Drive, Malibu, California

	Football Field
SS-STRUCTURE-7 0.5' 2.5' 4,4'-DDT 42.9 <16 alpha-Chlordane 683 108 gamma-Chlordane 305 66 Technical Chlordane 1,910 601	
SS-STRUCTURE-10 0.5' 4,4'-DDE <16 alpha-Chlordane 19.6 gamma-Chlordane <8 Technical Chlordane 58.2 33.5 8.68 67.8	
	Figure 13B



30215 Morning View Drive, Malibu, California

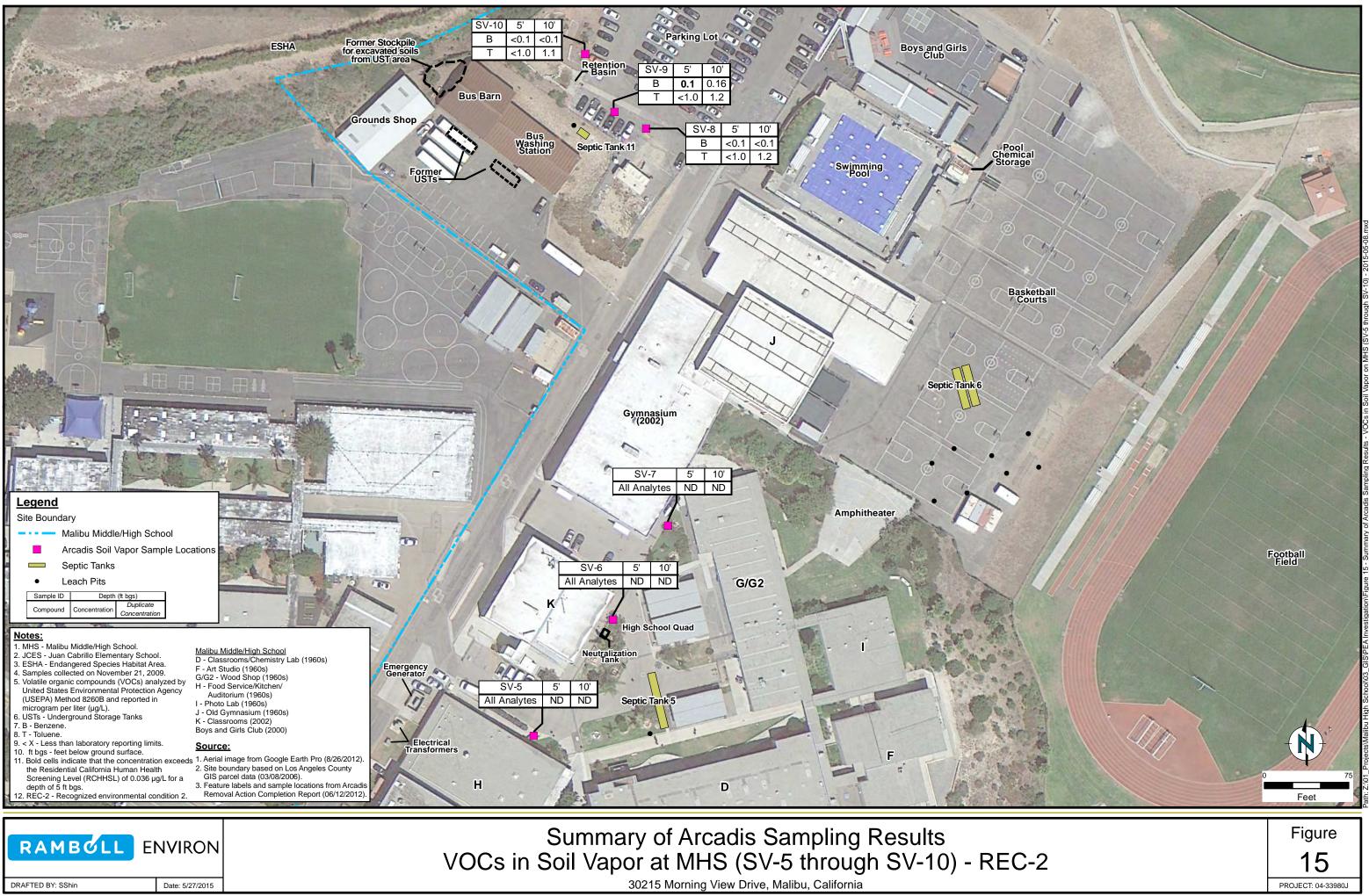


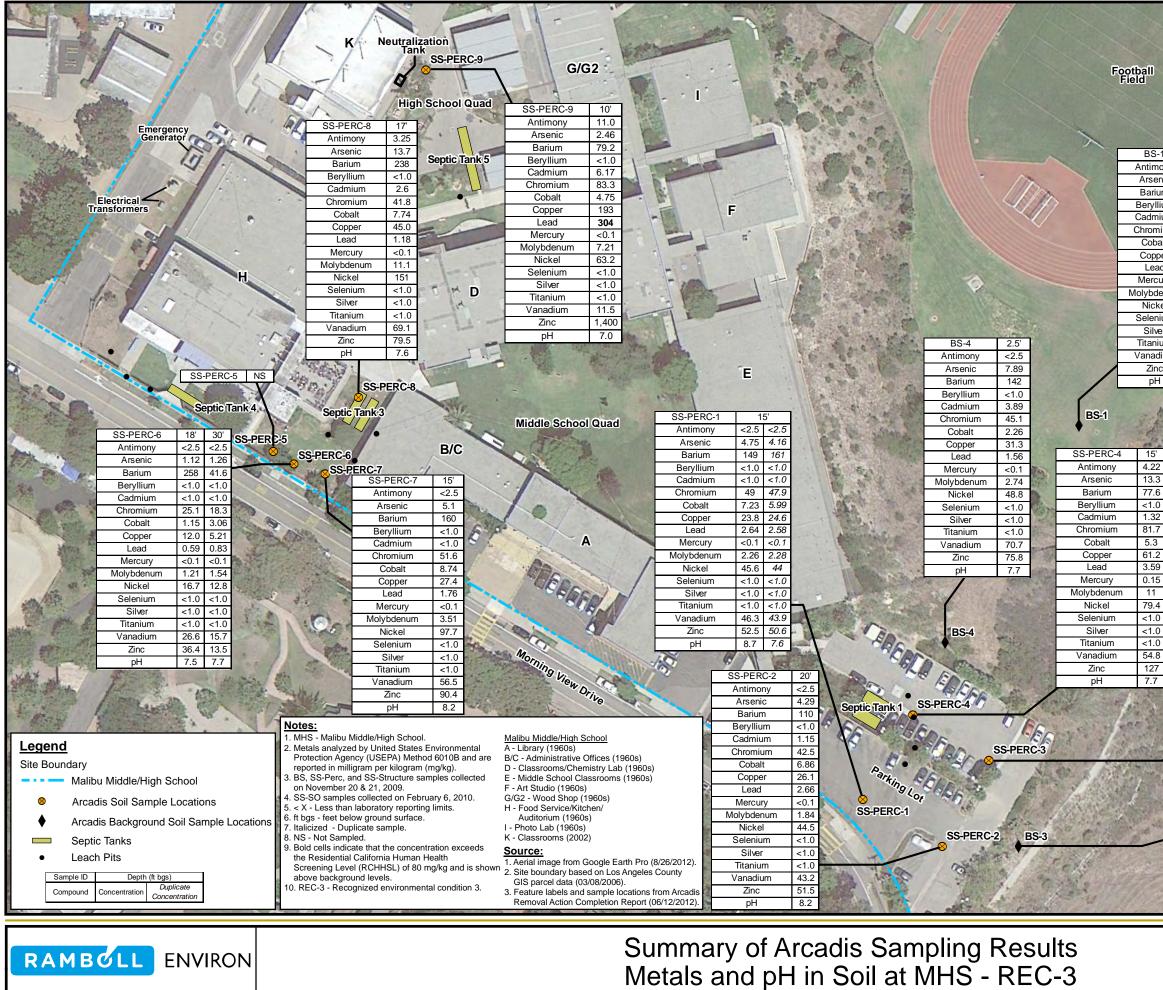


30215 Morning View Drive, Malibu, California

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Date: 5/27/2015





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Date: 5/27/2015

Proposed Redevelopment 150-space Parking Lot

BS-1	2.5'	
ntimony	<2.5	1
Arsenic	3.88	0
Barium	49.1	~
eryllium	<1.0	2
admium	1.08	2
nromium	46.5	9
Cobalt	12.6	1
Copper	17.3	l
Lead	2.36	2
lercury	<0.1	4
ybdenum	2.36	
Nickel	41.5	-
elenium	<1.0	10
Silver	<1.0	No. A
itanium	<1.0	A
anadium	45.9	
Zinc	36	4
рН	7.6	12.5

200	Martin Car	AL A
-	SS-PERC-3	10'
1	Antimony	<2.5
15	Arsenic	7.89
100	Barium	217
	Beryllium	<1.0
1	Cadmium	1.55
1	Chromium	55.3
12	Cobalt	6.56
10	Copper	32.8
10-	Lead	2.59
1	Mercury	<0.1
in the	Molybdenum	4.38
24	Nickel	55.3
1	Selenium	<1.0
10	Silver	<1.0
an of	Titanium	<1.0
30	Vanadium	58.5
150	Zinc	65.7
14	pН	7.7

BS-3

Antimony

Arsenic

Barium

Beryllium

Cadmium

Chromium

Cobalt

Copper

Lead

Mercury

Molybdenum

Nickel

Selenium

Silver

Titanium

Vanadium

Zinc

pН

2.5'

<2.5

10.6

211

<1.0

4.77

49.8

2.47

30.6

1.23

<0.1

8.36

51.1

<1.0

<1.0

<1.0

92.8

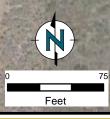
75.1

7.7

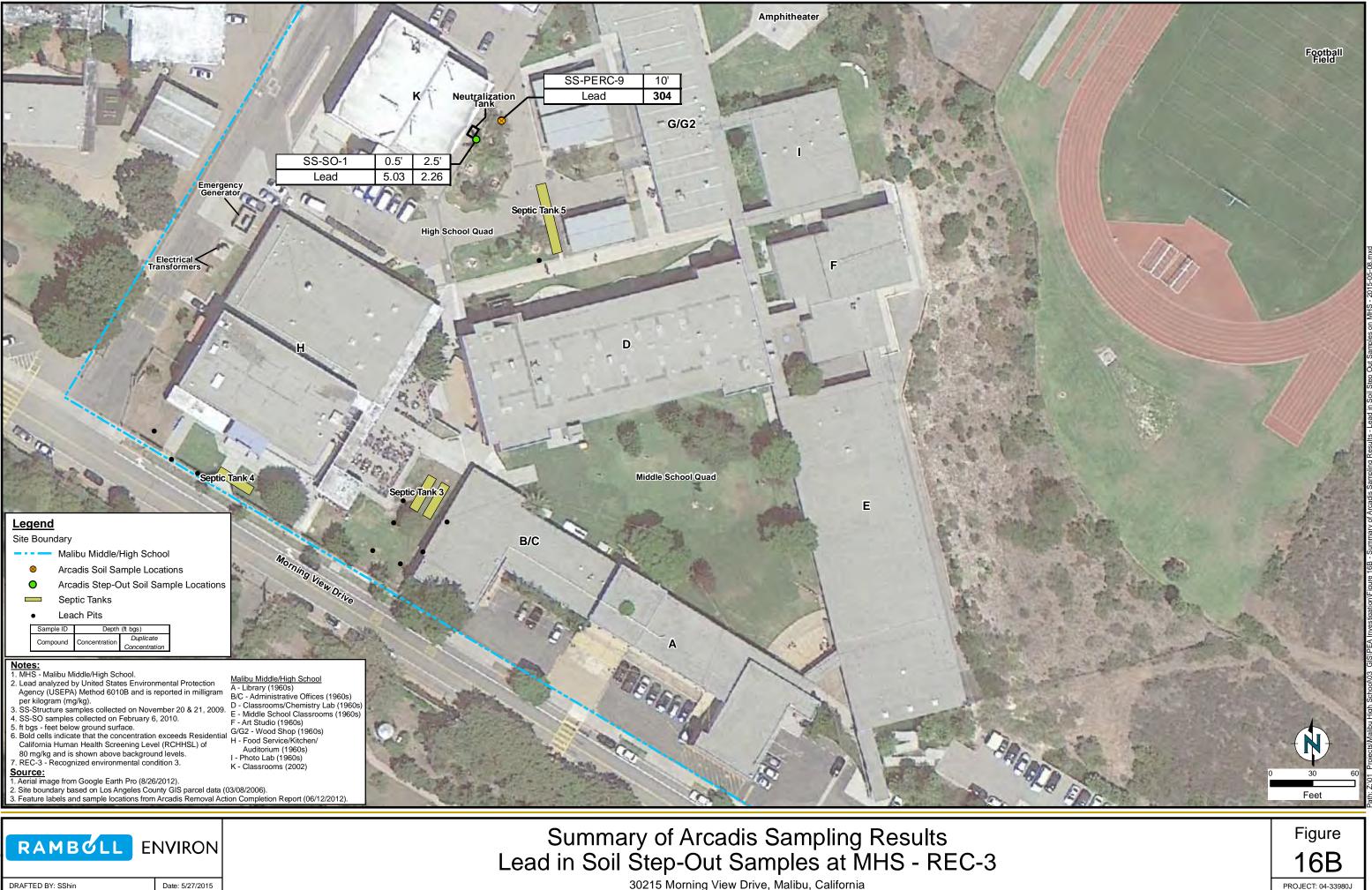
BS-2

BS-2	2.5'
Antimony	<2.5
Arsenic	3.59
Barium	102
Beryllium	<1.0
Cadmium	1.05
Chromium	57.2
Cobalt	14.3
Copper	26.4
Lead	4.1
Mercury	<0.1
Molybdenum	3.17
Nickel	62.6
Selenium	<1.0
Silver	<1.0
Titanium	<1.0
Vanadium	54.8
Zinc	47.4
рН	7.6
Carlora - States 7	ALC: NO. OF STREET,

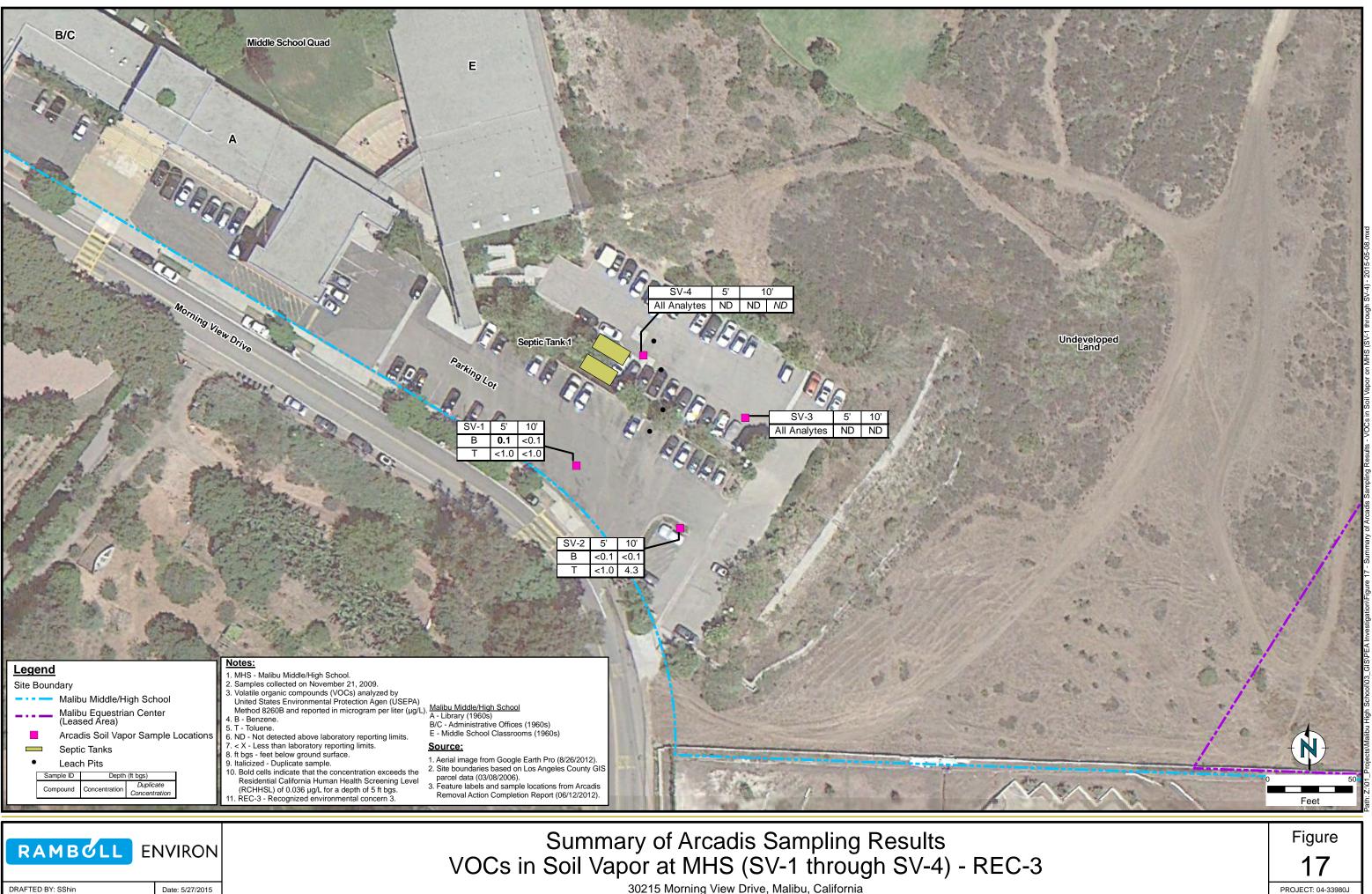
Unde	vel	lop	ec
300	an	d.	

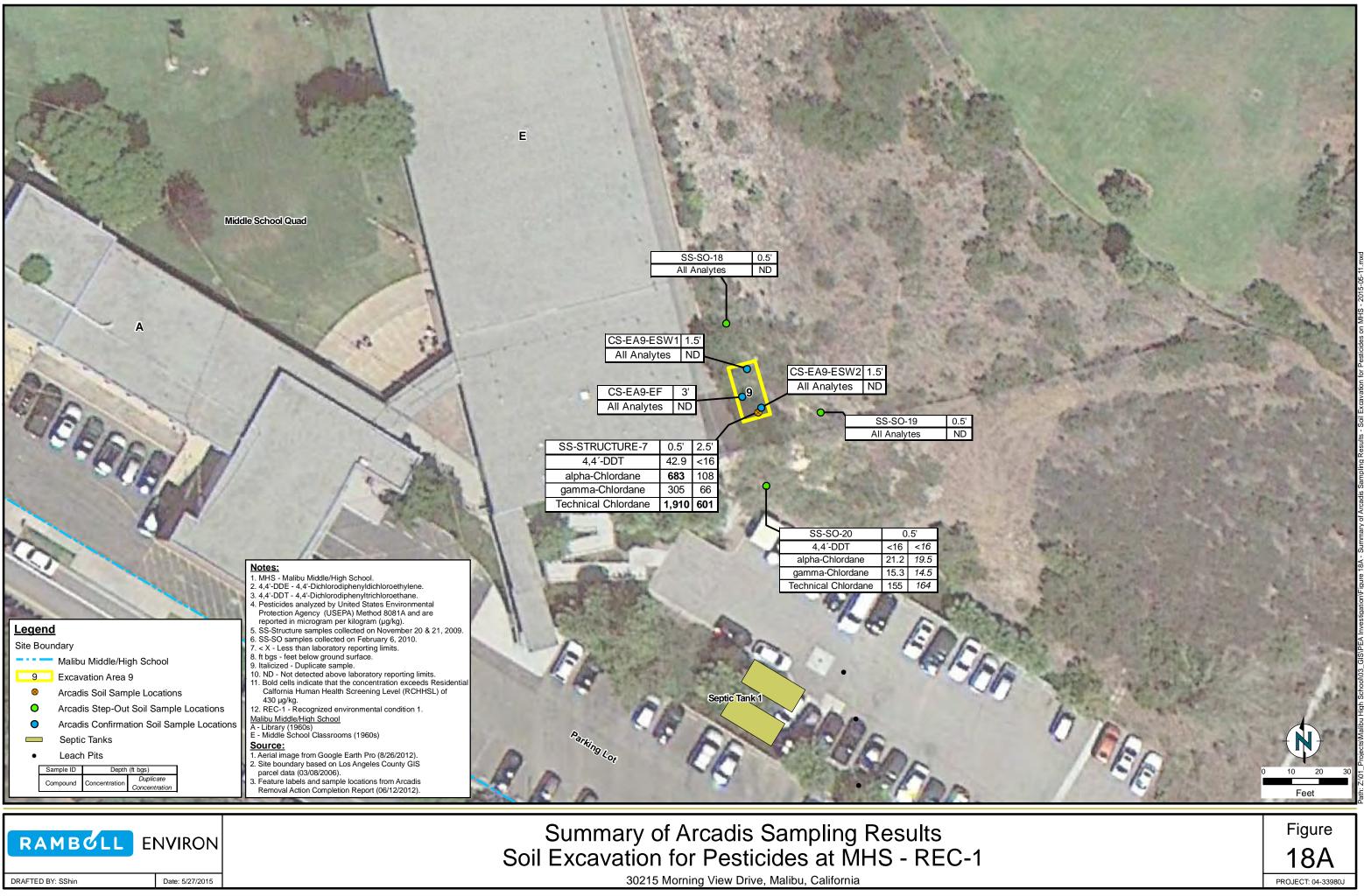


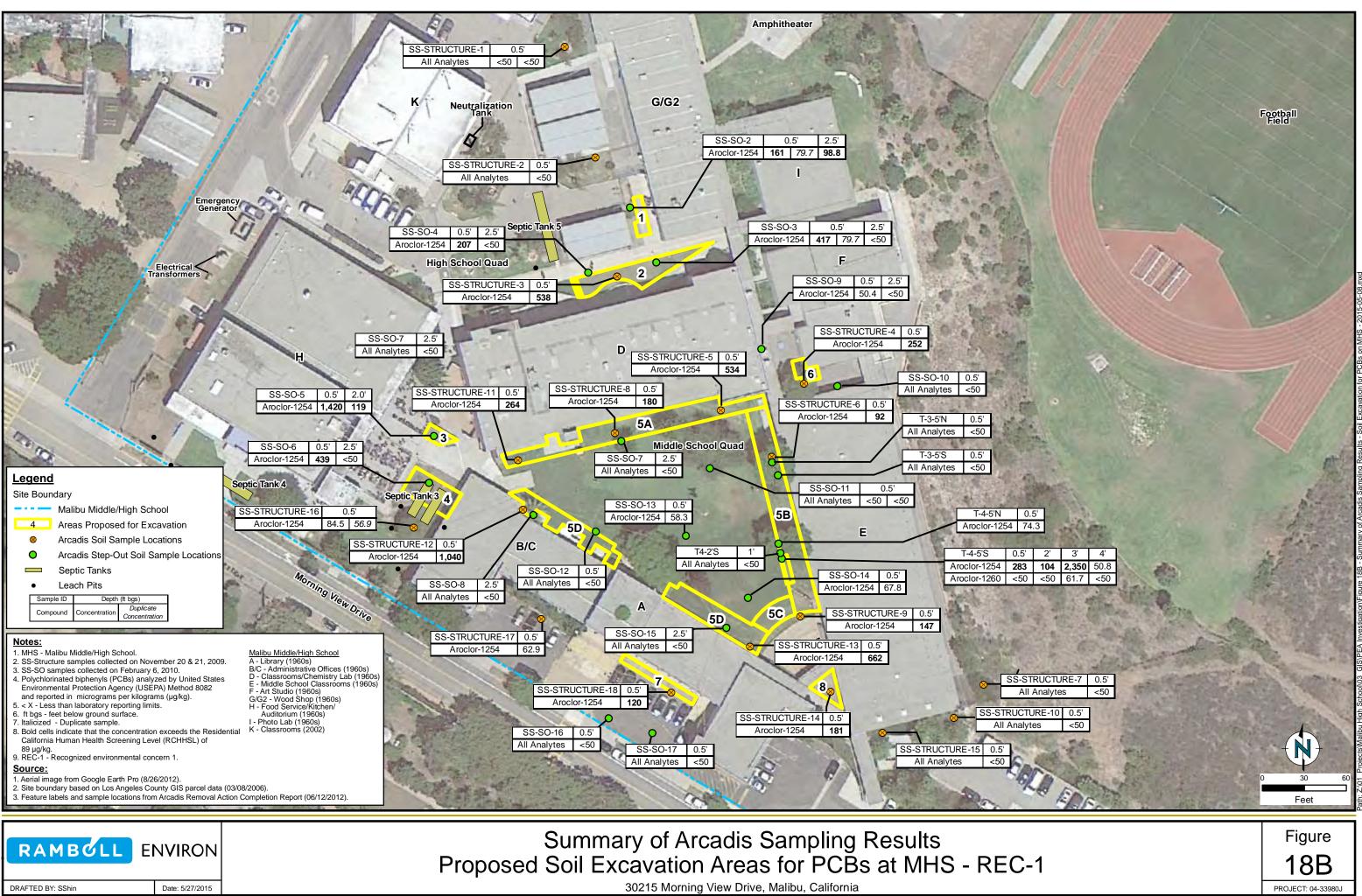


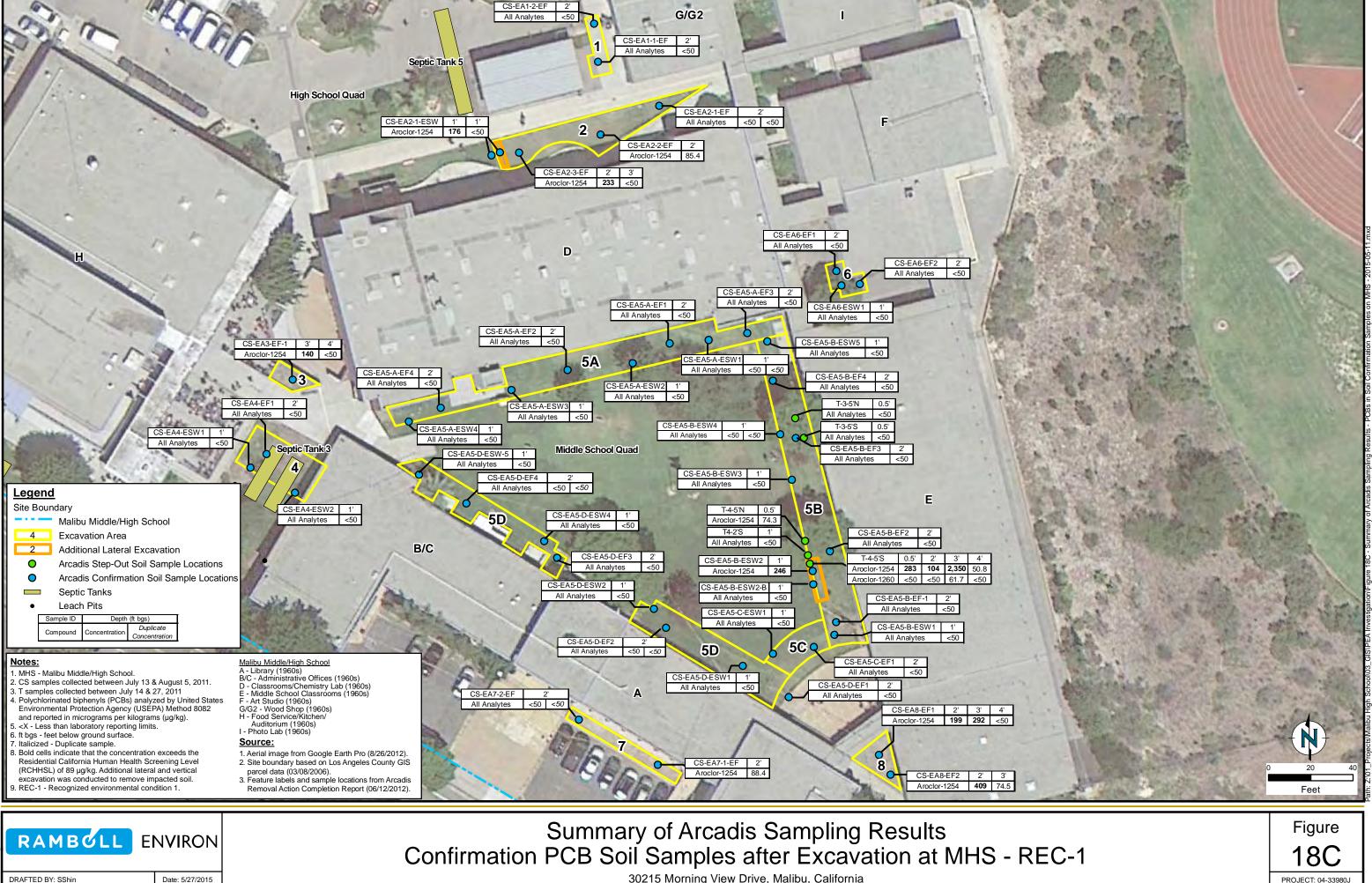


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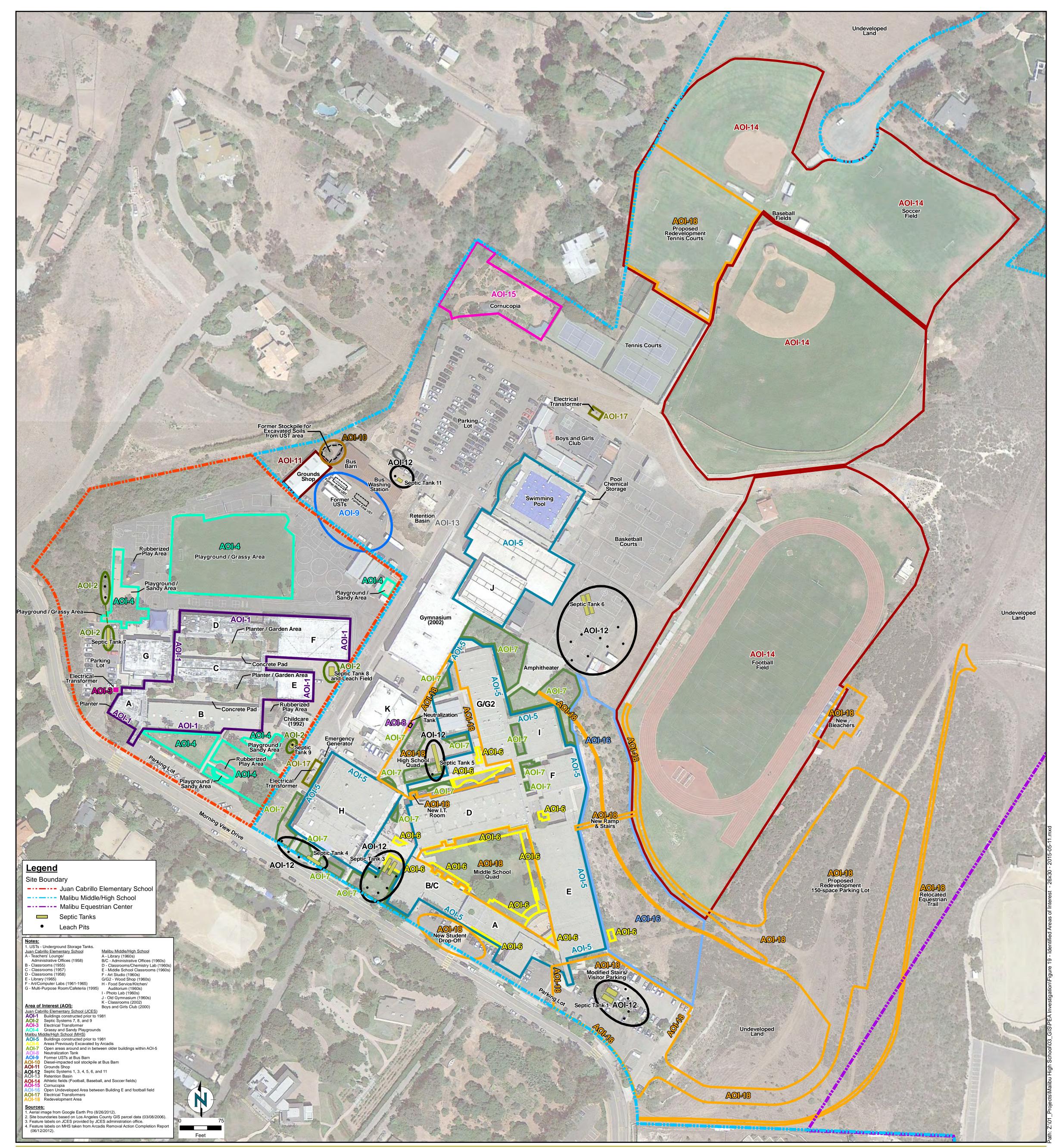




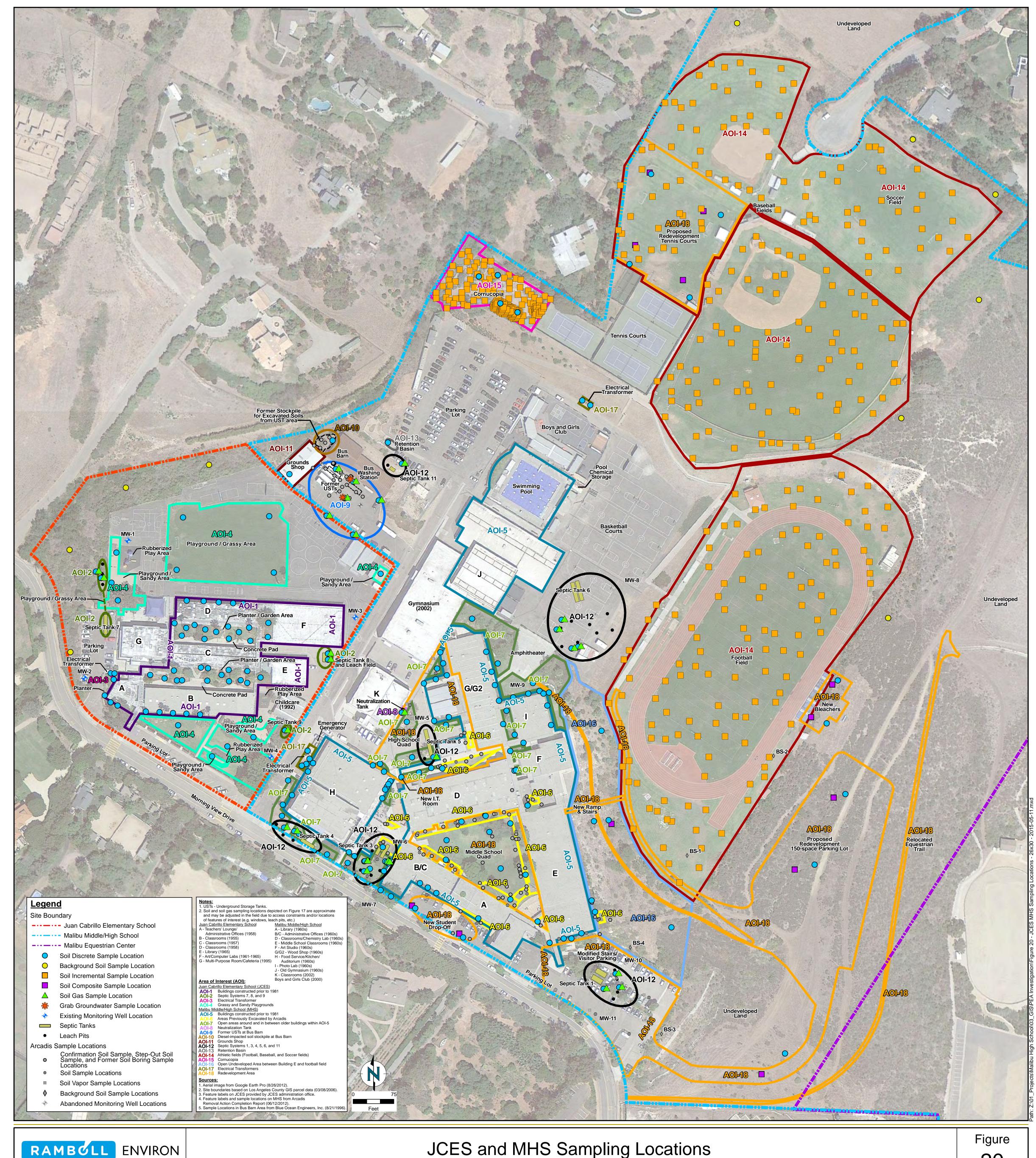




DRAFTED BY: SShin



RAMBOLL EN	IVIRON	Identified Areas of Interest MHS and JCES	Figure 19
DRAFTED BY: SShin	Date: 5/13/2015	30237 and 30215 Morning View Drive, Malibu, California	PROJECT: 04-33980J

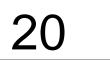


JCES and MHS Sa	mpling Location	١S
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ENVIRON

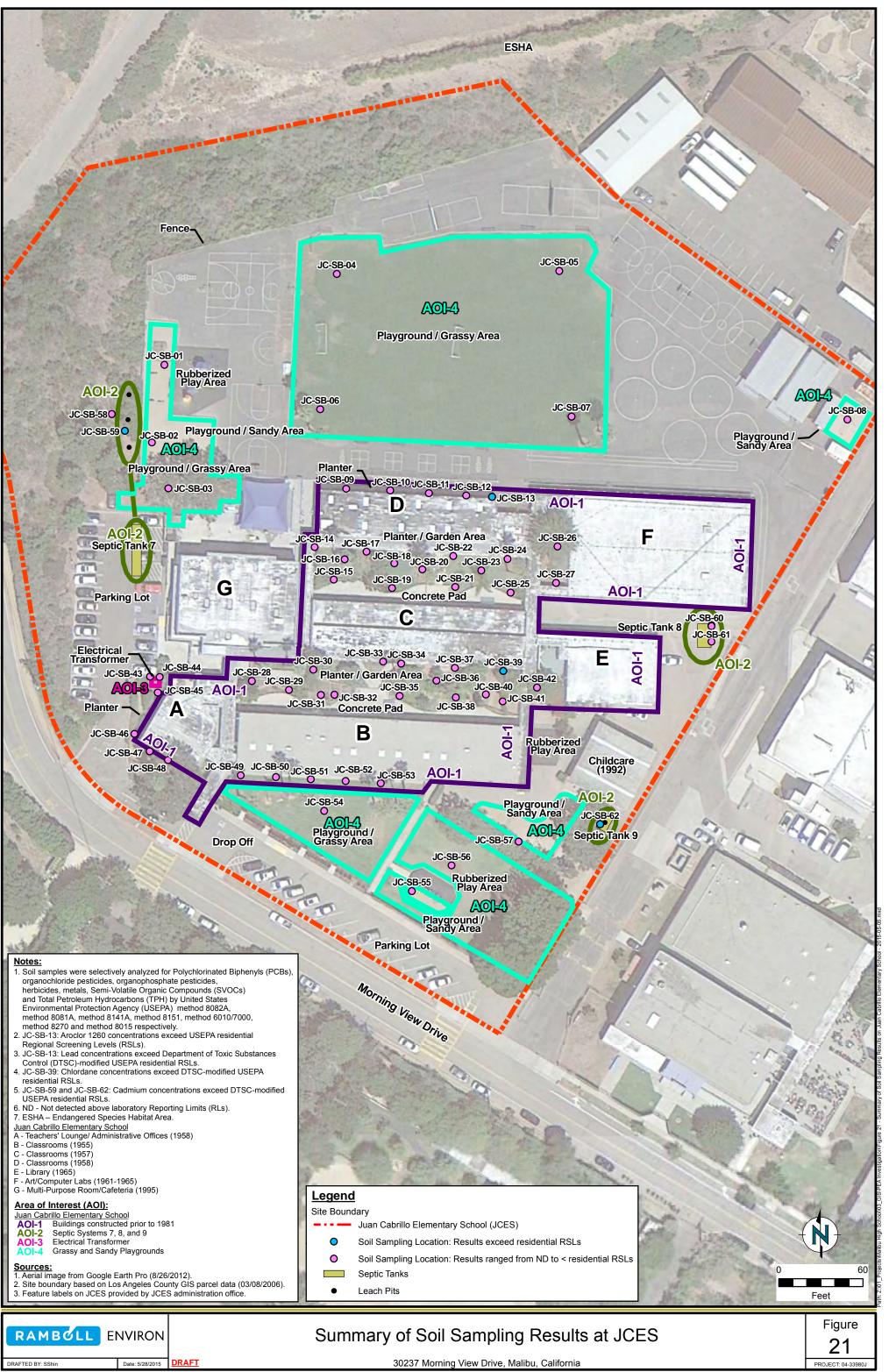
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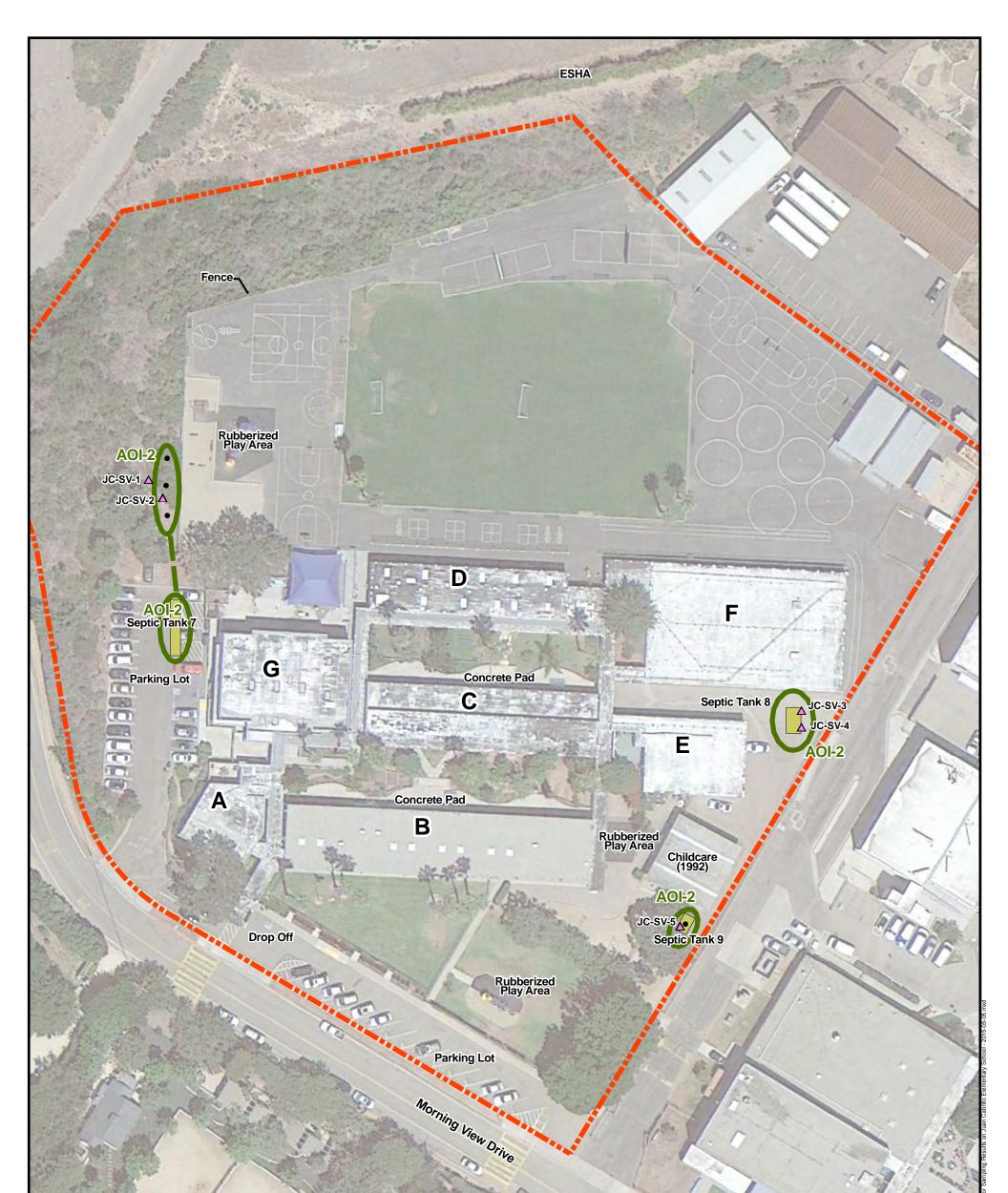
DRAFTED BY: SShin



PROJECT: 04-33980J

30237 and 30215 Morning View Drive, Malibu, California





- Notes: 1. Soil vapor samples were analyzed for Volatile Organic Compounds (VOCs) by United States Environmental Protection Agency (USEPA) method 8260B.
- 2. RLs Reporting Limits.
- 3. ESHA Endangered Species Habitat Area.

- Juan Cabrillo Elementary School A Teachers' Lounge/ Administrative Offices (1958)
- B Classrooms (1955) C Classrooms (1957) D Classrooms (1958)

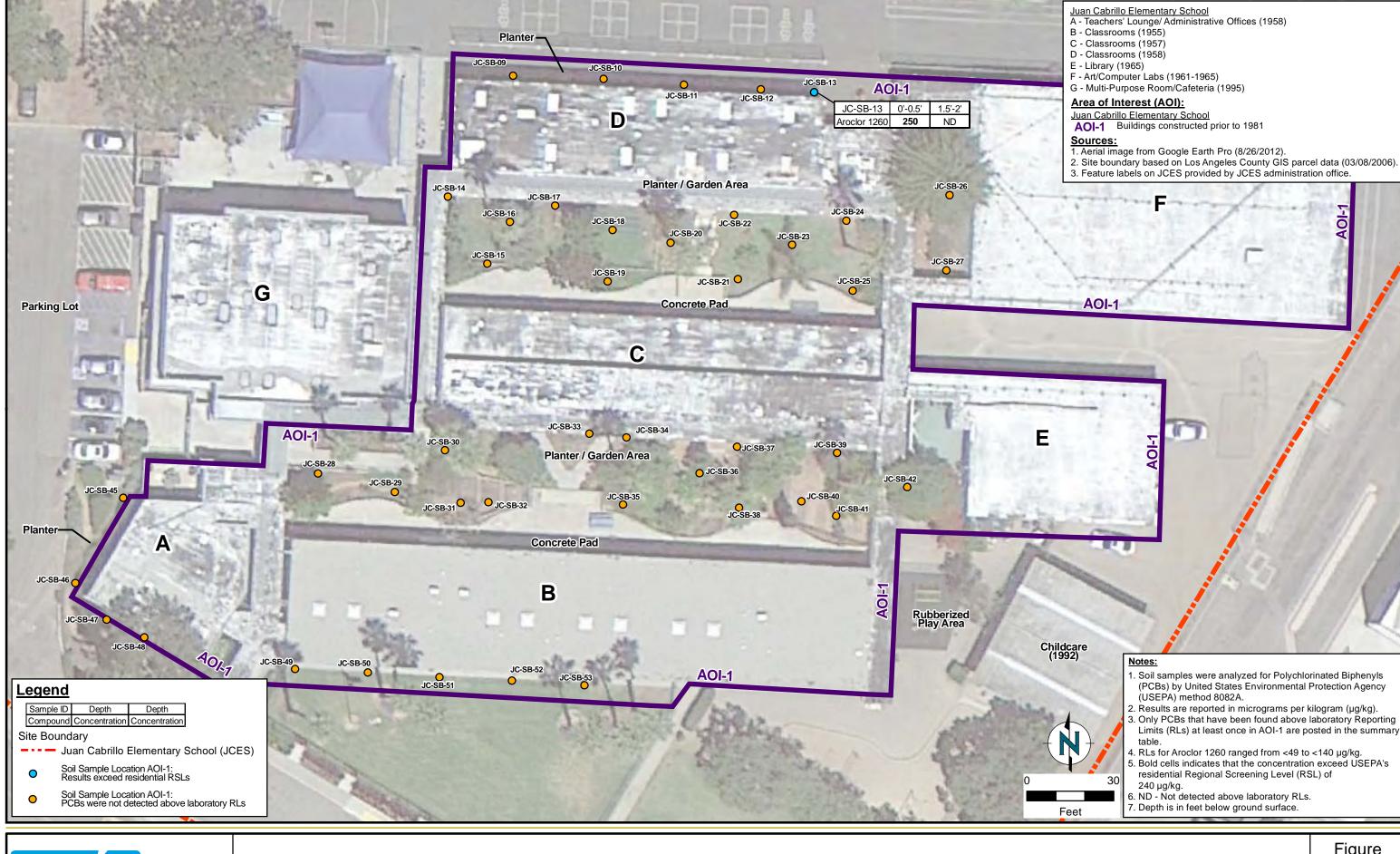
- E Library (1965) F Art/Computer Labs (1961-1965) G Multi-Purpose Room/Cafeteria (1995)

Area of Interest (AOI):

Juan Cabrillo Elementary School AOI-2 Septic Systems 7, 8, and 9

Legend Site Boundary Juan Cabrillo Elementary School (JCES) Soil Vapor Sample Location: VOCs were not detected above laboratory RLs Δ Sources: 1. Aerial image from Google Earth Pro (8/26/2012). 2. Site boundary based on Los Angeles County GIS parcel data (03/08/2006). 3. Feature labels on JCES provided by JCEs administration office. 0 60 Septic Tanks Leach Pits • Feet





RAMBOLL ENVIRON DRAFTED BY: SShin Date: 5/28/2015

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PCBs in Soil at JCES - AOI-1

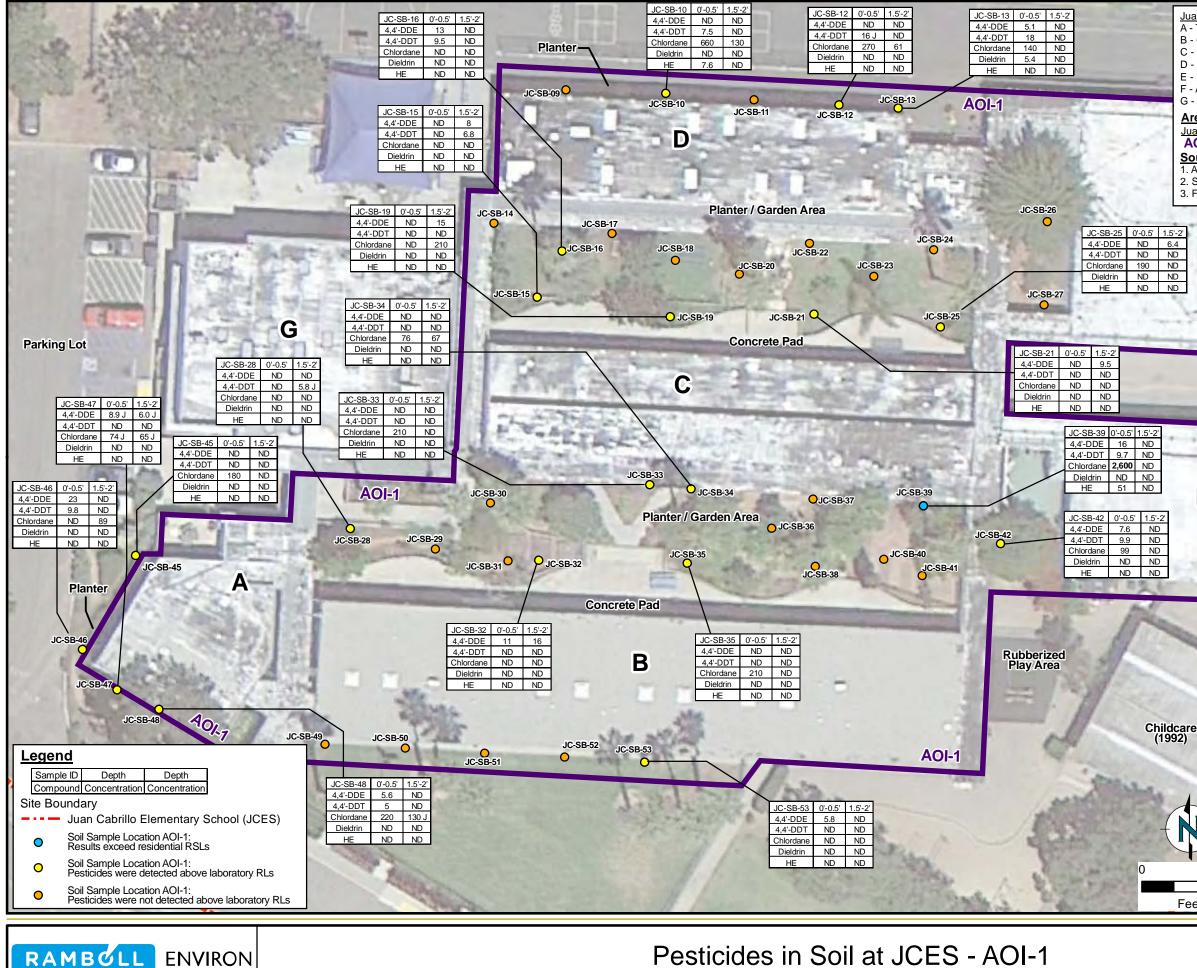
30237 Morning View Drive, Malibu, California

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Figure

23

PROJECT: 04-33980J



Date: 5/28/2015

DRAFTED BY: SShin

DRAFT



- A Teachers' Lounge/ Administrative Offices (1958)
- B Classrooms (1955)
- C Classrooms (1957)
- D Classrooms (1958)
- E Library (1965)
- F Art/Computer Labs (1961-1965) G - Multi-Purpose Room/Cafeteria (1995)

Area of Interest (AOI):

AOI-1

Juan Cabrillo Elementary School

AOI-1 Buildings constructed prior to 1981

Sources:

- 1. Aerial image from Google Earth Pro (8/26/2012).
- 2. Site boundary based on Los Angeles County GIS parcel data (03/08/2006).

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3. Feature labels on JCES provided by JCES administration office.

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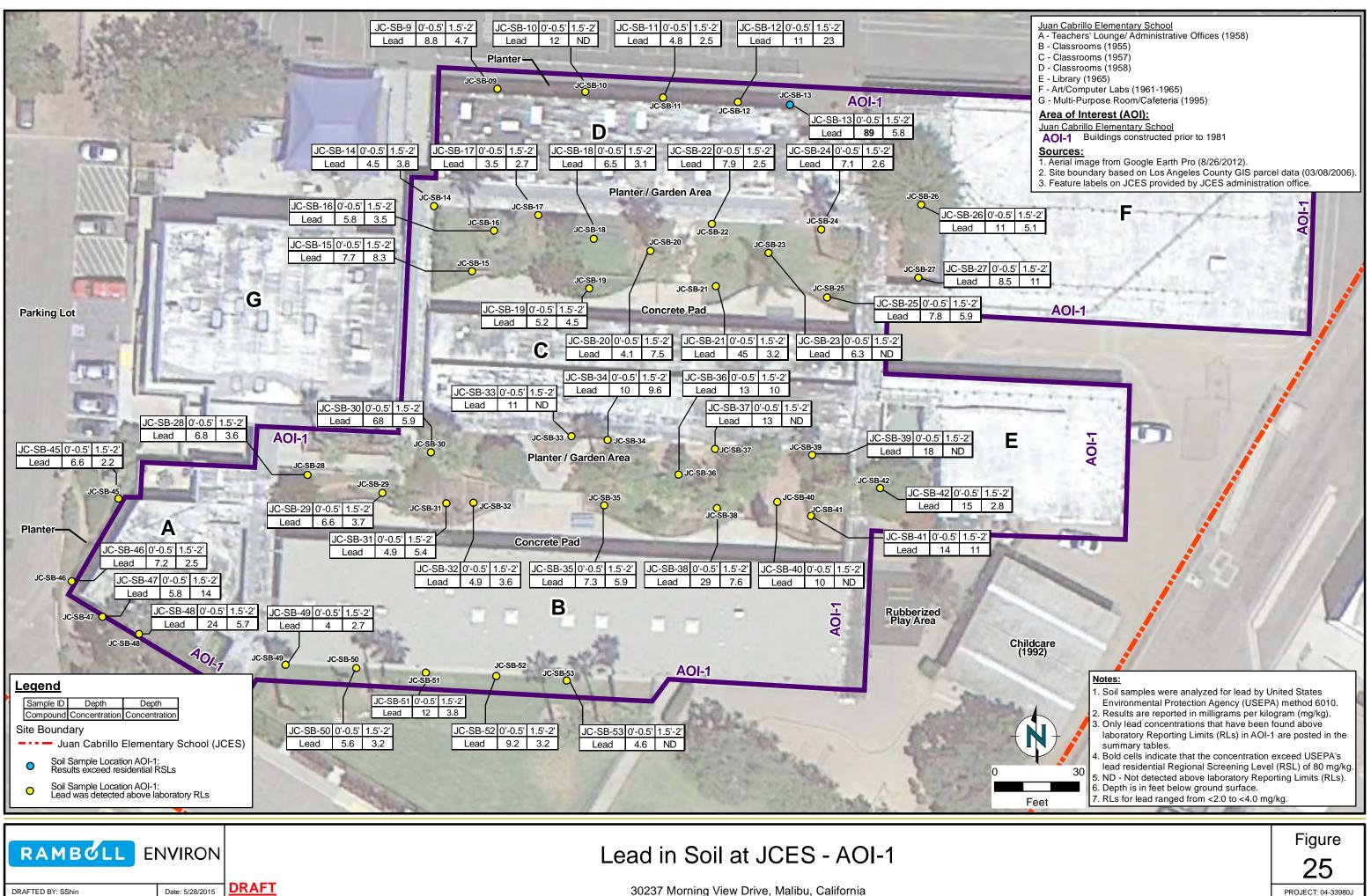


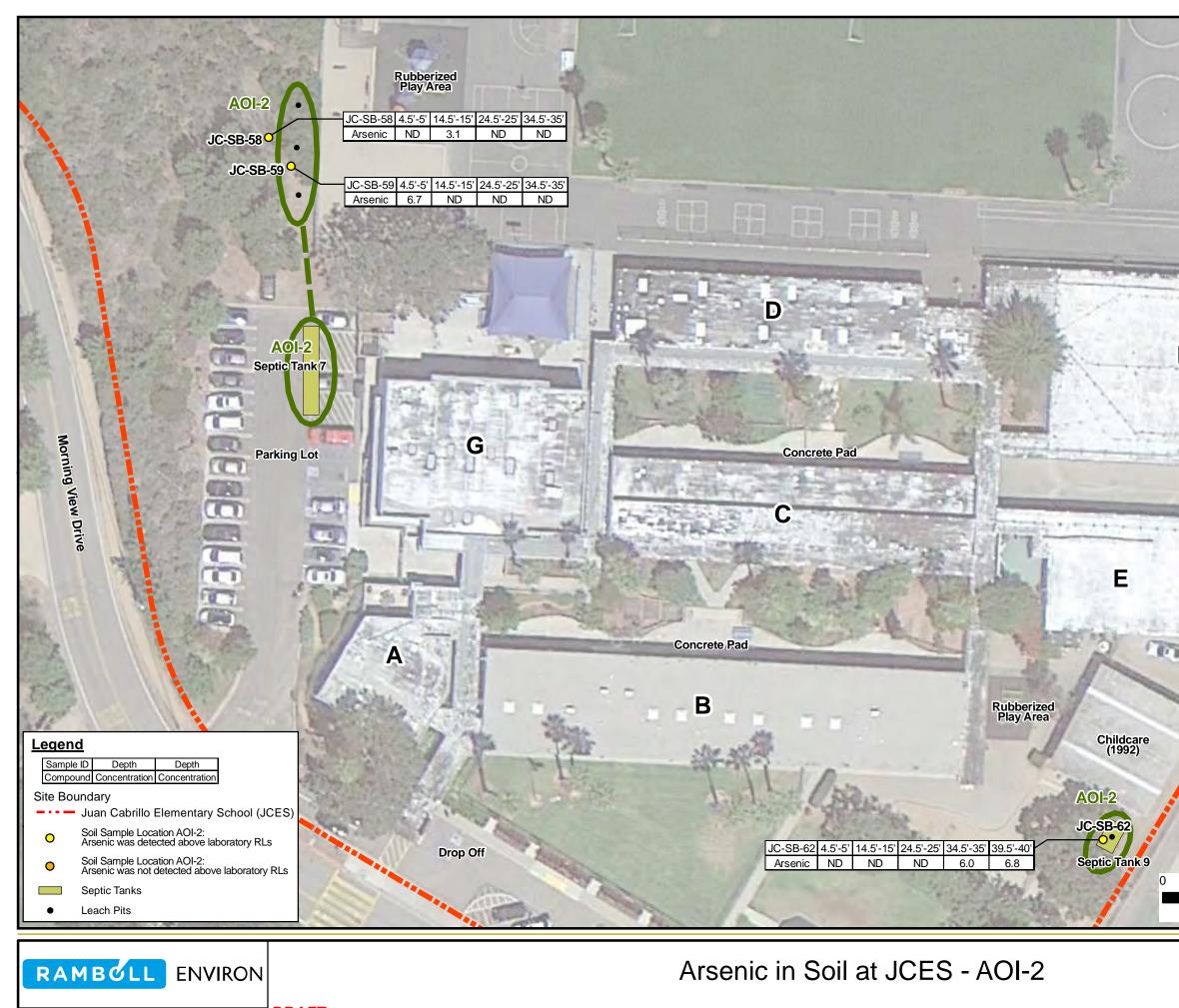
30

Feet

- 1. Soil samples were analyzed for Pesticides by United States Environmental Protection Agency (USEPA) method 8081.
- 2. Results are reported in micrograms per kilogram (µg/kg).
- 3. Only Pesticides that have been found above laboratory Reporting Limits (RLs) at least once in AOI-1 are posted in the summary tables.
- . RLs for dichlorodiphenyldichloroethylene (4,4'-DDE), dichlorodiphenyltrichloroethane (4,4-DDT), dieldrin and heptachlor epoxide ranged from <4.8 to <5.0 µg/kg. RLs for chlordane ranged from <48 to <50 µg/kg.
- . ND not detected above laboratory RLs. . Bold cells indicate that the concentration exceed USEPA's
- chlordane residential Regional Screening Level (RSL) of 1,800 µg/kg.
- . J Results and or reporting limits are estimated.
- 8. HE Heptachlor epoxide.
- 9. Depth is in feet below ground surface.







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DRAFT Date: 5/28/2015

Juan Cabrillo Elementary School

- A Teachers' Lounge/ Administrative Offices (1958)
- B Classrooms (1955) C Classrooms (1957)
- D Classrooms (1958) E Library (1965)
- F Art/Computer Labs (1961-1965) G - Multi-Purpose Room/Cafeteria (1995)

Area of Interest (AOI):

Juan Cabrillo Elementary School AOI-2 Septic Systems 7, 8, and 9

Sources:

F

- 1. Aerial image from Google Earth Pro (8/26/2012).
- Site boundary based on Los Angeles County GIS parcel data (03/08/2006).
 Feature labels on JCES provided by JCES administration office.



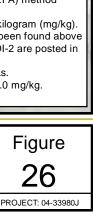
Notes:

40

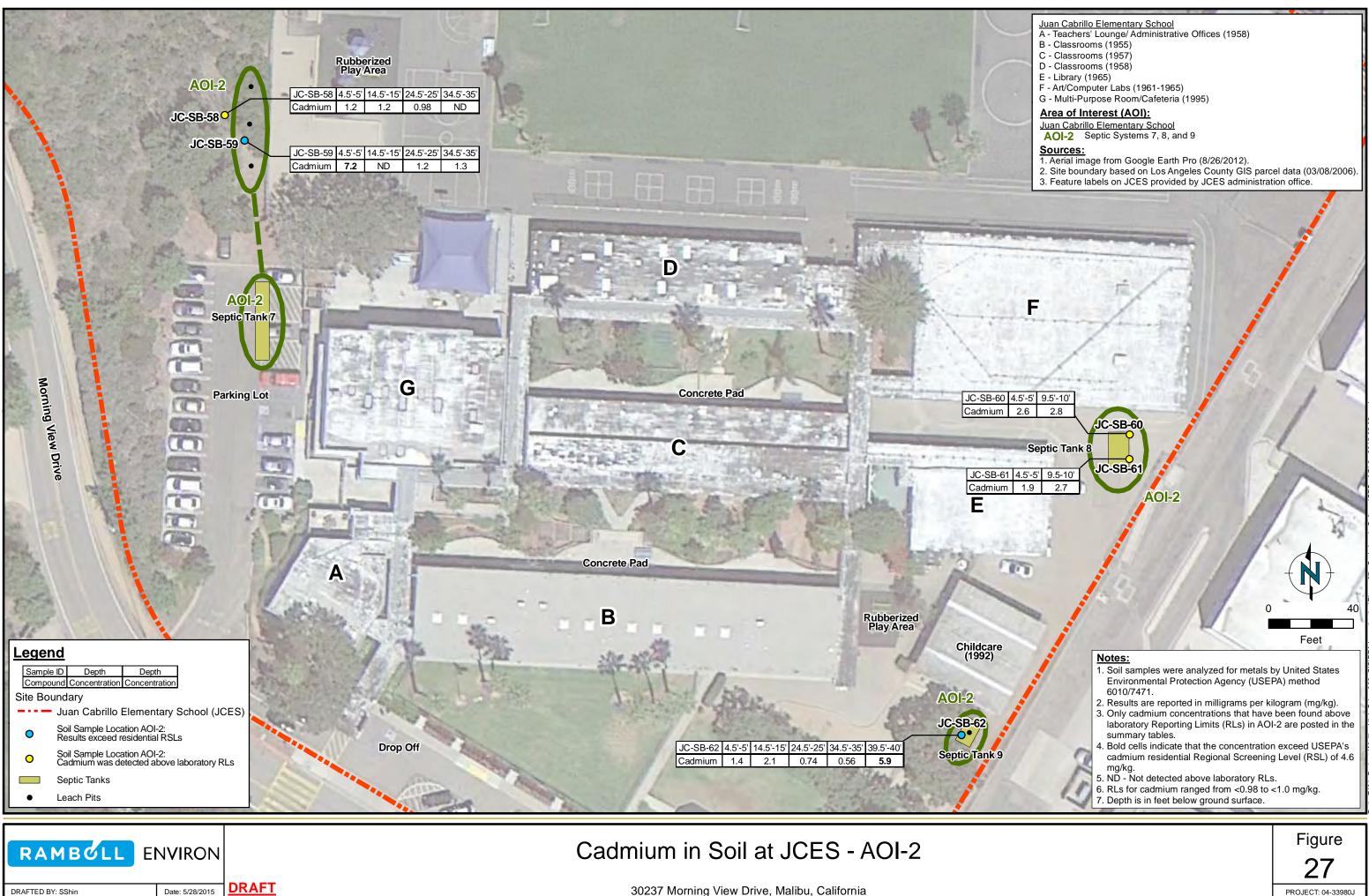
Feet

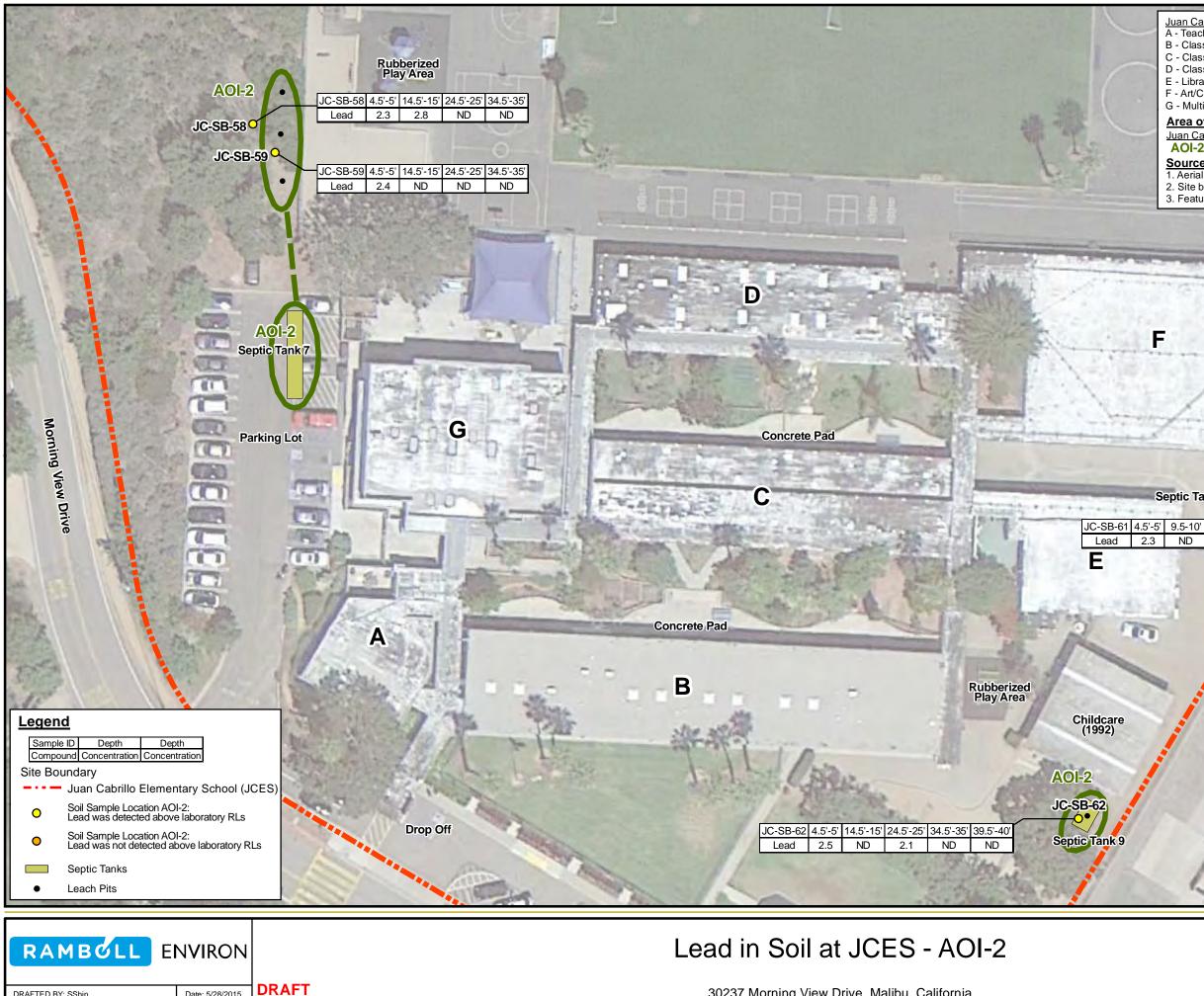
1. Soil samples were analyzed for metals by United States Environmental Protection Agency (USEPA) method

- 6010/7471. 2. Results are reported in milligrams per kilogram (mg/kg).
- Only arsenic concentrations that have been found above laboratory Reporting Limits (RLs) in AOI-2 are posted in the summary tables.
- 4. ND Not detected above laboratory RLs.
- 5. RLs for arsenic ranged from <2.9 to <6.0 mg/kg.
 6. Depth is in feet below ground surface.



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Date: 5/28/2015

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- <u>Juan Cabrillo Elementary School</u> A Teachers' Lounge/ Administrative Offices (1958)
- B Classrooms (1955) C Classrooms (1957)
- D Classrooms (1958) E Library (1965)
- F Art/Computer Labs (1961-1965)
- G Multi-Purpose Room/Cafeteria (1995)

Area of Interest (AOI):

Juan Cabrillo Elementary School AOI-2 Septic Systems 7, 8, and 9

JC-SB-6

JC-SB-6

AOI-2

Sources:

F

Septic Tank

2.3 ND

- 1. Aerial image from Google Earth Pro (8/26/2012).
- Site boundary based on Los Angeles County GIS parcel data (03/08/2006).
 Feature labels on JCES provided by JCES administration office.



Notes:

- Soil samples were analyzed for metals by United States Environmental Protection Agency (USEPA) method 6010/7471.
- 2. Results are reported in milligrams per kilogram (mg/kg).
- Results are reported in milligrams per kilogram (mg/kg).
 Only lead concentrations that have been found above laboratory Reporting Limits (RLs) in AOI-2 are posted in the summary tables.
 ND Not detected above laboratory RLs.
 RLs for lead ranged from <2.0 to <4.0 mg/kg.
 Depth is in feet below ground surface.





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30237 Morning View Drive, Malibu, California

Date: 5/28/2015

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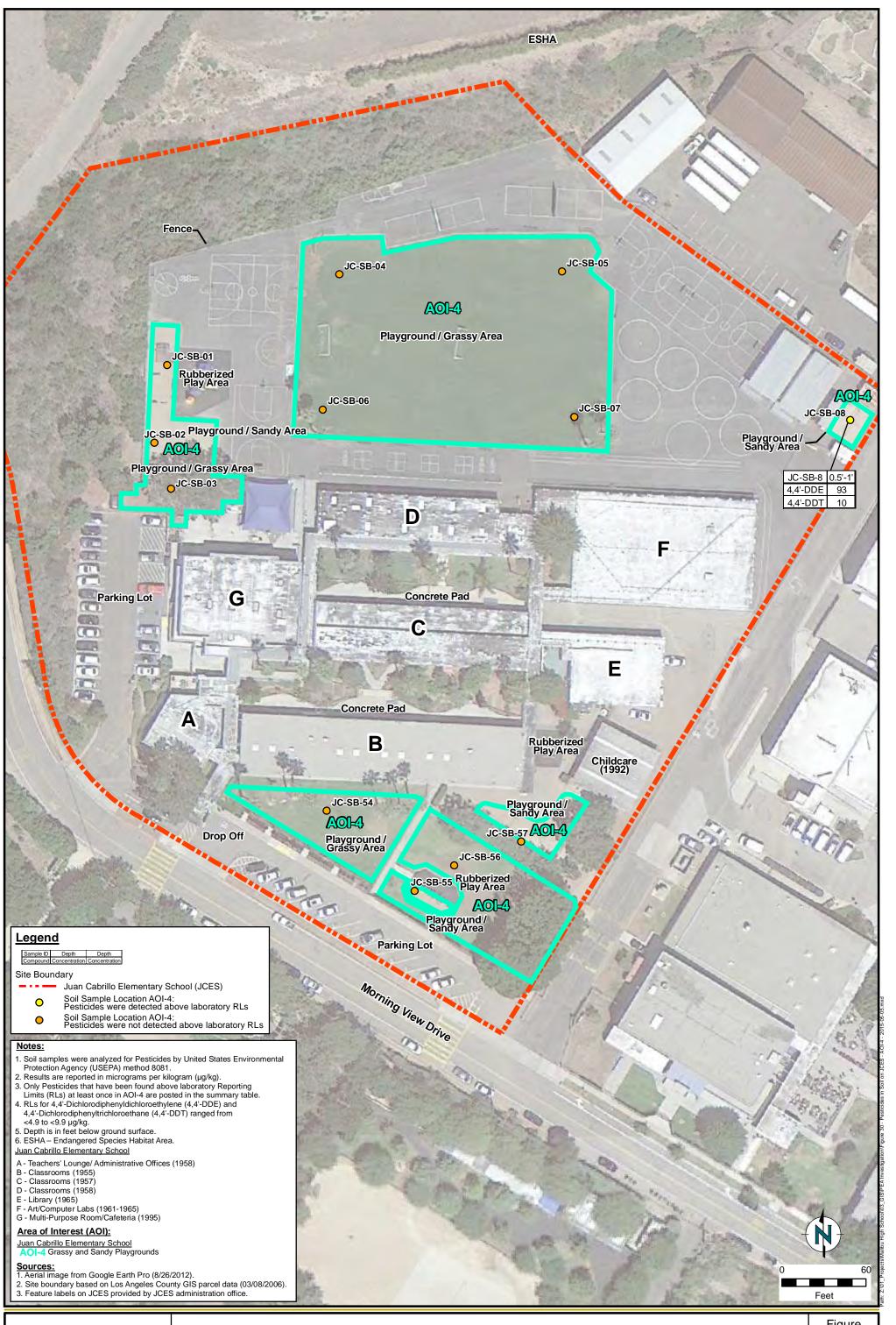
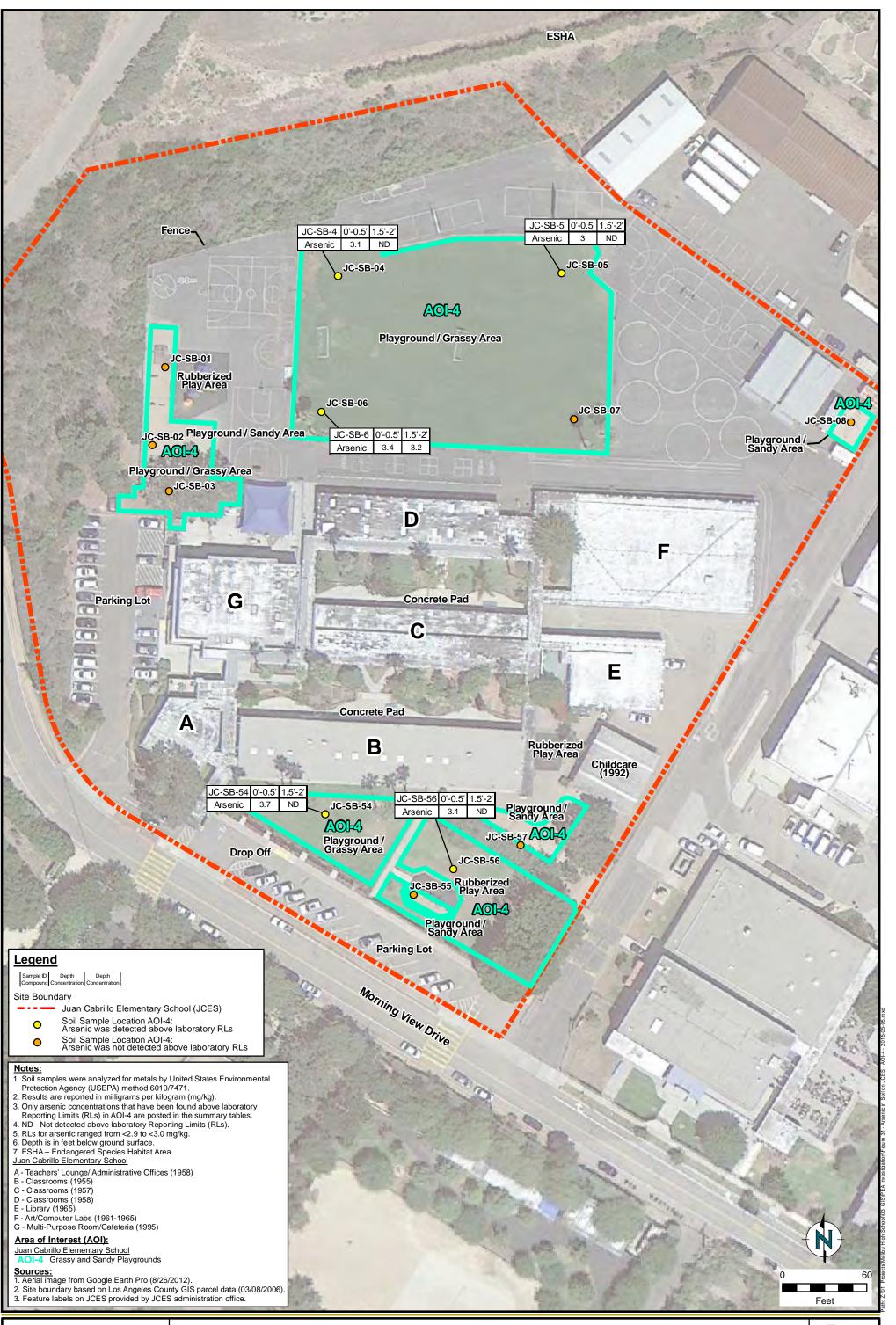
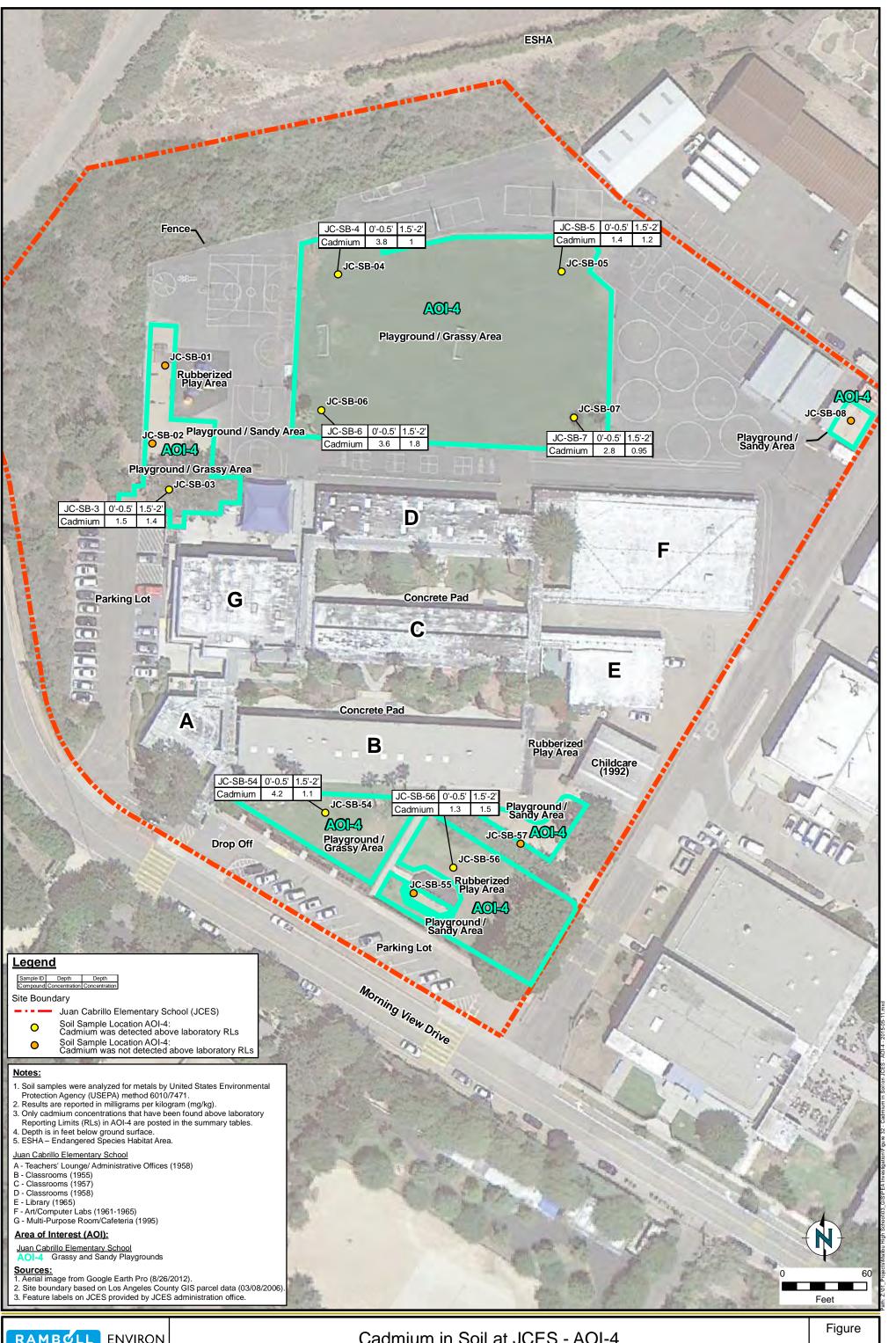


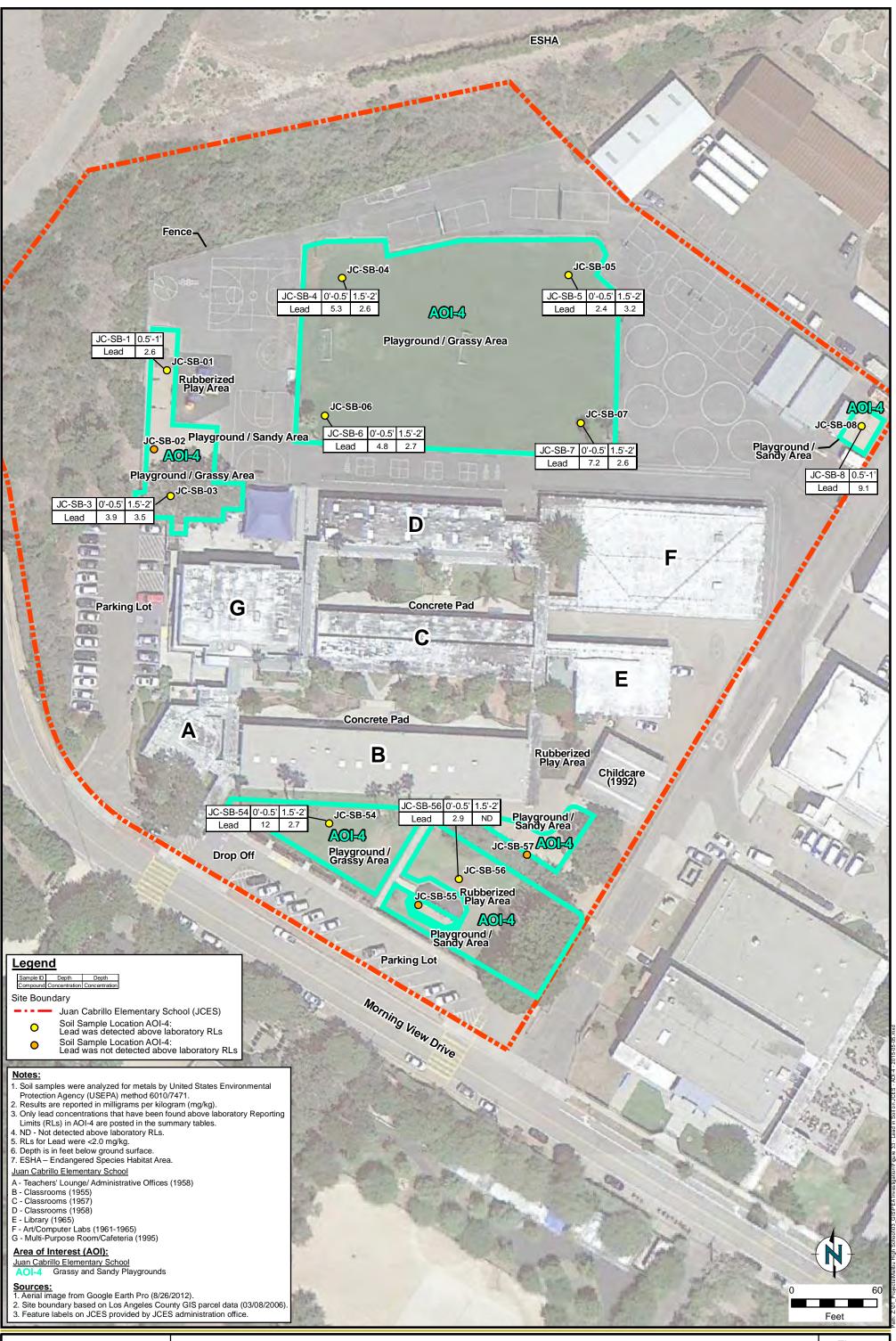
Figure RAMBOLL ENVIRON Pesticides in Soil at JCES - AOI-4 30 Date: 5/28/2015 DRAFT AFTED BY: SShin 30237 Morning View Drive, Malibu, California PROJECT: 04-33980J



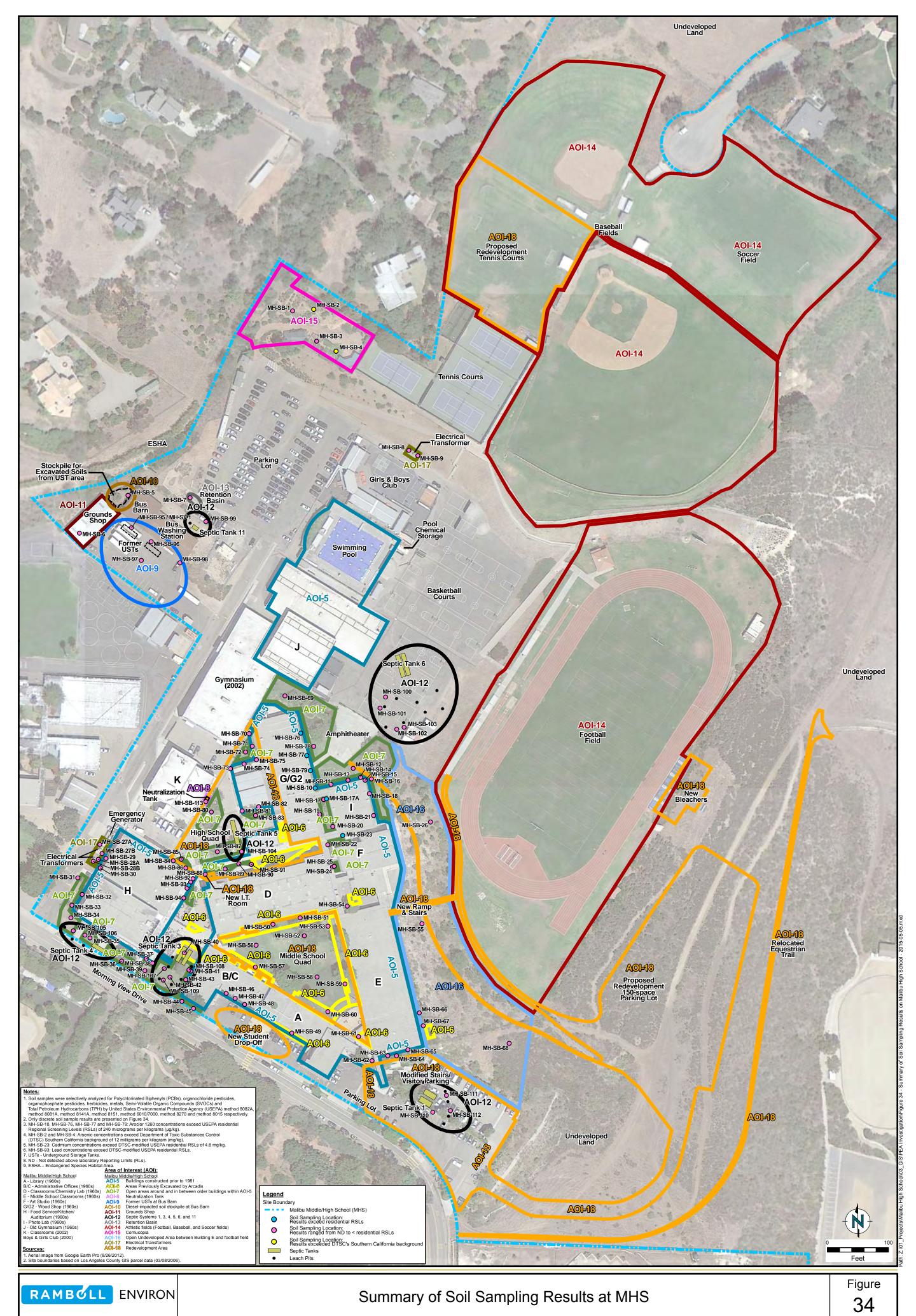
RAMBOLL ENVIRON		Figure 31
DRAFTED BY: SShin Date: 5/28/2015	DRAFT 30237 Morning View Drive, Malibu, California	PROJECT: 04-33980J



RAMBOLL ENVIRON Cadmium in Soil at JCES - AOI-4 32 Date: 5/28/2015 DRAFT AFTED BY: SShin 30237 Morning View Drive, Malibu, California PROJECT: 04-33980J



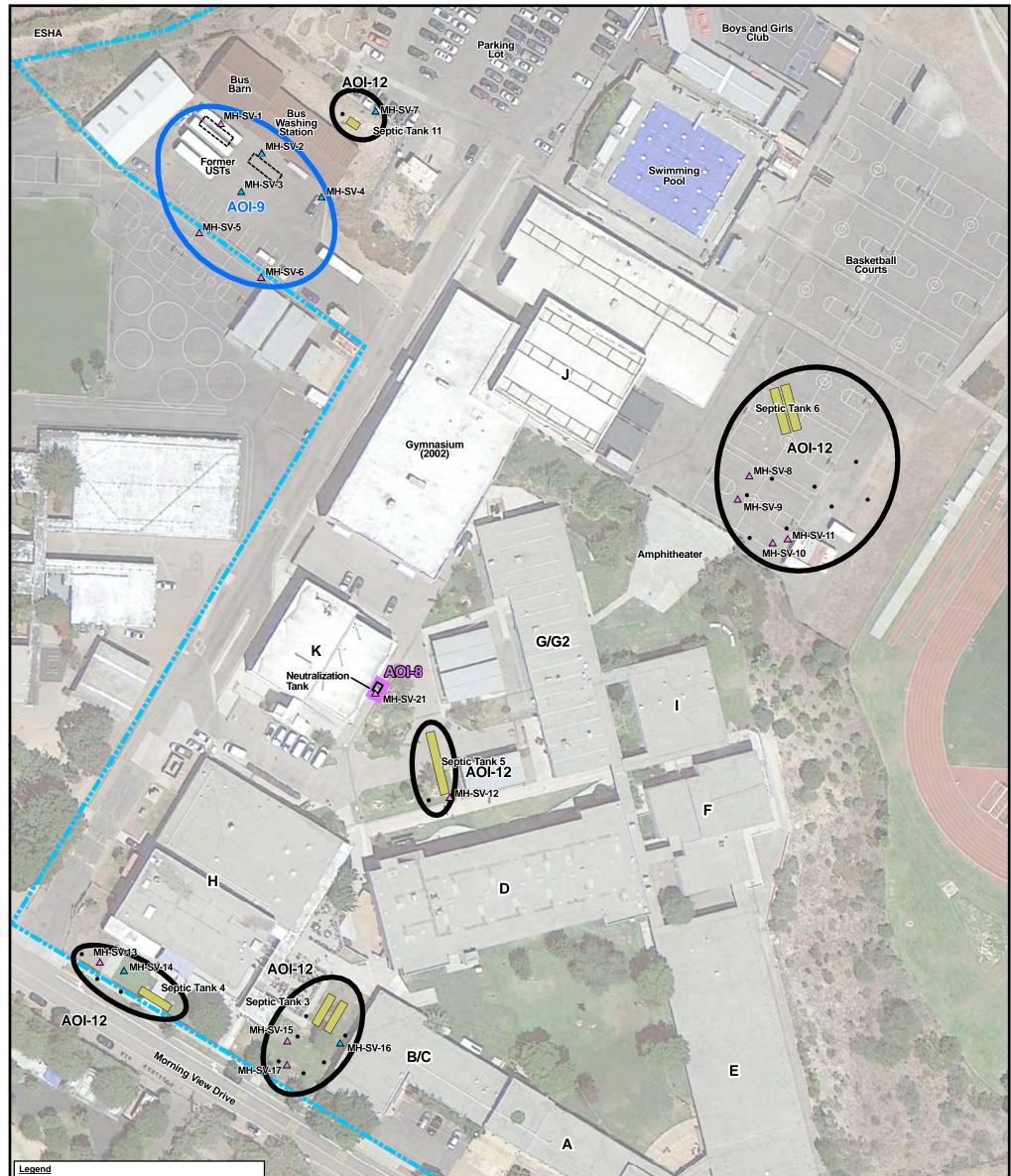
RAMBOLL ENVIRON		Figure 33
DRAFTED BY: SShin Date: 5/28/2015	DRAFT 30237 Morning View Drive, Malibu, California	PROJECT: 04-33980.



PROJECT: 04-33980J

DRAFTED BY: SShin

Date: 5/28/2015 DRAFT





- Soil Vapor Sampling Location: Results exceed residential screening levels Δ
- Soil Vapor Sampling Location: Results ranged from ND to < residential screening levels Δ

Septic Tanks

Leach Pits .

Notes:

- Notes:
 1. Soll vapor samples were analyzed for Volatile Organic Compounds (VOCs) by United States Environm Protection Agency (USEPA) method 8260B.
 2. MH-SV-2. Benzene, 1,2,4-trimethylbenzene, naphthalene, toluene and xylene concentrations exceed the calculated residential screening levels.
 3. MH-SV-3, MH-SV-1, MH-SV-14 and MH-SV-16 Benzene concentrations exceed the calculated residential eccensing levels.
- residential screening level. 4. MH-SV-4 Benzene, ethylbenzene and naphthalene concentrations exceed the calculated residential
- screening levels. 5. USTs Underground Storage Tanks. 6. ND Not detected above laboratory Reporting Limits (RLs). 7. ESHA Endangered Species Habitat Area.

 7. ESHA – Endangered Species Habitat Area.

 Malibu Middle/High School

 A - Library (1960s)

 B/C - Administrative Offices (1960s)

 D - Classrooms/Chemistry Lab (1960s)

 E - Middle School (1960s)

 F - Art Studio (1960s)

 G/G2 - Wood Shop (1960s)

 H - Food Service/Kitchen/ Auditorium (1960s)

 Sources: 1. Aerial image from Google Earth Pro (8/26/2012). 2. Site boundaries based on Los Angeles County GIS parcel data (03/08/2006). Auditorium (1960s) - Photo Lab (1960s) - Old Gymnasium (1960s) C - Classrooms (2002) Soys and Girls Club (2000)

SV-19 Parking Lot Septic Tank AOI-12 MH-SV-18 △ MH-S Feet

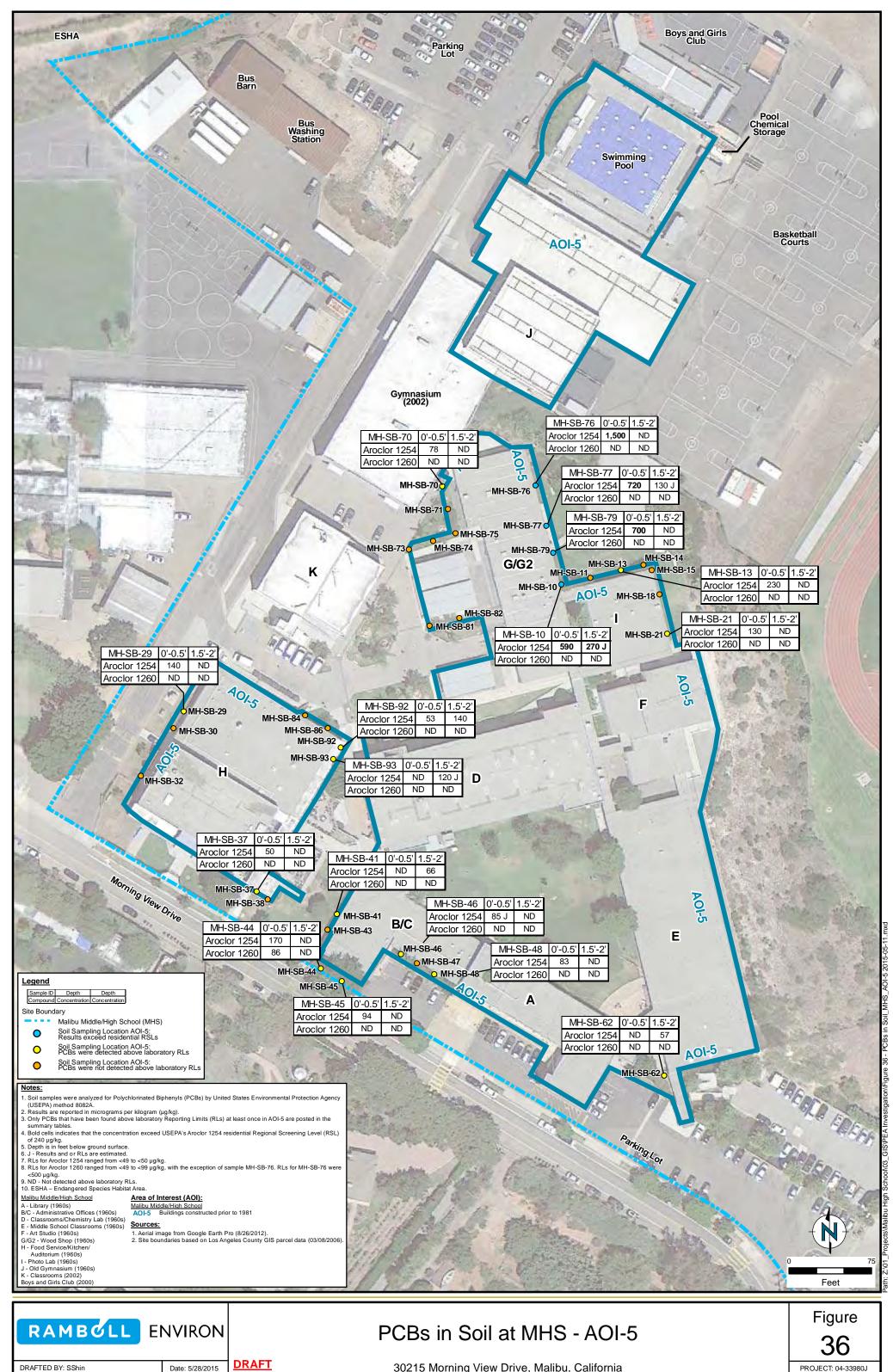


Summary of Soil Vapor Sampling Results at MHS



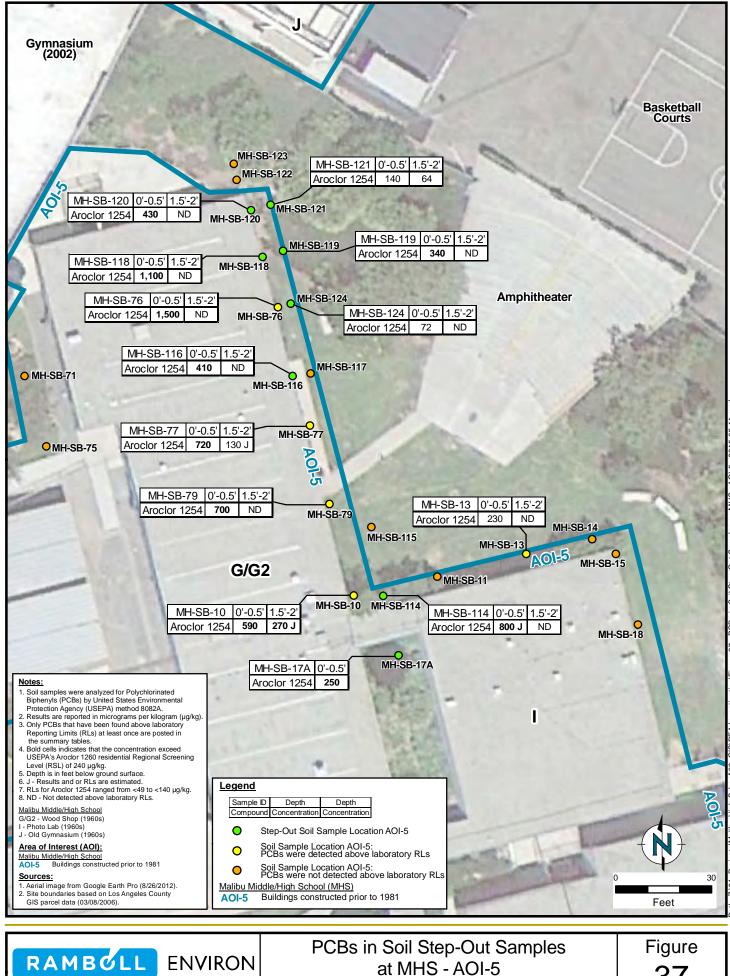
DRAFTED BY: SShin

DRAFT Date: 5/28/2015



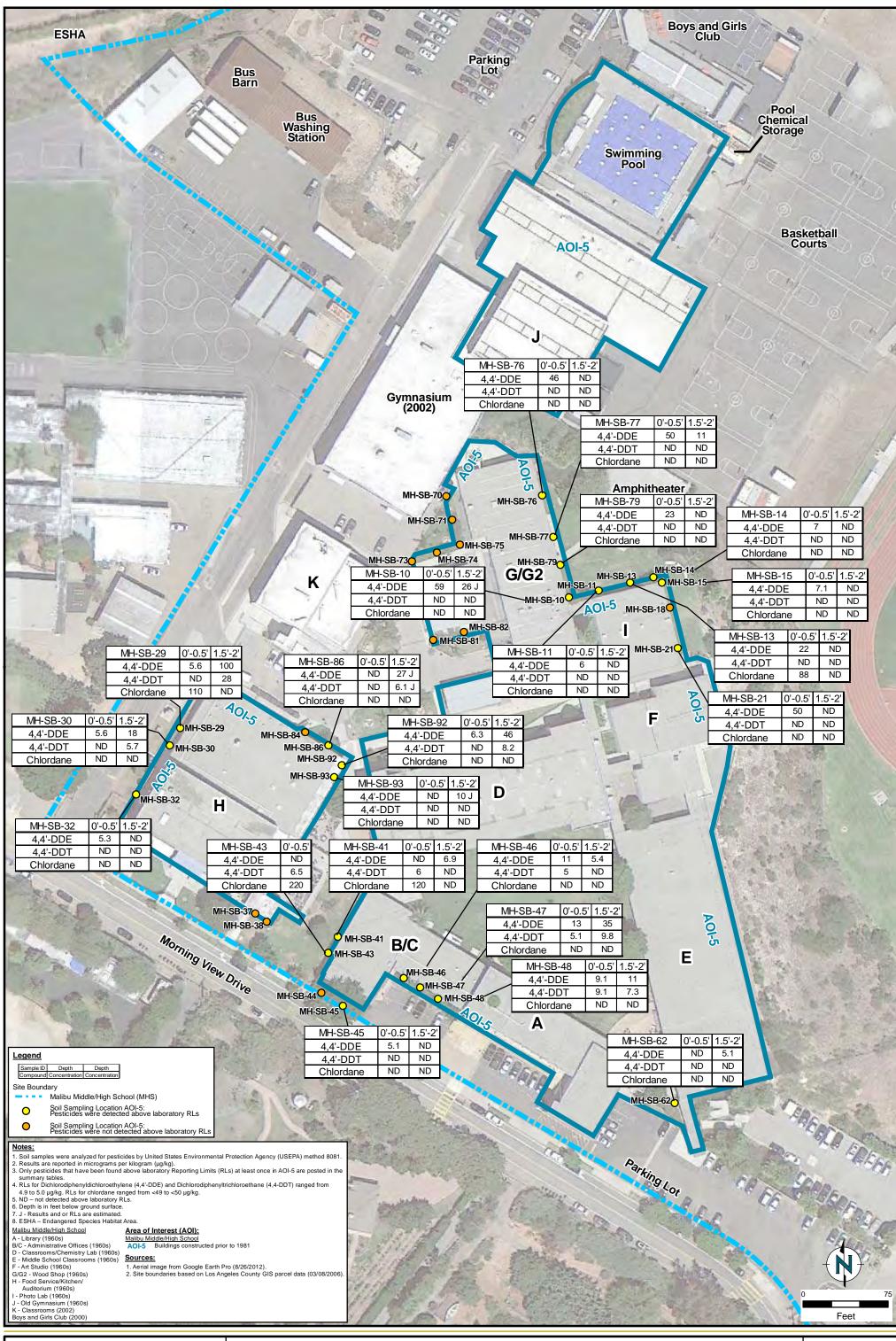
Date: 5/28/2015

PROJECT: 04-33980J



Date: 5/28/2015 DRAFT 30215 Morning View Drive, Malibu, California PROJECT: 04-33980J

DRAFTED BY: SShin

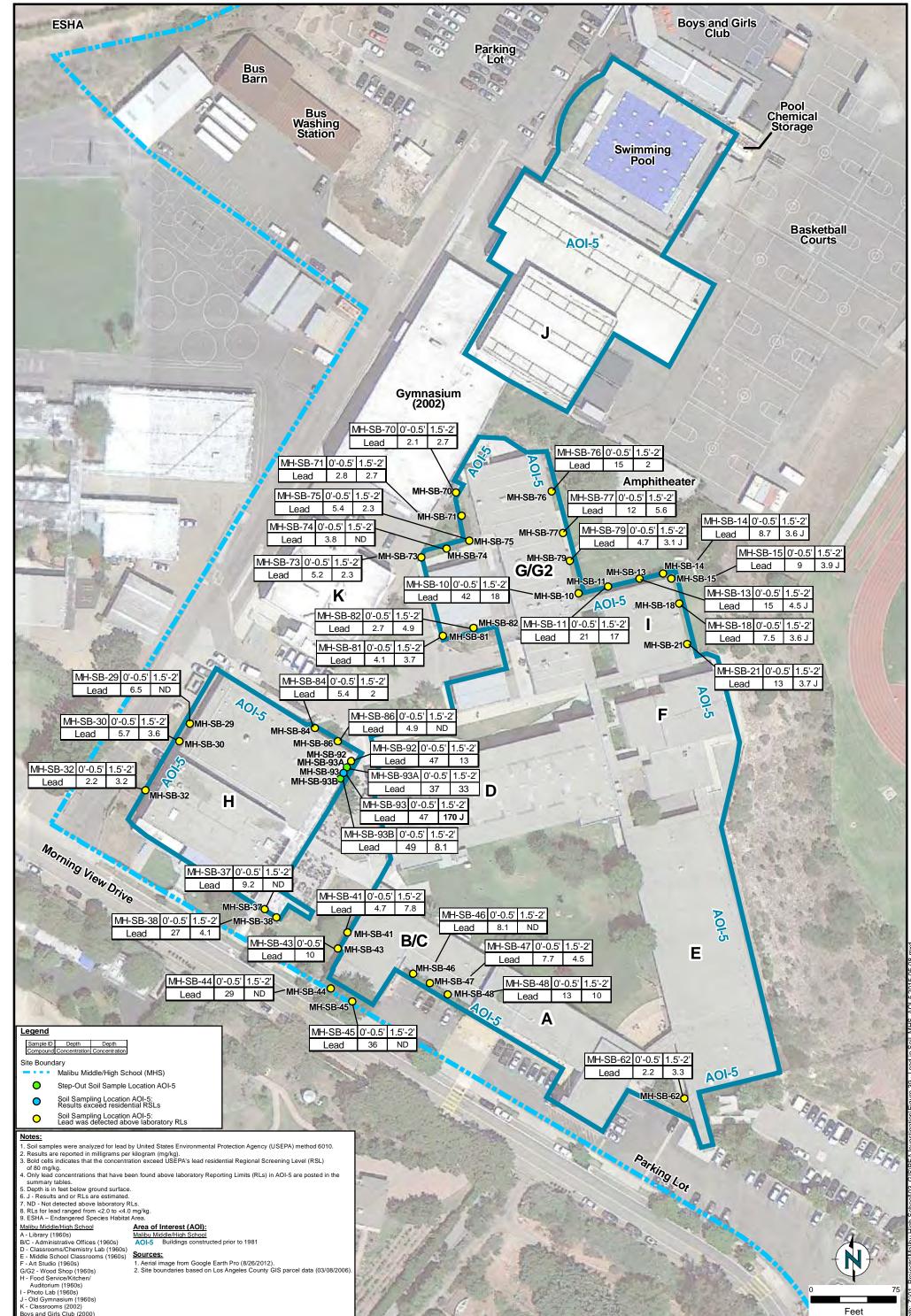


 RAMBOLL
 ENVIRON

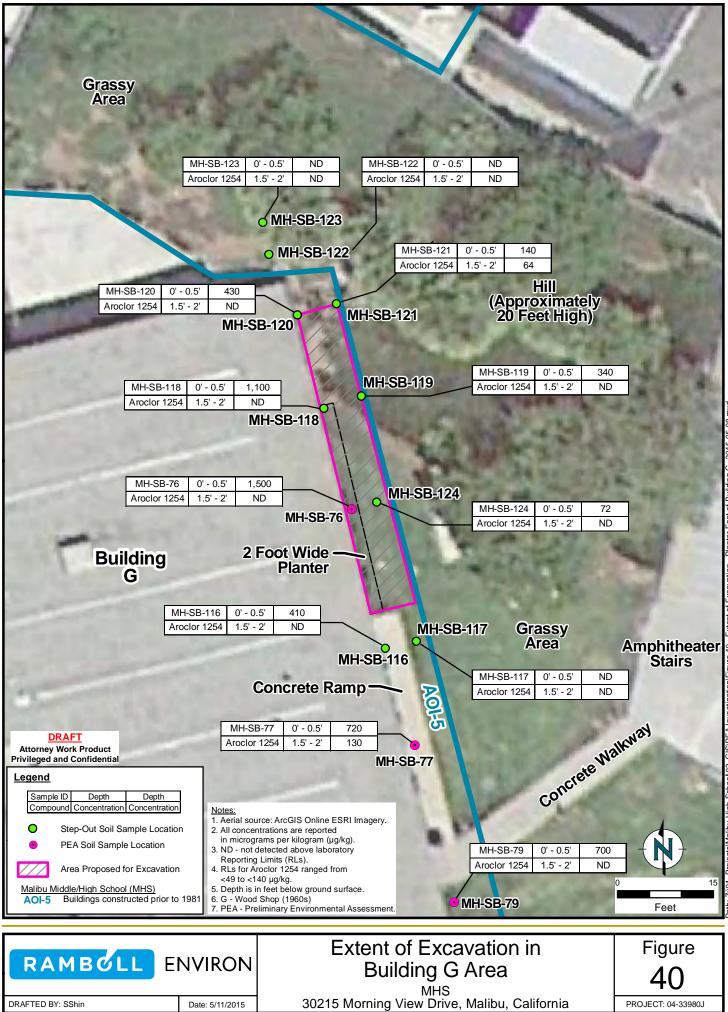
 DRAFTED BY: SShin
 Date: 5/28/2015

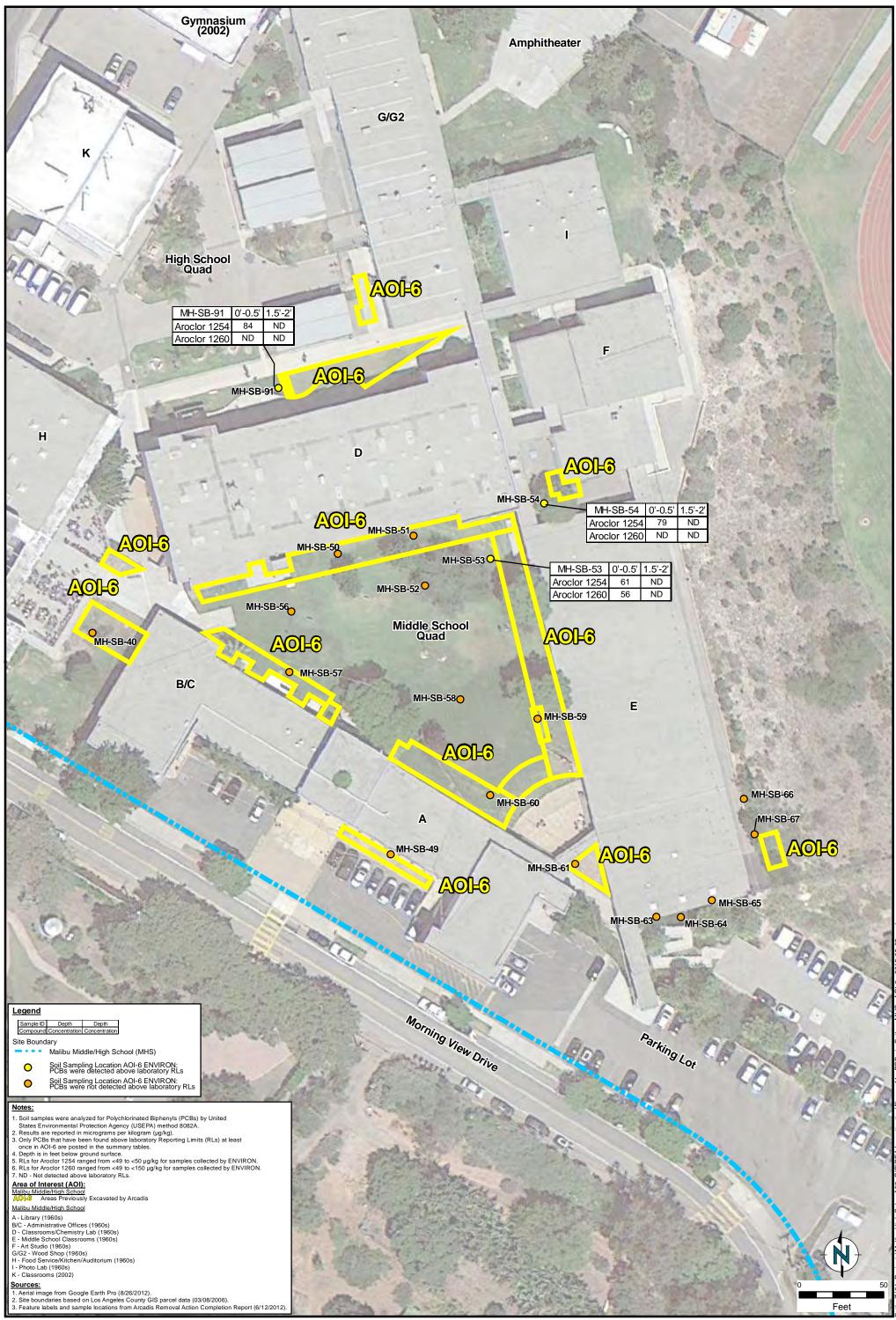
Pesticides in Soil at MHS - AOI-5

Figure 38

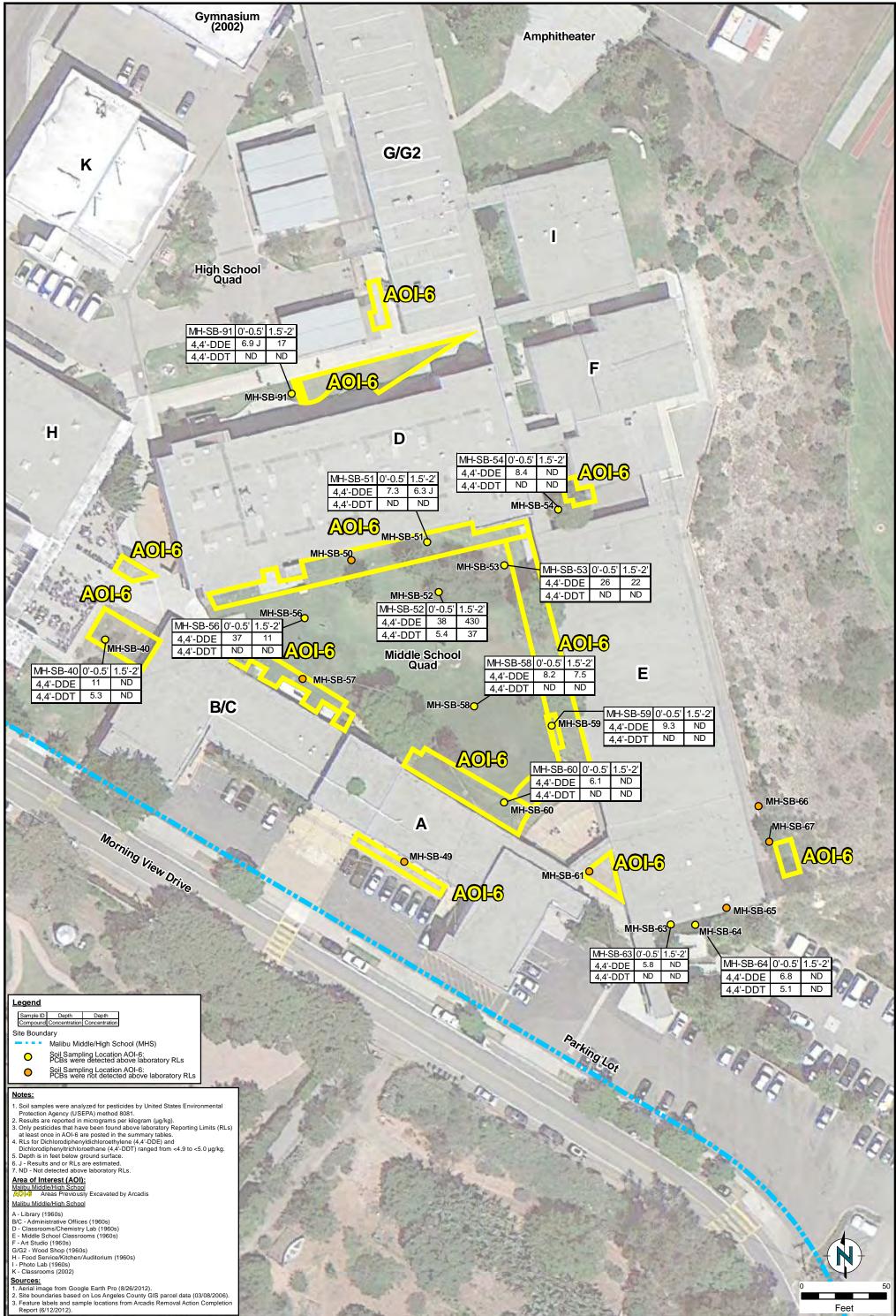


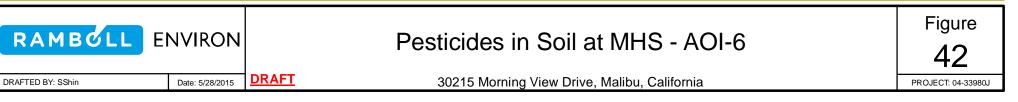


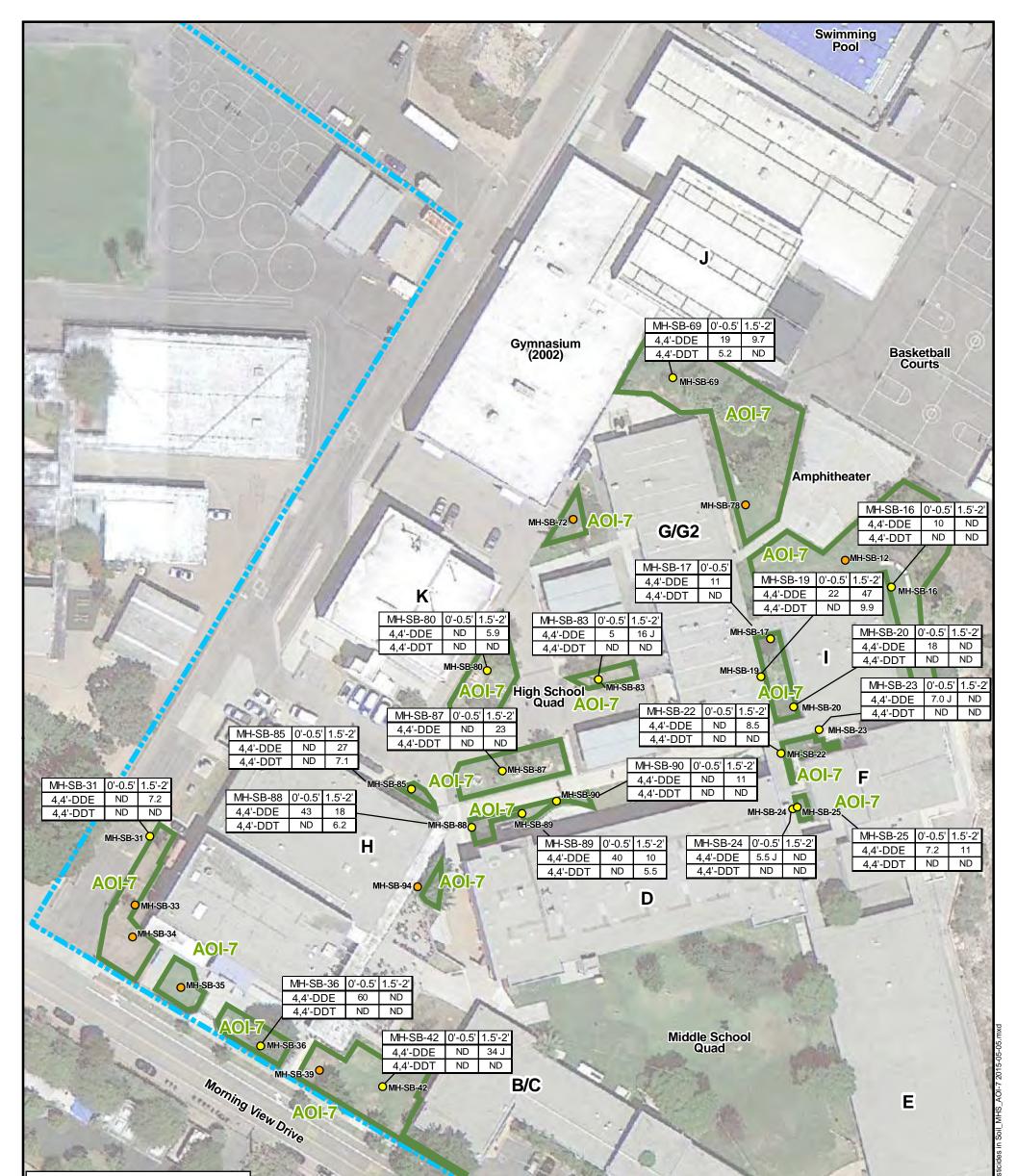












Leaend

2			
	Sample ID	Depth	Depth
	Compound	Concentration	Concentration

Site Boundary

Malibu Middle/High School (MHS)

Soil Sampling Location AOI-7: Pesticides were detected above laboratory RLs 0

Soil Sampling Location AOI-7: Pesticides were not detected above laboratory RLs 0

Notes:

- ples were analyzed for pesticides by United States ental Prote (USEPA) method 8081
- Soil samples were analyzed for pesticides by United States Environme
 Results are reported in micrograms per kilogram (µg/kg).
 Only pesticides that have been found above laboratory Reporting Limit summary tables.
 ALS for Dichlorodiphenyldichloroethylene (4,4'-DDE) and Dichlorodiphe (4,9 to <5.0 µg/kg).
 Depth is in feet below ground surface.
 J Results and or RLs are estimated.
 ND Not detected above laboratory RLs. orting Limits (RLs) at lea
- 4'-DDT)

Malibu Middle/High School A - Library (1960s) B/C - Administrative Offices (1960s) D - Classrooms/Chemistry Lab (1960s) E - Middle School Classrooms (1960s)

Area of Interest (AOI):

Malibu Middle/High School AOI-7 Open areas around and in between older buildings within AOI-5

1. Aerial image from Google Earth Pro (8/26/2012). 2. Site boundaries based on Los Angeles County GIS parcel data (03/08/2006)

Auditorium (1960s) Photo Lab (1960s)

Sources:

Old Gymnasium (1960s) - Classrooms (2002)

F - Art Studio (1960s) G/G2 - Wood Shop (1960s) H - Food Service/Kitchen/

RAMBOLL ENVIRON

Pesticides in Soil at MHS - AOI-7

Α

 \mathcal{F}_{1}

Parking Lot

202

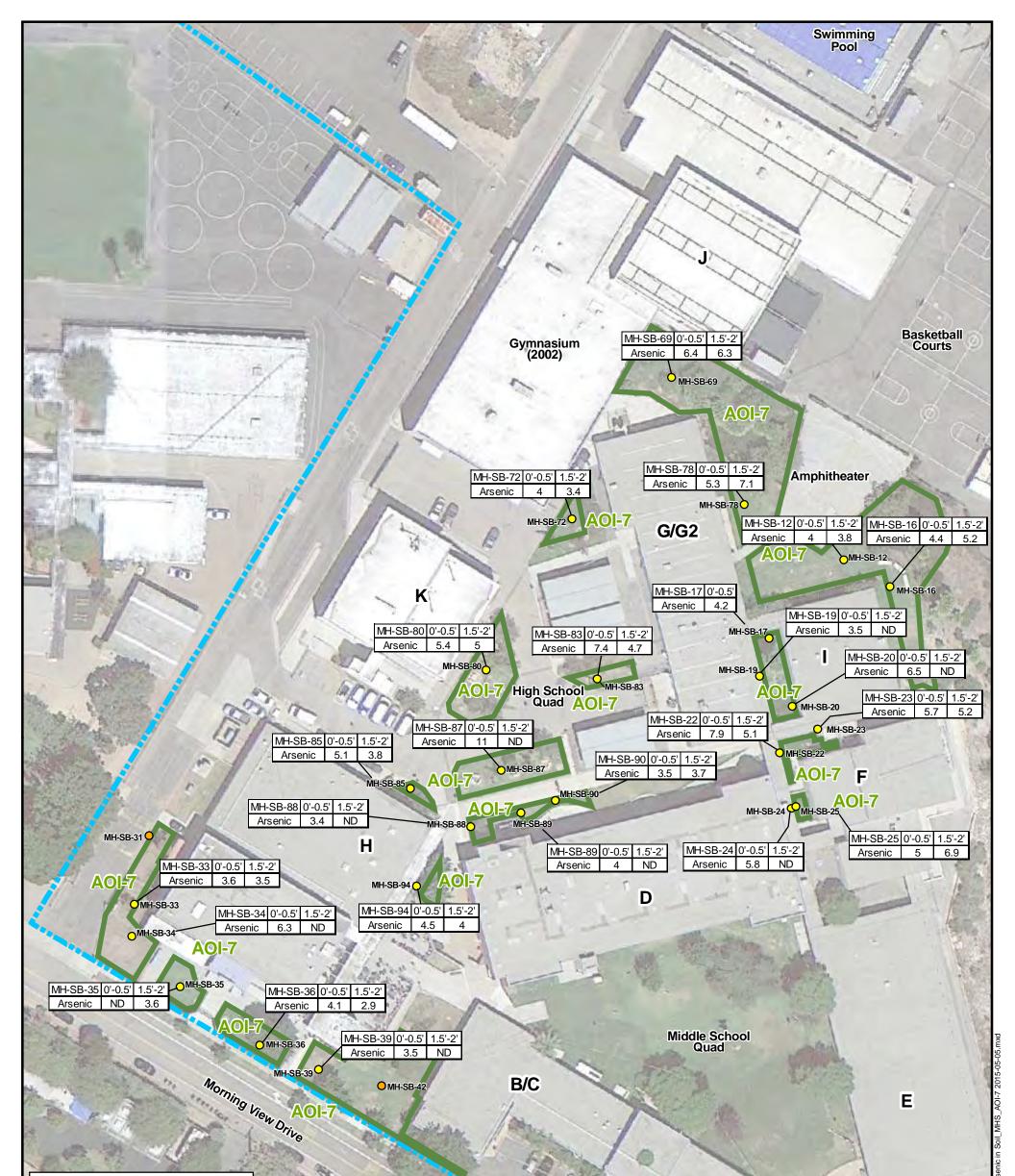


PROJECT: 04-33980J

Feet

DRAFTED BY: SShin

DRAFT Date: 5/28/2015



Legend

Sample ID	Depth	Depth
Compound	Concentration	Concentration

Site Boundary

Malibu Middle/High School (MHS)

- Soil Sampling Location AOI-7: Arsenic was not detected above laboratory RLs 0
- Soil Sampling Location AOI-7: Arsenic was detected above laboratory RLs 0

Notes:

Soil samples were analyzed for metals by United States Agency (USEPA) method 6010/747

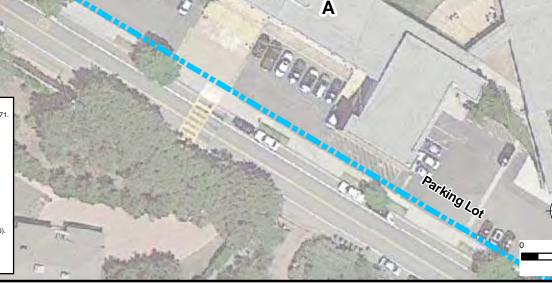
- Results are reported in milligrams per kilogram (mg/kg).
 Depth is in feet below ground surface.
 Only arsenic concentrations that have been found above laboratory Reporting Limits (RLs) in AOI-7 are posted in the summary tables.
- 5. ND Not detected above laboratory RLs.
- 6. RLs for arsenic ranged from <2.9 to <6.0 mg/kg

Malibu Middle/High School Area of Imi A - Library (1960s) Malibu Middle/High School Area of Imi B/C - Administrative Offices (1960s) D - Classrooms/Chemistry Lab (1960s) Aol-7 O S - Middle School Classrooms (1960s) F - Art Studio (1960s) Sources: 1. Aerial ima

G/G2 - Wood Shop (1960s) H - Food Service/Kitchen/ Auditorium (1960s) Photo Lab (1960s) - Old Gymnasium (1960s) - Classrooms (2002)

Area of Interest (AOI): Malibu Middle/High School AOI-7 Open areas arou around and in between older buildings within AOI-5

Aerial image from Google Earth Pro (8/26/2012).
 Site boundaries based on Los Angeles County GIS parcel data (03/08/2006).





Arsenic in Soil at MHS - AOI-7



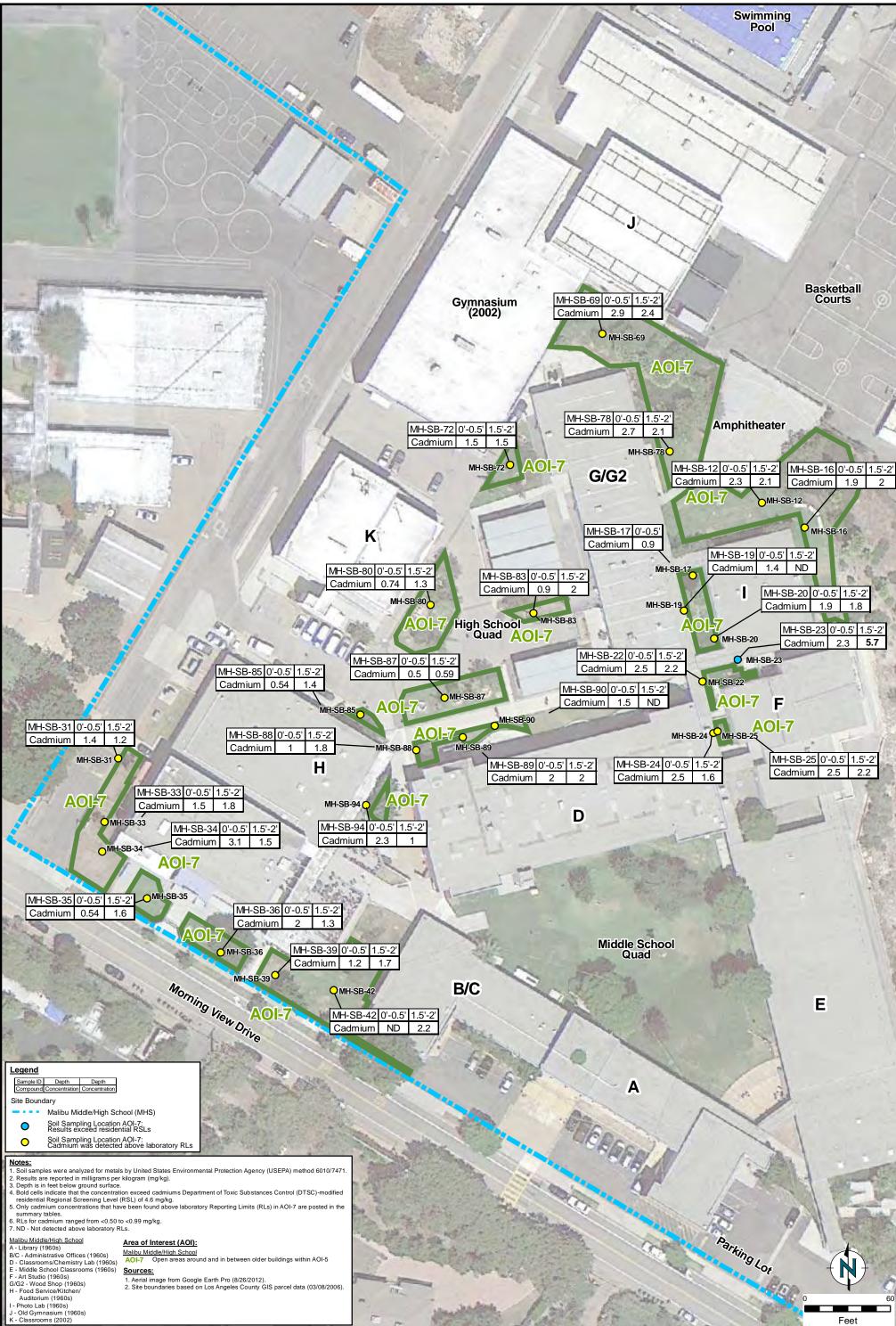
Feet

DRAFTED BY: SShin

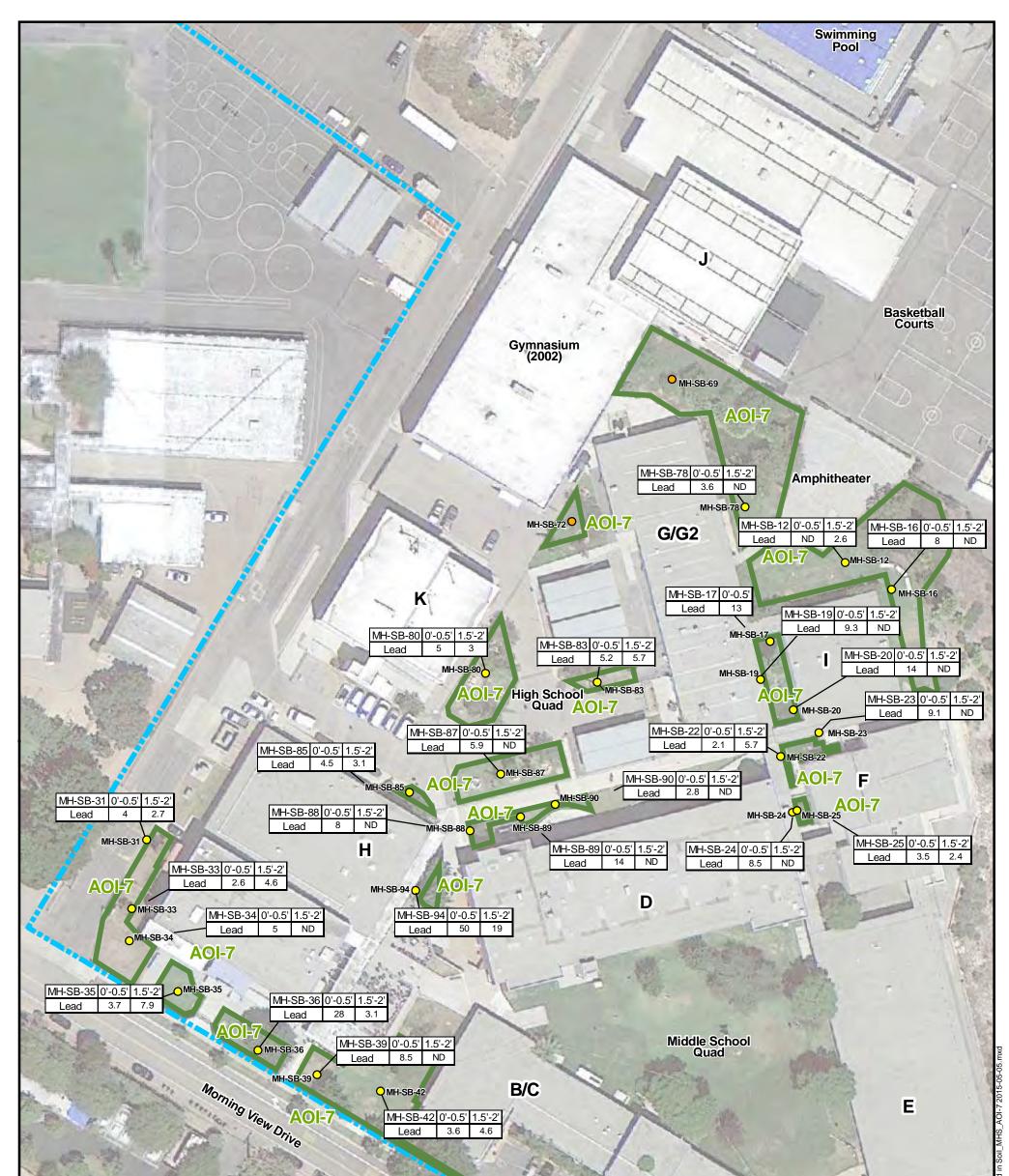
DRAFT Date: 5/28/2015

30215 Morning View Drive, Malibu, California

PROJECT: 04-33980J







Legend

Sample ID	Depth	Depth
Compound	Concentration	Concentration

Site Boundary

Malibu Middle/High School (MHS)

Soil Sampling Location AOI-7: Lead was detected above laboratory RLs 0

Soil Sampling Location AOI-7: Lead was not detected above laboratory RLs 0

Notes:

 Notes:
 1. Soil samples were analyzed for metals by United States Environmental Protection Agency (USEPA) method 6010/
 2. Results are reported in milligrams per kilogram (mg/kg).
 3. Depth is in feet below ground surface.
 4. Only lead concentrations that have been found above laboratory Reporting Limits (RLs) in AOI-7 are posted in the summary tables.
 5. RLs for lead ranged from <2.0 to <4.0 mg/kg.
 6. ND - Not detected above laboratory RLs. ncy (USEPA) method 6010/7471

Classrooms/Chemistry Lab (1960s) Middle School Classrooms (1960s)

Malibu Middle/High School A - Library (1960s) B/C - Administrative Offices (1960s)

Area of Interest (AOI):

Malibu Middle/High School Open areas around and in between older buildings within AOI-5 AOI-7

Sources:

Aerial image from Google Earth Pro (8/26/2012).
 Site boundaries based on Los Angeles County GIS parcel data (03/08/2006).

Auditorium (1960s) Photo Lab (1960s) Old Gymnasium (1960s) - Classrooms (2002)

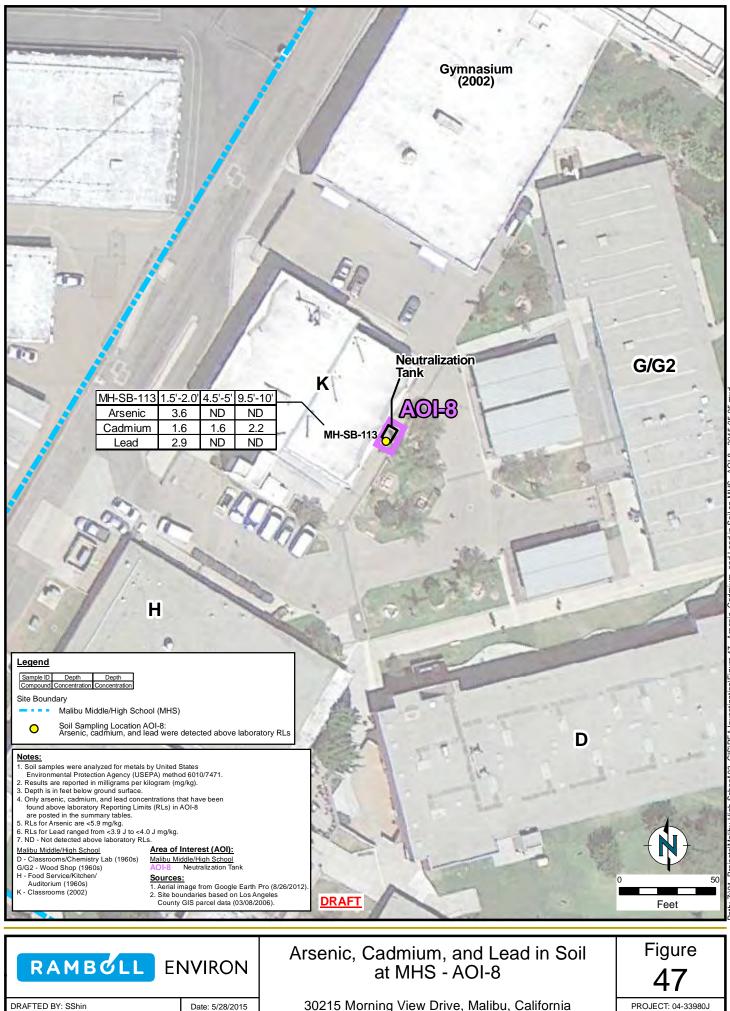
Art Studio (1960s)

/G2 - Wood Shop (1960s) - Food Service/Kitchen/

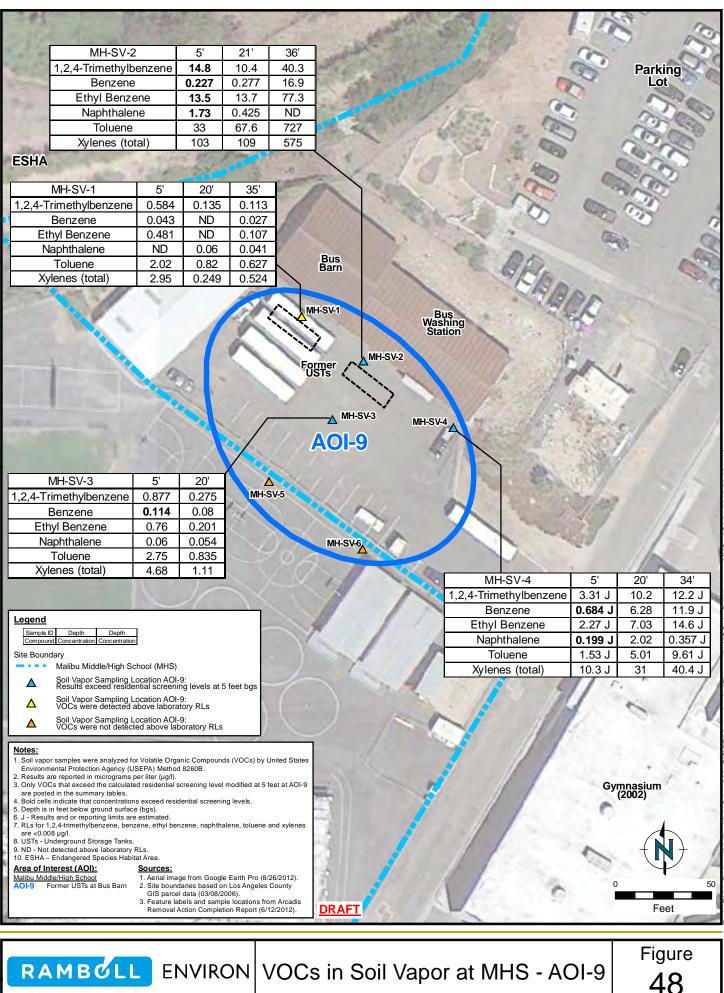
Α \mathcal{F}_{1} Parking Lot 202

Feet





Date: 5/28/2015

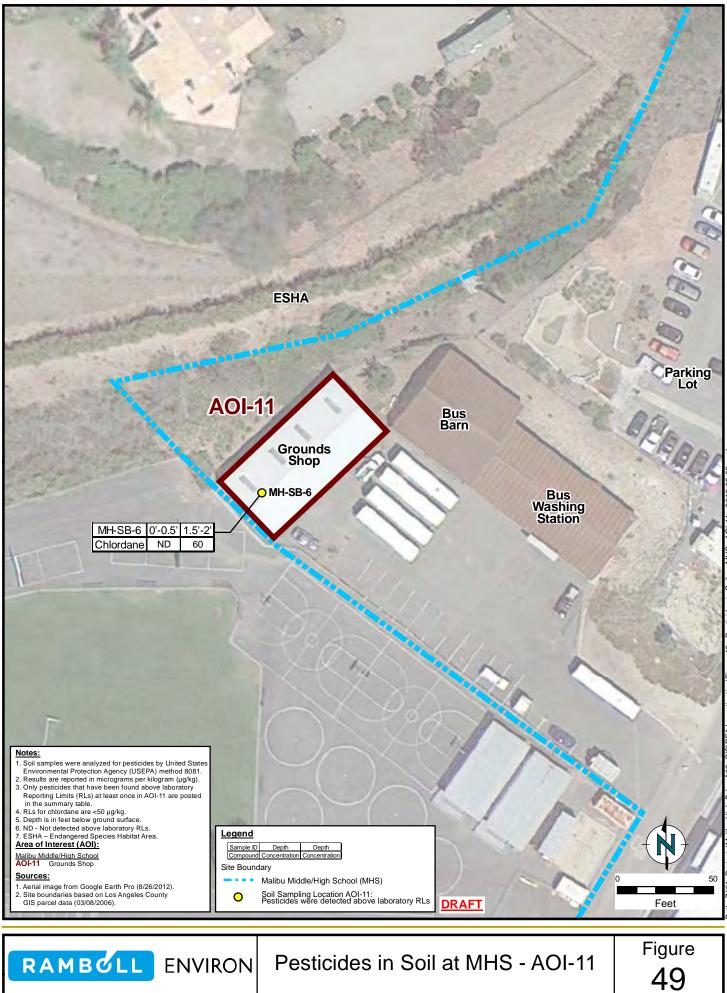


PROJECT: 04-33980J

30215 Morning View Drive, Malibu, California

Date: 5/28/2015

DRAFTED BY: SShin

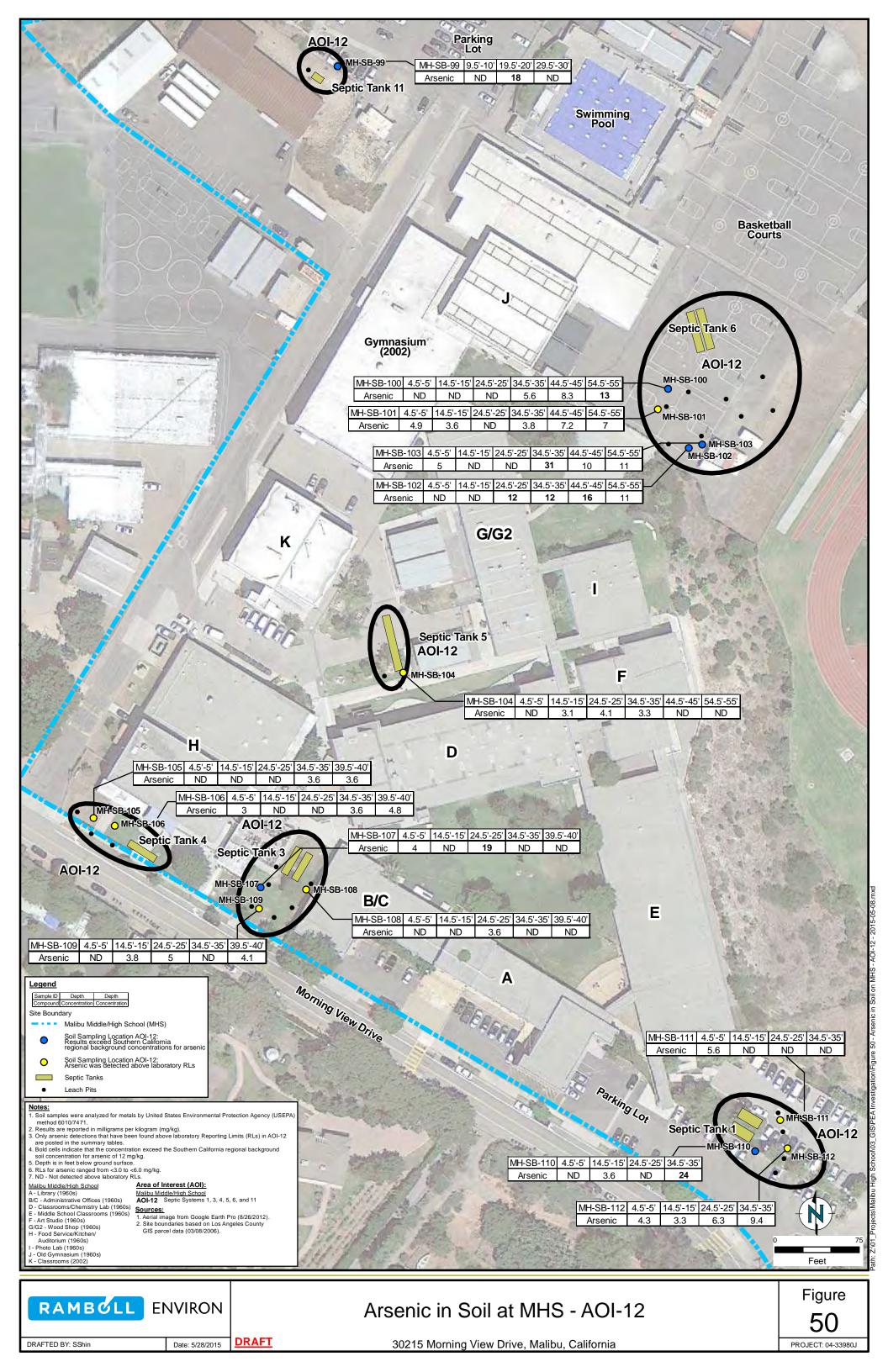


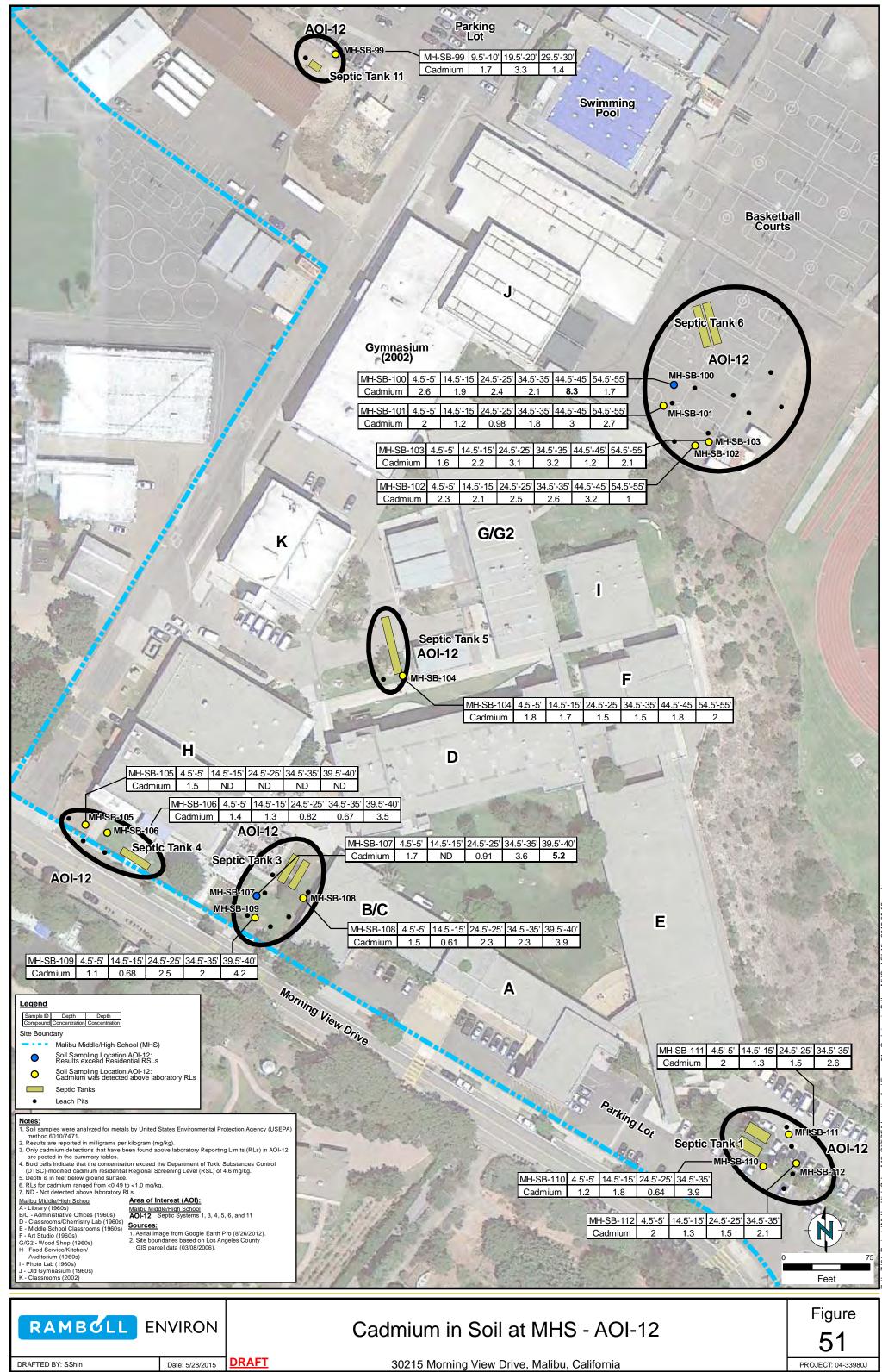
PROJECT: 04-33980J

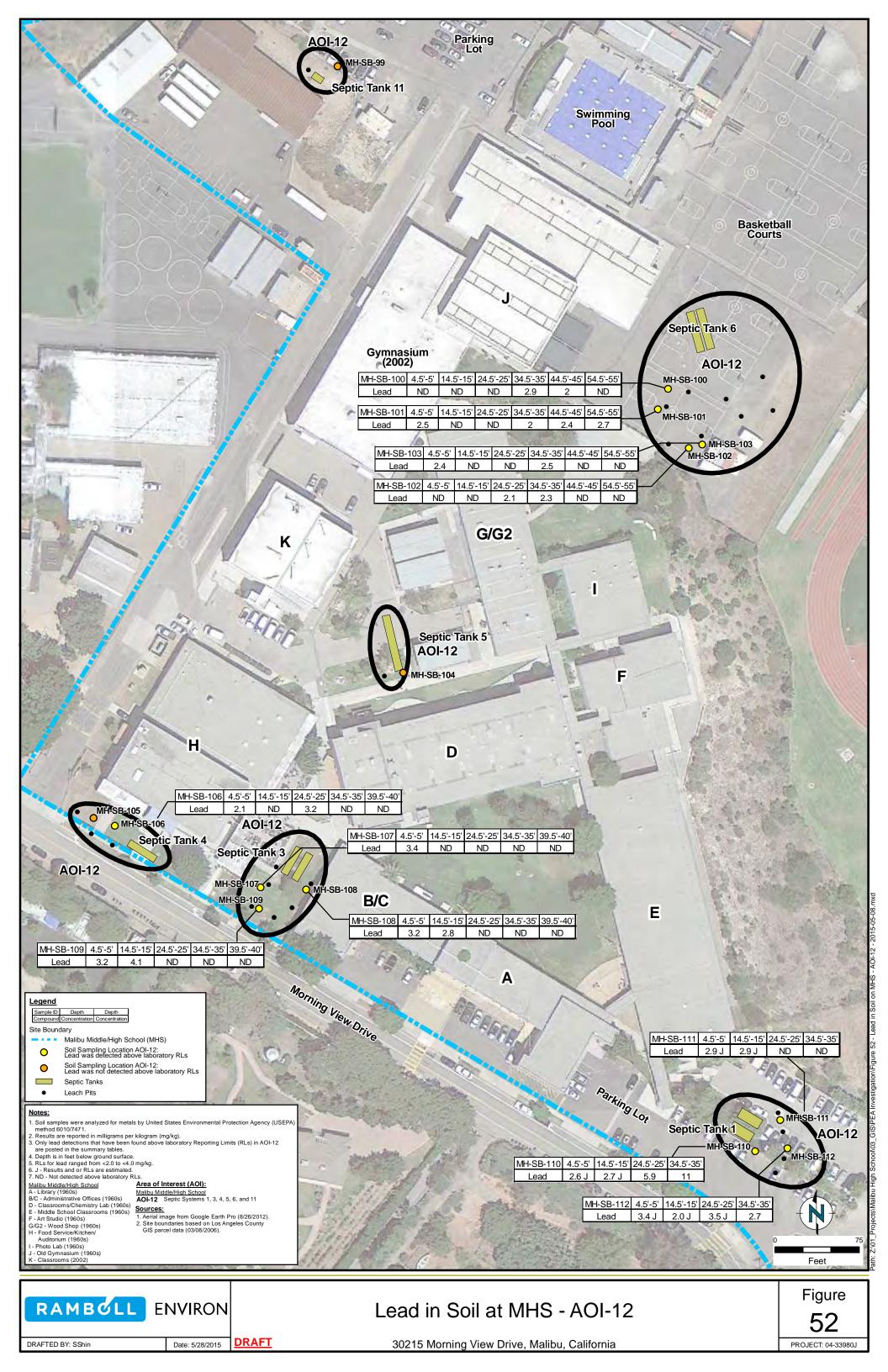
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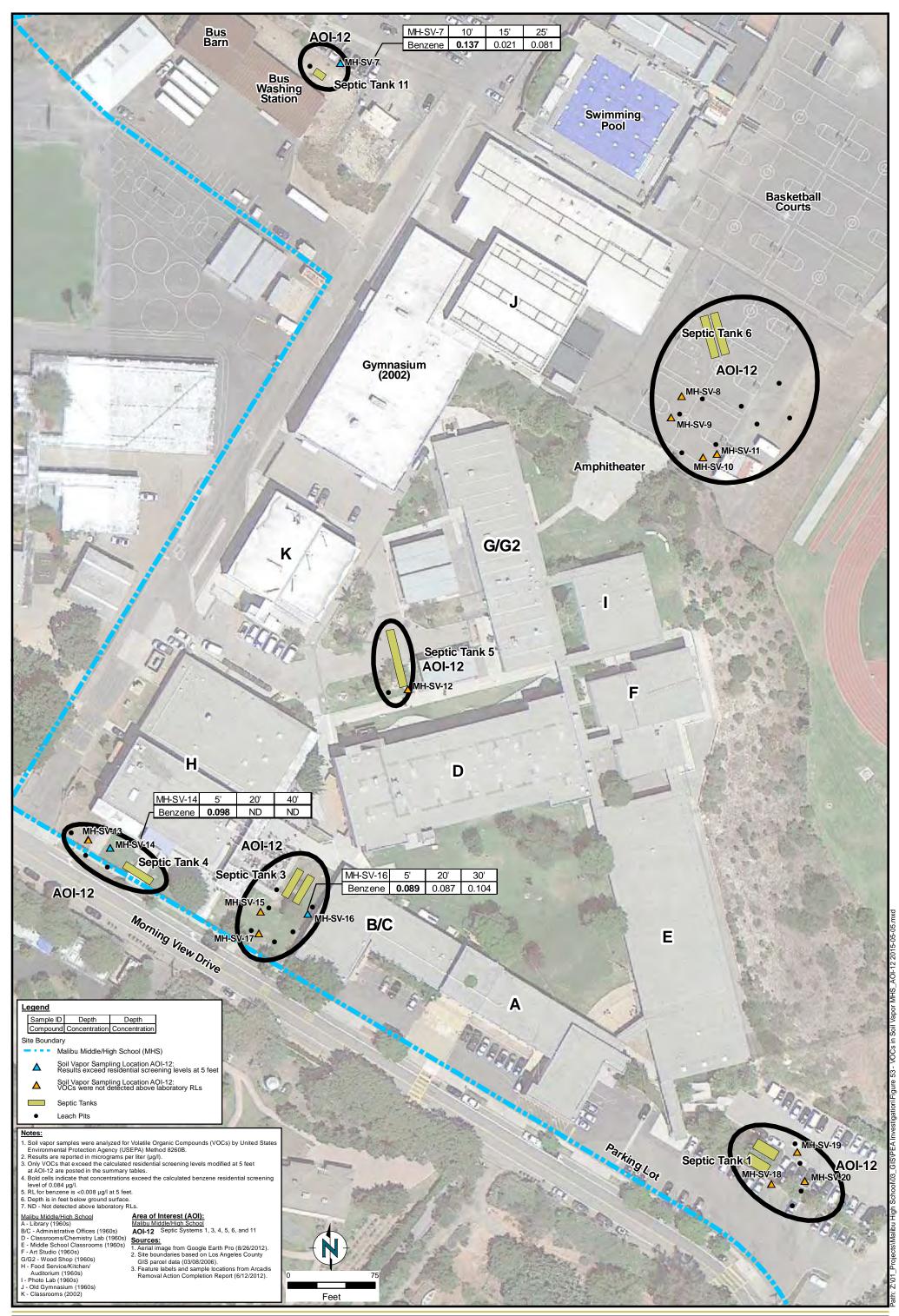
Date: 5/28/2015

30215 Morning View Drive, Malibu, California

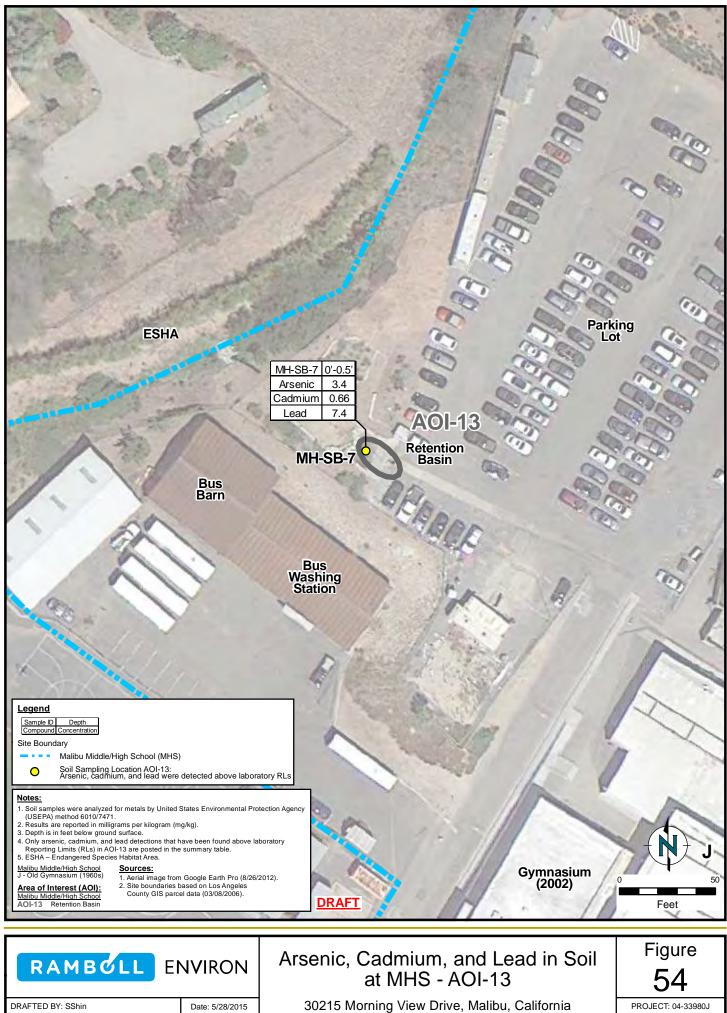


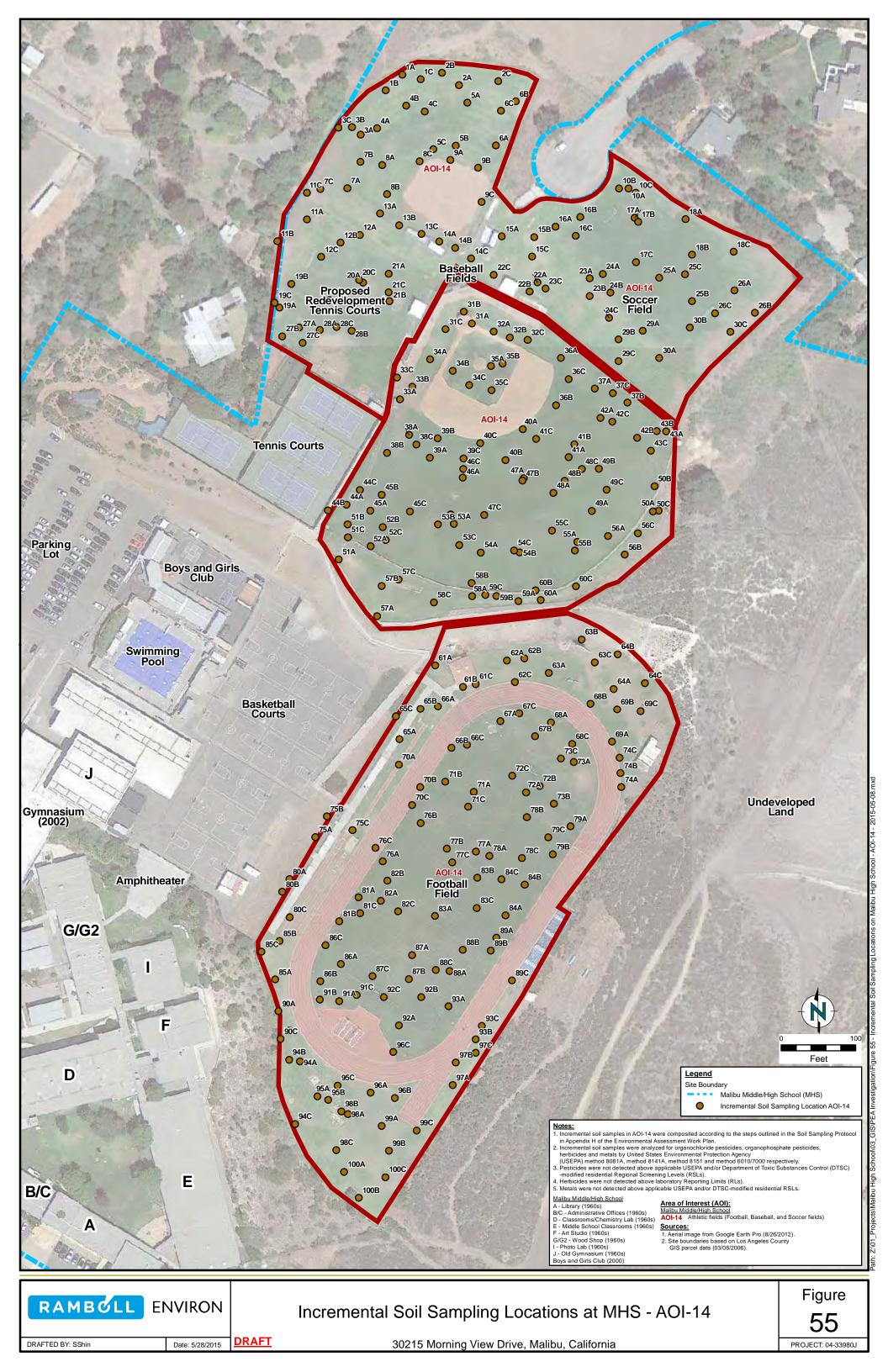


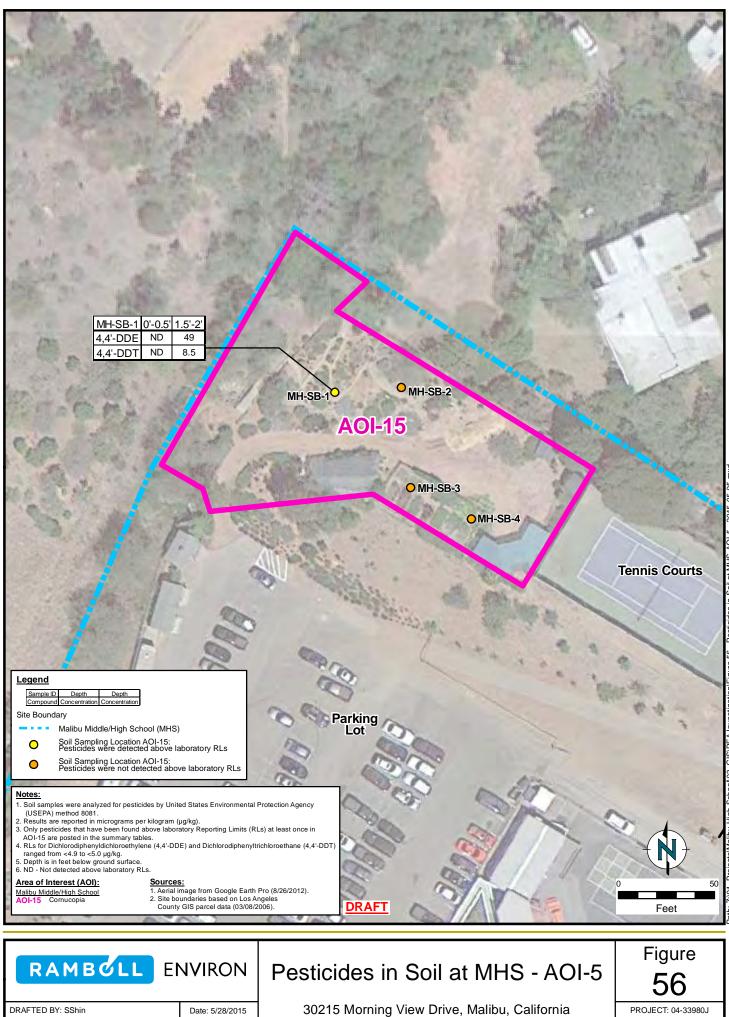


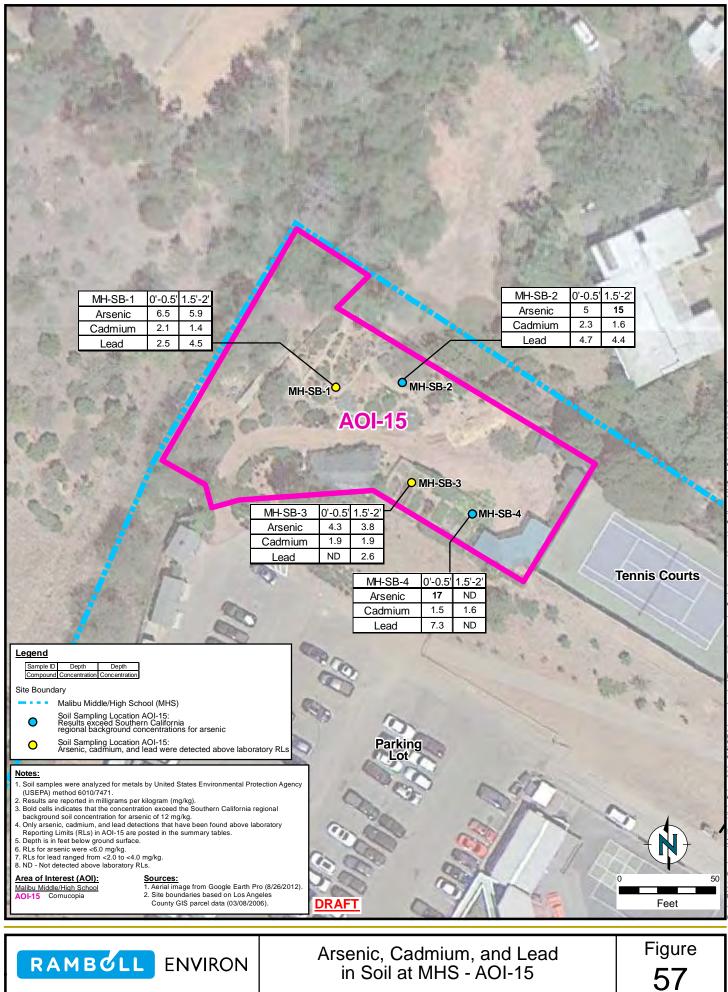










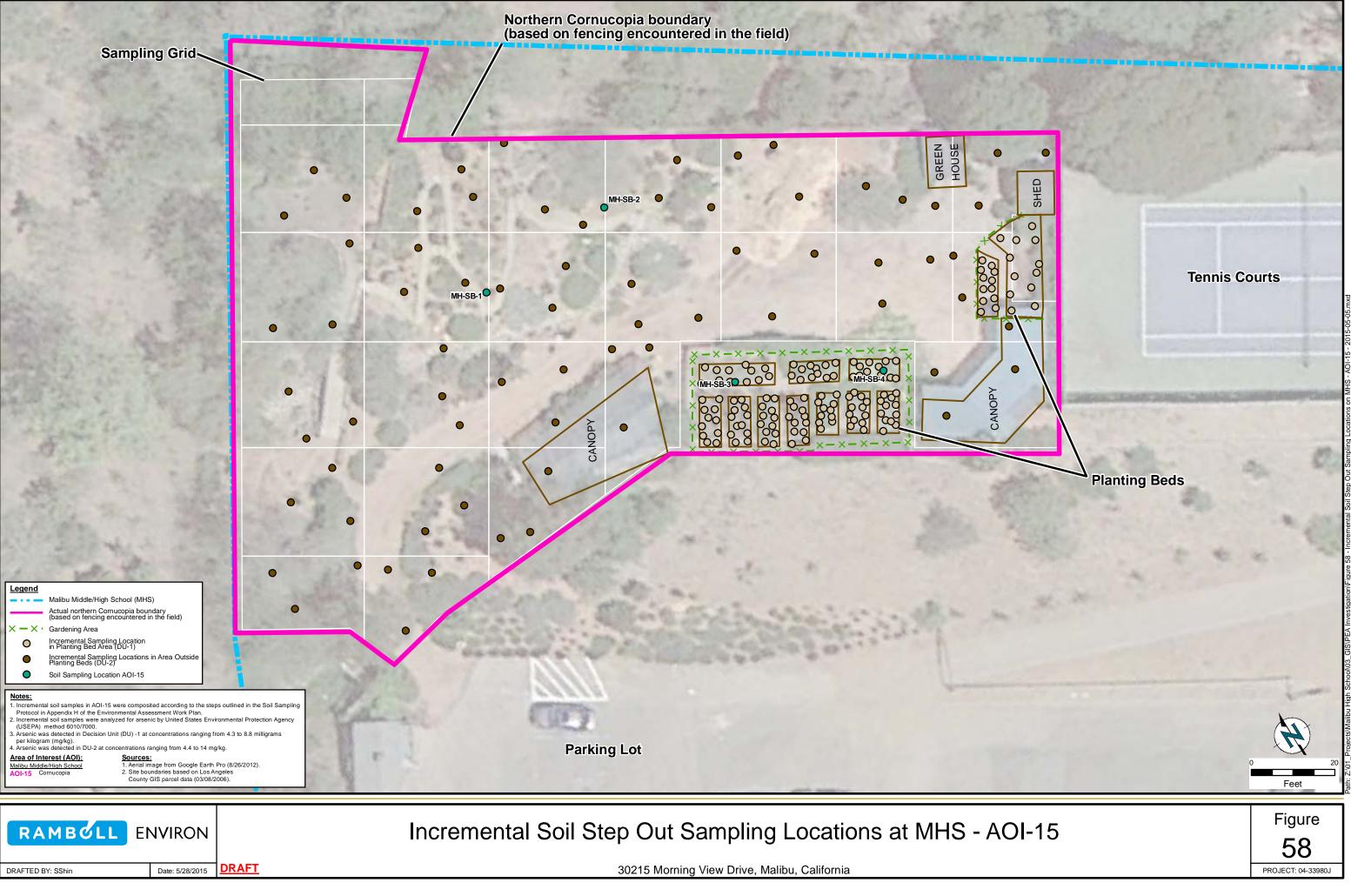


30215 Morning View Drive, Malibu, California

DRAFTED BY: SShin

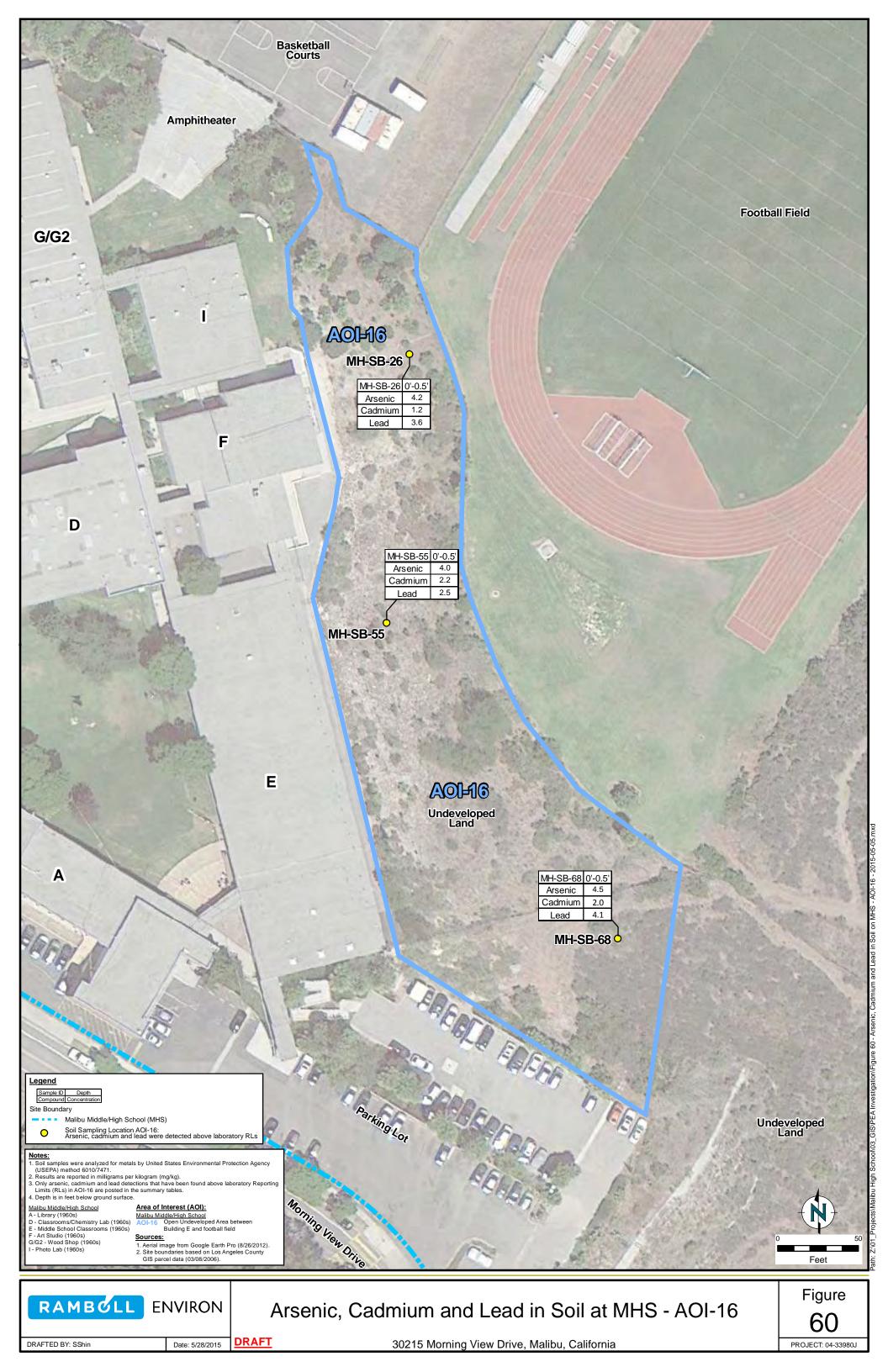
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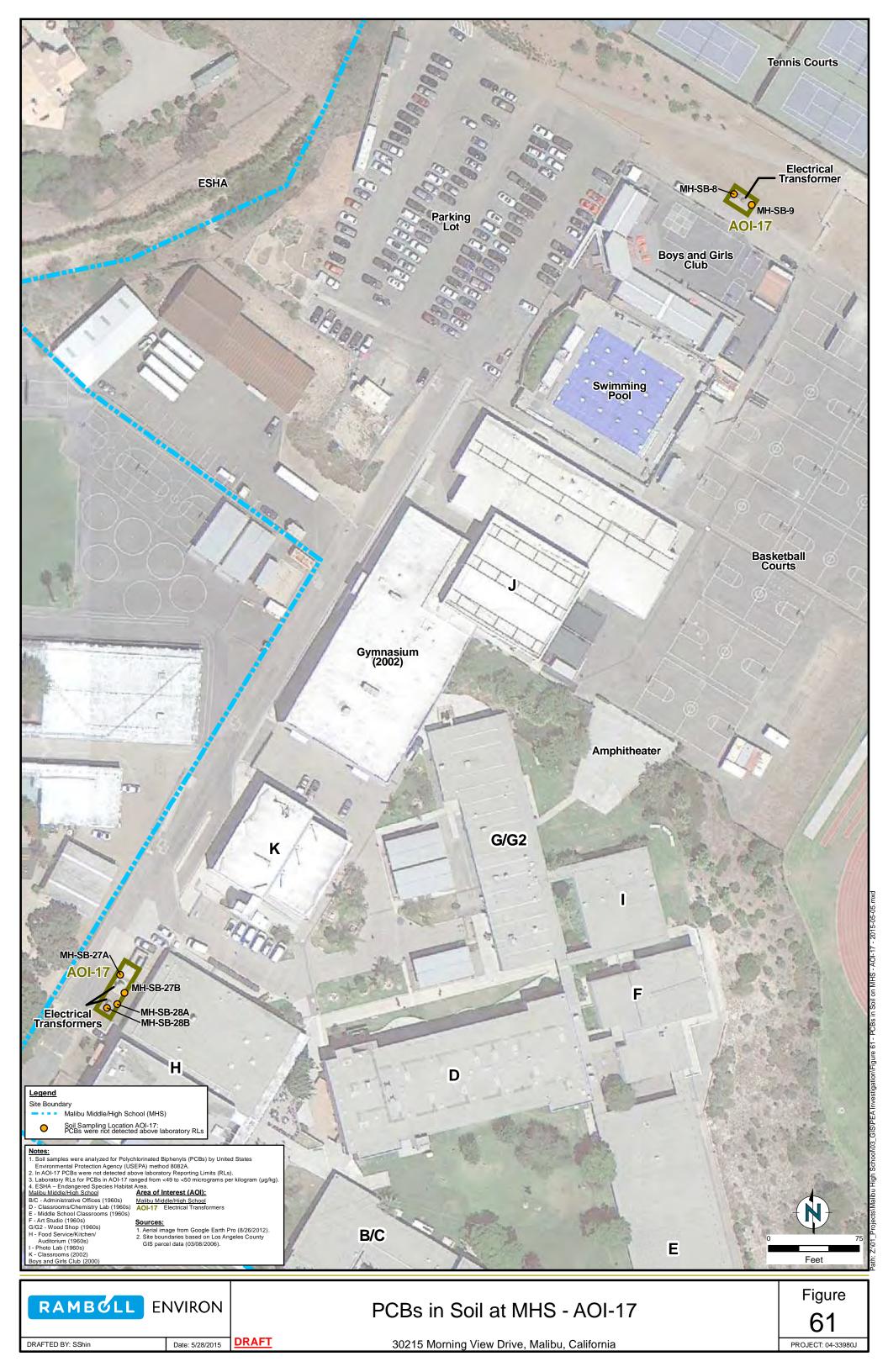
PROJECT: 04-33980J

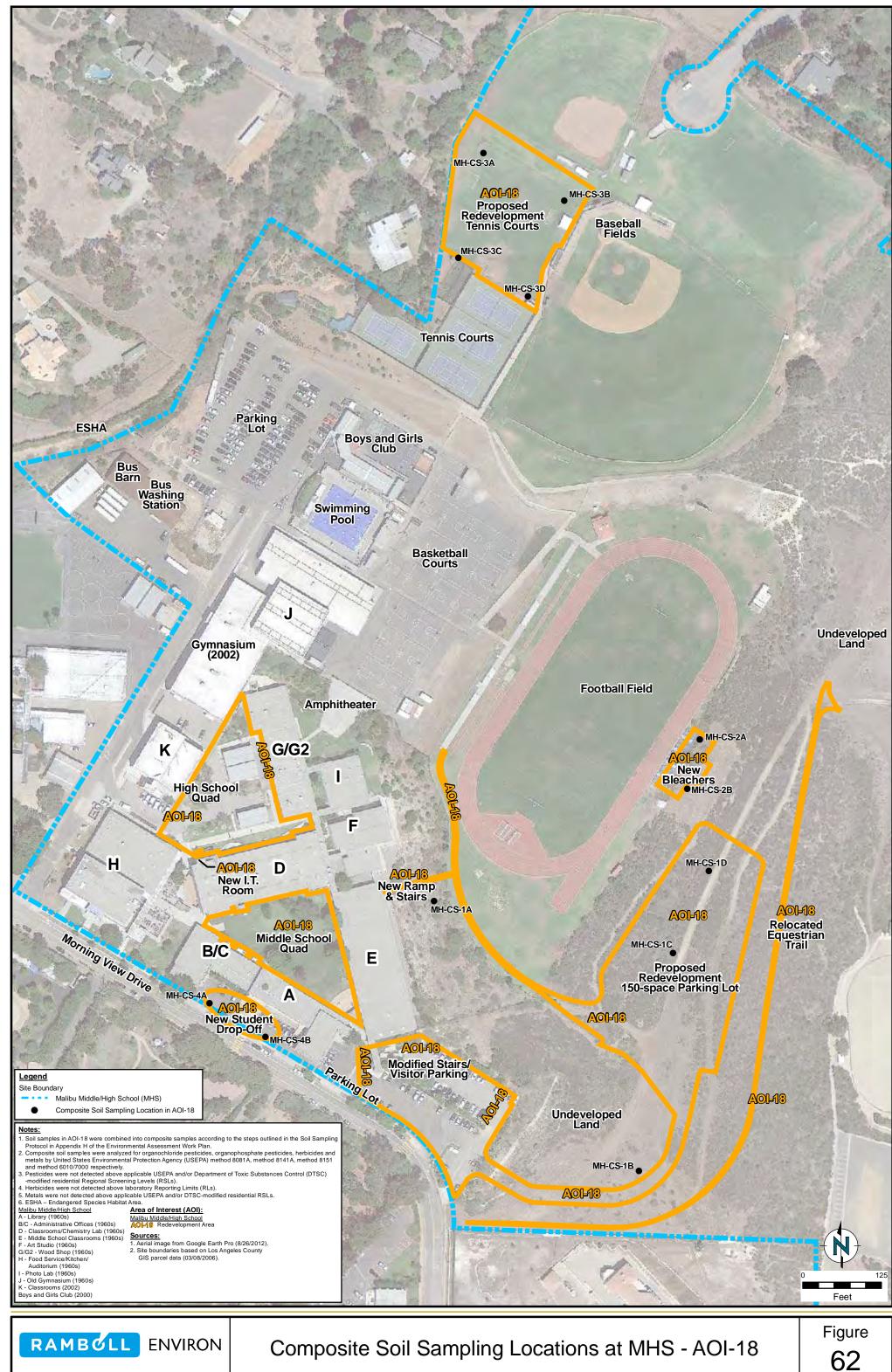










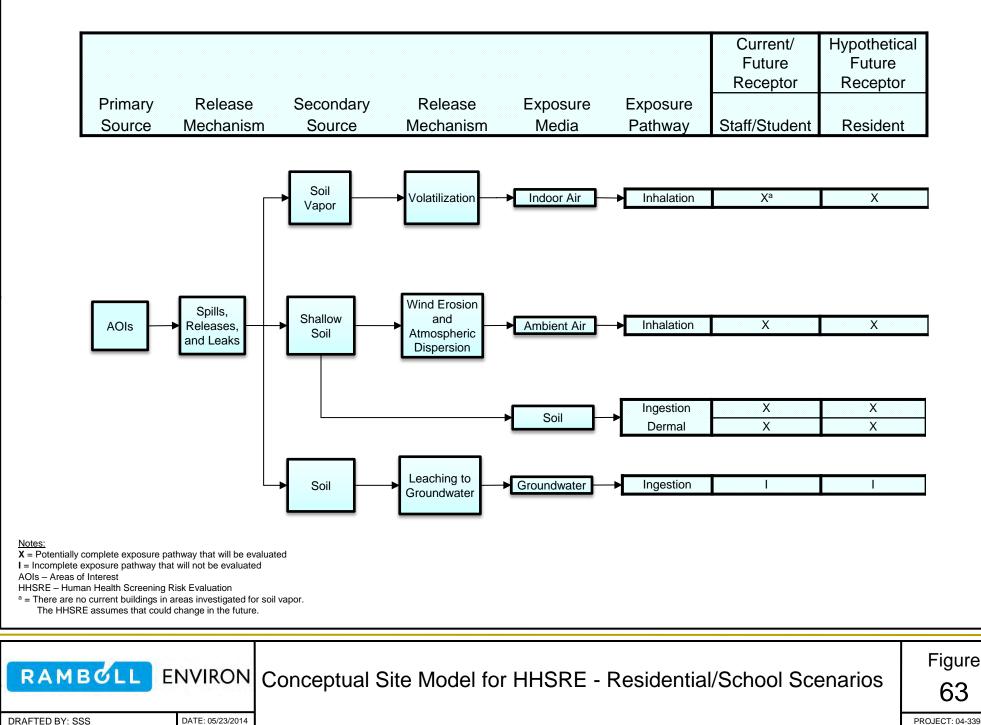


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DRAFT Date: 5/28/2015

30215 Morning View Drive, Malibu, California

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