

APPENDIX E



**PRELIMINARY ENVIRONMENTAL ASSESSMENT
FOR THE
PROPOSED SCHOOL SITE – STOCKTON SITE I
CORNER OF WESTLAKE DRIVE & REGATTA LANE
STOCKTON, CALIFORNIA**



**PROJECT NUMBER: 2019-00014
JULY 27, 2020
(REVISED SEPTEMBER 29, 2020)**

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July 27, 2020
Revised September 29, 2020
Project No. 2019-00014

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Subject: Preliminary Endangerment Assessment for the
Proposed School Site - Stockton Site - I
Corner of Westlake Drive and Regatta Lane
Stockton, CA 95219
APN: 066-050-07, -08 (portion)

Dear Ms. Tisdale:

Please find below our Preliminary Environmental Assessment (PEA) for the Proposed School Site – Stockton Site I on behalf of Lodi Unified School District for your review and consideration.

The Lodi Unified School District (LUSD) is currently in negotiations to purchase the above referenced property (APNs: 066-050-070, portion of -080) located at the corner of Westlake Drive and Regatta Lane, Stockton, California.

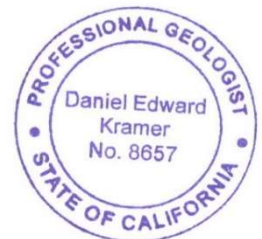
The accompanying PEA Report describes the methodologies, procedures, and findings of the PEA which was performed in general accordance with the California Department of Toxic Substances Control's PEA guidelines.

Sincerely,

Petralogix Engineering, Inc.

Tonya R. Scheftner, Project Geologist
B.Sc. Geology, GIT No. 685

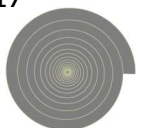
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**PRELIMINARY ENDANGERMENT ASSESSMENT
STOCKTON SITE I**

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APPENDIX E

Project Correspondence



July 27, 2020
Revised September 29, 2020

PRELIMINARY ENDANGERMENT ASSESSMENT WORKPLAN

STOCKTON SITE I CORNER OF WESTLAKE DRIVE & REGATTA LANE

STOCKTON, CALIFORNIA

OUR PROJECT NO: 2019-00014

EXECUTIVE SUMMARY

The purpose and objective of the Preliminary Environmental Assessment (PEA) is to assess environmental conditions for a proposed school site – Stockton Site I – located in the Westlake Villages development on the corner of Westlake Drive and Regatta Lane, Stockton, CA. The parcel is defined as San Joaquin County Assessor Parcel Number (APN: 066-050-070, portion of -080).

Lodi Unified School District is currently considering purchasing the parcel for a proposed school site. The proposed school is still in the design concept phase; however, the proposed school is anticipated to serve approximately 800 students with approximately 35 (K-8) classrooms. The Site will be connected to the sanitary sewer and water provided by the City of Stockton. The District is seeking state funding for this project.

Environmental conditions were identified for the parcel in a Phase I Environmental Site Assessment by Petralogix Engineering, dated November 18, 2019. The Phase I, in addition to a Scoping Meeting between LUSD and DTSC, identified the following environmental concerns:

- The potential presence of chemicals of concern (COCs) in soil at the Site from historical agricultural use, which includes the potential presence of organochlorine pesticides (OCPs), arsenic, and lead.
- An approximately 1.5-acre recently filled basin developed from at least 2006 was located on the southeastern boundary. Since the basin represents a low spot on the Site, OCPs, arsenic, and lead associated with agriculture are considered COCs for the basin.
- The southeastern portion of the subject property may have had up to two historic structures present from at least 1937 to 1947. Potential contamination from lead-based paint and organochlorine pesticides (OCPs) are considered COCs for this area.

This PEA report was prepared in accordance with the Revised PEA Workplan dated May 14, 2020 prepared by Petralogix. DTSC issued an approval letter for the PEA Workplan dated May 15, 2020. The purpose and objective of the PEA is to assess the potential presence of chemicals of concern (COCs) in soil at the Site from historical agricultural use, which includes the potential presence of organochlorine pesticides (OCPs), arsenic, and lead, and if present, the potential health risk to proposed future site user's (workers, students, residents). PEA investigation fieldwork was conducted on June 10, 2020 under DTSC oversight. Soil samples in the former agricultural field area were collected from the following locations on the Site, which are depicted on Plate 2.



- 30 locations within the agricultural use field boundary (including the former basin) to investigate presence of OCPs, arsenic, and lead in soil. 10 composite samples were prepared using the 30 discrete samples on a 3:1 or 4:1 ratio and analyzed for OCPs. 10 discrete samples were analyzed for arsenic and lead.
- 10 discrete samples from the Site at a depth of 5 to 5.5 feet below ground surface for background concentration of arsenic in soil. Background arsenic sample locations are depicted on Plate 3.

Based on a parcel expansion to accommodate the municipal lift station adjacent east of the Site, the two former historic structures are no longer within the parcel boundary, therefore, no sampling was performed for the former structures. In addition, the Phase I ESA report identified a pad-mounted transformer present on the Site since approximately 2006, however, the pad-mounted transformer was later determined to be outside the proposed school boundary; Plate 2 and Plate 3 show the transformer located outside the Site parcel boundary, adjacent west of Regatta Lane and south of Westlake Drive.

Arsenic was detected in 10 discrete soil samples (including co-located sample) from the upper 6 inches of soil in the former agricultural field, and one in the former basin at depth (2.5 feet below ground surface); concentrations ranged from 2.1 to 5.7 milligrams per kilogram (mg/kg). Arsenic was detected in 10 background samples obtained from the Site between 5 to 5.5 feet bgs with concentrations ranging from 1.5 to 4.0 mg/kg.

Lead was detected in 10 discrete soil samples (including co-located sample) from the upper 6 inches of soil in the former agricultural field, and one in the former basin at depth (2.5 feet bgs); concentrations ranged from 3.0 to 6.1 mg/kg.

Four OCP compounds (DDD, DDE, DDT, and dieldrin) were detected in the three 4-point composite samples, one co-located field duplicate sample, and the seven 3-point composite samples. The detected OCP concentrations were significantly less than the United States Environmental Protection Agency Regional Screening Levels (USEPA RSL) for residential soils.

A preliminary screening-evaluation human health risk assessment (HHRA) was performed to screen the Site for potential human health concerns. The soil results were compared to the DTSC-SLs and U.S. EPA Regional Screening Levels (April 2019) where DTSC-SLs were not available. The arsenic concentrations are considered similar to background arsenic when compared to local and regional background concentrations. The risk characterization methods used were consistent with the PEA Workplan and DTSC's PEA guidance for the calculation of cumulative cancer risk and noncancer hazard using the maximum exposure point concentrations for each COC. Detected concentrations of lead were assessed using DTSC's Lead Risk Assessment Version 8. The total noncancer hazard index is 5.54E-03 and cancer risk is 6.80E-08.

Based on the findings of the PEA investigation, Petralogix recommends no further action for the Site. The findings and conclusions presented herein are subject to review and approval by DTSC.



1.0 INTRODUCTION

On behalf of the Lodi Unified School District (LUSD), Petralogix Engineering Inc. (Petralogix) has performed a Preliminary Endangerment Assessment (PEA) to evaluate current Site conditions for the proposed new Stockton Site I school site located in Stockton, California (Plates 1 and 2). This PEA report was prepared in accordance with the Revised PEA Workplan dated May 14, 2020 prepared by Petralogix. DTSC issued an approval letter for the PEA Workplan dated May 15, 2020.

The approval letter is included in Appendix A.

1.1 PURPOSE

The purpose and objective of the PEA is to assess the potential presence of chemicals of concern (COCs) in soil at the Site from historical agricultural use, which includes the potential presence of organochlorine pesticides (OCPs), arsenic, and lead, and if present, the potential health risk to proposed future site user's (workers, students, residents).

Based on the original PEA Workplan, COCs related to historical demolished buildings in the far east portion of the Site were to be investigated for potential lead, arsenic, and OCPs, however, based on a parcel lot adjustment, the area is now being utilized by an expanded lift station, new asphalt parking, and a storm basin, therefore, the historical building investigation is no longer applicable.

Findings of the PEA are used to evaluate risk. PEA is defined in California Health and Safe Code (HSC §25319.5) as follows:

Preliminary Endangerment Assessment means an activity which is performed to determine whether current or past waste management practices have resulted in the release or threatened release of hazardous substances which pose a threat to public health or the environment. The PEA is also applicable to releases of hazardous materials.

As stated in the *Preliminary Endangerment Assessment Guidance Manual* by DTSC (January 1994, Revised October 2015), specific objectives of the PEA include:

- Determining if a release of hazardous wastes/substances/materials has occurred at a site and delineating the general extent of the contamination;
- Estimating the potential threat to public health and/or the environment posed by the site and providing an indicator of the relative risk;
- Determining if an interim action is required to reduce and existing or potential threat to public health or the environment;
- Completing preliminary project scoping activities to identify data gaps and possible remedial action strategies that would form the basis for development of a site strategy;
- Providing data and information to DTSC; and
- Assessing and providing for the informational needs of the community.



The PEA was performed for the proposed Stockton Site I school Site in accordance with the PEA Workplan.

1.2 SITE DESCRIPTION

The Site consists of vacant land. The Site property has no site address; the Site is located at the corner of Westlake Drive & Regatta Lane, Stockton, San Joaquin County, California (APNs: 066-050-070, -080 portion of). The overall parcel, pending a proposed property line adjustment, will be approximately 19.36 gross/18.5 net acres in size and is currently owned by Stockton Westlake, LLC. The vicinity map and site map are available for review as Plates 1 and 2. The most recent proposed parcel map is included as Plate 4.

1.2.1 Site Identification

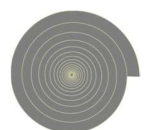
Site Identification Information	
Site Name	Stockton Site I
Contact Person	Ms. Vickie Brum, Lodi Unified School District
Site Address	Corner of Westlake Drive & Regatta Lane Stockton, California 95219
Mailing Address of Contact Person	1305 E. Vine Street, Lodi, CA 95240
Phone Number of Contact Person	(209) 331-7223
Other Site Names	None
USEPA Identification Number	None
Assessor Parcel Number(s)	066-050-070-000 and portion of 066-050-080-000
Township	2 North
Range	5 East
Land Use	Vacant
Zoning	Mixed Use

1.2.2 Adjacent Properties

The Site is bound by a municipal lift station and a pad-mounted transformer followed by Regatta Lane and housing to the east, vacant land planned for residential development to the north and west, and a levee followed by Bear Creek/Pixley Slough to the south.

1.2.2 Planned Development

Lodi Unified School District is currently considering purchasing the parcel for a proposed school site. The proposed school is still in the design concept phase; however, the proposed school is anticipated to serve approximately 800 students with approximately 35 (K-8) classrooms. The Site will be connected to the sanitary sewer and water provided by the City of Stockton. The District is seeking state funding for this project.



2.0 PRIOR ENVIRONMENTAL STUDIES

A Phase I Environmental Site Assessment designed to provide compliance with the ASTM E-1527-13 Standard and the *Department of Toxic Substances Control Phase I Site Assessment Advisory: School Property Evaluations, Revised September 5, 2001*, was prepared for the Site by Petralogix dated June 6, 2019. Further investigation was recommended to evaluate whether environmental media has been impacted by a release from historic agricultural practices and demolished structures.

Petralogix's professional opinion, in addition to a Scoping Meeting between DTSC, LUSD, and Petralogix dated November 18, 2019 occurred to discuss areas of concern.

The Phase I ESA and DTSC scoping meeting identified the following Recognized Environmental Conditions:

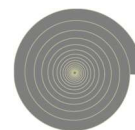
- Pesticides may have been applied to the subject property during possible agricultural use from at least 1937 to 1998. Organochlorine pesticides (OCPs), lead, and arsenic are considered chemicals of concern (COCs) for this past site use.
- An approximately 1.5-acre recently filled basin developed from at least 2006 was located on the southeastern boundary. Since the basin represents a low spot on the Site, OCPs, arsenic, and lead associated with agriculture are considered COCs for the basin.
- The southeastern portion of the subject property may have had up to two historic structures present from at least 1937 to 1947. Potential contamination from lead-based paint and organochlorine pesticides (OCPs) are considered COCs for this area.

Petralogix recommended that soil sampling for OCPs, arsenic, and lead be conducted in the former agricultural field and basin. According to Karen Garrett, Land Entitlement Manager for the A.G. Spanos Companies (property owner), the former basin was filled with native soil. However, because the basin was filled, the basin was recommended sampled at the new filled surface and the former basin surface prior to being filled, as interpreted during field sampling collection.

Based on a lot line adjustment in March 2020, the two historic structures are no longer within the proposed school boundary. The lot line adjustment was to accommodate an expansion of the lift station, a new asphalt parking area, and a new storm retention basin now expanded adjacent east of the Site. A.G. Spanos Corporation confirmed the proposed school site parcel was moved further west to accommodate the expansion while retaining the requested acreage.

3.0 ENVIRONMENTAL SETTING

A new campus (K-8) is proposed for the Site. Student capacity is anticipated to be approximately 800 students; however, the number of classrooms and administrative buildings are currently undetermined.



3.1 PHYSICAL SETTING

3.1.1 Regional Physiographic Conditions

The Site is located within the Great Valley Geomorphic Province of California (Great Valley), a ~100 million-year-old sedimentary basin that formed as a low lying region between a subducting oceanic plate to the west and the Sierra Nevada mountain range to the east. The province is approximately 450 miles long and 50 miles wide and is comprised of two northwest to southeast-trending sub-basins: the Sacramento Valley to the northwest and the San Joaquin Valley to the southeast. Each of these basins is filled by a thick sequence of Mesozoic to Quaternary sediment, whose terrigenous and subaerial depositional sources have been traced to the Sierra Nevada and Coast Range Geomorphic Provinces.

3.1.2 Geologic Conditions

Review of the Preliminary Geologic Map of the Lodi 30' x 60' Quadrangle¹, California indicates that the proposed school site is underlain by late Pleistocene-aged alluvium of the Modesto Formation. These deposits primarily consist of arkosic sands with minor silts and gravels.

3.1.3 Naturally Occurring Asbestos

According to the USGS Open-File Report 2011-1188, *Reported Historic Asbestos Mines, Historic Asbestos Prospects, and Other Natural Occurrences of Asbestos in California*², the project site does not lie within an area mapped as containing Naturally Occurring Asbestos (NOA). Naturally occurring asbestos occurring at the Site is therefore considered unlikely.

3.1.4 Radon

Radon gas emissions from the natural breakdown of elements in soil is a concern in many areas around the country. In particular, Radon gas can buildup in confined spaces such as tunnels and basements. A survey of the subject property was not conducted, but a review based on government data was performed. The area in question is listed on the US EPA Radon Check Map as having twenty (20) local tests historically performed. The Federal EPA Radon Zone for San Joaquin County is Zone 3, indoor average level <2 pCi/L. Based on this low potential, Radon is a low concern for the subject property.

3.1.5 Soil Conditions

The Site soil consists of Ryde clay loam (0-2 percent slopes) and Guard clay loam (0-2 percent slopes) for the western and eastern portions of the subject property, respectively. Ryde clay loam is very poorly drained with negligible runoff derived from herbaceous organic material derived from reeds and tules, and fine-loamy alluvium derived from mixed rock sources.³ Guard clay loam is poorly drained with high runoff derived from alluvium and mixed rock sources.¹

¹ California Geologic Society. Preliminary Geologic Map of the Lodi 30' x 60' Quadrangle. 2009.

² Reported historic asbestos mines, historic asbestos prospects, and other natural occurrences of asbestos in California: USGS Open-File Report 2011-1188. Van Gosen, B.S., And Clinkenbeard, J.P., 2011.

³ UC Davis California Soil Resource Lab, SoilWeb.



3.1.6 Groundwater Conditions

According to the San Joaquin County Spring 2016 and Fall 2016 Groundwater Reports⁴ groundwater elevation contour map, groundwater elevation is approximately -22 feet below mean sea level (msl) during spring and -24 feet below msl during fall. The elevation at the site is approximately 0 feet msl, therefore, according to the regional groundwater elevation maps reviewed, depth to groundwater at the subject property is approximately 22 to 24 feet below ground surface (bgs). The groundwater flow direction is east with a gradient of approximately 4.5 and 5.5 feet per mile in the spring and fall, toward a cone of depression.

To supplement regional groundwater report information, groundwater data obtained on the California State Water Resources Control Board's GeoTracker Ambient Monitoring and Assessment (GAMA) website⁵ was also reviewed. Groundwater elevation measurements recorded in groundwater monitoring well #02N5E01A006M, located approximately 1.25 miles northeast of the subject property indicates groundwater elevations have ranged from approximately -2.58 feet mean sea level (msl) and -11.58 feet msl as measured periodically between March 21, 2014 and October 17, 2016. GAMA well data indicates depth to groundwater is approximately 3 to 12 feet below ground surface. A LUSD Stockton-Lakeview School – Preliminary Geologic Hazards and Geotechnical Engineering Report⁶ for the Site encountered groundwater at depths ranging from 7.5 to 10 feet below existing site grades within soil borings on May 3 and 16, 2019.

3.1.7 Nearest Surface Water

The Site is adjacent to Bear Creek/Pixley Slough to the south with Bishop Cut approximately 1.3 miles west of the Site.

4.0 IMPLEMENTATION OF PEA WORKPLAN

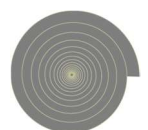
Fieldwork was conducted on June 10, 2020 under DTSC oversight. Soil samples in the former agricultural field area were collected from the following locations on the Site, which are depicted on Plate 2.

- 30 locations within the agricultural use field boundary (including the former basin) to investigate presence of OCPs, arsenic, and lead in soil. 10 composite samples were prepared using the 30 discrete samples on a 3:1 or 4:1 ratio and analyzed for OCPs. 10 discrete samples were analyzed for arsenic and lead.
- 10 discrete samples from the Site at a depth of 5 to 5.5 feet below ground surface for background concentration of arsenic in soil. Background arsenic sample locations are depicted on Plate 3.

⁴ San Joaquin County Flood Control and Water Conservation District, Spring 2016 and Fall 2016 Flood Control and Water Conservation District Reports.

⁵ <https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/Default.asp>

⁶ Mid Pacific Engineering. Preliminary Geologic Hazards and Geotechnical Engineering Report – LUSD Stockton-Lakeview School. August 15, 2019.



4.1 PRE-FIELD ACTIVITIES

LUSD issued a DTSC-approved Field Work Notice via mail to neighboring residents within line of sight of the proposed school property nine days prior to the beginning of field work. The approved Field Work Notice is available in the PEA Workplan⁷.

4.2 SOIL SAMPLING AND ANALYSIS

On June 10, 2020, Petralogix implemented the soil sampling and analysis plan presented in the DTSC-approved PEA Workplan. Tables A and B present a summary of laboratory results; sample locations are shown on Plates 2 and 3.

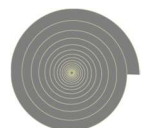
4.2.1 Former Agricultural Area

Based on the historic agricultural practices at the Site, organochlorine pesticides (OCPs), arsenic, and lead associated with pesticide use is a concern for the Site. The *Interim Guidance for Sampling Agricultural Fields for School Sites (Third Revision)*, dated August 7, 2008 by the Department of Toxic Substances (DTSC) was referenced to develop the sampling plan for the site to test for these constituents of potential concern (COPCs). The planned site acquisition is 18.5 net and approximately just over 19 acres gross; the sample plan uses the recommended sampling number per DTSC for a 20-acre site, which is a minimum of 30 sample locations, which were composited (3:1 or 4:1) into 10 samples for analysis as indicated in Plate 2. The proposed parcel is approximately rectangular in shape; locations were determined with approximately one-half acre grid locations superimposed onto the Site. The sampling locations were recorded with a handheld sub meter Trimble GeoXH GPS device and marked with flagging for future locating as needed. Plate 2 represents the Trimble GeoXH GPS coordinate locations. Soil samples were 'surface' samples collected from a depth interval of 0 to 6 inches below ground surface.

For OCP analysis, 11 composite samples (including 1 co-located duplicate) were prepared by the analytical laboratory (McCampbell Analytical, Pittsburg, California) using 33 samples with a 3:1 or 4:1 ratio (i.e. 3 or 4 discrete samples for every 1 composite sample including co-located duplicate).

For arsenic and lead, 11 discrete samples were analyzed, including co-located 1 duplicate sample. The 10 discrete samples were a subset of the 30 discrete samples (grid locations AG1, AG5, AG8, AG11, AG15, AG18, AG22, AG25, and AG28).

⁷ Petralogix Engineering, Inc. Stockton Site I – Preliminary Workplan. May 14, 2020.



4.2.2 Former Basin Area

The former basin was filled sometime during the fall of 2019. According to personal email correspondence with Karen Garrett⁸, Land Entitlement Manager for the A.G. Spanos Company (Appendix E), the basin was filled with native soil. The former agricultural sampling scheme took into consideration the approximate location of the former basin which was filled sometime during the fall of 2019. The sample locations (AG25, AG26, and AG27) within the former basin were sampled at the surface as well as at a depth that was determined by the onsite geologist to be native soil (labeled AG25@2.5', AG26@2', and AG27@4.5') with the label for each corresponding to the final depth interpreted as the original former basin surface. The soil encountered during hand auguring within the former basin was consistent with soil encountered throughout the Site. The native surface of the original basin was easily distinguished by the auger encountering a suddenly moist dark black soil containing preserved organic material; a field photo of the soil from the basin's former surface is available for review in Appendix B. The former basin samples at depth were composited 3:1 and analyzed for OCPs; AG25@2.5' was analyzed for arsenic and lead.

4.2.3 Former Structures

Based on the Phase I ESA (Petalogix, 2019) two former structures were observed in the historical photographs from 1937 and 1947 in the southeast portion of what was interpreted to be the proposed Site boundary. However, during field sample location activities, it was noted that the previous small lift station was expanded, with a larger lift station, new wall, and a large parking/driving area covered with asphalt now covering the former structure sample locations. Photos to document land use change associated with the lift station are available for review in Appendix B. In addition, an email correspondence with the parcel owner representative confirmed there was a lot line adjustment that involved shifting the municipal parcel further west onto what would have been the Site. Therefore, the former on-site structures were not sampled.

4.2.4 Background Soil

Ten discrete soil samples were collected from a depth of approximately 5 – 5.5 feet bgs at locations throughout the Site for assessing arsenic concentrations in undisturbed native soil. Per the workplan, the ten samples collected at depth were placed on hold and if all arsenic results were at or below the regional background of 12 mg/kg, then analysis of samples collected would not be required; however, based on correspondence with DTSC⁹, it was communicated that running the background samples would be preferred. Background arsenic sample analysis is discussed in Section 4.3.2.

4.2.5 Collection and Handling of Soil Samples

Soil sampling was performed using Level D personal protective equipment. Depending on the depth of the sample required, samples were obtained with either a decontaminated hand auger or small decontaminated hand tool advanced in the soil to appropriate depth. All samples were surface

⁸ Email correspondence with A.G. Spanos Land Entitlement Manager Karen Garrett. August 26, 2019 and September 28, 2020.

⁹ Email correspondence with DTSC Project Manager, Elizabeth Tisdale. June 17, 2020.



samples (0-6 inches bgs) with the exception of the background soil samples (5-5.5 feet bgs) and the Former Basin at depth soil samples (2 to feet to 4.5 feet bgs).

Thirty-three discrete surface (0 to 6 inches bgs) samples were collected (OCPs, arsenic, and lead) in the former agricultural area, three discrete samples were collected (OCPs, arsenic, and lead) located at the bottom of the filled in basin (2 feet to 4.5 feet), and ten discrete soil samples were collected at a depth of 5 to 5.5 feet bgs to obtain background arsenic data.

Soil samples were placed in laboratory-provided glass jars. No preservatives were necessary for planned analyses. Soil samples were placed on ice and directly transported under chain-of-custody documentation to McCampbell Analytical Laboratories in Pittsburg, California the same day as sampling occurred (June 10, 2020).

Each sample was uniquely identified on laboratory-provided labels. Individual sample labels included the discrete location sample identification number provided in Plate 2 and the sample collection depth. For example, AG1@0' represents sample location AG1 collected at a depth of 0 to 6 inches. Surface samples are labeled "0" for 0 to 6-inch depths and the maximum depth of any non-surface sample are labeled accordingly.

Field documentation includes:

- Sample I.D. numbers
- Sample collection Date/Time
- Latitude and Longitude determined from GPS unit
- Field staff
- Flags were placed at each sample collection location

4.2.6 Decontamination

Prior to collection of each sample, all reusable sampling equipment was washed in a solution of Liqui-Nox detergent and water and rinsed twice with tap water and once with distilled water. Cleaning was conducted in such a manner so as to contain the water, which was placed in appropriate containment vessels.

4.2.7 Laboratory Analysis

Samples were transported under chain-of-custody to McCampbell Analytical, Inc. of Pittsburg, California (ELAP No. 1644). Laboratory analysis is summarized below:

- Six 3:1 composite samples, three 4:1 composite samples, and one 4:1 co-located composite duplicate sample obtained from the surface (0 to 6 inches bgs) of the former agricultural field and filled in basin (AG25, AG26, and AG27) were analyzed for OCPs by United States Environmental Protection Agency (USEPA) Method 8081A.
- Nine co-located discrete surface samples (AG1, AG5, AG8, AG11, AG15, AG18, AG22, AG25, and AG28) and one co-located duplicate sample (AG14-Dup) were analyzed for arsenic and lead by USEPA Method 6020.



- One 3:1 composite sample at depth (AG25@2.5', AG26@2', and AG27@4.5') located at the original "surface" of the filled in basin were analyzed for OCPs. One co-located sample AG25@2.5' was analyzed discretely for arsenic and lead by USEPA Method 6020.
- Ten discrete samples obtained at depth (5 to 5.5 feet bgs) were analyzed for arsenic by USEPA Method 6020.

Summary of relevant results for OCPs, arsenic, and lead are tabulated in Tables A and B.

4.3 DISCUSSION OF RESULTS FOR SOIL SAMPLES

This section discusses the analytical results for OCPs, arsenic, and lead. Detected concentrations are tabulated in Tables A and B. Copies of the laboratory reports are provided in Appendix C.

4.3.1 Screening Levels

The purpose of a PEA-based screening evaluation is to provide risk managers with a general overview of the site conditions and potential risks to human health and the environment. The screening levels are considered conservative, therefore, the presence of a chemical of concern at a concentration elevated above a screening level does not necessarily indicate negative impacts to human health but that further evaluation potential human health concerns are appropriate when screening values are exceeded.

The screening levels of detected concentrations are compared to USEPA Regional Screening Levels (RSLs) for residential land use, modified as necessary by DTSC in HRR Note 3. As described in the PEA guidance document (2015) the identification of human health screening levels will be compared to human health-risk-based residential screening level/concentration. Constituents of Concern (COCs) identified on the Site will be compared to the appropriate HHSL for soil, as indicated in Tables A and B. Arsenic concentrations are compared to the background concentrations calculated from the Site (Section 4.3.2).

The data obtained is used in this PEA screening evaluation to estimate risk to the public. The highest concentrations of each contaminant onsite are used to estimate the project site's potential threat.

4.3.2 Background Soil Arsenic Concentrations

The DTSC-SL for arsenic in residential (unrestricted) land use is 0.11 mg/kg. As stated in the *Preliminary Endangerment Assessment Guidance Manual*, arsenic is naturally present in soil at concentrations frequently greater than the risk-based screening level, and natural background levels can vary widely in different regions. Therefore, it is recommended that background samples be collected to determine background concentrations to use in determining between background concentrations and elevated concentrations due to past release of hazardous substances or waste disposal.

Petralogix collected 9 discrete surface soil samples (0 to 6 inches), one sample at the surface of the filled in basin (AG25@2.5 feet bgs), and one duplicate surface at depth to analyze for arsenic. In addition, Petralogix collected 10 samples at a depth of 5 to 5.5 feet bgs in native,



undisturbed soil to use for background analysis, which is the recommended minimum sample number at depth per DTSC.

The framework provided by DTSC (1997) indicate the local ambient data set may be defined by combing all data and determining ambient conditions, therefore the detected arsenic concentrations were added to the Site background data set.

4.3.2.1 Statistical Evaluation Arsenic Background Concentration

ProUCL Version 5.1 (USEPA, 2016) was used to evaluate the background concentration for the Site utilizing the pooled data set. The data was subjected to summary statistics and the ProUCL Outlier Test (Dixon's); no outlying data was identified at 5 and 1 percent significance level, however for 10 percent significance the outlier test determined 5.7 mg/kg is an outlier. The relevant ProUCL statistical outputs are presented below:

Table 1. Summary Statistics for Background Arsenic (with Outliers)

Sample Size	21
Minimum Concentration	1.5
Maximum Concentration	5.7
Mean	3.03
First Quartile (Q ₁)	2.1
Median (Q ₂)	3.00
Third Quartile (Q ₃)	3.5
95 th Percentile	4.1
99 th Percentile	5.38
95 Percent UCL	3.409
Standard Deviation	0.998

Outliers are defined as in the DTSC guidance document (2009):

$$\text{Outlier} \geq Q_3 + (1.5 * (Q_3 - Q_1))$$

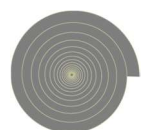
$$\text{Outlier} \geq Q_3 + (1.5 * (3.5 - 2.1))$$

$$\text{Outlier} \geq 5.6 \text{ mg/kg}$$

Based on the statistical analysis above, arsenic concentrations exceeding 5.6 mg/kg are considered outliers. The outlier analysis is consistent with the ProUCL Box Plot and normality plot (Q-Q plot) are provided as in Appendix D. According to the ProUCL Technical Guide (USEPA, 2013), Background Threshold Values (BTVs) should be established using an "established" data set representing the background under consideration, "*this data set represents background conditions free of outliers*".

The outlier test was performed for the second set with the removed outlier of 5.7 mg/kg. After the outlier removal the outlier calculation was performed, as shown below:

$$\text{Outlier} \geq Q_3 + (1.5 * (Q_3 - Q_1))$$



$$\text{Outlier} \geq Q3 + (1.5*(3.35-2.1))$$

$$\text{Outlier} \geq 5.225 \text{ mg/kg}$$

As indicated by the outlier test above, after removal of the outlier 5.7 mg/kg, no additional concentrations are considered outliers.

ProUCL was utilized to calculate the statistics in Table 2 below without outliers. Statistical evaluation for the adjusted data set was considered using the nonparametric distribution. According to the ProUCL Technical Guide (2016), *“since nonparametric upper limits (e.g. UTLs, UPLs) are based upon higher order statistics, often the CC achieved by these nonparametric upper limits is much lower than the specified CC of 0.95, especially when the sample size is small. In order to address this issue, one may want to compute a UPL based upon the Chebyshev inequality”*. Due to the small sample size and slightly left-censored skewed data set, the upper prediction Chebyshev inequality was used to compute a “conservative but stable” UPL.

The ProUCL statistical outputs are included in Appendix D. The statistical evaluation using the nonparametric distribution statistics output by ProUCL are summarized below:

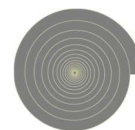
Table 2. Summary Statistics for Arsenic Background (without Outliers)

Sample Size	20
Minimum Concentration	1.5
Maximum Concentration	4.1
Mean	2.9
First Quartile (Q ₁)	2.1
Median (Q ₂)	3.00
Third Quartile (Q ₃)	3.35
95 th Percentile	4.1
99 th Percentile	4.1
90 Percent Chebyshev UPL	5.39
95 Percent Chebyshev UPL	6.51
95 Percent UTL	4.1
95 Percent Students-t UCL	3.213
Standard Deviation	0.809

As discussed in the ProUCL user guide, UPLs and UTLs represent an upper limit to be used for point-by-point individual site observation comparisons and are computed based on background data sets. Based on Petralogix’s professional judgement and experience with soil sampling in the region, the 95 Percent UPL of approximately 6.51 mg/kg is considered a reasonable upper limit for the background data set. The arsenic detected onsite is considered similar to local background. The concentration of 5.7 mg/kg was also compared to the regional background concentration of arsenic (12 mg/kg).

4.3.2.2 Arsenic Background Evaluation Summary

Comparison of existing Site data indicates arsenic is within the range of the calculated background concentration of 6.51 mg/kg. The arsenic concentration was additionally compared to the regional



background concentration of arsenic (12 mg/kg). Based on professional experience with arsenic results in the area with similar soil type, the regional background concentration of arsenic, and the statistical evaluation based on pooled Site data, the arsenic data evaluated appear similar to background concentrations.

4.3.3 Arsenic and Lead in Soil Samples

Lead concentrations detected in soil samples at the Site do not exceed the corresponding screening level of 80 mg/kg as determined by HHRA Note Number 4 (2019) for unrestricted land use. All arsenic sample concentrations were detected above the DTSC-SL for arsenic in residential soil, which is 0.11 mg/kg.

Arsenic was detected in 11 discrete samples (including co-located duplicate sample) obtained from the surface (0 to 6 inches) of soil at the Site with concentrations ranging from 2.1 to 5.7 mg/kg. The samples were obtained on June 10, 2020 and are shown referenced in Plate 2. Results are provided in Table B.

Arsenic was detected in 10 background samples obtained from 5 to 5.5 feet bgs located at the Site and concentrations ranged from 1.5 to 4 mg/kg. The background concentration samples were obtained on June 10, 2020 and are referenced in Plate 3. Results are provided in Table B.

4.3.4 Organochlorine Pesticides in Soil Samples

Four OCP compounds (DDD, DDE, DDT, and dieldrin) were detected in the three 4-point composite samples, the one co-located field duplicate sample, and the seven 3-point composite samples. The detected OCP concentrations were significantly less than the USEPA RSL for residential soils.

4.4 DATA QUALITY SUMMARY

4.4.1 Field Sampling and Field Variance

The sampling was performed in general agreement with the DTSC approved Workplan (Petalogix, 2020). A modification to the Workplan consisted of abandoning the planned sampling of the two former structures located in the southeast portion of the parcel based on a lot line adjustment.

4.4.2 Field Sampling and Field Variance

The sampling was performed in general agreement with the DTSC approved Workplan (Petalogix, 2020). A modification to the Workplan consisted of abandoning the planned sampling of the two former structures located in the southeast portion of the parcel based on a lot line adjustment.



4.4.3 Chain of Custody Evaluation

The chain of custody (COC) was delivered complete per the Workplan. As indicated in the workplan, a “J” flag was requested for arsenic. Samples were delivered to McCampbell Analytical Laboratory the same day as sampling, June 10. The samples were transported under ice and were cold and in good condition at sample delivery. Samples and analysis were consistent with the COC, with the exception of arsenic and lead analysis which were changed from USEPA 6010B to USEPA 6020.

4.4.4 Data Validation

Project data validation was performed by McCampbell Analytical Laboratory; data analysis was accepted as complete and released. Upon review of the laboratory data released by the McCampbell, the data quality was determined to be acceptable. The laboratory analytical reports provide a detailed summary of the QC/QA sample results. The data evaluation is available for review in Appendix C.

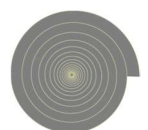
4.4.5 Health and Safety Procedures

Petralogix conducted a “tailgate” safety meeting prior to field sampling activities. Field work was performed in accordance with the Health and Safety Plan (HASP) with appropriate personal protective equipment and training.

5.0 HUMAN HEALTH SCREENING EVALUATION

As stated by DTSC’s PEA guidance (2015), the purpose of a PEA-based human health evaluation is to estimate the potential chronic human health risk/hazard from soil and groundwater contamination at the Site and to assist in deciding whether further characterization, risk assessment or remediation is necessary. Although risk estimates are calculated as part of a PEA, it should be noted that these estimates are not definitive. Rather, because highly conservative screening assumptions are applied, the estimates are conservative and are only indicators of relative risk.

Laboratory data from the samples collected on June 10, 2020 were used for the HHRA, as shown in Tables A and B. The data evaluation and HHRA spreadsheets and are included for review in Appendix D.



5.1 Conceptual Site Model

The conceptual site model (CSM) is a tool used to identify primary sources of contaminants of potential concern (COPC) at a Site, mechanisms of release for COPCs, points of exposure at the Site, and the exposure pathways (ingestion, inhalation, and dermal contact) for the screening level evaluation of health risks. The objective of the PEA Workplan is to evaluate the Site for an unrestricted residential land use scenario. The CSM also serves the purpose of guiding the progression of the risk assessment process, thereby functioning both as an organizational tool and as a check against omissions that might result in under- estimations of health risk. Three of the most important elements of the CSM are land use, potential receptors, and potential exposure pathways. Based on a review of existing data (site history, environmental setting, see Section 2), a Conceptual Site Model (CSM) has been developed for purposes of this PEA (Plate 5).

The conceptual site model has the following components:

- The primary source of COPCs are organochlorine pesticides associated with historical agriculture pesticide application practices.
- The primary release mechanism is uniform pesticide application to surface soil. It is worth noting, significantly elevated OCP compounds were not detected as an anomaly within the agricultural field sample area, therefore, spills and accidental pesticide release are not considered likely.
- Shallow soil containing residual pesticide compounds are considered the secondary source.
- Potential transport mechanisms would include soil disturbed for construction activities and soil erosion, specifically by wind and dust transport. Groundwater is not considered an expected concern for the Site due to the relatively immobile contaminants of concern.
- The exposure route for the Site is ingestion, dermal contact, and inhalation from exposure to dust created by wind and soil disturbance activities.
- The objective of the PEA Workplan is to evaluate the Site for an unrestricted residential land use scenario, and includes residents, school students and staff.

5.2 Exposure Point Concentrations and Chemical Groups

Exposure point concentrations (EPC) are the representative chemical concentrations to which it is assumed receptors (*e.g.*, residents) may be exposed in a prospective risk assessment. Constituents of concern (COCs) include OCPs associated with historical pesticide application, as well as arsenic and lead related to historical agricultural pesticides. Based on the small data set, the maximum detected concentration for each detected COC is used as the exposure point concentration. The use of the maximum concentration of each chemical measured on the property assumes that the maximum detected concentration of every chemical across the site is present at the same location regardless of whether this condition exists or not at the property. This is a very conservative approach and may greatly over-estimate risk on the site.



Arsenic concentrations detected in discrete surface samples at the Site range from 2.1 to 5.7 mg/kg which exceeds the DTSC-SL for residential soil (0.11 mg/kg). The exposure point concentration (EPC) for this Site of 5.7 mg/kg was detected in the southeastern portion of the agricultural field, location AG28. The detected concentrations appear similar to the local background values detected for the Site. The concentration was also compared to the regional background concentration of arsenic (12 mg/kg).

Lead concentrations detected in all discrete surface samples, but at concentrations below the respective DTSC-SLs. Lead concentrations detected at the Site range from 3 to 6.1 mg/kg. The EPC for lead is therefore 6.1 mg/kg.

The OCP compounds DDD, DDE, DDT, and Dieldrin were detected in several 3:1 and 4:1 composite samples, but at concentrations below their respective residential RSLs.

5.3 Soil Screening Evaluation

The soil results were compared to the DTSC-SLs and U.S. EPA Regional Screening Levels (April 2019) where DTSC-SLs were not available. The arsenic concentrations were compared to background concentration.

As discussed in the PEA Workplan, the methodology for assessing human health risks at the Site follow the preliminary evaluation of potential risk and hazard for a residential land use scenario Human Health screening evaluation. The Human Health screening evaluation is used to assist the project manager and project team in deciding whether further site characterization, risk assessment, or remediation is necessary.

The basic screening risk approach was to calculate the estimated risk or hazard posed by the maximum concentration of a chemical detected in the medium (in this case, soil) using an established human health-risk based residential screening level/concentration as a comparator, which is the *USEPA Regional Screening Level (RSL) for Residential Land Use*¹⁰, modified as necessary by the *DTSC HHRA Note 3*¹¹. The maximum exposure point concentrations for each COC are discussed above in Section 5.2. In addition, DTSC's 2015 Preliminary Endangerment Assessment Guidance Manual will be consulted as needed. All chemicals detected at the site are included in the assessment as COCs.

Detected concentrations of lead is assessed using DTSC's Lead Risk Assessment Spreadsheet, Version 8. If HHSLs are not available for constituents identified, alternative toxicity criteria and screening methods will be utilized pursuant to DTSC's PEA guidance (2015).

COC concentrations detected were below their respective screening criteria. A background concentration of 6.51 mg/kg was calculated for arsenic and a 95 percent UCL concentration was 3.21 calculated for arsenic.



5.4 Risk Characterization

The risk characterization methods to be used in the PEA, which are consistent with DTSC's PEA guidance, are presented in the following sections.

5.4.1 Calculation of Cumulative Cancer Risks and Noncancer Hazard

Per PEA manual guidance (2015), and as described in the PEA Workplan, the maximum chemical concentration for each site-related chemical should be divided by the corresponding screening level designated for cancer evaluation. For a carcinogenic chemical, the resulting ratio concentration will be multiplied by 10^{-6} to calculate the estimated cancer risk for that chemical. For multiple carcinogenic chemicals, the risks for individual chemicals are added to get a screening estimate of the cumulative risk. The cumulative risk is summed according to the following equation:

$$\text{Risk} = \left[\left(\frac{\text{conc}_x}{\text{HHSL}_x} \right) + \left(\frac{\text{conc}_y}{\text{HHSL}_y} \right) + \left(\frac{\text{conc}_z}{\text{HHSL}_z} \right) \right] * 10^{-6}$$

A risk level of 1×10^{-6} represents a probability of one in one million that an individual could develop cancer from exposure to the potential carcinogen under a defined set of exposure assumptions. If the estimated risk falls below the risk value considered acceptable by DTSC, the chemical is considered unlikely to pose a significant carcinogenic health risk to individuals under the given exposure conditions. DTSC considers a total carcinogenic risk of 1×10^{-6} the point of departure for conducting a more thorough risk assessment. However, risk management decisions are based on many factors, and a finding of no further action may be given for a site with a cancer risk greater than 1×10^{-6} .

Per the PEA manual guidance (2015), for all chemicals causing non-carcinogenic health effects, the ratios derived by dividing the maximum concentration of each chemical by its corresponding screening level based on non-cancer effects (HQ) are summed to get a site-related Hazard Index (HI) over all chemicals and media evaluated.

$$\text{Hazard Index} = \left[\left(\frac{\text{conc}_x}{\text{HHSL}_x} \right) + \left(\frac{\text{conc}_y}{\text{HHSL}_y} \right) + \left(\frac{\text{conc}_z}{\text{HHSL}_z} \right) \right]$$

This sum of the HQs is known as a hazard index (HI). A HI of 1 or less is generally considered "safe." If the cumulative risk is less than one-in-a-million (1×10^{-6}) and the Hazard Index is less than one, the PEA human health screening risk evaluation report may be used as support for a "no further action" (NFA) decision.

The cancer screening and non-cancer screening criteria and source for COCs are provided in Table C. As discussed above, the cancer risk and hazard indices were calculated using the maximum value and the above equations. Because all the exposure point concentration levels are from 3:1 composite analyses, the corresponding screening level was divided by 3 prior to calculating; for example, the DDD cancer screening level is 2.3 mg/kg, therefore, the 3:1 composite for the calculation is 2.3 mg/kg divided by 3, or 0.77 mg/kg.

¹⁰ USEPA Regional Screening Levels (Formerly PRGS) Website. <http://www.epa.gov/region9/superfund/prg/>

¹¹ DTSC Human Health Risk resources page contains HHRA Note 3. Website: <http://www.dtsc.ca.gov/assessingrisk/humanrisk2.cfm#Guidance>



Based on the above calculations using the maximum exposure point concentrations, the hazard indices are below 1 for all detected OCPs and the cumulative hazard index is below 1. The cancer risks calculated using the maximum exposure point concentrations for all detected OCPs are below 10^{-6} . Based on the calculations and data, the health hazard and cancer risk from the COCs do not appear to be a significant risk.

Background arsenic in the Central Valley generally exceed the non-cancer and cancer screening criteria set forth by DTSC (0.4 mg/kg and 0.11 mg/kg, respectively). As discussed in the PEA Workplan, arsenic will only be evaluated quantitatively if concentrations exceed the ambient (background) levels. The arsenic detected in Site surface soil range from 2.1 to 5.7 mg/kg. The detected concentrations are similar to the statistical background value (95 percent UPL of 6.51 mg/kg) and below the regional background value (12 mg/kg).

5.4.2 Lead

Lead was detected below the screening level (80 mg/kg) in all samples analyzed for the Site. Eleven samples were analyzed for lead, including one duplicate sample. Lead ranged from 3 to 6.1 mg/kg. The exposure point concentration (EPC) for lead is therefore 6.1 mg/kg. The EPC for lead was assessed using DTSC's Lead Risk Assessment Spreadsheet, Version 8. The result is well below the target Preliminary Remediation Goal 90th percentile (PRG90) of 1 ug/dL. The spreadsheet is available for review in Appendix D.

5.5 **Ecological Screening Evaluation**

The Site is located in a former agricultural field. Agricultural fields are generally dominated by cultivated crops and weeds and do not provide quality habitat for wildlife species. The proposed school site is located within the Westlake Village Subdivision Project, which was subject to an environmental impact report in 2004 with biological impact(s) for the greater parcels (including the Site) mitigated through the San Joaquin Multi-Species Conservation Plan (SJMSCP) in 2005. Prior to ground disturbance the project Site is eligible for a biological site visit through SJMSCP at no additional cost. In addition, proper storm water pollution prevention controls will be implemented to mitigate impacts to waters of the State.

6.0 **COMMUNITY PROFILE**

According to the US Census Bureau, there are approximately 28,000 people residing in the zip code 95219 associated with the Site. The racial demographics for the area is reported as primarily white, with the percentage of children under 18 living in the zip code large compared to other areas of the county.



7.0 PUBLIC PARTICIPATION

7.1 CEQA Option 'A'

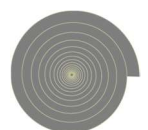
Pursuant to AB 972, the LUSD is pursuing the PEA process separately from the California Environmental Quality Act (CEQA) process under Option 'A.' LUSD provided a notice to all residents within line-of-site of the proposed school site approximately 10 days prior to commencement of field activities related to the PEA. The draft fieldwork notice is available for review in the PEA Workplan.

The draft PEA is submitted to DTSC in for review. Once the revised draft version is accepted by DTSC, LUSD will post a notice in a local newspaper of general circulation, at the LUSD office, and in a prominent manner at the proposed school site; DTSC will receive a copy of the notice. The notice will indicate LUSD's intent to make the PEA available for public review and comment. LUSD may receive written comments for at least 30 days after the PEA is submitted to DTSC and will hold a public hearing to receive further comments. The date, time, and location of the hearing will be included in the notice. All changes to the PEA requested by DTSC and correspondence between the district and DTSC related to the PEA will be available for public review both before and after the hearing. At the end of the public comment period and after the public hearing, any comments received by LUSD will be transmitted to DTSC. DTSC will review and either approve or disapprove the PEA within 30 calendar days of the close of the public review period.

8.0 CONCLUSIONS AND RECOMMENDATIONS

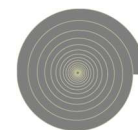
The PEA was performed in general accordance with the approved PEA Workplan. Soil samples were collected to evaluate historical agriculture use, including an area that was previously a basin, located on the Site.

Arsenic concentrations in surface soil range from 2.1 to 5.7 mg/kg and have an average value of 3.45 mg/kg. These concentrations exceed the DTSC-SL for residential soil (unrestricted land use). However, the arsenic detected onsite is considered similar to local and regional background concentrations of 6.51 mg/kg and 12 mg/kg, respectively. OCPs and lead detected in soil within the former agricultural area, including the former basin, are below DTSC-SLs. The preliminary evaluation of potential risk and hazard for a residential land use scenario human health screening evaluation indicated the maximum detected concentrations were below the hazard index and cancer risk threshold. **Based on the findings described above, we recommend no further action for this Site.**



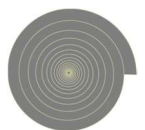
9.0 REFERENCES

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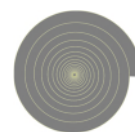


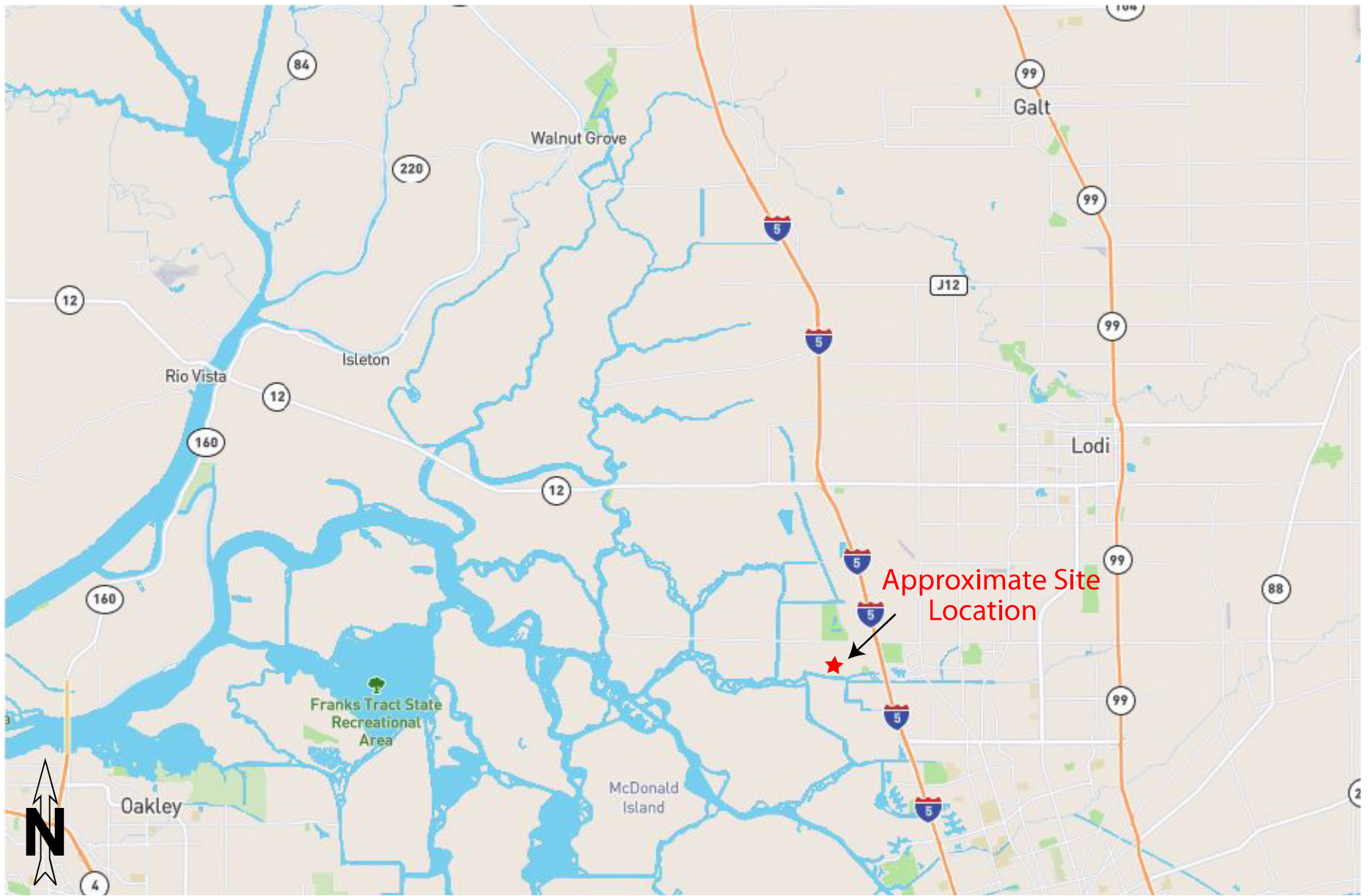
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U.S. Environmental Protection Agency (EPA). 1996. Region I, EPA-New England Data Validation Functional Guidelines for Evaluating Environmental Analyses. July Revised December.



PLATES





Vicinity Map
 Proposed School Site - Stockton Site I
 Corner of Westlake Drive & Regatta Lane
 Stockton, CA 95219

DATE: July 2020
 JOB NUMBER: 2019-00014
 SCALE: Not to Scale
 DRAWN BY: TS
 CHECKED BY: DK
 PLATE: 1



LEGEND

- Approximate Site Boundary
- Former Basin Area
- Sample Location
- ★ Transformer
- - - Composite Analysis

Google Earth 2020



Sample Locations Map

Proposed School Site - Stockton Site I
 Corner of Westlake Drive & Regatta Lane
 Stockton, CA 95219

DATE: July 2020
 JOB NUMBER: 2019-00014
 SCALE: Not to Scale
 DRAWN BY: TS
 CHECKED BY: DK
 PLATE: 2



LEGEND

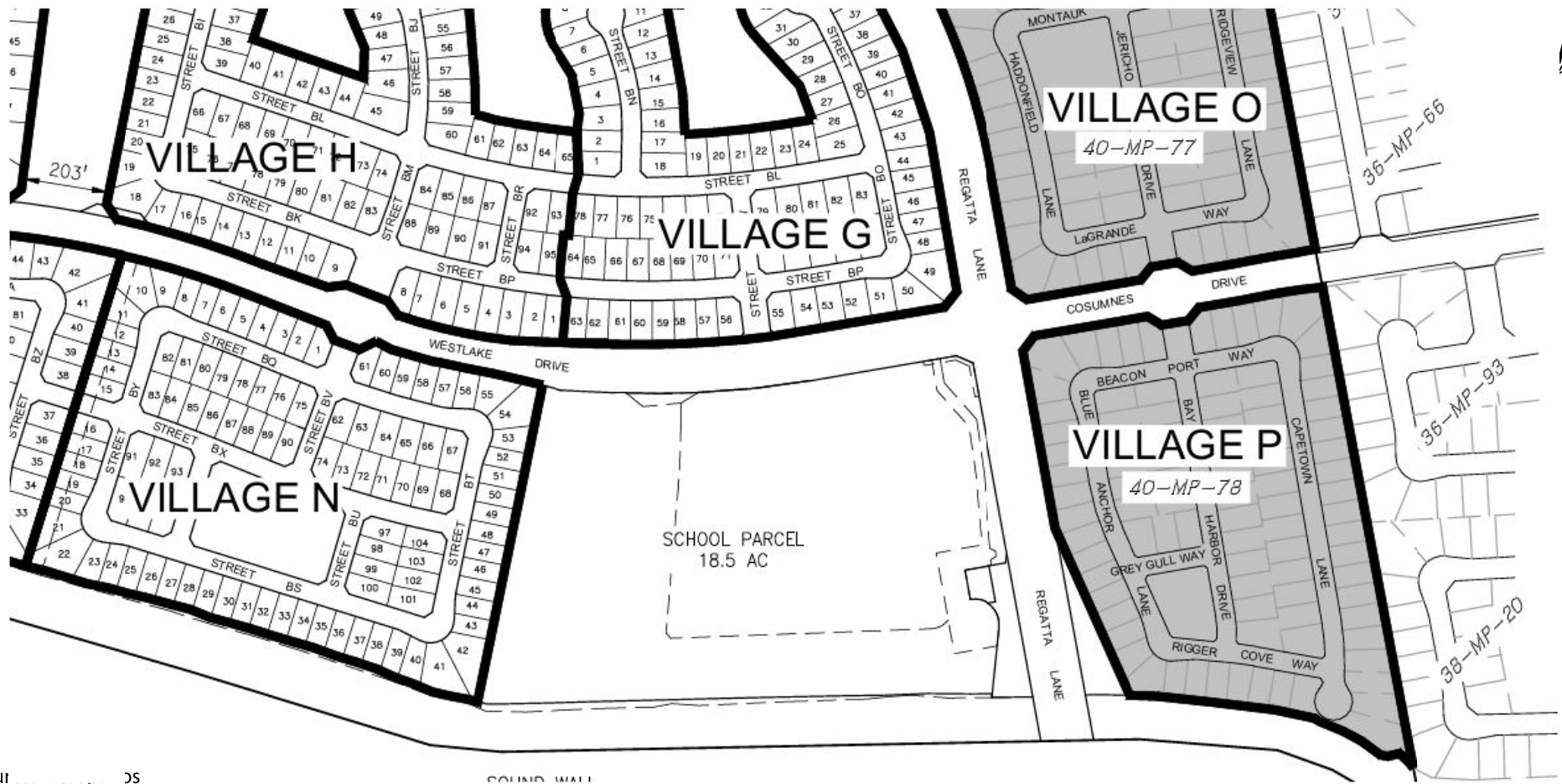
- Approximate Site Boundary
- Former Basin Area
- ⊙ AG Sample Location
- ★ Transformer
- BG Background Arsenic Location

Google Earth 2020



**Background Arsenic
Sample Location Map**
 Proposed School Site - Stockton Site I
 Corner of Westlake Drive & Regatta Lane
 Stockton, CA 95219

DATE: July 2020
 JOB NUMBER: 2019-00014
 SCALE: Not to Scale
 DRAWN BY: TS
 CHECKED BY: DK
 PLATE: 3



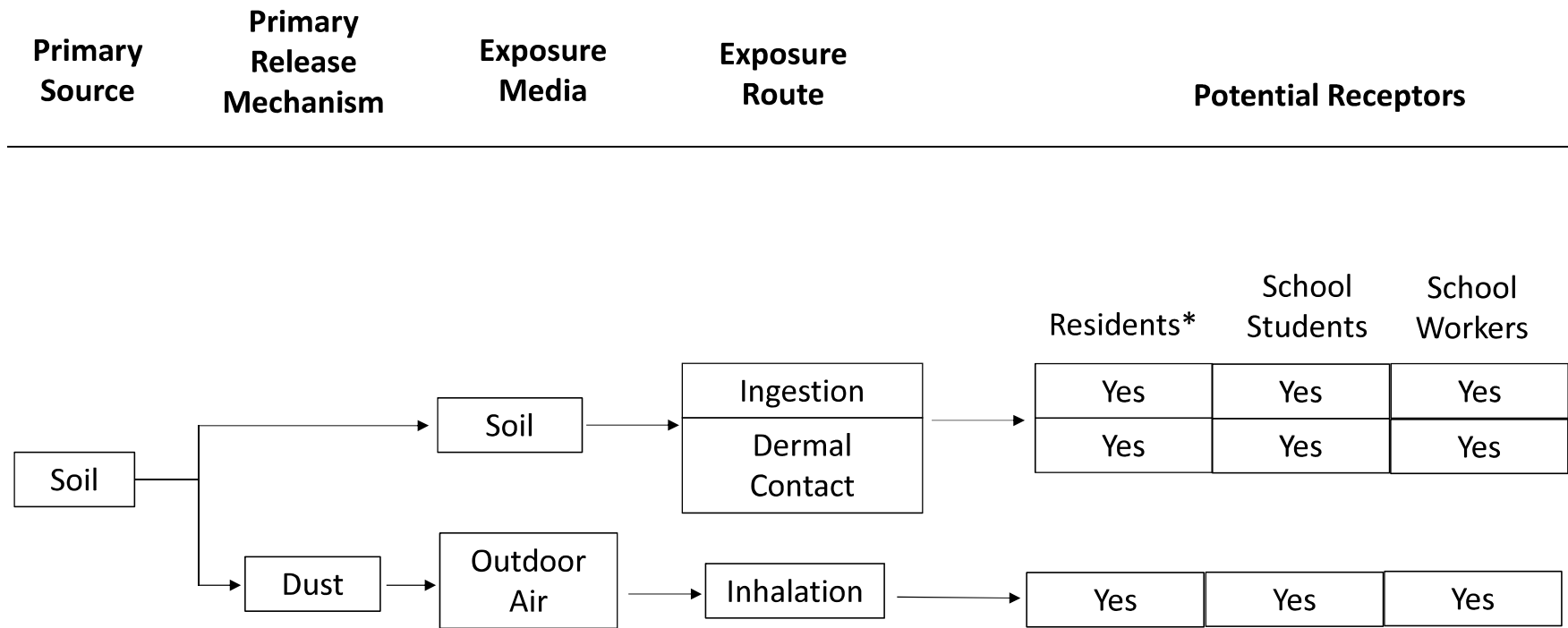
Sour... OS

SOUND WALL



Westlake Villages
Proposed School Parcel
 Proposed School Site - Stockton Site I
 Corner of Westlake Drive & Regatta Lane
 Stockton, CA 95219

DATE: July 2020
 JOB NUMBER : 2019-00014
 SCALE: Not to Scale
 DRAWN BY: TS
 CHECKED BY : DK
 PLATE: 4



*Although the property is proposed for development as a school site, a residential receptor is required by the PEA guidance.



Conceptual Site Model

Proposed School Site - Stockton Site I
 Corner of Westlake Drive & Regatta Lane
 Stockton, CA 95219

DATE: July 2020
 JOB NUMBER: 2019-00014
 SCALE: Not to Scale
 DRAWN BY: TS
 CHECKED BY: DK
 PLATE: 5

TABLES

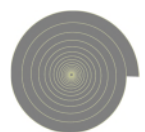


Table A. Analytical Results of Selected Soil Samples - OCPs

(Concentration in mg/kg)

Sample Date June 10, 2020

Analysis Type	Sample ID	Depth	DDD	DDE	DDT	Dieldrin	a-chlordane ¹	g-chlordane ¹
4:1 COMP	AG1-AG4@0'	0-6"	<0.00010	0.00028	0.00013	<0.00010	<0.00010	<0.00010
3:1 COMP	AG5-AG7@0'	0-6"	<0.00010	0.00016	0.00012	<0.00010	<0.00010	<0.00010
3:1 COMP	AG8-AG10@0'	0-6"	<0.00010	0.0021	0.00077	<0.00010	<0.00010	0.000072
4:1 COMP	AG11-AG14@0'	0-6"	0.00014	0.0024	0.00071	<0.00010	<0.00010	0.000065
4:1 COMP	AG11-AG14-DUP@0'	0-6"	0.000078	0.002	0.00062	<0.00010	<0.00010	0.000065
3:1 COMP	AG15-AG17@0'	0-6"	0.000071	0.0014	0.00064	<0.00010	<0.00010	<0.00010
4:1 COMP	AG18-AG21@0'	0-6"	0.0003	0.0056	0.0019	0.0001	0.00016	0.00015
3:1 COMP	AG22-AG24@0'	0-6"	0.00073	0.019	0.0062	<0.00010	0.00035	0.00043
3:1 COMP	AG25-AG27@0'	0-6"	0.00069	0.016	0.0054	0.00019	<0.00010	0.00011
3:1 COMP	AG25, AG26, AG27	2.5', 2.0', 4.5'	0.0013	0.016	0.0018	<0.00010	<0.00010	<0.00010
3:1 COMP	AG28-30@0'	0-6"	0.00077	0.012	0.0096	0.00025	0.00022	0.00029
Screening Criteria - RSLs - U.S. EPA Screening Levels (April 2019)			2.3	2.0	1.9	0.034	1.7	1.7
4:1 COMP			0.77	0.67	0.63	0.011	0.6	0.6
3:1 COMP			0.58	0.5	0.48	0.009	0.4	0.4

¹RSL for Chlordane (Technical) used - U.S. EPA Regional Screening Level (April 2019)

Table B. Analytical Results of Soil Samples - Arsenic and Lead (Concentration in mg/kg) Sample Date June 10, 2020			
Sample ID	Depth	Arsenic	Lead
AG1@0'	0-6"	2.1	3.7
AG5@0'	0-6"	4.1	6.1
AG8@0'	0-6"	3	3.7
AG11@0'	0-6"	2.9	4.7
AG11@0'-DUP	0-6"	3	5
AG15@0'	0-6"	3.3	4.9
AG18@0'	0-6"	2.4	3
AG22@0'	0-6"	4.1	5.3
AG25@0'	0-6"	3.3	5.6
AG25@2.5'	2.5'	4	5.8
AG28@0'	0-6"	5.7	6.1
BG1	5-5.5'	3.5	---
BG2	5-5.5'	3.2	---
BG3	5-5.5'	2.7	---
BG4	5-5.5'	2	---
BG5	5-5.5'	1.9	---
BG6	5-5.5'	2.1	---
BG7	5-5.5'	1.5	---
BG8	5-5.5'	1.9	---
BG9	5-5.5'	3	---
BG10	5-5.5'	4	---
95% UCL		3.21	---
Screening Criteria		6.51	80.0
Basis		BG ¹	DTSC-SL ²

¹Calculated background concentration using onsite detection of pooled data with statistical methods detailed in the PEA

²DTSC recommended Screening Level (SL), HERO Note 3 - June 2018

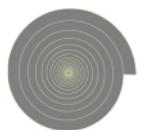
Table C. Non-Cancer Hazard Index and Cancer Risk Calculations

COC	EPC Sample Point (3:1 Composite)	Exposure Point Concentration (mg/kg)*	Non-Cancer (Child) Residential Screening Level (mg/kg)*	Source/Basis	Non-Cancer Hazard Index *	Cancer Residential Screening Level (mg/kg)*	Source/Basis	Cancer Risk
DDD	AG(28,29,30)	0.0013	0.63	RSL	2.05E-03	0.77	RSL	1.69E-09
DDE	AG(22,23,24)	0.019	7.67	RSL	2.48E-03	0.67	RSL	2.84E-08
DDT	AG(28,29,30)	0.0096	12.33	RSL	7.78E-04	0.63	RSL	1.52E-08
Dieldrin	AG(28,29,30)	0.00025	1.07	RSL	2.34E-04	0.011	RSL	2.27E-08
Total					5.54E-03	Total		6.80E-08

*RSL Divided by 3 due to 3:1 composite



APPENDIX A – DTSC LETTER





Jared Blumenfeld
Secretary for
Environmental Protection



Department of Toxic Substances Control

Meredith Williams, Ph.D., Director
8800 Cal Center Drive
Sacramento, California 95826-3200



Gavin Newsom
Governor

May 15, 2020

Mr. Leonard Kahn
Chief Business Officer
Lodi Unified School District
1305 East Vine Street
Lodi, California 95240

PRELIMINARY ENVIRONMENTAL ASSESSMENT WORKPLAN – APPROVAL,
LODI UNIFIED SCHOOL DISTRICT, STOCKTON SITE I, CORNER OF WESTLAKE
DRIVE AND REGATTA LANE, STOCKTON, SAN JOAQUIN COUNTY, CALIFORNIA
(PROJECT CODE 104809)

Dear Mr. Kahn

The Department of Toxic Substances Control (DTSC) reviewed the revised *Preliminary Environmental Assessment Workplan* (PEA Workplan – Petralogix Engineering, Inc., May 14, 2020) received electronically on May 14, 2020. The PEA Workplan was revised in response to DTSC comments on the draft version forwarded in a letter dated April 10, 2020. The PEA Workplan includes project background information as well as proposed environmental investigation activities.

The Lodi Unified School District (District) is considering purchasing a 19.36-acre property located at the corner of Westlake Drive and Regatta Lane in Stockton, San Joaquin County, California (Site). The District intends to construct a K-8 school, which will accommodate a maximum of 800 students in 35 classrooms. The City of Stockton Municipal Utilities District will provide municipal water and sewer services.

The Site is identified by the San Joaquin County Assessor as Assessor's Parcel Numbers (APN) 066-050-070 (10.2 acres) and approximately 9.16 acres of APN 066-050-080 (27.8 acres). The Site is bounded to the north by vacant land; to the east by Regatta Lane followed by residential lots; to the south by White Slough followed by agricultural land; and to the west by vacant land.

According to the PEA Workplan, the Site was used for agricultural purposes from at least 1937 through 1998. Based on historic aerial photographs, two structures may have been present in the southeast portion of the Site from at least 1937 through 1947. A 1.5-acre basin located approximately along the south-central Site boundary was

developed at the Site in 2006 and was filled in sometime in 2019. A pad-mounted transformer has been present on the Site since approximately 2006.

The PEA Workplan includes activities to investigate the Site for potential impacts from the following environmental conditions that may pose a threat to human health or the environment:

- Organochlorine pesticides (OCPs), arsenic, and lead in surface soils from historic agricultural use; and,
- Lead in surface soils from the potential weathering of lead-based paint associated with the historic structures.

DTSC's comments have been adequately addressed, and the revised PEA Workplan is hereby approved. If Site conditions differ from those presented in the approved PEA Workplan, additional work may be necessary. In accordance with Education Code section 17210.1(b), the District shall provide written notice to businesses and residents in the immediate area, approved in form by DTSC, at least five days in advance of field investigation activities. The intent of this requirement is to provide advance notice of fieldwork such as drilling, sampling, and other environmental data collection activities to anyone who lives or works in the line of sight of the Site. Please notify DTSC a minimum of 48 hours in advance of fieldwork or schedule changes.

The PEA Workplan states that the District intends to make the Draft PEA Report available for public review in compliance with Option A of the Education Code section 17213.1(a)(6)(A). Pursuant to Education Code section 17213.1, subdivision (a)(6), at the same time the Draft PEA Report is submitted to DTSC for review, the District shall publish a DTSC approved notice in a local newspaper of general circulation and post the notice in a prominent manner at the Site. The notice should state the District's intent of making the Draft PEA Report available for public review pursuant Option A. A copy of the notice shall be submitted to DTSC with the Draft PEA Report.

If you have any questions regarding the project, please contact me at (916) 255-6666 or via email at Elizabeth.Tisdale@dtsc.ca.gov.

Sincerely,



Elizabeth Tisdale
Project Manager
Northern California Schools Unit
Site Mitigation and Restoration Program

cc: (see next page)

cc: (via e-mail)

Ms. Vickie Brum
Planning Analyst
Lodi Unified School District
vbrum@lodiUSD.net

Mr. Daniel Kramer, PG
President
Petralogix Engineering, Inc.
dkramer@petralogix.com

Ms. Tonya Scheftner, GIT
Project Geologist
Petralogix Engineering, Inc.
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Mr. José Salcedo, PE
Chief
DTSC Northern California Schools Unit
Jose.Salcedo@dtsc.ca.gov

Ms. Mai Ngo, PhD
Staff Toxicologist
DTSC Human and Ecological Risk Office
Mai.Ngo@dtsc.ca.gov

APPENDIX B – FIELD PHOTOGRAPHS

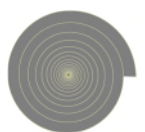


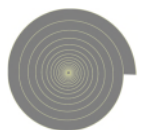


Figure 1 – View of soil interpreted to be the former basin surface, at sample location ID AG25.



Figure 2 – View of expanded lift station and associated improvements previously within the proposed project Site, looking northwest from the levee .

APPENDIX C – LAB REPORTS





McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 2006544

Report Created for: Petralogix

26675 Bruella Road
Galt, CA 95632

Project Contact: Daniel Kramer

Project P.O.:

Project: 2019-00014; Stockton Site I

Project Received: 06/10/2020

Analytical Report reviewed & approved for release on 06/17/2020 by:

Yen Cao

Project Manager

The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.





Glossary of Terms & Qualifier Definitions

Client: Petralogix
Project: 2019-00014; Stockton Site I
WorkOrder: 2006544

Glossary Abbreviation

%D	Serial Dilution Percent Difference
95% Interval	95% Confident Interval
CPT	Consumer Product Testing not NELAP Accredited
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test (Serial Dilution)
DUP	Duplicate
EDL	Estimated Detection Limit
ERS	External reference sample. Second source calibration verification.
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
LQL	Lowest Quantitation Level
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
ST	Sorbent Tube
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
TZA	TimeZone Net Adjustment for sample collected outside of MAI's UTC.
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)



Glossary of Terms & Qualifier Definitions

Client: Petralogix
Project: 2019-00014; Stockton Site I
WorkOrder: 2006544

Analytical Qualifiers

J Result is less than the RL/ML but greater than the MDL. The reported concentration is an estimated value.
P Agreement between quantitative confirmation results exceed method recommended limits.
h7 Copper (EPA 3660B) cleanup.



Analytical Report

Client: Petralogix
Date Received: 06/10/2020 17:05
Date Prepared: 06/12/2020
Project: 2019-00014; Stockton Site I

WorkOrder: 2006544
Extraction Method: SW3550B/3640Am/3630Cm
Analytical Method: SW8081A
Unit: mg/kg

Organochlorine Pesticides

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
AG1-4@0'	2006544-001A	Soil	06/10/2020 09:12	GC23 06122040.d	200023

Analytes	Result	MDL	RL	DF	Date Analyzed
Aldrin	ND	0.000036	0.00010	1	06/12/2020 21:19
a-BHC	ND	0.000025	0.00010	1	06/12/2020 21:19
b-BHC	ND	0.00025	0.00030	1	06/12/2020 21:19
d-BHC	ND	0.00013	0.00020	1	06/12/2020 21:19
g-BHC	ND	0.000066	0.00010	1	06/12/2020 21:19
Chlordane (Technical)	ND	0.00043	0.0025	1	06/12/2020 21:19
a-Chlordane	ND	0.000095	0.00010	1	06/12/2020 21:19
g-Chlordane	ND	0.000047	0.00010	1	06/12/2020 21:19
p,p-DDD	ND	0.000043	0.00010	1	06/12/2020 21:19
p,p-DDE	0.00028	0.000094	0.00010	1	06/12/2020 21:19
p,p-DDT	0.00013	0.000092	0.00010	1	06/12/2020 21:19
Dieldrin	ND	0.000061	0.00010	1	06/12/2020 21:19
Endosulfan I	ND	0.000048	0.00010	1	06/12/2020 21:19
Endosulfan II	ND	0.000076	0.00010	1	06/12/2020 21:19
Endosulfan sulfate	ND	0.000078	0.00010	1	06/12/2020 21:19
Endrin	ND	0.000035	0.00010	1	06/12/2020 21:19
Endrin aldehyde	ND	0.000067	0.00010	1	06/12/2020 21:19
Endrin ketone	ND	0.000084	0.00010	1	06/12/2020 21:19
Heptachlor	ND	0.000040	0.00010	1	06/12/2020 21:19
Heptachlor epoxide	ND	0.000054	0.00010	1	06/12/2020 21:19
Hexachlorobenzene	ND	0.00011	0.0010	1	06/12/2020 21:19
Hexachlorocyclopentadiene	ND	0.00034	0.0020	1	06/12/2020 21:19
Methoxychlor	ND	0.00013	0.00020	1	06/12/2020 21:19
Toxaphene	ND	0.0034	0.0050	1	06/12/2020 21:19

Surrogates	REC (%)	Limits	
Decachlorobiphenyl	114	20-145	06/12/2020 21:19

Analyst(s): LT



Analytical Report

Client: Petralogix
Date Received: 06/10/2020 17:05
Date Prepared: 06/12/2020
Project: 2019-00014; Stockton Site I

WorkOrder: 2006544
Extraction Method: SW3550B/3640Am/3630Cm
Analytical Method: SW8081A
Unit: mg/kg

Organochlorine Pesticides

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
AG5-7@0'	2006544-002A	Soil	06/10/2020 09:38	GC23 06122041.d	200023

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
Aldrin	ND		0.000036	0.00010	1	06/12/2020 21:35
a-BHC	ND		0.000025	0.00010	1	06/12/2020 21:35
b-BHC	ND		0.00025	0.00030	1	06/12/2020 21:35
d-BHC	ND		0.00013	0.00020	1	06/12/2020 21:35
g-BHC	ND		0.000066	0.00010	1	06/12/2020 21:35
Chlordane (Technical)	ND		0.00043	0.0025	1	06/12/2020 21:35
a-Chlordane	ND		0.000095	0.00010	1	06/12/2020 21:35
g-Chlordane	ND		0.000047	0.00010	1	06/12/2020 21:35
p,p-DDD	ND		0.000043	0.00010	1	06/12/2020 21:35
p,p-DDE	0.00016		0.000094	0.00010	1	06/12/2020 21:35
p,p-DDT	0.00012	P	0.000092	0.00010	1	06/12/2020 21:35
Dieldrin	ND		0.000061	0.00010	1	06/12/2020 21:35
Endosulfan I	ND		0.000048	0.00010	1	06/12/2020 21:35
Endosulfan II	ND		0.000076	0.00010	1	06/12/2020 21:35
Endosulfan sulfate	ND		0.000078	0.00010	1	06/12/2020 21:35
Endrin	ND		0.000035	0.00010	1	06/12/2020 21:35
Endrin aldehyde	ND		0.000067	0.00010	1	06/12/2020 21:35
Endrin ketone	ND		0.000084	0.00010	1	06/12/2020 21:35
Heptachlor	ND		0.000040	0.00010	1	06/12/2020 21:35
Heptachlor epoxide	ND		0.000054	0.00010	1	06/12/2020 21:35
Hexachlorobenzene	ND		0.00011	0.0010	1	06/12/2020 21:35
Hexachlorocyclopentadiene	ND		0.00034	0.0020	1	06/12/2020 21:35
Methoxychlor	ND		0.00013	0.00020	1	06/12/2020 21:35
Toxaphene	ND		0.0034	0.0050	1	06/12/2020 21:35

Surrogates	REC (%)	Limits	
Decachlorobiphenyl	103	20-145	06/12/2020 21:35

Analyst(s): LT



Analytical Report

Client: Petralogix
Date Received: 06/10/2020 17:05
Date Prepared: 06/12/2020
Project: 2019-00014; Stockton Site I

WorkOrder: 2006544
Extraction Method: SW3550B/3640Am/3630Cm
Analytical Method: SW8081A
Unit: mg/kg

Organochlorine Pesticides

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
AG8-10@0'	2006544-003A	Soil	06/10/2020 10:00	GC23 06122042.d	200023

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
Aldrin	ND		0.000036	0.00010	1	06/12/2020 21:51
a-BHC	ND		0.000025	0.00010	1	06/12/2020 21:51
b-BHC	ND		0.00025	0.00030	1	06/12/2020 21:51
d-BHC	ND		0.00013	0.00020	1	06/12/2020 21:51
g-BHC	ND		0.000066	0.00010	1	06/12/2020 21:51
Chlordane (Technical)	ND		0.00043	0.0025	1	06/12/2020 21:51
a-Chlordane	ND		0.000095	0.00010	1	06/12/2020 21:51
g-Chlordane	0.000072	J	0.000047	0.00010	1	06/12/2020 21:51
p,p-DDD	ND		0.000043	0.00010	1	06/12/2020 21:51
p,p-DDE	0.0021		0.000094	0.00010	1	06/12/2020 21:51
p,p-DDT	0.00077		0.000092	0.00010	1	06/12/2020 21:51
Dieldrin	ND		0.000061	0.00010	1	06/12/2020 21:51
Endosulfan I	ND		0.000048	0.00010	1	06/12/2020 21:51
Endosulfan II	ND		0.000076	0.00010	1	06/12/2020 21:51
Endosulfan sulfate	ND		0.000078	0.00010	1	06/12/2020 21:51
Endrin	ND		0.000035	0.00010	1	06/12/2020 21:51
Endrin aldehyde	ND		0.000067	0.00010	1	06/12/2020 21:51
Endrin ketone	ND		0.000084	0.00010	1	06/12/2020 21:51
Heptachlor	ND		0.000040	0.00010	1	06/12/2020 21:51
Heptachlor epoxide	ND		0.000054	0.00010	1	06/12/2020 21:51
Hexachlorobenzene	ND		0.00011	0.0010	1	06/12/2020 21:51
Hexachlorocyclopentadiene	ND		0.00034	0.0020	1	06/12/2020 21:51
Methoxychlor	ND		0.00013	0.00020	1	06/12/2020 21:51
Toxaphene	ND		0.0034	0.0050	1	06/12/2020 21:51

Surrogates	REC (%)	Limits	
Decachlorobiphenyl	116	20-145	06/12/2020 21:51

Analyst(s): LT



Analytical Report

Client: Petralogix
Date Received: 06/10/2020 17:05
Date Prepared: 06/12/2020
Project: 2019-00014; Stockton Site I

WorkOrder: 2006544
Extraction Method: SW3550B/3640Am/3630Cm
Analytical Method: SW8081A
Unit: mg/kg

Organochlorine Pesticides

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
AG11-14@0'	2006544-004A	Soil	06/10/2020 11:40	GC23 06122043.d	200023

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
Aldrin	ND		0.000036	0.00010	1	06/12/2020 22:06
a-BHC	ND		0.000025	0.00010	1	06/12/2020 22:06
b-BHC	ND		0.00025	0.00030	1	06/12/2020 22:06
d-BHC	ND		0.00013	0.00020	1	06/12/2020 22:06
g-BHC	ND		0.000066	0.00010	1	06/12/2020 22:06
Chlordane (Technical)	ND		0.00043	0.0025	1	06/12/2020 22:06
a-Chlordane	ND		0.000095	0.00010	1	06/12/2020 22:06
g-Chlordane	0.000065	JP	0.000047	0.00010	1	06/12/2020 22:06
p,p-DDD	0.00014		0.000043	0.00010	1	06/12/2020 22:06
p,p-DDE	0.0024		0.000094	0.00010	1	06/12/2020 22:06
p,p-DDT	0.00071		0.000092	0.00010	1	06/12/2020 22:06
Dieldrin	ND		0.000061	0.00010	1	06/12/2020 22:06
Endosulfan I	ND		0.000048	0.00010	1	06/12/2020 22:06
Endosulfan II	ND		0.000076	0.00010	1	06/12/2020 22:06
Endosulfan sulfate	ND		0.000078	0.00010	1	06/12/2020 22:06
Endrin	ND		0.000035	0.00010	1	06/12/2020 22:06
Endrin aldehyde	ND		0.000067	0.00010	1	06/12/2020 22:06
Endrin ketone	ND		0.000084	0.00010	1	06/12/2020 22:06
Heptachlor	ND		0.000040	0.00010	1	06/12/2020 22:06
Heptachlor epoxide	ND		0.000054	0.00010	1	06/12/2020 22:06
Hexachlorobenzene	ND		0.00011	0.0010	1	06/12/2020 22:06
Hexachlorocyclopentadiene	ND		0.00034	0.0020	1	06/12/2020 22:06
Methoxychlor	ND		0.00013	0.00020	1	06/12/2020 22:06
Toxaphene	ND		0.0034	0.0050	1	06/12/2020 22:06

Surrogates	REC (%)	Limits	
Decachlorobiphenyl	115	20-145	06/12/2020 22:06

Analyst(s): LT



Analytical Report

Client: Petralogix
Date Received: 06/10/2020 17:05
Date Prepared: 06/12/2020
Project: 2019-00014; Stockton Site I

WorkOrder: 2006544
Extraction Method: SW3550B/3640Am/3630Cm
Analytical Method: SW8081A
Unit: mg/kg

Organochlorine Pesticides

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
AG11-14-DUP@0'	2006544-005A	Soil	06/10/2020 11:40	GC23 06122044.d	200023

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
Aldrin	ND		0.000036	0.00010	1	06/12/2020 22:22
a-BHC	ND		0.000025	0.00010	1	06/12/2020 22:22
b-BHC	ND		0.00025	0.00030	1	06/12/2020 22:22
d-BHC	ND		0.00013	0.00020	1	06/12/2020 22:22
g-BHC	ND		0.000066	0.00010	1	06/12/2020 22:22
Chlordane (Technical)	ND		0.00043	0.0025	1	06/12/2020 22:22
a-Chlordane	ND		0.000095	0.00010	1	06/12/2020 22:22
g-Chlordane	0.000065	JP	0.000047	0.00010	1	06/12/2020 22:22
p,p-DDD	0.000078	JP	0.000043	0.00010	1	06/12/2020 22:22
p,p-DDE	0.0020		0.000094	0.00010	1	06/12/2020 22:22
p,p-DDT	0.00062		0.000092	0.00010	1	06/12/2020 22:22
Dieldrin	ND		0.000061	0.00010	1	06/12/2020 22:22
Endosulfan I	ND		0.000048	0.00010	1	06/12/2020 22:22
Endosulfan II	ND		0.000076	0.00010	1	06/12/2020 22:22
Endosulfan sulfate	ND		0.000078	0.00010	1	06/12/2020 22:22
Endrin	ND		0.000035	0.00010	1	06/12/2020 22:22
Endrin aldehyde	ND		0.000067	0.00010	1	06/12/2020 22:22
Endrin ketone	ND		0.000084	0.00010	1	06/12/2020 22:22
Heptachlor	ND		0.000040	0.00010	1	06/12/2020 22:22
Heptachlor epoxide	ND		0.000054	0.00010	1	06/12/2020 22:22
Hexachlorobenzene	ND		0.00011	0.0010	1	06/12/2020 22:22
Hexachlorocyclopentadiene	ND		0.00034	0.0020	1	06/12/2020 22:22
Methoxychlor	ND		0.00013	0.00020	1	06/12/2020 22:22
Toxaphene	ND		0.0034	0.0050	1	06/12/2020 22:22

Surrogates	REC (%)	Limits	
Decachlorobiphenyl	99	20-145	06/12/2020 22:22

Analyst(s): LT



Analytical Report

Client: Petralogix
Date Received: 06/10/2020 17:05
Date Prepared: 06/12/2020
Project: 2019-00014; Stockton Site I

WorkOrder: 2006544
Extraction Method: SW3550B/3640Am/3630Cm
Analytical Method: SW8081A
Unit: mg/kg

Organochlorine Pesticides

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
AG15-17@0'	2006544-006A	Soil	06/10/2020 10:41	GC23 06122045.d	200023

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
Aldrin	ND		0.000036	0.00010	1	06/12/2020 22:38
a-BHC	ND		0.000025	0.00010	1	06/12/2020 22:38
b-BHC	ND		0.00025	0.00030	1	06/12/2020 22:38
d-BHC	ND		0.00013	0.00020	1	06/12/2020 22:38
g-BHC	ND		0.000066	0.00010	1	06/12/2020 22:38
Chlordane (Technical)	ND		0.00043	0.0025	1	06/12/2020 22:38
a-Chlordane	ND		0.000095	0.00010	1	06/12/2020 22:38
g-Chlordane	ND		0.000047	0.00010	1	06/12/2020 22:38
p,p-DDD	0.000071	J	0.000043	0.00010	1	06/12/2020 22:38
p,p-DDE	0.0014		0.000094	0.00010	1	06/12/2020 22:38
p,p-DDT	0.00064		0.000092	0.00010	1	06/12/2020 22:38
Dieldrin	ND		0.000061	0.00010	1	06/12/2020 22:38
Endosulfan I	ND		0.000048	0.00010	1	06/12/2020 22:38
Endosulfan II	ND		0.000076	0.00010	1	06/12/2020 22:38
Endosulfan sulfate	ND		0.000078	0.00010	1	06/12/2020 22:38
Endrin	ND		0.000035	0.00010	1	06/12/2020 22:38
Endrin aldehyde	ND		0.000067	0.00010	1	06/12/2020 22:38
Endrin ketone	ND		0.000084	0.00010	1	06/12/2020 22:38
Heptachlor	ND		0.000040	0.00010	1	06/12/2020 22:38
Heptachlor epoxide	ND		0.000054	0.00010	1	06/12/2020 22:38
Hexachlorobenzene	ND		0.00011	0.0010	1	06/12/2020 22:38
Hexachlorocyclopentadiene	ND		0.00034	0.0020	1	06/12/2020 22:38
Methoxychlor	ND		0.00013	0.00020	1	06/12/2020 22:38
Toxaphene	ND		0.0034	0.0050	1	06/12/2020 22:38

Surrogates	REC (%)	Limits	
Decachlorobiphenyl	115	20-145	06/12/2020 22:38

Analyst(s): LT

(Cont.)



Analytical Report

Client: Petralogix
Date Received: 06/10/2020 17:05
Date Prepared: 06/12/2020
Project: 2019-00014; Stockton Site I

WorkOrder: 2006544
Extraction Method: SW3550B/3640Am/3630Cm
Analytical Method: SW8081A
Unit: mg/kg

Organochlorine Pesticides

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
AG18-21 @0'	2006544-007A	Soil	06/10/2020 14:24	GC23 06122046.d	200023

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
Aldrin	ND		0.000036	0.00010	1	06/12/2020 22:53
a-BHC	ND		0.000025	0.00010	1	06/12/2020 22:53
b-BHC	ND		0.00025	0.00030	1	06/12/2020 22:53
d-BHC	ND		0.00013	0.00020	1	06/12/2020 22:53
g-BHC	ND		0.000066	0.00010	1	06/12/2020 22:53
Chlordane (Technical)	ND		0.00043	0.0025	1	06/12/2020 22:53
a-Chlordane	0.00016		0.000095	0.00010	1	06/12/2020 22:53
g-Chlordane	0.00015		0.000047	0.00010	1	06/12/2020 22:53
p,p-DDD	0.00030		0.000043	0.00010	1	06/12/2020 22:53
p,p-DDE	0.0056		0.000094	0.00010	1	06/12/2020 22:53
p,p-DDT	0.0019		0.000092	0.00010	1	06/12/2020 22:53
Dieldrin	0.00010	J	0.000061	0.00010	1	06/12/2020 22:53
Endosulfan I	ND		0.000048	0.00010	1	06/12/2020 22:53
Endosulfan II	ND		0.000076	0.00010	1	06/12/2020 22:53
Endosulfan sulfate	ND		0.000078	0.00010	1	06/12/2020 22:53
Endrin	ND		0.000035	0.00010	1	06/12/2020 22:53
Endrin aldehyde	ND		0.000067	0.00010	1	06/12/2020 22:53
Endrin ketone	ND		0.000084	0.00010	1	06/12/2020 22:53
Heptachlor	ND		0.000040	0.00010	1	06/12/2020 22:53
Heptachlor epoxide	ND		0.000054	0.00010	1	06/12/2020 22:53
Hexachlorobenzene	ND		0.00011	0.0010	1	06/12/2020 22:53
Hexachlorocyclopentadiene	ND		0.00034	0.0020	1	06/12/2020 22:53
Methoxychlor	ND		0.00013	0.00020	1	06/12/2020 22:53
Toxaphene	ND		0.0034	0.0050	1	06/12/2020 22:53

Surrogates	REC (%)	Limits	
Decachlorobiphenyl	124	20-145	06/12/2020 22:53

Analyst(s): LT

(Cont.)



Analytical Report

Client: Petralogix
Date Received: 06/10/2020 17:05
Date Prepared: 06/12/2020
Project: 2019-00014; Stockton Site I

WorkOrder: 2006544
Extraction Method: SW3550B/3640Am/3630Cm
Analytical Method: SW8081A
Unit: mg/kg

Organochlorine Pesticides

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
AG22-24@0'	2006544-008A	Soil	06/10/2020 14:38	GC23 06122047.d	200023

Analytes	Result	MDL	RL	DF	Date Analyzed
Aldrin	ND	0.000036	0.00010	1	06/12/2020 23:09
a-BHC	ND	0.000025	0.00010	1	06/12/2020 23:09
b-BHC	ND	0.00025	0.00030	1	06/12/2020 23:09
d-BHC	ND	0.00013	0.00020	1	06/12/2020 23:09
g-BHC	ND	0.000066	0.00010	1	06/12/2020 23:09
Chlordane (Technical)	ND	0.00043	0.0025	1	06/12/2020 23:09
a-Chlordane	0.00035	0.000095	0.00010	1	06/12/2020 23:09
g-Chlordane	0.00043	0.000047	0.00010	1	06/12/2020 23:09
p,p-DDD	0.00073	0.000043	0.00010	1	06/12/2020 23:09
p,p-DDE	0.019	0.000094	0.00010	1	06/12/2020 23:09
p,p-DDT	0.0062	0.000092	0.00010	1	06/12/2020 23:09
Dieldrin	ND	0.000061	0.00010	1	06/12/2020 23:09
Endosulfan I	ND	0.000048	0.00010	1	06/12/2020 23:09
Endosulfan II	ND	0.000076	0.00010	1	06/12/2020 23:09
Endosulfan sulfate	ND	0.000078	0.00010	1	06/12/2020 23:09
Endrin	ND	0.000035	0.00010	1	06/12/2020 23:09
Endrin aldehyde	ND	0.000067	0.00010	1	06/12/2020 23:09
Endrin ketone	ND	0.000084	0.00010	1	06/12/2020 23:09
Heptachlor	ND	0.000040	0.00010	1	06/12/2020 23:09
Heptachlor epoxide	ND	0.000054	0.00010	1	06/12/2020 23:09
Hexachlorobenzene	ND	0.00011	0.0010	1	06/12/2020 23:09
Hexachlorocyclopentadiene	ND	0.00034	0.0020	1	06/12/2020 23:09
Methoxychlor	ND	0.00013	0.00020	1	06/12/2020 23:09
Toxaphene	ND	0.0034	0.0050	1	06/12/2020 23:09

Surrogates	REC (%)	Limits	
Decachlorobiphenyl	99	26-141	06/12/2020 23:09

Analyst(s): LT



Analytical Report

Client: Petralogix
Date Received: 06/10/2020 17:05
Date Prepared: 06/12/2020
Project: 2019-00014; Stockton Site I

WorkOrder: 2006544
Extraction Method: SW3550B/3640Am/3630Cm
Analytical Method: SW8081A
Unit: mg/kg

Organochlorine Pesticides

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
AG25-27@0'	2006544-009A	Soil	06/10/2020 15:17	GC23 06122048.d	200023

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
Aldrin	ND		0.000036	0.00010	1	06/12/2020 23:25
a-BHC	ND		0.000025	0.00010	1	06/12/2020 23:25
b-BHC	ND		0.00025	0.00030	1	06/12/2020 23:25
d-BHC	ND		0.00013	0.00020	1	06/12/2020 23:25
g-BHC	ND		0.000066	0.00010	1	06/12/2020 23:25
Chlordane (Technical)	ND		0.00043	0.0025	1	06/12/2020 23:25
a-Chlordane	ND		0.000095	0.00010	1	06/12/2020 23:25
g-Chlordane	0.00011	P	0.000047	0.00010	1	06/12/2020 23:25
p,p-DDD	0.00069	P	0.000043	0.00010	1	06/12/2020 23:25
p,p-DDE	0.016		0.000094	0.00010	1	06/12/2020 23:25
p,p-DDT	0.0054		0.000092	0.00010	1	06/12/2020 23:25
Dieldrin	0.00019		0.000061	0.00010	1	06/12/2020 23:25
Endosulfan I	ND		0.000048	0.00010	1	06/12/2020 23:25
Endosulfan II	ND		0.000076	0.00010	1	06/12/2020 23:25
Endosulfan sulfate	ND		0.000078	0.00010	1	06/12/2020 23:25
Endrin	ND		0.000035	0.00010	1	06/12/2020 23:25
Endrin aldehyde	ND		0.000067	0.00010	1	06/12/2020 23:25
Endrin ketone	ND		0.000084	0.00010	1	06/12/2020 23:25
Heptachlor	ND		0.000040	0.00010	1	06/12/2020 23:25
Heptachlor epoxide	ND		0.000054	0.00010	1	06/12/2020 23:25
Hexachlorobenzene	ND		0.00011	0.0010	1	06/12/2020 23:25
Hexachlorocyclopentadiene	ND		0.00034	0.0020	1	06/12/2020 23:25
Methoxychlor	ND		0.00013	0.00020	1	06/12/2020 23:25
Toxaphene	ND		0.0034	0.0050	1	06/12/2020 23:25

Surrogates	REC (%)	Limits	
Decachlorobiphenyl	112	20-145	06/12/2020 23:25

Analyst(s): LT



Analytical Report

Client: Petralogix
Date Received: 06/10/2020 17:05
Date Prepared: 06/12/2020
Project: 2019-00014; Stockton Site I

WorkOrder: 2006544
Extraction Method: SW3550B/3640Am/3630Cm
Analytical Method: SW8081A
Unit: mg/kg

Organochlorine Pesticides

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
AG25@2.5',26@2',27@4.5'	2006544-010A	Soil	06/10/2020 15:27	GC23 06162010.d	200023

Analytes	Result	MDL	RL	DF	Date Analyzed
Aldrin	ND	0.000036	0.00010	1	06/16/2020 13:10
a-BHC	ND	0.000025	0.00010	1	06/16/2020 13:10
b-BHC	ND	0.00025	0.00030	1	06/16/2020 13:10
d-BHC	ND	0.00013	0.00020	1	06/16/2020 13:10
g-BHC	ND	0.000066	0.00010	1	06/16/2020 13:10
Chlordane (Technical)	ND	0.00043	0.0025	1	06/16/2020 13:10
a-Chlordane	ND	0.000095	0.00010	1	06/16/2020 13:10
g-Chlordane	ND	0.000047	0.00010	1	06/16/2020 13:10
p,p-DDD	0.0013	0.000043	0.00010	1	06/16/2020 13:10
p,p-DDE	0.016	0.000094	0.00010	1	06/16/2020 13:10
p,p-DDT	0.0018	0.000092	0.00010	1	06/16/2020 13:10
Dieldrin	ND	0.000061	0.00010	1	06/16/2020 13:10
Endosulfan I	ND	0.000048	0.00010	1	06/16/2020 13:10
Endosulfan II	ND	0.000076	0.00010	1	06/16/2020 13:10
Endosulfan sulfate	ND	0.000078	0.00010	1	06/16/2020 13:10
Endrin	ND	0.000035	0.00010	1	06/16/2020 13:10
Endrin aldehyde	ND	0.000067	0.00010	1	06/16/2020 13:10
Endrin ketone	ND	0.000084	0.00010	1	06/16/2020 13:10
Heptachlor	ND	0.000040	0.00010	1	06/16/2020 13:10
Heptachlor epoxide	ND	0.000054	0.00010	1	06/16/2020 13:10
Hexachlorobenzene	ND	0.00011	0.0010	1	06/16/2020 13:10
Hexachlorocyclopentadiene	ND	0.00034	0.0020	1	06/16/2020 13:10
Methoxychlor	ND	0.00013	0.00020	1	06/16/2020 13:10
Toxaphene	ND	0.0034	0.0050	1	06/16/2020 13:10

Surrogates	REC (%)	Limits	Date Analyzed
Decachlorobiphenyl	108	20-145	06/16/2020 13:10

Analyst(s): LT **Analytical Comments:** h7

(Cont.)



Analytical Report

Client: Petralogix
Date Received: 06/10/2020 17:05
Date Prepared: 06/12/2020
Project: 2019-00014; Stockton Site I

WorkOrder: 2006544
Extraction Method: SW3550B/3640Am/3630Cm
Analytical Method: SW8081A
Unit: mg/kg

Organochlorine Pesticides

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
AG28-30@0'	2006544-011A	Soil	06/10/2020 14:43	GC23 06162013.d	200023

Analytes	Result	Qualifiers	MDL	RL	DF	Date Analyzed
Aldrin	ND		0.000036	0.00010	1	06/16/2020 13:57
a-BHC	ND		0.000025	0.00010	1	06/16/2020 13:57
b-BHC	ND		0.00025	0.00030	1	06/16/2020 13:57
d-BHC	ND		0.00013	0.00020	1	06/16/2020 13:57
g-BHC	ND		0.000066	0.00010	1	06/16/2020 13:57
Chlordane (Technical)	ND		0.00043	0.0025	1	06/16/2020 13:57
a-Chlordane	0.00022	P	0.000095	0.00010	1	06/16/2020 13:57
g-Chlordane	0.00029		0.000047	0.00010	1	06/16/2020 13:57
p,p-DDD	0.00077		0.000043	0.00010	1	06/16/2020 13:57
p,p-DDE	0.012		0.000094	0.00010	1	06/16/2020 13:57
p,p-DDT	0.0096		0.000092	0.00010	1	06/16/2020 13:57
Dieldrin	0.00025		0.000061	0.00010	1	06/16/2020 13:57
Endosulfan I	ND		0.000048	0.00010	1	06/16/2020 13:57
Endosulfan II	ND		0.000076	0.00010	1	06/16/2020 13:57
Endosulfan sulfate	ND		0.000078	0.00010	1	06/16/2020 13:57
Endrin	ND		0.000035	0.00010	1	06/16/2020 13:57
Endrin aldehyde	ND		0.000067	0.00010	1	06/16/2020 13:57
Endrin ketone	ND		0.000084	0.00010	1	06/16/2020 13:57
Heptachlor	ND		0.000040	0.00010	1	06/16/2020 13:57
Heptachlor epoxide	ND		0.000054	0.00010	1	06/16/2020 13:57
Hexachlorobenzene	ND		0.00011	0.0010	1	06/16/2020 13:57
Hexachlorocyclopentadiene	ND		0.00034	0.0020	1	06/16/2020 13:57
Methoxychlor	ND		0.00013	0.00020	1	06/16/2020 13:57
Toxaphene	ND		0.0034	0.0050	1	06/16/2020 13:57

Surrogates	REC (%)	Limits	
Decachlorobiphenyl	115	20-145	06/16/2020 13:57

Analyst(s): LT



Analytical Report

Client: Petralogix
Date Received: 06/10/2020 17:05
Date Prepared: 06/11/2020
Project: 2019-00014; Stockton Site I

WorkOrder: 2006544
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/kg

Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID	
AG1@0'	2006544-001B	Soil	06/10/2020 08:55	ICP-MS5 323SMPL.d	199897	
<u>Analytes</u>	<u>Result</u>		<u>MDL</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Arsenic	2.1		0.15	0.50	1	06/11/2020 21:34
Lead	3.7		0.14	0.50	1	06/11/2020 21:34
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>			
Terbium	111		70-130			06/11/2020 21:34
<u>Analyst(s):</u> MIG						

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID	
AG5@0'	2006544-002B	Soil	06/10/2020 09:24	ICP-MS5 324SMPL.d	199897	
<u>Analytes</u>	<u>Result</u>		<u>MDL</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Arsenic	4.1		0.15	0.50	1	06/11/2020 21:37
Lead	6.1		0.14	0.50	1	06/11/2020 21:37
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>			
Terbium	107		70-130			06/11/2020 21:37
<u>Analyst(s):</u> MIG						

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID	
AG8@0'	2006544-003B	Soil	06/10/2020 09:45	ICP-MS5 325SMPL.d	199897	
<u>Analytes</u>	<u>Result</u>		<u>MDL</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Arsenic	3.0		0.15	0.50	1	06/11/2020 21:40
Lead	3.7		0.14	0.50	1	06/11/2020 21:40
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>			
Terbium	105		70-130			06/11/2020 21:40
<u>Analyst(s):</u> MIG						

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Analytical Report

Client: Petralogix
Date Received: 06/10/2020 17:05
Date Prepared: 06/11/2020
Project: 2019-00014; Stockton Site I

WorkOrder: 2006544
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/kg

Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
AG11@0'	2006544-004B	Soil	06/10/2020 11:15	ICP-MS5 326SMPL.d	199897

Analytes	Result	MDL	RL	DF	Date Analyzed
Arsenic	2.9	0.15	0.50	1	06/11/2020 21:44
Lead	4.7	0.14	0.50	1	06/11/2020 21:44

Surrogates	REC (%)	Limits
Terbium	106	70-130

Analyst(s): MIG

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
AG11-DUP@0'	2006544-005B	Soil	06/10/2020 11:14	ICP-MS5 330SMPL.d	199897

Analytes	Result	MDL	RL	DF	Date Analyzed
Arsenic	3.0	0.15	0.50	1	06/11/2020 21:57
Lead	5.0	0.14	0.50	1	06/11/2020 21:57

Surrogates	REC (%)	Limits
Terbium	112	70-130

Analyst(s): MIG

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
AG15@0'	2006544-006B	Soil	06/10/2020 10:41	ICP-MS4 442SMPL.d	199897

Analytes	Result	MDL	RL	DF	Date Analyzed
Arsenic	3.3	0.15	0.50	1	06/12/2020 13:37
Lead	4.9	0.14	0.50	1	06/12/2020 13:37

Surrogates	REC (%)	Limits
Terbium	106	70-130

Analyst(s): WV

(Cont.)



Analytical Report

Client: Petralogix
Date Received: 06/10/2020 17:05
Date Prepared: 06/11/2020
Project: 2019-00014; Stockton Site I

WorkOrder: 2006544
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/kg

Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID	
AG18@0'	2006544-007B	Soil	06/10/2020 11:49	ICP-MS4 396SMPL.d	199897	
<u>Analytes</u>	<u>Result</u>		<u>MDL</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Arsenic	2.4		0.15	0.50	1	06/12/2020 10:45
Lead	3.0		0.14	0.50	1	06/12/2020 10:45
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>			
Terbium	109		70-130			06/12/2020 10:45
<u>Analyst(s):</u> JAG						

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID	
AG22@0'	2006544-008B	Soil	06/10/2020 10:56	ICP-MS4 400SMPL.d	199897	
<u>Analytes</u>	<u>Result</u>		<u>MDL</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Arsenic	4.1		0.15	0.50	1	06/12/2020 11:00
Lead	5.3		0.14	0.50	1	06/12/2020 11:00
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>			
Terbium	104		70-130			06/12/2020 11:00
<u>Analyst(s):</u> JAG						

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID	
AG25@0'	2006544-009B	Soil	06/10/2020 15:17	ICP-MS4 401SMPL.d	199897	
<u>Analytes</u>	<u>Result</u>		<u>MDL</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Arsenic	3.3		0.15	0.50	1	06/12/2020 11:03
Lead	5.6		0.14	0.50	1	06/12/2020 11:03
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>			
Terbium	103		70-130			06/12/2020 11:03
<u>Analyst(s):</u> JAG						

(Cont.)



Analytical Report

Client: Petralogix
Date Received: 06/10/2020 17:05
Date Prepared: 06/11/2020
Project: 2019-00014; Stockton Site I

WorkOrder: 2006544
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/kg

Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
AG25@2.5'	2006544-010B	Soil	06/10/2020 15:27	ICP-MS4 402SMPL.d	199897

Analytes	Result	MDL	RL	DF	Date Analyzed
Arsenic	4.0	0.15	0.50	1	06/12/2020 11:07
Lead	5.8	0.14	0.50	1	06/12/2020 11:07

Surrogates	REC (%)	Limits
Terbium	103	70-130

Analyst(s): JAG

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
AG28@0'	2006544-011B	Soil	06/10/2020 14:35	ICP-MS4 403SMPL.d	199897

Analytes	Result	MDL	RL	DF	Date Analyzed
Arsenic	5.7	0.15	0.50	1	06/12/2020 11:11
Lead	6.1	0.14	0.50	1	06/12/2020 11:11

Surrogates	REC (%)	Limits
Terbium	106	70-130

Analyst(s): JAG



Quality Control Report

Client: Petralogix	WorkOrder: 2006544
Date Prepared: 06/12/2020	BatchID: 200023
Date Analyzed: 06/12/2020	Extraction Method: SW3550B/3640Am/3630Cm
Instrument: GC23	Analytical Method: SW8081A
Matrix: Soil	Unit: mg/kg
Project: 2019-00014; Stockton Site I	Sample ID: MB/LCS/LCSD-200023

QC Summary Report for SW8081A/8082

Analyte	MB Result	MDL	RL	SPK Val	MB SS %REC	MB SS Limits
Aldrin	ND	0.0000360	0.000100	-	-	-
a-BHC	ND	0.0000250	0.000100	-	-	-
b-BHC	ND	0.000250	0.000300	-	-	-
d-BHC	ND	0.000130	0.000200	-	-	-
g-BHC	ND	0.0000660	0.000100	-	-	-
Chlordane (Technical)	ND	0.000430	0.00250	-	-	-
a-Chlordane	ND	0.0000950	0.000100	-	-	-
g-Chlordane	ND	0.0000470	0.000100	-	-	-
p,p-DDD	ND	0.0000430	0.000100	-	-	-
p,p-DDE	ND	0.0000940	0.000100	-	-	-
p,p-DDT	ND	0.0000920	0.000100	-	-	-
Dieldrin	ND	0.0000610	0.000100	-	-	-
Endosulfan I	ND	0.0000480	0.000100	-	-	-
Endosulfan II	ND	0.0000760	0.000100	-	-	-
Endosulfan sulfate	ND	0.0000780	0.000100	-	-	-
Endrin	ND	0.0000350	0.000100	-	-	-
Endrin aldehyde	ND	0.0000670	0.000100	-	-	-
Endrin ketone	ND	0.0000840	0.000100	-	-	-
Heptachlor	ND	0.0000400	0.000100	-	-	-
Heptachlor epoxide	ND	0.0000540	0.000100	-	-	-
Hexachlorobenzene	ND	0.000110	0.00100	-	-	-
Hexachlorocyclopentadiene	ND	0.000340	0.00200	-	-	-
Methoxychlor	ND	0.000130	0.000200	-	-	-
Toxaphene	ND	0.00340	0.00500	-	-	-
Surrogate Recovery						
Decachlorobiphenyl	0.00461			0.005	92	28-170

(Cont.)



Quality Control Report

Client:	Petralogix	WorkOrder:	2006544
Date Prepared:	06/12/2020	BatchID:	200023
Date Analyzed:	06/12/2020	Extraction Method:	SW3550B/3640Am/3630Cm
Instrument:	GC23	Analytical Method:	SW8081A
Matrix:	Soil	Unit:	mg/kg
Project:	2019-00014; Stockton Site I	Sample ID:	MB/LCS/LCSD-200023

QC Summary Report for SW8081A/8082

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Aldrin	0.00376	0.00375	0.0050	75	75	31-155	0.404	20
a-BHC	0.00427	0.00439	0.0050	85	88	32-160	2.85	20
b-BHC	0.00382	0.00388	0.0050	77	78	44-149	1.34	20
d-BHC	0.00432	0.00427	0.0050	86	85	37-157	1.13	20
g-BHC	0.00418	0.00425	0.0050	84	85	43-154	1.71	20
a-Chlordane	0.00356	0.00347	0.0050	71	69	39-150	2.65	20
g-Chlordane	0.00399	0.00390	0.0050	80	78	39-151	2.36	20
p,p-DDD	0.00404	0.00391	0.0050	81	78	30-158	3.08	20
p,p-DDE	0.00385	0.00370	0.0050	77	74	47-149	4.08	20
p,p-DDT	0.00400	0.00377	0.0050	80	75	56-166	5.86	20
Dieldrin	0.00426	0.00412	0.0050	85	82	50-163	3.10	20
Endosulfan I	0.00375	0.00364	0.0050	75	73	45-159	3.02	20
Endosulfan II	0.00368	0.00354	0.0050	74	71	41-155	3.87	20
Endosulfan sulfate	0.00364	0.00352	0.0050	73	70	45-156	3.23	20
Endrin	0.00402	0.00386	0.0050	80	77	54-154	4.01	20
Endrin aldehyde	0.00354	0.00337	0.0050	71	67	27-159	4.74	20
Endrin ketone	0.00320	0.00302	0.0050	64	60	40-147	5.69	20
Heptachlor	0.00412	0.00421	0.0050	82	84	52-165	2.11	20
Heptachlor epoxide	0.00366	0.00363	0.0050	73	73	46-145	0.945	20
Hexachlorobenzene	0.00356	0.00362	0.0050	71	72	22-156	1.68	20
Hexachlorocyclopentadiene	0.00274	0.00267	0.0050	55	53	43-173	2.74	20
Methoxychlor	0.00396	0.00374	0.0050	79	75	49-150	5.55	20
Surrogate Recovery								
Decachlorobiphenyl	0.00448	0.00405	0.0050	90	81	28-170	10.1	20



Quality Control Report

Client: Petralogix	WorkOrder: 2006544
Date Prepared: 06/11/2020	BatchID: 199897
Date Analyzed: 06/11/2020	Extraction Method: SW3050B
Instrument: ICP-MS5	Analytical Method: SW6020
Matrix: Soil	Unit: mg/kg
Project: 2019-00014; Stockton Site I	Sample ID: MB/LCS/LCSD-199897

QC Summary Report for Metals

Analyte	MB Result	MDL	RL	SPK Val	MB SS %REC	MB SS Limits
Arsenic	ND	0.150	0.500	-	-	-
Lead	ND	0.140	0.500	-	-	-
Surrogate Recovery						
Terbium	517			500	103	70-130

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Arsenic	51.6	50.4	50	103	101	75-125	2.34	20
Lead	50.6	48.6	50	101	97	75-125	4.03	20
Surrogate Recovery								
Terbium	523	510	500	105	102	70-130	2.46	20

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Pittsburg, CA 94565-1701
(925) 252-9262



WaterTrax WriteOn EDF

CHAIN-OF-CUSTODY RECORD

WorkOrder: 2006544

ClientCode: PLGC

Excel EQulS Email HardCopy ThirdParty J-flag
 Detection Summary Dry-Weight

Report to:

Daniel Kramer
Petalogix
26675 Bruella Road
Galt, CA 95632
(209) 400-5729 FAX:

Email: dkramer@petralogix.com
cc/3rd Party: tscheftner@petralogix.com;
PO:
Project: 2019-00014; Stockton Site I

Bill to:

Accounts Payable
Petalogix
26675 Bruella Road
Galt, CA 95632

Requested TAT: 5 days;

Date Received: 06/10/2020
Date Logged: 06/11/2020

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
2006544-001	AG1@0'	Soil	6/10/2020 08:55	<input type="checkbox"/>		B										
2006544-001	AG1-4@0'	Soil	6/10/2020 09:12	<input type="checkbox"/>	A		A									
2006544-002	AG5@0'	Soil	6/10/2020 09:24	<input type="checkbox"/>		B										
2006544-002	AG5-7@0'	Soil	6/10/2020 09:38	<input type="checkbox"/>	A		A									
2006544-003	AG8@0'	Soil	6/10/2020 09:45	<input type="checkbox"/>		B										
2006544-003	AG8-10@0'	Soil	6/10/2020 10:00	<input type="checkbox"/>	A		A									
2006544-004	AG11@0'	Soil	6/10/2020 11:15	<input type="checkbox"/>		B										
2006544-004	AG11-14@0'	Soil	6/10/2020 11:40	<input type="checkbox"/>	A		A									
2006544-005	AG11-14-DUP@0'	Soil	6/10/2020 11:40	<input type="checkbox"/>	A		A									
2006544-005	AG11-DUP@0'	Soil	6/10/2020 11:14	<input type="checkbox"/>		B										
2006544-006	AG15@0'	Soil	6/10/2020 10:41	<input type="checkbox"/>		B										
2006544-006	AG15-17@0'	Soil	6/10/2020 10:41	<input type="checkbox"/>	A		A									
2006544-007	AG18@0'	Soil	6/10/2020 11:49	<input type="checkbox"/>		B										
2006544-007	AG18-21@0'	Soil	6/10/2020 14:24	<input type="checkbox"/>	A		A									
2006544-008	AG22@0'	Soil	6/10/2020 10:56	<input type="checkbox"/>		B										

Test Legend:

1	8081_ESL_LL_S	2	METALSMS_TTLC_S	3	PRDisposal Fee	4	PRHOLD
5		6		7		8	
9		10		11		12	

Project Manager: Rosa Venegas

Prepared by: Tina Perez

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.

1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262



WaterTrax WriteOn EDF

CHAIN-OF-CUSTODY RECORD

WorkOrder: 2006544

ClientCode: PLGC

Excel EQuIS Email HardCopy ThirdParty J-flag
 Detection Summary Dry-Weight

Report to:

Daniel Kramer
Petalogix
26675 Bruella Road
Galt, CA 95632
(209) 400-5729 FAX:

Email: dkramer@petralogix.com
cc/3rd Party: tscheftner@petralogix.com;
PO:
Project: 2019-00014; Stockton Site I

Bill to:

Accounts Payable
Petalogix
26675 Bruella Road
Galt, CA 95632

Requested TAT: 5 days;

Date Received: 06/10/2020
Date Logged: 06/11/2020

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
2006544-008	AG22-24@0'	Soil	6/10/2020 14:38	<input type="checkbox"/>	A		A										
2006544-009	AG25@0'	Soil	6/10/2020 15:17	<input type="checkbox"/>		B											
2006544-009	AG25-27@0'	Soil	6/10/2020 15:17	<input type="checkbox"/>	A		A										
2006544-010	AG25@2.5'	Soil	6/10/2020 15:27	<input type="checkbox"/>		B											
2006544-010	AG25@2.5',26@2',27@4.5'	Soil	6/10/2020 15:27	<input type="checkbox"/>	A		A										
2006544-011	AG28@0'	Soil	6/10/2020 14:35	<input type="checkbox"/>		B											
2006544-011	AG28-30@0'	Soil	6/10/2020 14:43	<input type="checkbox"/>	A		A										
2006544-012	BG1	Soil	6/10/2020 08:54	<input checked="" type="checkbox"/>			A	A									
2006544-013	BG2	Soil	6/10/2020 09:18	<input checked="" type="checkbox"/>			A	A									
2006544-014	BG3	Soil	6/10/2020 09:47	<input checked="" type="checkbox"/>			A	A									
2006544-015	BG4	Soil	6/10/2020 11:23	<input checked="" type="checkbox"/>			A	A									
2006544-016	BG5	Soil	6/10/2020 10:22	<input checked="" type="checkbox"/>			A	A									
2006544-017	BG6	Soil	6/10/2020 11:52	<input checked="" type="checkbox"/>			A	A									
2006544-018	BG7	Soil	6/10/2020 10:57	<input checked="" type="checkbox"/>			A	A									
2006544-019	BG8	Soil	6/10/2020 14:13	<input checked="" type="checkbox"/>			A	A									

Test Legend:

1	8081_ESL_LL_S	2	METALSMS_TTLC_S	3	PRDisposal Fee	4	PRHOLD
5		6		7		8	
9		10		11		12	

Project Manager: Rosa Venegas

Prepared by: Tina Perez

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.

1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262



WaterTrax WriteOn EDF

CHAIN-OF-CUSTODY RECORD

WorkOrder: 2006544

ClientCode: PLGC

Excel EQuIS Email HardCopy ThirdParty J-flag
 Detection Summary Dry-Weight

Report to:

Daniel Kramer
Petalogix
26675 Bruella Road
Galt, CA 95632
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Email: dkramer@petralogix.com
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PO:
Project: 2019-00014; Stockton Site I

Bill to:

Accounts Payable
Petalogix
26675 Bruella Road
Galt, CA 95632

Requested TAT: 5 days;

Date Received: 06/10/2020

Date Logged: 06/11/2020

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
2006544-020	BG9	Soil	6/10/2020 09:04	<input checked="" type="checkbox"/>			A	A								
2006544-021	BG10	Soil	6/10/2020 14:40	<input checked="" type="checkbox"/>			A	A								

Test Legend:

1	8081_ESL_LL_S	2	METALSMS_TTLC_S	3	PRDisposal Fee	4	PRHOLD
5		6		7		8	
9		10		11		12	

Project Manager: Rosa Venegas

Prepared by: Tina Perez

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.



WORK ORDER SUMMARY

Client Name: PETRALOGIX
Client Contact: Daniel Kramer
Contact's Email: dkramer@petralogix.com

Project: 2019-00014; Stockton Site I

Work Order: 2006544
QC Level: LEVEL 2
Date Logged: 6/11/2020

Comments:

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Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
2006544-001A	AG1-4@0'	Soil	SW8081A (OC Pesticides) ESLs	4 / (4:1)	4OZ GJ, Unpres	<input type="checkbox"/>	6/10/2020 9:12	5 days		<input type="checkbox"/>	
2006544-001B	AG1@0'	Soil	SW6020 (Metals) <Arsenic, Lead>	1	4OZ GJ, Unpres	<input type="checkbox"/>	6/10/2020 8:55	5 days		<input type="checkbox"/>	
2006544-002A	AG5-7@0'	Soil	SW8081A (OC Pesticides) ESLs	3 / (3:1)	4OZ GJ, Unpres	<input type="checkbox"/>	6/10/2020 9:38	5 days		<input type="checkbox"/>	
2006544-002B	AG5@0'	Soil	SW6020 (Metals) <Arsenic, Lead>	1	4OZ GJ, Unpres	<input type="checkbox"/>	6/10/2020 9:24	5 days		<input type="checkbox"/>	
2006544-003A	AG8-10@0'	Soil	SW8081A (OC Pesticides) ESLs	3 / (3:1)	4OZ GJ, Unpres	<input type="checkbox"/>	6/10/2020 10:00	5 days		<input type="checkbox"/>	
2006544-003B	AG8@0'	Soil	SW6020 (Metals) <Arsenic, Lead>	1	4OZ GJ, Unpres	<input type="checkbox"/>	6/10/2020 9:45	5 days		<input type="checkbox"/>	
2006544-004A	AG11-14@0'	Soil	SW8081A (OC Pesticides) ESLs	4 / (4:1)	4OZ GJ, Unpres	<input type="checkbox"/>	6/10/2020 11:40	5 days		<input type="checkbox"/>	
2006544-004B	AG11@0'	Soil	SW6020 (Metals) <Arsenic, Lead>	1	4OZ GJ, Unpres	<input type="checkbox"/>	6/10/2020 11:15	5 days		<input type="checkbox"/>	
2006544-005A	AG11-14-DUP@0'	Soil	SW8081A (OC Pesticides) ESLs	4 / (4:1)	4OZ GJ, Unpres	<input type="checkbox"/>	6/10/2020 11:40	5 days		<input type="checkbox"/>	
2006544-005B	AG11-DUP@0'	Soil	SW6020 (Metals) <Arsenic, Lead>	1	4OZ GJ, Unpres	<input type="checkbox"/>	6/10/2020 11:14	5 days		<input type="checkbox"/>	
2006544-006A	AG15-17@0'	Soil	SW8081A (OC Pesticides) ESLs	3 / (3:1)	4OZ GJ, Unpres	<input type="checkbox"/>	6/10/2020 10:41	5 days		<input type="checkbox"/>	
2006544-006B	AG15@0'	Soil	SW6020 (Metals) <Arsenic, Lead>	1	4OZ GJ, Unpres	<input type="checkbox"/>	6/10/2020 10:41	5 days		<input type="checkbox"/>	
2006544-007A	AG18-21@0'	Soil	SW8081A (OC Pesticides) ESLs	4 / (4:1)	4OZ GJ, Unpres	<input type="checkbox"/>	6/10/2020 14:24	5 days		<input type="checkbox"/>	
2006544-007B	AG18@0'	Soil	SW6020 (Metals) <Arsenic, Lead>	1	4OZ GJ, Unpres	<input type="checkbox"/>	6/10/2020 11:49	5 days		<input type="checkbox"/>	
2006544-008A	AG22-24@0'	Soil	SW8081A (OC Pesticides) ESLs	3 / (3:1)	4OZ GJ, Unpres	<input type="checkbox"/>	6/10/2020 14:38	5 days		<input type="checkbox"/>	
2006544-008B	AG22@0'	Soil	SW6020 (Metals) <Arsenic, Lead>	1	4OZ GJ, Unpres	<input type="checkbox"/>	6/10/2020 10:56	5 days		<input type="checkbox"/>	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).
- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.



WORK ORDER SUMMARY

Client Name: PETRALOGIX
Client Contact: Daniel Kramer
Contact's Email: dkramer@petralogix.com

Project: 2019-00014; Stockton Site I

Work Order: 2006544
QC Level: LEVEL 2
Date Logged: 6/11/2020

Comments:

WaterTrax WriteOn EDF Excel EQulS Email HardCopy ThirdParty J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
2006544-009A	AG25-27@0'	Soil	SW8081A (OC Pesticides) ESLs	3 / (3:1)	4OZ GJ, Unpres	<input type="checkbox"/>	6/10/2020 15:17	5 days		<input type="checkbox"/>	
2006544-009B	AG25@0'	Soil	SW6020 (Metals) <Arsenic, Lead>	1	4OZ GJ, Unpres	<input type="checkbox"/>	6/10/2020 15:17	5 days		<input type="checkbox"/>	
2006544-010A	AG25@2.5',26@2',27@4.5'	Soil	SW8081A (OC Pesticides) ESLs	3 / (3:1)	4OZ GJ, Unpres	<input type="checkbox"/>	6/10/2020 15:27	5 days		<input type="checkbox"/>	
2006544-010B	AG25@2.5'	Soil	SW6020 (Metals) <Arsenic, Lead>	1	4OZ GJ, Unpres	<input type="checkbox"/>	6/10/2020 15:27	5 days		<input type="checkbox"/>	
2006544-011A	AG28-30@0'	Soil	SW8081A (OC Pesticides) ESLs	3 / (3:1)	4OZ GJ, Unpres	<input type="checkbox"/>	6/10/2020 14:43	5 days		<input type="checkbox"/>	
2006544-011B	AG28@0'	Soil	SW6020 (Metals) <Arsenic, Lead>	1	4OZ GJ, Unpres	<input type="checkbox"/>	6/10/2020 14:35	5 days		<input type="checkbox"/>	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).
- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.



McCAMPBELL ANALYTICAL, INC.

1534 Willow Pass Rd. Pittsburg, Ca. 94565-1701

Telephone: (877) 252-9262 / Fax: (925) 252-9269

www.mccampbell.com

main@mccampbell.com

CHAIN OF CUSTODY RECORD

Turn Around Time: 1 Day Rush	2 Day Rush	3 Day Rush	STD ●	Quote #
J-Flag / MDL	ESL	Cleanup Approved	Dry Weight	Bottle Order #
Delivery Format: PDF	GeoTracker EDF	EDD	Write On (DW)	Detect Summary

Report To: DANIEL KRAMER Bill To: DANIEL KRAMER

Company: Petralogix Engineering, Inc

Email: dkramer@petralogix.com

Alt Email: tscheftner@petralogix.com

Tele: 209.770.0731

Project Name: Stockton Site I

Project #: 2019-00014

Project Location: Corner of Westlake Dr & Regatta Lane PO #

Sampler Signature: *Tonya Schefstner*

Analysis Requested

SAMPLE ID Location / Field Point	Sampling		#Containers	Matrix	Preservative	OCP's (8081A)	Arsenic (6010B)	Lead (6010B)													
	Date	Time																			
AG1@0'	6/10/20	8:55	1	Soil		X	X														
AG2@0'		9:02																			
AG3@0'		9:16																			
AG4@0'		9:12																			
AG5@0'		9:24				X	X														
AG6@0'		9:30																			
AG7@0'		9:38																			
AG8@0'		9:45				X	X														
AG9@0'		9:55																			
AG10@0'		10:00																			

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* If metals are requested for water samples and the water type (Matrix) is not specified on the chain of custody, MAI will default to metals by E200.8.						Comments / Instructions									
Please provide an adequate volume of sample. If the volume is not sufficient for a MS/MSD a LCS/LCSD will be prepared in its place and noted in the report.						J flag arsenic Clean-up OCPs									
Relinquished By / Company Name			Date	Time	Received By / Company Name							Date	Time		
<i>Tonya Schefstner / Petralogix</i>			6/10/20	5:05	<i>[Signature]</i>							6/10/20	17:05		

Matrix Code: DW=Drinking Water, GW=Ground Water, WW=Waste Water, SW=Seawater, S=Soil, SL=Sludge, A=Air, WP=Wipe, O=Other
 Preservative Code: 1=4°C 2=HCl 3=H₂SO₄ 4=HNO₃ 5=NaOH 6=ZnOAc/NaOH 7=None

Temp 2.6 °C Initials TP



McCAMPBELL ANALYTICAL, INC.

1534 Willow Pass Rd. Pittsburg, Ca. 94565-1701
 Telephone: (877) 252-9262 / Fax: (925) 252-9269

www.mccampbell.com main@mccampbell.com

CHAIN OF CUSTODY RECORD

Turn Around Time: 1 Day Rush	2 Day Rush	3 Day Rush	STD ●	Quote #
J-Flag / MDL	ESL	Cleanup Approved	Dry Weight	Bottle Order #
Delivery Format: PDF	GeoTracker EDF	EDD	Write On (DW)	Detect Summary

Report To: DANIEL KRAMER Bill To: DANIEL KRAMER
 Company: Petralogix Engineering, Inc
 Email: dkramer@petralogix.com
 Alt Email: tscheftner@petralogix.com Tele: 209.770.0731
 Project Name: Stockton Site I Project #: 2019-00014
 Project Location: Corner of Westlake Dr & Regatta Lane PO #
 Sampler Signature: *Tonya Scheftner*


Analysis Requested

SAMPLE ID Location / Field Point	Sampling		#Containers	Matrix	Preservative	OCP's (8081A)	Arsenic (6010B)	Lead (6010B)														
	Date	Time																				
AG11@0'	6/10/20	11:15	1	Soil		X	X															
AG12@0'		11:29	1			X																
AG13@0'		11:20	1			X																
AG14@0'		11:40	1			X																
AG11-DUP@0"		11:14				X	X															
AG12-DUP@0"		11:29				X																
AG13-DUP@0"		11:20				X																
AG14-DUP@0"		11:40				X																

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* If metals are requested for water samples and the water type (Matrix) is not specified on the chain of custody, MAI will default to metals by E200.8.						Comments / Instructions						
Please provide an adequate volume of sample. If the volume is not sufficient for a MS/MSD a LCS/LCSD will be prepared in its place and noted in the report.												
Relinquished By / Company Name			Date	Time	Received By / Company Name			Date	Time	J flag arsenic Cleanup OCPs		
<i>Tonya Scheftner / Petralogix</i>			6/10/20	5:05	<i>[Signature]</i>			6/10/20	17:05			

Matrix Code: DW=Drinking Water, GW=Ground Water, WW=Waste Water, SW=Seawater, S=Soil, SL=Sludge, A=Air, WP=Wipe, O=Other
 Preservative Code: 1=4°C 2=HCl 3=H₂SO₄ 4=HNO₃ 5=NaOH 6=ZnOAc/NaOH 7=None
 Temp _____ °C Initials _____



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CHAIN OF CUSTODY RECORD

Turn Around Time: 1 Day Rush	2 Day Rush	3 Day Rush	STD ●	Quote #
J-Flag / MDL	ESL	Cleanup Approved	Dry Weight	Bottle Order #
Delivery Format: PDF	GeoTracker EDF	EDD	Write On (DW)	Detect Summary

Report To: DANIEL KRAMER Bill To: DANIEL KRAMER

Analysis Requested

Company: Petralogix Engineering, Inc
 Email: dkramer@petralogix.com
 Alt Email: tscheftner@petralogix.com Tele: 209.770.0731
 Project Name: Stockton Site I Project #: 2019-00014
 Project Location: Corner of Westlake Dr & Regatta Lane PO #
 Sampler Signature: *Tony Schefner*

SAMPLE ID Location / Field Point	Sampling		#Containers	Matrix	Preservative	OCP's (8081A)	Arsenic (6010B)	Lead (6010B)	Analysis Requested															
	Date	Time																						
AG15@0'	6/10/20	10:41	1	SOIL		X	X																	
AG16@0'		10:24				X																		
AG17@0'		10:20				X																		
AG18@0'		11:49				X	X																	
AG19@0'		2:22				X																		
AG20@0'		2:04				X																		
AG21@0'		2:24				X																		
AG22@0'		10:56				X	X																	
AG23@0'		10:50				X																		
AG24@0'		2:38				X																		

3:1
4:1
3:1

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* If metals are requested for water samples and the water type (Matrix) is not specified on the chain of custody, MAI will default to metals by #200.8.							Comments / Instructions <i>J flag arsenic Clean up OCPs</i>
Please provide an adequate volume of sample. If the volume is not sufficient for a MS/MSD a LCS/LCSD will be prepared in its place and noted in the report.							
Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time		
<i>Tony Schefner / Petralogix</i>	<i>6/10/20</i>	<i>5:05</i>	<i>[Signature]</i>	<i>6/10/20</i>	<i>17:05</i>		

Matrix Code: DW=Drinking Water, GW=Ground Water, WW=Waste Water, SW=Seawater, S=Soil, SL=Sludge, A=Air, WP=Wipe, O=Other
 Preservative Code: 1=4°C 2=HCl 3=H₂SO₄ 4=HNO₃ 5=NaOH 6=ZnOAc/NaOH 7=None Temp _____ °C Initials _____



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CHAIN OF CUSTODY RECORD									
Turn Around Time: 1 Day Rush			2 Day Rush		3 Day Rush		STD	●	Quote #
J-Flag / MDL		ESL		Cleanup Approved			Dry Weight		Bottle Order #
Delivery Format: PDF		GeoTracker EDF			EDD		Write On (DW)		Detect Summary

Report To: DANIEL KRAMER Bill To: DANIEL KRAMER
 Company: Petralogix Engineering, Inc
 Email: dkramer@petralogix.com
 Alt Email: tscheftner@petralogix.com Tele: 209.770.0731
 Project Name: Stockton Site I Project #: 2019-00014
 Project Location: Corner of Westlake Dr & Regatta Lane PO #
 Sampler Signature: *Tanya Schuftner*

Analysis Requested

SAMPLE ID Location / Field Point	Sampling		#Containers	Matrix	Preservative
	Date	Time			
AG25@0'	6/10/20	3:17	1	SOIL	
AG26@0'	6/10/20	3:08	1		
AG27@0'		2:57	1		
AG25@ 2.5'		3:27	1		
AG26@ 2'		3:12	1		
AG27@ 4.5'		3:03	1		
AG28@0'		2:35	1		
AG29@0'		2:41	1		
AG30@0'	↓	2:43	↓	↓	

OCF's (8081A)	Arsenic (6010B)	Lead (6010B)																		
X	X	X																		
X	X	X																		
X	X	X																		

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* If metals are requested for water samples and the water type (Matrix) is not specified on the chain of custody, MAI will default to metals by E200.8.						Comments / Instructions J flag arsenic Clean up OCPs				
Please provide an adequate volume of sample. If the volume is not sufficient for a MS/MSD a LCS/LCSD will be prepared in its place and noted in the report.										
Relinquished By / Company Name		Date	Time	Received By / Company Name		Date	Time			
<i>Tanya Schuftner / Petralogix</i>		6/10/20	5:05	<i>[Signature]</i>		6/10/20	17:05			

Matrix Code: DW=Drinking Water, GW=Ground Water, WW=Waste Water, SW=Seawater, S=Soil, SL=Sludge, A=Air, WP=Wipe, O=Other
 Preservative Code: 1=4°C 2=HCl 3=H₂SO₄ 4=HNO₃ 5=NaOH 6=ZnOAc/NaOH 7=None Temp _____ °C Initials _____



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 Telephone: (877) 252-9262 / Fax: (925) 252-9269
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CHAIN OF CUSTODY RECORD			
Turn Around Time: 1 Day Rush	2 Day Rush	3 Day Rush	STD ● Quote #
J-Flag / MDL	ESL	Cleanup Approved	Dry Weight Bottle Order #
Delivery Format: PDF	GeoTracker EDF	EDD	Write On (DW) Detect Summary

Report To: DANIEL KRAMER Bill To: DANIEL KRAMER
 Company: Petralogix Engineering, Inc
 Email: dkramer@petralogix.com
 Alt Email: tscheftner@petralogix.com Tele: 209.770.0731
 Project Name: Stockton Site I Project #: 2019-00014
 Project Location: Corner of Westlake Dr & Regatta Lane PO #
 Sampler Signature: *Tonya Schestner*

Analysis Requested

SAMPLE ID Location / Field Point	Sampling		# Containers	Matrix	Preservative	OCP's (8081A)	Arsenic (6010B)	Lead (6010B)													
	Date	Time																			
BG1	6/10/20	8:54	1	SOIL	—					X											
BG2	6/10/20	9:18								X											
BG3	6/10/20	9:47								X											
BG4	6/10/20	11:23								X											
BG5	6/10/20	10:22								X											5
BG6	6/10/20	11:52								X											
BG7	6/10/20	10:57								X											
BG8	6/10/20	2:13								X											
BG9	6/10/20	9:04					X														
BG10	6/10/20	2:40					X														

SAMPLE ID Location / Field Point	Sampling		# Containers	Matrix	Preservative	OCP's (8081A)	Arsenic (6010B)	Lead (6010B)													
	Date	Time																			
BG1	6/10/20	8:54	1	SOIL	—					X											
BG2	6/10/20	9:18								X											
BG3	6/10/20	9:47								X											
BG4	6/10/20	11:23								X											
BG5	6/10/20	10:22								X											5
BG6	6/10/20	11:52								X											
BG7	6/10/20	10:57								X											
BG8	6/10/20	2:13								X											
BG9	6/10/20	9:04					X														
BG10	6/10/20	2:40					X														

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Please provide an adequate volume of sample. If the volume is not sufficient for a MS/MSD a LCS/LCSD will be prepared in its place and noted in the report.

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
<i>Tonya Schestner / Petralogix</i>	6/10/20	5:05	<i>[Signature]</i>	6/10/20	17:05

Comments / Instructions
Hold all "BG" samples Thank you

Matrix Code: DW=Drinking Water, GW=Ground Water, WW=Waste Water, SW=Seawater, S=Soil, SL=Sludge, A=Air, WP=Wipe, O=Other
 Preservative Code: 1=4°C 2=HCl 3=H₂SO₄ 4=HNO₃ 5=NaOH 6=ZnOAc/NaOH 7=None

Temp _____ °C Initials _____



Sample Receipt Checklist

Client Name: **Petralogix**
Project: **2019-00014; Stockton Site I**

Date and Time Received: **6/10/2020 17:05**

Date Logged: **6/11/2020**

Received by: **Tina Perez**

Logged by: **Tina Perez**

WorkOrder No: **2006544** Matrix: Soil
Carrier: Client Drop-In

Chain of Custody (COC) Information

- Chain of custody present? Yes No
- Chain of custody signed when relinquished and received? Yes No
- Chain of custody agrees with sample labels? Yes No
- Sample IDs noted by Client on COC? Yes No
- Date and Time of collection noted by Client on COC? Yes No
- Sampler's name noted on COC? Yes No
- COC agrees with Quote? Yes No NA

Sample Receipt Information

- Custody seals intact on shipping container/cooler? Yes No NA
- Shipping container/cooler in good condition? Yes No
- Samples in proper containers/bottles? Yes No
- Sample containers intact? Yes No
- Sufficient sample volume for indicated test? Yes No

Sample Preservation and Hold Time (HT) Information

- All samples received within holding time? Yes No NA
- Samples Received on Ice? Yes No

(Ice Type: OTHERS)

- Sample/Temp Blank temperature Temp: 2.6°C NA
- Water - VOA vials have zero headspace / no bubbles? Yes No NA
- Sample labels checked for correct preservation? Yes No
- pH acceptable upon receipt (Metal: <2; Nitrate 353.2/4500NO3: <2; 522: <4; 218.7: >8)? Yes No NA

UCMR Samples:

- pH tested and acceptable upon receipt (200.8: ≤2; 525.3: ≤4; 530: ≤7; 541: <3; 544: <6.5 & 7.5)? Yes No NA
- Free Chlorine tested and acceptable upon receipt (<0.1mg/L)? Yes No NA

Comments:



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 2006544 A

Report Created for: Petralogix

26675 Bruella Road
Galt, CA 95632

Project Contact: Daniel Kramer

Project P.O.:

Project: 2019-00014; Stockton Site I

Project Received: 06/10/2020

Analytical Report reviewed & approved for release on 06/29/2020 by:

Yen Cao
Project Manager

The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.





Glossary of Terms & Qualifier Definitions

Client: Petralogix
Project: 2019-00014; Stockton Site I
WorkOrder: 2006544 A

Glossary Abbreviation

%D	Serial Dilution Percent Difference
95% Interval	95% Confident Interval
CPT	Consumer Product Testing not NELAP Accredited
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test (Serial Dilution)
DUP	Duplicate
EDL	Estimated Detection Limit
ERS	External reference sample. Second source calibration verification.
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
LQL	Lowest Quantitation Level
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
ST	Sorbent Tube
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
TZA	TimeZone Net Adjustment for sample collected outside of MAI's UTC.
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)



Analytical Report

Client: Petralogix
Date Received: 06/10/2020 17:05
Date Prepared: 06/23/2020
Project: 2019-00014; Stockton Site I

WorkOrder: 2006544
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

Arsenic

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
BG1	2006544-012A	Soil	06/10/2020 08:54	ICP-MS4 141SMPL.d	200567

Analytes	Result	MDL	RL	DF	Date Analyzed
Arsenic	3.5	0.15	0.50	1	06/24/2020 11:46

Surrogates	REC (%)	Limits
Terbium	106	70-130

Analyst(s): MIG

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
BG2	2006544-013A	Soil	06/10/2020 09:18	ICP-MS4 142SMPL.d	200567

Analytes	Result	MDL	RL	DF	Date Analyzed
Arsenic	3.2	0.15	0.50	1	06/24/2020 11:49

Surrogates	REC (%)	Limits
Terbium	103	70-130

Analyst(s): MIG

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
BG3	2006544-014A	Soil	06/10/2020 09:47	ICP-MS4 146SMPL.d	200567

Analytes	Result	MDL	RL	DF	Date Analyzed
Arsenic	2.7	0.15	0.50	1	06/24/2020 12:04

Surrogates	REC (%)	Limits
Terbium	101	70-130

Analyst(s): WV

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
BG4	2006544-015A	Soil	06/10/2020 11:23	ICP-MS4 147SMPL.d	200567

Analytes	Result	MDL	RL	DF	Date Analyzed
Arsenic	2.0	0.15	0.50	1	06/24/2020 12:08

Surrogates	REC (%)	Limits
Terbium	100	70-130

Analyst(s): WV

(Cont.)



Analytical Report

Client: Petralogix
Date Received: 06/10/2020 17:05
Date Prepared: 06/23/2020
Project: 2019-00014; Stockton Site I

WorkOrder: 2006544
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

Arsenic

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
BG5	2006544-016A	Soil	06/10/2020 10:22	ICP-MS4 148SMPL.d	200567

Analytes	Result	MDL	RL	DF	Date Analyzed
Arsenic	1.9	0.15	0.50	1	06/24/2020 12:12

Surrogates	REC (%)	Limits
Terbium	102	70-130

Analyst(s): WV

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
BG6	2006544-017A	Soil	06/10/2020 11:52	ICP-MS4 149SMPL.d	200567

Analytes	Result	MDL	RL	DF	Date Analyzed
Arsenic	2.1	0.15	0.50	1	06/24/2020 12:15

Surrogates	REC (%)	Limits
Terbium	101	70-130

Analyst(s): WV

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
BG7	2006544-018A	Soil	06/10/2020 10:57	ICP-MS4 150SMPL.d	200567

Analytes	Result	MDL	RL	DF	Date Analyzed
Arsenic	1.5	0.15	0.50	1	06/24/2020 12:19

Surrogates	REC (%)	Limits
Terbium	103	70-130

Analyst(s): WV

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
BG8	2006544-019A	Soil	06/10/2020 14:13	ICP-MS4 151SMPL.d	200567

Analytes	Result	MDL	RL	DF	Date Analyzed
Arsenic	1.9	0.15	0.50	1	06/24/2020 12:23

Surrogates	REC (%)	Limits
Terbium	103	70-130

Analyst(s): WV

(Cont.)



Analytical Report

Client: Petralogix
Date Received: 06/10/2020 17:05
Date Prepared: 06/23/2020
Project: 2019-00014; Stockton Site I

WorkOrder: 2006544
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

Arsenic

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
BG9	2006544-020A	Soil	06/10/2020 09:04	ICP-MS4 152SMPL.d	200567

Analytes	Result	MDL	RL	DF	Date Analyzed
Arsenic	3.0	0.15	0.50	1	06/24/2020 12:27

Surrogates	REC (%)	Limits
Terbium	105	70-130

Analyst(s): WV

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
BG10	2006544-021A	Soil	06/10/2020 14:40	ICP-MS4 153SMPL.d	200567

Analytes	Result	MDL	RL	DF	Date Analyzed
Arsenic	4.0	0.15	0.50	1	06/24/2020 12:30

Surrogates	REC (%)	Limits
Terbium	105	70-130

Analyst(s): WV



Quality Control Report

Client: Petralogix
Date Prepared: 06/23/2020
Date Analyzed: 06/24/2020
Instrument: ICP-MS4
Matrix: Soil
Project: 2019-00014; Stockton Site I

WorkOrder: 2006544
BatchID: 200567
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/kg
Sample ID: MB/LCS/LCSD-200567

QC Summary Report for Metals

Analyte	MB Result	MDL	RL	SPK Val	MB SS %REC	MB SS Limits
Arsenic	ND	0.150	0.500	-	-	-
Surrogate Recovery						
Terbium	524			500	105	70-130

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Arsenic	49.2	52.3	50	98	105	75-125	5.99	20
Surrogate Recovery								
Terbium	507	522	500	101	104	70-130	3.01	20



1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

WaterTrax WriteOn EDF

CHAIN-OF-CUSTODY RECORD

WorkOrder: 2006544 **A** ClientCode: PLGC

Excel EQulS Email HardCopy ThirdParty J-flag
 Detection Summary Dry-Weight

Report to:

Daniel Kramer
Petalogix
26675 Bruella Road
Galt, CA 95632
(209) 400-5729 FAX:

Email: dkramer@petralogix.com
cc/3rd Party: tscheftner@petralogix.com;
PO:
Project: 2019-00014; Stockton Site I

Bill to:

Accounts Payable
Petalogix
26675 Bruella Road
Galt, CA 95632

Requested TAT: 5 days;

Date Received: 06/10/2020
Date Logged: 06/11/2020
Date Add-On: 06/23/2020

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
2006544-012	BG1	Soil	6/10/2020 08:54	<input type="checkbox"/>	A	A											
2006544-013	BG2	Soil	6/10/2020 09:18	<input type="checkbox"/>	A	A											
2006544-014	BG3	Soil	6/10/2020 09:47	<input type="checkbox"/>	A	A											
2006544-015	BG4	Soil	6/10/2020 11:23	<input type="checkbox"/>	A	A											
2006544-016	BG5	Soil	6/10/2020 10:22	<input type="checkbox"/>	A	A											
2006544-017	BG6	Soil	6/10/2020 11:52	<input type="checkbox"/>	A	A											
2006544-018	BG7	Soil	6/10/2020 10:57	<input type="checkbox"/>	A	A											
2006544-019	BG8	Soil	6/10/2020 14:13	<input type="checkbox"/>	A	A											
2006544-020	BG9	Soil	6/10/2020 09:04	<input type="checkbox"/>	A	A											
2006544-021	BG10	Soil	6/10/2020 14:40	<input type="checkbox"/>	A	A											

Test Legend:

1	ASMS_6020_TTLC_S	2	PRHOLD Credit	3		4	
5		6		7		8	
9		10		11		12	

Project Manager: Rosa Venegas

Prepared by: Tina Perez

Add-On Prepared By: Maria Venegas

Comments: BG samples off HOLD 6/23/2020 STAT.

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.



WORK ORDER SUMMARY

Client Name: PETRALOGIX
Client Contact: Daniel Kramer
Contact's Email dkramer@petralogix.com

Project: 2019-00014; Stockton Site I

Comments: BG samples off HOLD 6/23/2020 STAT.

Work Order: 2006544
QC Level: LEVEL 2
Date Logged: 6/11/2020
Date Add-On: 6/23/2020

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
2006544-012A	BG1	Soil	SW6020 (Arsenic)	1	4OZ GJ, Unpres	6/10/2020 8:54	5 days		<input type="checkbox"/>	
2006544-013A	BG2	Soil	SW6020 (Arsenic)	1	4OZ GJ, Unpres	6/10/2020 9:18	5 days		<input type="checkbox"/>	
2006544-014A	BG3	Soil	SW6020 (Arsenic)	1	4OZ GJ, Unpres	6/10/2020 9:47	5 days		<input type="checkbox"/>	
2006544-015A	BG4	Soil	SW6020 (Arsenic)	1	4OZ GJ, Unpres	6/10/2020 11:23	5 days		<input type="checkbox"/>	
2006544-016A	BG5	Soil	SW6020 (Arsenic)	1	4OZ GJ, Unpres	6/10/2020 10:22	5 days		<input type="checkbox"/>	
2006544-017A	BG6	Soil	SW6020 (Arsenic)	1	4OZ GJ, Unpres	6/10/2020 11:52	5 days		<input type="checkbox"/>	
2006544-018A	BG7	Soil	SW6020 (Arsenic)	1	4OZ GJ, Unpres	6/10/2020 10:57	5 days		<input type="checkbox"/>	
2006544-019A	BG8	Soil	SW6020 (Arsenic)	1	4OZ GJ, Unpres	6/10/2020 14:13	5 days		<input type="checkbox"/>	
2006544-020A	BG9	Soil	SW6020 (Arsenic)	1	4OZ GJ, Unpres	6/10/2020 9:04	5 days		<input type="checkbox"/>	
2006544-021A	BG10	Soil	SW6020 (Arsenic)	1	4OZ GJ, Unpres	6/10/2020 14:40	5 days		<input type="checkbox"/>	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.



McCAMPBELL ANALYTICAL, INC.
 1534 Willow Pass Rd. Pittsburg, Ca. 94565-1701
 Telephone: (877) 252-9262 / Fax: (925) 252-9269
www.mccampbell.com main@mccampbell.com

CHAIN OF CUSTODY RECORD									
Turn Around Time: 1 Day Rush		2 Day Rush		3 Day Rush		STD ●		Quote #	
J-Flag / MDL		ESL		Cleanup Approved		Dry Weight		Bottle Order #	
Delivery Format: PDF		GeoTracker EDF		EDD		Write On (DW)		Detect Summary	

Report To: DANIEL KRAMER Bill To: DANIEL KRAMER
 Company: Petralogix Engineering, Inc
 Email: dkramer@petralogix.com
 Alt Email: tscheftner@petralogix.com Tele: 209.770.0731
 Project Name: Stockton Site I Project #: 2019-00014
 Project Location: Corner of Westlake Dr & Regatta Lane PO #
 Sampler Signature: *Tonya Schestner*

Analysis Requested

SAMPLE ID Location / Field Point	Sampling		#Containers	Matrix	Preservative
	Date	Time			
BG1	6/10/20	8:54	1	SOIL	—
BG2	6/10/20	9:18			
BG3	6/10/20	9:47			
BG4	6/10/20	11:23			
BG5	6/10/20	10:22			
BG6	6/10/20	11:52			
BG7	6/10/20	10:57			
BG8	6/10/20	2:13			
BG9	6/10/20	9:04			
BG10	6/10/20	2:40			

OCF's (8081A)	Arsenic (6010B)	Lead (6010B)																		
	X																			
	X																			
	X																			
	X																			
	X																			
	X																			
	X																			
	X																			
	X																			

MAI clients MUST disclose any dangerous chemicals known to be present in their submitted samples in concentrations that may cause immediate harm or serious future health endangerment as a result of brief, gloved, open air, sample handling by MAI staff. Non-disclosure incurs an immediate \$250 surcharge and the client is subject to full legal liability for harm suffered. Thank you for your understanding and for allowing us to work safely.

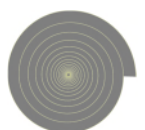
* If metals are requested for water samples and the water type (Matrix) is not specified on the chain of custody, MAI will default to metals by E200.8.
 Please provide an adequate volume of sample. If the volume is not sufficient for a MS/MSD a LCS/LCSD will be prepared in its place and noted in the report.

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
<i>Tonya Schestner / Petralogix</i>	6/10/20	5:05	<i>[Signature]</i>	6/10/20	17:05

Comments / Instructions
 Hold all "BG" samples
 Thank you
OFF HOLD 6/23/2020

Matrix Code: DW=Drinking Water, GW=Ground Water, WW=Waste Water, SW=Seawater, S=Soil, SL=Sludge, A=Air, WP=Wipe, O=Other
 Preservative Code: 1=4°C 2=HCl 3=H₂SO₄ 4=HNO₃ 5=NaOH 6=ZnOAc/NaOH 7=None
 Temp _____ °C Initials _____

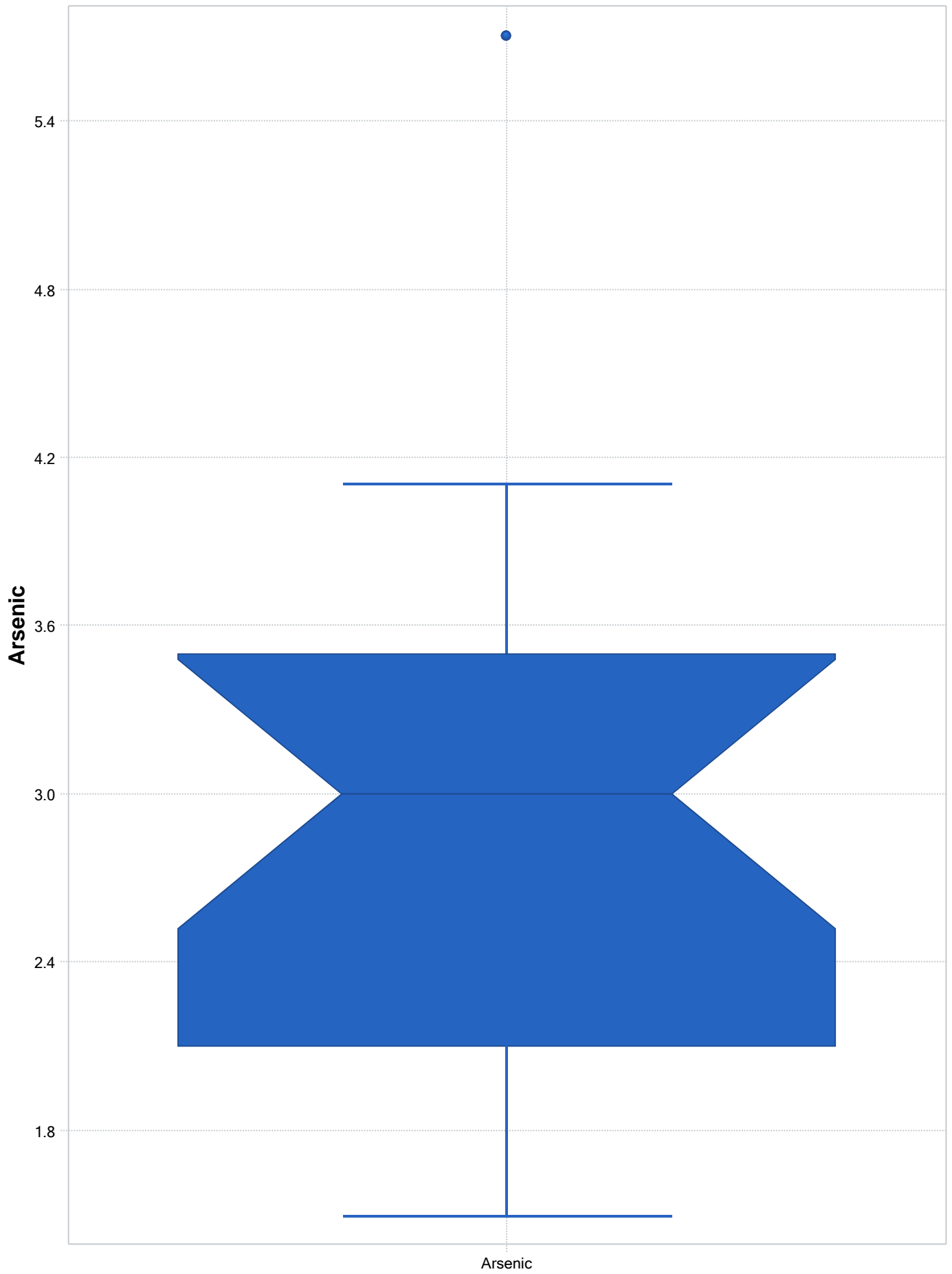
APPENDIX D – SUMMARY STATISTICS



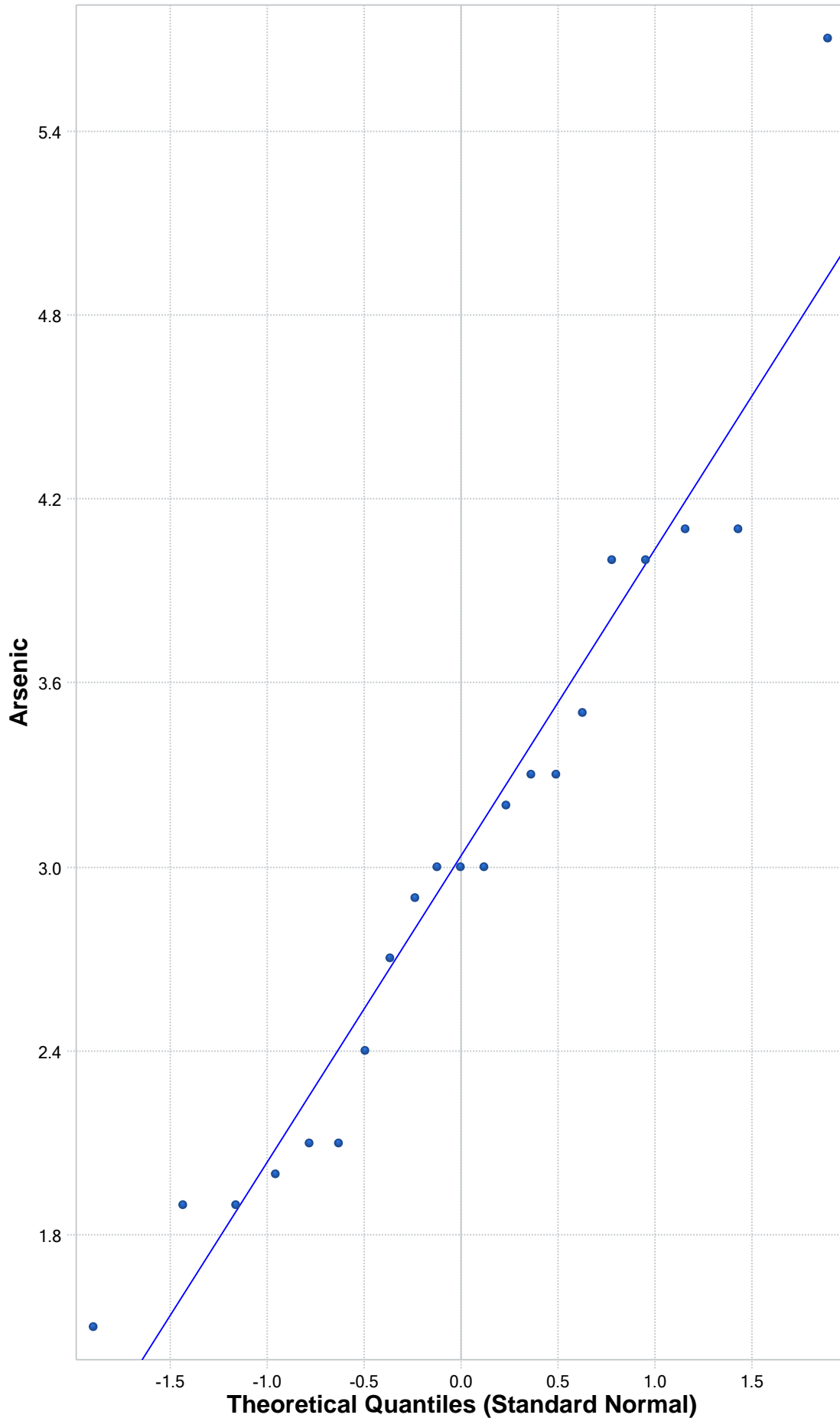
	0	1
	As	As w/o Outlier
	3.5	3.5
	3.2	3.2
	2.7	2.7
4	2	2
5	1.9	1.9
6	2.1	2.1
7	1.5	1.5
8	1.9	1.9
9	3	3
10	4	4
11	2.1	2.1
12	4.1	4.1
13	3	3
14	2.9	2.9
15	3.3	3.3
16	2.4	2.4
17	4.1	4.1
18	3.3	3.3
19	4	4
20	5.7	3
21	3	

	A	B	C	D	E	F	G	H	I	J	K	L
	Outlier Tests for Selected Uncensored Variables											
	User Selected Options											
	Date/Time of Computation			ProUCL 5.17/19/2020 11:12:02 PM								
	From File			WorkSheet.xls								
	Full Precision			OFF								
	Dixon's Outlier Test for C0											
	Number of Observations = 21											
	10% critical value: 0.391											
	5% critical value: 0.44											
	1% critical value: 0.524											
	1. Observation Value 5.7 is a Potential Outlier (Upper Tail)											
16												
17	Test Statistic: 0.421											
18												
19	For 10% significance level, 5.7 is an outlier.											
20	For 5% significance level, 5.7 is not an outlier.											
21	For 1% significance level, 5.7 is not an outlier.											
22												
23	2. Observation Value 1.5 is a Potential Outlier (Lower Tail)											
24												
25	Test Statistic: 0.154											
26												
27	For 10% significance level, 1.5 is not an outlier.											
28	For 5% significance level, 1.5 is not an outlier.											
29	For 1% significance level, 1.5 is not an outlier.											
30												

Box Plot for Arsenic



Q-Q Plot for Arsenic



Arsenic

N = 21

Mean = 3.033

Sd = 0.998

Slope = 1.001

Intercept = 3.033

Correlation, R = 0.968

Best Fit Line

A	B	C	D	E	F	G	H	I	J	K	L
Background Statistics for Uncensored Full Data Sets											
User Selected Options											
Date/Time of Computation		ProUCL 5.17/19/2020 11:21:56 PM									
From File		WorkSheet.xls									
Full Precision		OFF									
Confidence Coefficient		95%									
Coverage		95%									
New or Future K Observations		1									
Number of Bootstrap Operations		2000									
Arsenic - w/o Outlier											
General Statistics											
Total Number of Observations				20		Number of Distinct Observations				13	
Minimum				1.5		First Quartile				2.1	
Second Largest				4.1		Median				3	
Maximum				4.1		Third Quartile				3.35	
Mean				2.9		SD				0.809	
Coefficient of Variation				0.279		Skewness				-0.0152	
Mean of logged Data				1.025		SD of logged Data				0.297	
Critical Values for Background Threshold Values (BTVs)											
Tolerance Factor K (For UTL)				2.396		d2max (for USL)				2.557	
Normal GOF Test											
Shapiro Wilk Test Statistic				0.94		Shapiro Wilk GOF Test					
5% Shapiro Wilk Critical Value				0.905		Data appear Normal at 5% Significance Level					
Lilliefors Test Statistic				0.139		Lilliefors GOF Test					
5% Lilliefors Critical Value				0.192		Data appear Normal at 5% Significance Level					
Data appear Normal at 5% Significance Level											
Background Statistics Assuming Normal Distribution											
95% UTL with 95% Coverage				4.839		90% Percentile (z)				3.937	
95% UPL (t)				4.334		95% Percentile (z)				4.231	
95% USL				4.969		99% Percentile (z)				4.782	
Gamma GOF Test											
A-D Test Statistic				0.471		Anderson-Darling Gamma GOF Test					
5% A-D Critical Value				0.742		Detected data appear Gamma Distributed at 5% Significance Level					
K-S Test Statistic				0.14		Kolmogorov-Smirnov Gamma GOF Test					
5% K-S Critical Value				0.194		Detected data appear Gamma Distributed at 5% Significance Level					
Detected data appear Gamma Distributed at 5% Significance Level											
Gamma Statistics											
k hat (MLE)				12.66		k star (bias corrected MLE)				10.79	
Theta hat (MLE)				0.229		Theta star (bias corrected MLE)				0.269	
nu hat (MLE)				506.3		nu star (bias corrected)				431.7	
MLE Mean (bias corrected)				2.9		MLE Sd (bias corrected)				0.883	
Background Statistics Assuming Gamma Distribution											
95% Wilson Hilferty (WH) Approx. Gamma UPL				4.546		90% Percentile				4.073	
95% Hawkins Wixley (HW) Approx. Gamma UPL				4.584		95% Percentile				4.488	
95% WH Approx. Gamma UTL with 95% Coverage				5.288		99% Percentile				5.337	

A	B	C	D	E	F	G	H	I	J	K	L
	95% HW Approx. Gamma UTL with	95% Coverage			5.371						
		95% WH USL			5.491				95% HW USL		5.589
Lognormal GOF Test											
	Shapiro Wilk Test Statistic				0.933				Shapiro Wilk Lognormal GOF Test		
	5% Shapiro Wilk Critical Value				0.905				Data appear Lognormal at 5% Significance Level		
	Lilliefors Test Statistic				0.154				Lilliefors Lognormal GOF Test		
	5% Lilliefors Critical Value				0.192				Data appear Lognormal at 5% Significance Level		
Data appear Lognormal at 5% Significance Level											
Background Statistics assuming Lognormal Distribution											
	95% UTL with	95% Coverage			5.676				90% Percentile (z)		4.077
		95% UPL (t)			4.716				95% Percentile (z)		4.541
		95% USL			5.954				99% Percentile (z)		5.56
Nonparametric Distribution Free Background Statistics											
Data appear Normal at 5% Significance Level											
Nonparametric Upper Limits for Background Threshold Values											
73		Order of Statistic, r			20				95% UTL with	95% Coverage	4.1
74		Approx, f used to compute achieved CC			1.053				Approximate Actual Confidence Coefficient achieved by UTL		0.642
75									Approximate Sample Size needed to achieve specified CC		59
76		95% Percentile Bootstrap UTL with			4.1				95% BCA Bootstrap UTL with	95% Coverage	4.1
77					95% UPL					90% Percentile	4.01
78					90% Chebyshev UPL					95% Percentile	4.1
79					95% Chebyshev UPL					99% Percentile	4.1
80					95% USL						
81											
82	Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.										
83	Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers										
84	and consists of observations collected from clean unimpacted locations.										
85	The use of USL tends to provide a balance between false positives and false negatives provided the data										
86	represents a background data set and when many onsite observations need to be compared with the BTV.										
87											

A	B	C	D	E	F	G	H	I	J	K	L
Background Statistics for Uncensored Full Data Sets											
User Selected Options											
Date/Time of Computation		ProUCL 5.17/19/2020 11:21:56 PM									
From File		WorkSheet.xls									
Full Precision		OFF									
Confidence Coefficient		95%									
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95% WH Approx. Gamma UTL with 95% Coverage		5.288		99% Percentile		5.337					

A	B	C	D	E	F	G	H	I	J	K	L
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74		Approx, f used to compute achieved CC			1.053				Approximate Actual Confidence Coefficient achieved by UTL		0.642
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80					95% USL						
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85	The use of USL tends to provide a balance between false positives and false negatives provided the data										
86	represents a background data set and when many onsite observations need to be compared with the BTV.										
87											

LEAD RISK ASSESSMENT SPREADSHEET 8
CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL

Click here for ABBREVIATED INSTRUCTIONS FOR LEADSPREAD 8

INPUT	
MEDIUM	LEVEL
Lead in Soil/Dust (ug/g)	6.1
Respirable Dust (ug/m ³)	1.5

OUTPUT						
Percentile Estimate of Blood Pb (ug/dl)						PRG-90
	50th	90th	95th	98th	99th	(ug/g)
BLOOD Pb, CHILD	0.0	0.1	0.1	0.1	0.1	77
BLOOD Pb, PICA CHILD	0.1	0.2	0.2	0.2	0.3	39

EXPOSURE PARAMETERS		
	units	children
Days per week	days/wk	7
Geometric Standard Deviation		1.6
Blood lead level of concern (ug/dl)		1
Skin area, residential	cm ²	2900
Soil adherence	ug/cm ²	200
Dermal uptake constant	(ug/dl)/(ug/day)	0.0001
Soil ingestion	mg/day	100
Soil ingestion, pica	mg/day	200
Ingestion constant	(ug/dl)/(ug/day)	0.16
Bioavailability	unitless	0.44
Breathing rate	m ³ /day	6.8
Inhalation constant	(ug/dl)/(ug/day)	0.192

PATHWAYS						
CHILDREN	typical			with pica		
	Pathway contribution			Pathway contribution		
	Pathway	PEF	ug/dl	percent	PEF	ug/dl
Soil Contact	5.8E-5	0.00	1%		0.00	0%
Soil Ingestion	7.0E-3	0.04	99%	1.4E-2	0.09	100%
Inhalation	2.0E-6	0.00	0%		0.00	0%

Click here for REFERENCES

MODIFIED VERSION OF USEPA ADULT LEAD MODEL

CALCULATIONS OF BLOOD LEAD CONCENTRATIONS (PbBs) AND PRELIMINARY REMEDIATION GOAL (PRG)

EDIT RED CELL

Variable	Description of Variable	Units	
PbS	Soil lead concentration	ug/g or ppm	6.1
$R_{\text{fetal/maternal}}$	Fetal/maternal PbB ratio	--	0.9
BKSF	Biokinetic Slope Factor	ug/dL per ug/day	0.4
GSD_i	Geometric standard deviation PbB	--	1.8
PbB_0	Baseline PbB	ug/dL	0.0
IR_s	Soil ingestion rate (including soil-derived indoor dust)	g/day	0.050
$AF_{s,d}$	Absorption fraction (same for soil and dust)	--	0.12
$EF_{s,d}$	Exposure frequency (same for soil and dust)	days/yr	250
$AT_{s,d}$	Averaging time (same for soil and dust)	days/yr	365
PbB_{adult}	PbB of adult worker, geometric mean	ug/dL	0.0
$PbB_{\text{fetal}, 0.90}$	90th percentile PbB among fetuses of adult workers	ug/dL	0.0
PbB_t	Target PbB level of concern (e.g., 10 ug/dL)	ug/dL	1.0
$P(PbB_{\text{fetal}} > PbB_t)$	Probability that fetal PbB > PbB_t, assuming lognormal distributi	%	0.0%

PRG90

318

[Click here for REFERENCES](#)

APPENDIX E – PROJECT CORRESPONDENCE



Re: Stockton Site I

Karen Garrett <kgarrett@agspanos.com>

Mon 9/28/2020 5:34 PM

To: Tonya Scheftner <tscheftner@petralogix.com>

Sorry, dropped my phone. We used native on site soil to fill the basin, we have not ever brought in outside soil. Let me know if you need anything else. Thank you.

Karen E. Garrett

Land Entitlement Manager

Northern California

A.G. Spanos Companies

209-955-2574 direct

209-993-2745 cell

On Sep 28, 2020, at 5:32 PM, Karen Garrett <kgarrett@agspanos.com> wrote:

Yes, I confirm that we used native soil to fill the basin, not outside soil. It has never been

Karen E. Garrett

Land Entitlement Manager

Northern California

A.G. Spanos Companies

209-955-2574 direct

209-993-2745 cell

On Sep 28, 2020, at 4:42 PM, Tonya Scheftner <tscheftner@petralogix.com> wrote:

Hi Karen,

We are addressing some final minor comments from DTSC for the Preliminary Site Investigation at the Stockton Site I parcel. Based on a previous email, I had confirmed that no off-site soil was brought to the site and confirmed that the basin filled in last year was therefore filled from onsite native soil. DTSC is requesting the email correspondence documentation and it's not coming up in my search. Can you please respond to this email stating onsite native soil was used to fill in the former basin last year?

The DTSC process has experienced time delays due to the COVID pandemic and a lack of in office staffing there, however, we are close to finalizing the PEA.

Thank you,

Tonya R. Scheftner, Project Geologist

Petralogix Engineering, Inc.

209-770-0731

www.petralogix.com

RE: Stockton Westlake School Site

Karen Garrett <kgarrett@agspanos.com>

Mon 8/26/2019 8:37 AM

To: Tonya Scheftner <tscheftner@petralogix.com>

In Westlake we have NEVER stored off site soil. Too risky. Any soil pile came from the existing site. Hope this answers your question. Thank you.,

Karen E. Garrett
Land Development Manager
Northern California
The Spanos Corporation
(209) 478-7954 (Main)
(209) 955-2574 (direct)
(209) 993-2745 (Cell)

From: Tonya Scheftner <tscheftner@petralogix.com>

Sent: Monday, August 26, 2019 8:34 AM

To: Karen Garrett <kgarrett@agspanos.com>

Subject: Re: Stockton Westlake School Site

Good morning Karen,

Thank you for this information. Did you happen to get a chance to discuss any potential off-site soil being stored on this site in the past?

Have a great day,

Tonya

From: Karen Garrett <kgarrett@agspanos.com>

Sent: Tuesday, August 20, 2019 1:39 PM

To: Tonya Scheftner <tscheftner@petralogix.com>

Subject: RE: Stockton Westlake School Site

Yes, it was the same farmer and owner for years before we purchased all the property.

Karen E. Garrett
Land Development Manager
Northern California
The Spanos Corporation
(209) 478-7954 (Main)
(209) 955-2574 (direct)
(209) 993-2745 (Cell)

From: Tonya Scheftner <tscheftner@petralogix.com>

Sent: Tuesday, August 20, 2019 12:57 PM

To: Karen Garrett <kgarrett@agspanos.com>

Subject: Stockton Westlake School Site

Hi Karen,

Hope your Tuesday is going well. I just have a couple more questions regarding the Westlake School Site.

Do you know if the Stockton Westlake School Site parcel has the same previous owner/ag farmer as the Manlio Silva Elementary school property? There is a site history description for the Manlio Silva site on GeoTracker that states there was an EIR submitted to the county that included pesticide sampling for the land within 100 feet of the site (Manlio Silva school) but I don't see any reference to such testing in the Westlake Villages EIR (SCH# 2004052105).

I understand you may not have any further information regarding this, but wanted to cover all the bases.

Thank you,

Tonya R. Scheftner, Project Geologist
Petralogix Engineering, Inc.
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