

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

Ms. Elizabeth Tisdale

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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.

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PRELIMINARY ENDANGERMENT ASSESSMENT STOCKTON SITE I

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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.

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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 (Petralogix, 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.

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- 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 HRRA 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 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 (Q1)	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			

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

Outlier \geq Q3 + (1.5*(Q3-Q1))

Outlier \geq Q3 + (1.5*(3.5-2.1))

Outlier \geq 5.6 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:

Outlier \geq Q3 + (1.5*(Q3-Q1))

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Outlier \ge Q3 + (1.5*(3.35-2.1))

Outlier \geq 5.225 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 that 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 in included in Appendix D. The statistical evaluation using the nonparametric distribution statistics output by ProUCL are summarized below:

	enie baekground (without outhers)
Sample Size	20
Minimum Concentration	1.5
Maximum Concentration	4.1
Mean	2.9
First Quartile (Q1)	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

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

As discussed in the ProUCL user guide, UPLs and UTLs represent an upper limit to be used for pointby-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 (Petralogix, 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 (Petralogix, 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 Use¹⁰, modified as necessary by the DTSC HHRA Note 3¹¹. 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 <u>Calculation of Cumulative Cancer Risks and Noncancer Hazard</u>

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:

$$\operatorname{Risk} = \left[\left(\frac{\operatorname{conc}_{x}}{\operatorname{HHSL}_{x}} \right) + \left(\frac{\operatorname{conc}_{y}}{\operatorname{HHSL}_{y}} \right) + \left(\frac{\operatorname{conc}_{z}}{\operatorname{HHSL}_{z}} \right) \right] * 10^{-6}$$

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.

Hazard Index =
$$\left[\left(\frac{conc_x}{HHSL_x} \right) + \left(\frac{conc_y}{HHSL_y} \right) + \left(\frac{conc_z}{HHSL_z} \right) \right]$$

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 $(1x10^{-6})$ 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. <u>http://www.epa.gov/region9/superfund/prg/</u>

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 <u>Lead</u>

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 <u>CEQA Option 'A'</u>

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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PLATES

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*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

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	Table A. Analytical Results of Selected Soil Samples - OCPs									
	(Cocentration in mg/kg)									
	Sample Date June 10, 2020									
Analysis Type Sample ID Depth DDD DDE DDT Dieldrin a-chlordane										
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 - F	Screening Criteria - RSLs - U.S. EPA Screening Levels (April 2019)			2.0	1.9	0.034	1.7	1.7		
	4:1 COMP			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 Chrlodane (Technical) used - U.S. EPA Regional Screening Level (April 2019)





Table B. Analytical Results of Soil Samples - Arsenic and Lead							
(Cocentration 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%	3.21						
Screenin	6.51	80.0					
Ва	sis	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

сос	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	

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

*RSL Divided by 3 due to 3:1 composite


APPENDIX A – DTSC LETTER

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Department of Toxic Substances Control

Environmental Protection

Jared Blumenfeld

Secretary for

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





Gavin Newsom Governor Mr. Leonard Kahn May 15, 2020 Page 2

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 <u>Elizabeth.Tisdale@dtsc.ca.gov</u>.

Sincerely,

Jisdale

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

cc: (see next page)

Mr. Leonard Kahn May 15, 2020 Page 3

cc: (via e-mail)

Ms. Vickie Brum Planning Analyst Lodi Unified School District <u>vbrum@lodiusd.net</u>

Mr. Daniel Kramer, PG President Petralogix Engineering, Inc. <u>dkramer@petralogix.com</u>

Ms. Tonya Scheftner, GIT Project Geologist Petralogix Engineering, Inc. tscheftner@petralogix.com

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 <u>Mai.Ngo@dtsc.ca.gov</u>

APPENDIX B – FIELD PHOTGRAPHS

Petralogix Engineering, Inc. 26675 Bruella Road, Galt, Ca 95632 (209)-400-5729 www.petralogix.com







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

Petralogix Engineering, Inc. 26675 Bruella Road, Galt, Ca 95632 (209)-400-5729 www.petralogix.com





McCampbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 2006544

Report Created for: Petralogix

26675 Bruella Road Galt, CA 95632

Project Contact: Project P.O.: Project:

Daniel Kramer

ct: 2019-00014; Stockton Site I

Project Received: 06/10/2020

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

Ja Cao

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.



1534 Willow Pass Rd. Pittsburg, CA 94565 ♦ TEL: (877) 252-9262 ♦ FAX: (925) 252-9269 ♦ www.mccampbell.com CA ELAP 1644 ♦ NELAP 4033 ORELAP



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 μ m 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:PetralogixProject:2019-00014; Stockton Site IWorkOrder:2006544

Analytical Qualifiers

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



 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

Client ID	Lab ID	Matrix	Date Colle	ected	Instrument	Batch ID
AG1-4@0'	2006544-001A	Soil	06/10/2020	09:12	GC23 06122040.d	200023
Analytes	<u>Result</u>		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	<u>REC (%)</u>		<u>Limits</u>			
Decachlorobiphenyl	114		20-145			06/12/2020 21:19
<u>Analyst(s):</u> LT						



 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

Client ID	Lab ID	Matrix	Date Collected			Instrument	Batch ID
AG5-7@0'	2006544-002A	Soil	0	6/10/2020 (09:38	GC23 06122041.d	200023
Analytes	<u>Result</u>	<u>Qualifiers</u>	MDL	<u>RL</u>	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	Р	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	<u>REC (%)</u>			<u>Limits</u>			
Decachlorobiphenyl	103			20-145			06/12/2020 21:35
Analyst(s): LT							



 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

Client ID	Lab ID	Matrix	Date Collected			Instrument	Batch ID
AG8-10@0'	2006544-003A	Soil	0	6 /10/2020 1	10:00	GC23 06122042.d	200023
Analytes	<u>Result</u>	<u>Qualifiers</u>	MDL	<u>RL</u>	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	<u>REC (%)</u>			<u>Limits</u>			
Decachlorobiphenyl	116			20-145			06/12/2020 21:51
Analyst(s): LT							



 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

Client ID	Lab ID	Matrix	Date Collected			Instrument	Batch ID
AG11-14@0'	2006544-004A	Soil	06	6/1 0/2020 [·]	11:40	GC23 06122043.d	200023
Analytes	<u>Result</u>	<u>Qualifiers</u>	MDL	<u>RL</u>	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	<u>REC (%)</u>			<u>Limits</u>			
Decachlorobiphenyl	115			20-145			06/12/2020 22:06
Analyst(s): LT							



 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

Client ID	Lab ID	Matrix	Date Collected			Instrument	Batch ID
AG11-14-DUP@0'	2006544-005A	Soil	0	6/10/2020 1	11:40	GC23 06122044.d	200023
Analytes	<u>Result</u>	<u>Qualifiers</u>	MDL	<u>RL</u>	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	<u>REC (%)</u>			<u>Limits</u>			
Decachlorobiphenyl	99			20-145			06/12/2020 22:22
Analyst(s): LT							



 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

Client ID	Lab ID	Matrix	Date Collected			Instrument	Batch ID
AG15-17@0'	2006544-006A	Soil	0	6/10/2020 1	0:41	GC23 06122045.d	200023
Analytes	Result	<u>Qualifiers</u>	MDL	<u>RL</u>	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	<u>REC (%)</u>			Limits			
Decachlorobiphenyl	115			20-145			06/12/2020 22:38
Analyst(s): LT							



 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

Client ID	Lab ID	Matrix	Date Collected			Instrument	Batch ID
AG18-21@0'	2006544-007A	Soil	0	6 /10/2020 1	14:24	GC23 06122046.d	200023
Analytes	<u>Result</u>	<u>Qualifiers</u>	MDL	<u>RL</u>	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	<u>REC (%)</u>			Limits			
Decachlorobiphenyl	124			20-145			06/12/2020 22:53
Analyst(s): LT							



 Client:
 Petralogix

 Date Received:
 06/10/2020 17:05

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 06/12/2020

 Project:
 2019-00014; Stockton Site I

 WorkOrder:
 2006544

 Extraction Method:
 SW3550B/3640Am/3630Cm

 Analytical Method:
 SW8081A

 Unit:
 mg/kg

Client ID	Lab ID	Matrix	Date Colle	ected	Instrument	Batch ID
AG22-24@0'	2006544-008A	Soil	06/10/2020 ⁻	14:38	GC23 06122047.d	200023
Analytes	<u>Result</u>	Ν	<u>IDL RL</u>	DF		Date Analyzed
Aldrin	ND	C	0.000036 0.00010	1		06/12/2020 23:09
a-BHC	ND	C	0.000025 0.00010	1		06/12/2020 23:09
b-BHC	ND	C	0.00025 0.00030	1		06/12/2020 23:09
d-BHC	ND	C	0.00013 0.00020	1		06/12/2020 23:09
g-BHC	ND	C	0.000066 0.00010	1		06/12/2020 23:09
Chlordane (Technical)	ND	C	0.00043 0.0025	1		06/12/2020 23:09
a-Chlordane	0.00035	C	0.000095 0.00010	1		06/12/2020 23:09
g-Chlordane	0.00043	C	0.000047 0.00010	1		06/12/2020 23:09
p,p-DDD	0.00073	C	0.000043 0.00010	1		06/12/2020 23:09
p,p-DDE	0.019	C	0.000094 0.00010	1		06/12/2020 23:09
p,p-DDT	0.0062	C	0.000092 0.00010	1		06/12/2020 23:09
Dieldrin	ND	C	0.000061 0.00010	1		06/12/2020 23:09
Endosulfan I	ND	C	0.000048 0.00010	1		06/12/2020 23:09
Endosulfan II	ND	C	0.000076 0.00010	1		06/12/2020 23:09
Endosulfan sulfate	ND	C	0.000078 0.00010	1		06/12/2020 23:09
Endrin	ND	C	0.000035 0.00010	1		06/12/2020 23:09
Endrin aldehyde	ND	C	0.000067 0.00010	1		06/12/2020 23:09
Endrin ketone	ND	C	0.000084 0.00010	1		06/12/2020 23:09
Heptachlor	ND	C	0.000040 0.00010	1		06/12/2020 23:09
Heptachlor epoxide	ND	C	0.000054 0.00010	1		06/12/2020 23:09
Hexachlorobenzene	ND	C	0.00011 0.0010	1		06/12/2020 23:09
Hexachlorocyclopentadiene	ND	C	0.00034 0.0020	1		06/12/2020 23:09
Methoxychlor	ND	C	0.00013 0.00020	1		06/12/2020 23:09
Toxaphene	ND	C	0.0034 0.0050	1		06/12/2020 23:09
Surrogates	<u>REC (%)</u>		<u>Limits</u>			
Decachlorobiphenyl	99		26-141			06/12/2020 23:09
<u>Analyst(s):</u> LT						



 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

Client ID	Lab ID	Matrix	D	ate Colle	cted	Instrument	Batch ID
AG25-27@0'	2006544-009A	Soil	0	6 /10/2020 1	5:17	GC23 06122048.d	200023
Analytes	Result	<u>Qualifiers</u>	MDL	<u>RL</u>	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	Р	0.000047	0.00010	1		06/12/2020 23:25
p,p-DDD	0.00069	Р	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	<u>REC (%)</u>			<u>Limits</u>			
Decachlorobiphenyl	112			20-145			06/12/2020 23:25
Analyst(s): LT							



 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

Client ID	Lab ID	Matrix	Date Collected			Instrument	Batch ID
AG25@2.5',26@2',27@4.5'	2006544-010A	Soil	06	6 /10/2020 1	5:27	GC23 06162010.d	200023
Analytes	<u>Result</u>	ļ	MDL	<u>RL</u>	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	<u>REC (%)</u>			<u>Limits</u>			
Decachlorobiphenyl	108			20-145			06/16/2020 13:10
<u>Analyst(s):</u> LT			Analy	tical Comn	<u>nents:</u> h	7	



 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

Client ID	Lab ID	Matrix	D	ate Colle	cted	Instrument	Batch ID
AG28-30@0'	2006544-011A	Soil	0	6/10/2020 [·]	14:43	GC23 06162013.d	200023
Analytes	<u>Result</u>	<u>Qualifiers</u>	MDL	<u>RL</u>	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	Р	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
<u>Surrogates</u>	<u>REC (%)</u>			<u>Limits</u>			
Decachlorobiphenyl	115			20-145			06/16/2020 13:57
Analyst(s): LT							



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Date Received: 06/10/2020 17:05	
Date Prepared: 06/11/2020	
Project: 2019-00014; Stockton Si	te I

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

			Μ	[etals				
Client ID		Lab ID	Matrix	ĸ	Date Co	llected	Instrument	Batch ID
AG1@0'		2006544-001B	Soil		06/10/202	0 08:55	ICP-MS5 323SMPL.d	199897
Analytes		Result		MDL	<u>RL</u>	DE		Date Analyzed
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
Surrogates		<u>REC (%)</u>			<u>Limits</u>			
Terbium		111			70-130)		06/11/2020 21:34
Analyst(s):	MIG							
Client ID		Lab ID	Matrix	X	Date Co	llected	Instrument	Batch ID
AG5@0'		2006544-002B	Soil		06/10/202	0 09:24	ICP-MS5 324SMPL.d	199897
Analytes		Result		MDL	<u>RL</u>	DF		Date Analyzed
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
Surrogates		<u>REC (%)</u>			<u>Limits</u>			
Terbium		107			70-130)		06/11/2020 21:37
Analyst(s):	MIG							
Client ID		Lab ID	Matrix	K	Date Co	llected	Instrument	Batch ID
AG8@0'		2006544-003B	Soil		06/10/202	0 09:45	ICP-MS5 325SMPL.d	199897
Analytes		Result		MDL	<u>RL</u>	DF		Date Analyzed
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
Surrogates		<u>REC (%)</u>			<u>Limits</u>			
Terbium		105			70-130)		06/11/2020 21:40
Analyst(s):	MIG							



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Date Received: 06/10/2020 17:05	
Date Prepared: 06/11/2020	
Project: 2019-00014; Stockton Si	te I

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

		Me	etals				
Client ID	Lab ID	Matrix		Date Co	llected	Instrument	Batch ID
AG11@0'	2006544-004B	Soil		06/10/202	0 11:15	ICP-MS5 326SMPL.d	199897
Analytes	Result		MDL	<u>RL</u>	DE		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	<u>REC (%)</u>			<u>Limits</u>			
Terbium	106			70-130)		06/11/2020 21:44
Analyst(s): MIG							
Client ID	Lab ID	Matrix		Date Col	llected	Instrument	Batch ID
AG11-DUP@0'	2006544-005B	Soil		06/10/202	0 11:14	ICP-MS5 330SMPL.d	199897
Analytes	<u>Result</u>		MDL	<u>RL</u>	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	<u>REC (%)</u>			<u>Limits</u>			
Terbium	112			70-130)		06/11/2020 21:57
Analyst(s): MIG							
Client ID	Lab ID	Matrix		Date Co	llected	Instrument	Batch ID
AG15@0'	2006544-006B	Soil		06/10/202	0 10:41	ICP-MS4 442SMPL.d	199897
Analytes	Result		MDL	<u>RL</u>	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
<u>Surrogates</u>	<u>REC (%)</u>			<u>Limits</u>			
Terbium	106			70-130)		06/12/2020 13:37
<u>Analyst(s):</u> WV							



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Date Received: 06/10/2020 17:05	
Date Prepared: 06/11/2020	
Project: 2019-00014; Stockton Si	te I

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

			Μ	letals				
Client ID		Lab ID	Matrix	X	Date Co	llected	Instrument	Batch ID
AG18@0'		2006544-007B	Soil		06/10/202	0 11:49	ICP-MS4 396SMPL.d	199897
Analytes		<u>Result</u>		MDL	<u>RL</u>	DF		Date Analyzed
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
Surrogates		<u>REC (%)</u>			<u>Limits</u>			
Terbium		109			70-130)		06/12/2020 10:45
Analyst(s):	JAG							
Client ID		Lab ID	Matrix	X	Date Co	llected	Instrument	Batch ID
AG22@0'		2006544-008B	Soil		06/10/202	0 10:56	ICP-MS4 400SMPL.d	199897
Analytes		<u>Result</u>		MDL	<u>RL</u>	DF		Date Analyzed
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
Surrogates		<u>REC (%)</u>			<u>Limits</u>			
Terbium		104			70-130)		06/12/2020 11:00
Analyst(s):	JAG							
Client ID		Lab ID	Matrix	X	Date Co	llected	Instrument	Batch ID
AG25@0'		2006544-009B	Soil		06/10/202	0 15:17	ICP-MS4 401SMPL.d	199897
Analytes		Result		MDL	<u>RL</u>	DF		Date Analyzed
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
Surrogates		<u>REC (%)</u>			<u>Limits</u>			
Terbium		103			70-130)		06/12/2020 11:03
<u>Analyst(s):</u>	JAG							



Petralogix
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06/11/2020
2019-00014; Stockton Site I

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

Metals									
Client ID		.ab ID	Matrix		Date Co	ollected	Instrument	Batch ID	
AG25@2.5'	2	006544-010B	Soil		06/10/20	20 15:27	ICP-MS4 402SMPL.d	199897	
Analytes	<u>R</u> (<u>esult</u>		MDL	<u>RL</u>	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	<u>RI</u>	<u>EC (%)</u>			<u>Limits</u>				
Terbium	1	03			70-13	30		06/12/2020 11:07	
<u>Analyst(s):</u> JA	٨G								
Client ID	I	.ab ID	Matrix		Date Co	ollected	Instrument	Batch ID	
AG28@0'	2	006544-011B	Soil		06/10/20	20 14:35	ICP-MS4 403SMPL.d	199897	
Analytes	R	<u>esult</u>		MDL	<u>RL</u>	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	R	<u>EC (%)</u>			<u>Limits</u>				
Terbium	1	06			70-13	30		06/12/2020 11:11	
Analyst(s): JA	٨G								

Quality Control Report

Client:	Petralogix
Date Prepared:	06/12/2020
Date Analyzed:	06/12/2020
Instrument:	GC23
Matrix:	Soil
Project:	2019-00014; Stockton Site I

WorkOrder:	2006544
BatchID:	200023
Extraction Method:	SW3550B/3640Am/3630Cm
Analytical Method:	SW8081A
Unit:	mg/kg
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

Quality Control Report

Client:	Petralogix
Date Prepared:	06/12/2020
Date Analyzed:	06/12/2020
Instrument:	GC23
Matrix:	Soil
Project:	2019-00014; Stockton Site I

WorkOrder:	2006544
BatchID:	200023
Extraction Method:	SW3550B/3640Am/3630Cm
Analytical Method:	SW8081A
Unit:	mg/kg
Sample ID:	MB/LCS/LCSD-200023

QC Summary Report for SW8081A/8082

Analyte	LCS Result	LCSD Result	LCSD SPK Result Val		LCSD C %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

Petralogix
06/11/2020
06/11/2020
ICP-MS5
Soil
2019-00014; Stockton Site I

WorkOrder:	2006544
BatchID:	199897
Extraction Method:	SW3050B
Analytical Method:	SW6020
Unit:	mg/kg
Sample ID:	MB/LCS/LCSD-199897

QC Summary Report for Metals MB MDL SPK MB SS Analyte RL MB SS Result Val %REC Limits Arsenic ND 0.150 0.500 -_ -ND 0.140 Lead 0.500 ---Surrogate Recovery Terbium 517 500 103 70-130 LCS LCSD SPK LCS LCSD LCS/LCSD RPD RPD Analyte %REC %REC Result Result Val Limits Limit Arsenic 51.6 50.4 50 103 101 75-125 2.34 20 50.6 48.6 50 101 97 75-125 4.03 20 Lead Surrogate Recovery Terbium 523 510 500 105 102 70-130 2.46 20

McCampbell Analytical, Inc.

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

Report to: **Daniel Kramer** Petralogix 26675 Bruella Road Galt, CA 95632 (209) 400-5729 FAX:

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

∏WriteOn

□WaterTrax

CHAIN-OF-CUSTODY RECORD

orkOrder: 2006544	ClientCod	e: PLGC		
Excel	Email	HardCopy	ThirdParty	✓ J-flag
Detection Summary	Dry-Weight			
Bill to:		Requ	lested TAT:	5 days;
Accounts Payabl	e			
Petralogix				
26675 Bruella Ro	bad	Date	e Received:	06/10/2020
Galt, CA 95632		Date	e Logged:	06/11/2020

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

Test Legend:

1	8081_ESL_LL_S	2	METALSMS_TTLC_S	3	PRDisposal Fee
5		6		7	
9		10		11	

4	PRHOLD
8	
12	

Page 1 of 3

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.

McCampbell Analytical, Inc.



1534 Willow Pass Rd Pittsburg, CA 94565-1701

(925) 252-9262

□WaterTrax ∏WriteOn

EDF

Report to:

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

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 2006544 **ClientCode: PLGC** Excel EQuIS □Email HardCopy ThirdParty J-flag Detection Summary Dry-Weight Bill to: Requested TAT: 5 days; Accounts Payable Petralogix 06/10/2020 Date Received: 26675 Bruella Road Galt, CA 95632 Date Logged: 06/11/2020

								Re	quested	d Tests ((See leg	end bel	ow)			
Lab ID	Client ID	Matrix	Collection Date	Hold	1	2	3	4	5	6	7	8	9	10	11	12
							-	1	-		1					
2006544-008	AG22-24@0'	Soil	6/10/2020 14:38		Α		A									
2006544-009	AG25@0'	Soil	6/10/2020 15:17			В										
2006544-009	AG25-27@0'	Soil	6/10/2020 15:17		А		Α									
2006544-010	AG25@2.5'	Soil	6/10/2020 15:27			В										
2006544-010	AG25@2.5',26@2',27@4.5'	Soil	6/10/2020 15:27		А		Α									
2006544-011	AG28@0'	Soil	6/10/2020 14:35			В										
2006544-011	AG28-30@0'	Soil	6/10/2020 14:43		А		А									
2006544-012	BG1	Soil	6/10/2020 08:54	✓			Α	Α								
2006544-013	BG2	Soil	6/10/2020 09:18	✓			Α	Α								
2006544-014	BG3	Soil	6/10/2020 09:47	✓			Α	Α								
2006544-015	BG4	Soil	6/10/2020 11:23	✓			Α	Α								
2006544-016	BG5	Soil	6/10/2020 10:22	✓			Α	Α								
2006544-017	BG6	Soil	6/10/2020 11:52	✓			Α	Α								
2006544-018	BG7	Soil	6/10/2020 10:57	✓			A	Α								
2006544-019	BG8	Soil	6/10/2020 14:13	✓			Α	Α								

Test Legend:

1	8081_ESL_LL_S	2	METALSMS_TTLC_S	3	
5		6		7	
9		10		11	

PRDisposal Fee	

4	PRHOLD
8	
12	

Page 2 of 3

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.

McCampbell Al	nalytical,	Inc.			CH / Work	AIN Orde	I-OF r: 2000	-CU	ST	DDY ClientC	REC ode: P	CORD		Page	e 3 of	3
(925) 252-9262		WaterTrax	≪ ⊡WriteOn	EDF	E>	cel etectio	n Summ	EQuIS ary		Email Dry-Weig	ht	HardCopy	Third	JParty	✔ J-fl	lag
Report to:						Bi	ill to:					Rec	uested TA	\T :	5 days	;
Daniel Kramer Petralogix 26675 Bruella Road		Email: dkramer@petralogix.com cc/3rd Party: tscheftner@petralogix.com; PO: Project: 2019-00014; Stockton Site I			Accounts Payable Petralogix 26675 Bruella Road Galt, CA 95632						Date Received:			06/10/2020		
Galt, CA 95632 (209) 400-5729 FAX:											Date Logged:				06/11/2020	
									Re	quested 1	Fests (Se	ee legend	below)			
Lab ID	Client ID		Matrix	Collection Date	Hold	1	2	3	4	5	6	7	B 9	10	0 11	12
2006544-020	BG9		Soil	6/10/2020 09:04				А	Α							

✓

6/10/2020 14:40

Test Legend:

2006544-021

1	8081_ESL_LL_S
5	
9	

BG10

2	METALSMS_TTLC_S
6	
10	

Soil

3	PRDisposal Fee	
7		
11		

А

А

4	PRHOLD
8	
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	e: PETRALOO	GIX	Pro	oject: 2019-000	014; Stockton Site I			Wor	k Order: 2006544
Client Cont	act: Daniel Kran	ner						Q	C Level: LEVEL 2
Contact's E	mail: dkramer@pe	etralogix.com	Со	mments:				Date	e Logged: 6/11/2020
		WaterTrax	WriteOn EDF	Excel	EQuIS Email	HardC	opyThirdPart	y 🖌	J-flag
Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De- chlorinated	Collection Date & Time	TAT	Sediment Hold SubOut Content
2006544-001A	AG1-4@0'	Soil	SW8081A (OC Pesticides) ESLs	4 / (4:1)	4OZ GJ, Unpres		6/10/2020 9:12	5 days	
2006544-001B	AG1@0'	Soil	SW6020 (Metals) <arsenic, lead=""></arsenic,>	- 1	4OZ GJ, Unpres		6/10/2020 8:55	5 days	
2006544-002A	AG5-7@0'	Soil	SW8081A (OC Pesticides) ESLs	3 / (3:1)	4OZ GJ, Unpres		6/10/2020 9:38	5 days	
2006544-002B	AG5@0'	Soil	SW6020 (Metals) <arsenic, lead=""></arsenic,>	- 1	4OZ GJ, Unpres		6/10/2020 9:24	5 days	
2006544-003A	AG8-10@0'	Soil	SW8081A (OC Pesticides) ESLs	3 / (3:1)	4OZ GJ, Unpres		6/10/2020 10:00	5 days	
2006544-003B	AG8@0'	Soil	SW6020 (Metals) <arsenic, lead=""></arsenic,>	» 1	4OZ GJ, Unpres		6/10/2020 9:45	5 days	
2006544-004A	AG11-14@0'	Soil	SW8081A (OC Pesticides) ESLs	4 / (4:1)	4OZ GJ, Unpres		6/10/2020 11:40	5 days	
2006544-004B	AG11@0'	Soil	SW6020 (Metals) <arsenic, lead=""></arsenic,>	- 1	4OZ GJ, Unpres		6/10/2020 11:15	5 days	
2006544-005A	AG11-14-DUP@0'	Soil	SW8081A (OC Pesticides) ESLs	4 / (4:1)	4OZ GJ, Unpres		6/10/2020 11:40	5 days	
2006544-005B	AG11-DUP@0'	Soil	SW6020 (Metals) <arsenic, lead=""></arsenic,>	- 1	4OZ GJ, Unpres		6/10/2020 11:14	5 days	
2006544-006A	AG15-17@0'	Soil	SW8081A (OC Pesticides) ESLs	3 / (3:1)	4OZ GJ, Unpres		6/10/2020 10:41	5 days	
2006544-006B	AG15@0'	Soil	SW6020 (Metals) <arsenic, lead=""></arsenic,>	· 1	4OZ GJ, Unpres		6/10/2020 10:41	5 days	
2006544-007A	AG18-21@0'	Soil	SW8081A (OC Pesticides) ESLs	4 / (4:1)	4OZ GJ, Unpres		6/10/2020 14:24	5 days	
2006544-007B	AG18@0'	Soil	SW6020 (Metals) <arsenic, lead=""></arsenic,>	» 1	4OZ GJ, Unpres		6/10/2020 11:49	5 days	
2006544-008A	AG22-24@0'	Soil	SW8081A (OC Pesticides) ESLs	3 / (3:1)	4OZ GJ, Unpres		6/10/2020 14:38	5 days	
2006544-008B	AG22@0'	Soil	SW6020 (Metals) <arsenic, lead=""></arsenic,>	· 1	4OZ GJ, Unpres		6/10/2020 10:56	5 days	

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		Pre	oject: 2019-000	014; Stockton Site I			Wor	k Order: 2006544
Client Conta	act: Daniel Kramer							Ç	C Level: LEVEL 2
Contact's Er	nail: dkramer@petralogix	com	Со	mments:				Date	Logged: 6/11/2020
_	Wate	erTrax	WriteOnEDF	Excel]EQuISEmail	HardC	opy ThirdPart	y 🖌	l-flag
Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De- chlorinated	Collection Date & Time	ТАТ	Sediment Hold SubOut Content
2006544-009A	AG25-27@0'	Soil	SW8081A (OC Pesticides) ESLs	3 / (3:1)	4OZ GJ, Unpres		6/10/2020 15:17	5 days	
2006544-009B	AG25@0'	Soil	SW6020 (Metals) <arsenic, lead=""></arsenic,>	. 1	4OZ GJ, Unpres		6/10/2020 15:17	5 days	
2006544-010A	AG25@2.5',26@2',27@4.5'	Soil	SW8081A (OC Pesticides) ESLs	3 / (3:1)	4OZ GJ, Unpres		6/10/2020 15:27	5 days	
2006544-010B	AG25@2.5'	Soil	SW6020 (Metals) <arsenic, lead=""></arsenic,>	. 1	4OZ GJ, Unpres		6/10/2020 15:27	5 days	
2006544-011A	AG28-30@0'	Soil	SW8081A (OC Pesticides) ESLs	3 / (3:1)	4OZ GJ, Unpres		6/10/2020 14:43	5 days	
2006544-011B	AG28@0'	Soil	SW6020 (Metals) <arsenic, lead=""></arsenic,>	· 1	4OZ GJ, Unpres		6/10/2020 14:35	5 days	

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.

General COC

MAI Work Order # 2006544

MicCA	, INC.	CHAIN OF CUSTODY RECORD																				
	1534 Willow Pass	Rd. Pittsburg	, Ca. 94	4565-1701		Turn Around Time			Day Ru	ısh	2 Day Rush			3 Day	Rush		STD	•	Que	te #		
	Telephone: (877) 2	252-9262 / Fa	x: (925)) 252-9269)	J-Flag	J-Flag / MDL		ESL		Cleanup Approved		roved		Dry V	Veight		Bottl	le Ord	er #		
www.mc	campbell.com	ma	in@mc	campbell	.com	Deliv	ery For	mat:	PDF	Ge	oTracke	r EDF		EDD		Wri	ite On	(DW)		Detect Summ		iary
Report To: DANIEL KRAMER		Bill To:	DANIE	L KRAMER	2							A	alysi	s Req	quest	ed						
Company: Petralogix Engineering, I	nc																					
Email: dkramer@petralogix.com						1																
Alt Email: tscheftner@petralogix.c	om	Tele:		209.770.0	0731																	
Project Name: Stockton Site I		Project #:		2019-00	014	Σ	E E	m														
Project Location: Corner of West	lake Dr & Regatta I	ane PO,#			-	8	00	101														
Sampler Signature: Jonga	Schelter	11/	2		-	8) U	00														
SAMPLE ID	San	npling	iners			0 S	eni) p														
Location / Field Point	Date	Time	Conta	Matrix	Preservative	Q	I'SE	ea														
10100	1/10/20	0.~~	**	5 1		H	X	X		+	+		\rightarrow	\rightarrow		_					+	-
AGI@U	610100	0.55	+	2011		\mathbb{H}	1^				+			\rightarrow			_			_	+	-
AG2@0'		7.02	++			Ι¥	<u> </u>			_											+	_
AG3@0' #		9:16				IΛ																
AG4@0'		9:12				$V \setminus$																
AG5@0'		9:24				1	X	×														
AG6@0'		9.30	\uparrow			X																_
AG7@0'√		9:38	++			IΛ	4															-
AG8@0'		9:45	++			KŻ	7.	×			+									-	-	_
AG9@0'		9:55	$\uparrow \uparrow$			ΙX														_		_
AG10@0'	D	10:00	4	*		t				-	1										+	-
MAI clients MUST disclose any dangerous	chemicals known to be	present in their s	submitted	samples in c	oncentrations the	at may o	cause in	mediate	Tharm or s	erious fi	iture heal	th enda	ngermen	nt as a r	esult o	f brief,	gloved	, open a	ir, samp	le handlir	ng by M	1A
Non-disclosure incurs an immediate \$250 s	urcharge and the client	is subject to full	legal liab	ility for harm	suffered. Thank	you for	r your u	nderstan	ling and f	or allow	ing us to	work sa	fely.									_
* If metals are requested for water sam	ples and the water typ	be (Matrix) is n	ot specif	fied on the c	hain of custod	y, MAI	will de	efaul to	metals b	E200	.8.	1						Co	mment	s / Instru	ctions	2
Please provide an adequate volume of :	sample. If the volume	is not sufficien	nt for a N	AS/MSD a I	LCS/LCSD wil	I be pro	Pared	in its pl	ice and r	inted in	the repo	rt.	De	14	Ti		7	flag	ar	ozni	C	
Kennquished By/	Company Name	1 1	Colin	e 1			Recei	Year By	No V	- Nam			la la	00	17	· 1)€	01	ల		DC.	Pa	
Uniga . They	VUN/ IETRO	16 gnx	apiop	20 3.1	0				Iver	+	X –		4/10	124	11	.00	Cle	ean-	ap	00		
								\leftarrow)	-)-(5			-								
Matrix Code: DW=Drinking W	ater, GW=Grour	d Water, W	W=Wa	ste Water	r. SW=Seaw	vater.	S=So	il. SL=	Sludge	A=A	ir. WF	P=Wir	e. O=	Othe	er							
Procompative Code: 1-4°C 2-					.,	,		,	B		,		-, -				-4	10			-	4

Page 27 of 32

General COC

4.1

MAI Work Order #

- X.

Mc	CAMPBE	ELL	ANAI	Y	ΓΙΟ	AL, I	NC.	CHAIN OF CUSTODY RECORD																
	1534 Willow	w Pass 1	Rd. Pittsburg	g, Ca.	94565	-1701		Turn	Aroun	d Time	:1 Day	Rush	1	2 Day Ru	ısh	3 Da	y Rush		STD • Quote #					
	Telephone: (877) 252-9262 / Fax: (925) 252-9269								J-Flag / MDL ESL Cleanup Appro							ed Dry Weight Bottle Order #								
www	v.mccampbell.c	om	ma	in@n	nccam	pbell.com	n	Deliv	ery Fo	rmat:	PDF		GeoT	racker E	DF	EDD		Wr	rite On (DW)		T	Detect	Summa	ary
Report To: DANIEL KRAMER			Bill To:	DANI	IEL KR	AMER		Analysis Requested																
Company: Petralogix Enginee	ing, Inc													-										
Email: dkramer@petralogix.co	om							1																
Alt Email: tscheftner@petralogix.com Tele: 209.770.0731																								
Project Name: Stockton Site			Project #:		20	19-00014		R	BO	$\widehat{\mathbf{m}}$									2					
Project Location: Corner of	Westlake Dr & Re	gatta La	ane PO #	0				ò	100	B														
Sampler Signature: / m	ma Sc	hit	breall/				5	8	9	ò														
SAMPLE ID	0	Sam	pling	ners				0'S	Snic	9														
Location / Field Po	int T	Data	Timo	ontai	Ma	atrix Pr	eservative	1 S	LSG	ea														
1	1	Jale	Thile)#	-			0	A						_									+-
AG11@0'	610	0/30	11:15)	50	11		\mathbb{A}	X	X			_	_	_						_		_	+
AG12@0'			11:29					V							_									
AG13@0'			11:20					IX														-		
AG14@0'			11:40					$ \Lambda $																
AG11-DUP@0''			11:14					1	X	X														
AG12-DUP@0'			11:29					IV																
AG13-DUP@0'			11:20					IA																
AG14-DUP@0'	`	₩-	11:40	4	5	4		\backslash																
MAI clients MUST disclose any dang Non-disclosure incurs an immediate	erous chemicals know 250 surcharge and th	wn to be j ie client i	present in their s subject to full	submitt legal li	ed samp ability fo	oles in conce or harm suff	ntrations th ered. Thank	at may vou fo	cause in r vour u	nmedia	te harm (nding ar	or serio	ous futur llowing	e health e us to wor	ndangern k safelv.	nent as a	result o	of brief,	gloved.	, open a	ir, sampl	e handlir	ng by M.	AI staf
* If metals are requested for wate	samples and the w	ater typ	e (Matrix) is n	iot spec	cified o	n the chain	of custod	y, MA	will d	efault t	o metal	s by E	200.8.	-						Co	mments	/ Instru	ctions	
Please provide an adequate volum	e of sample. If the	volume	is not sufficie	nt for a	a MS/M	ISD a LCS/	LCSD wil	l be pr	epared	ih its p	lace an	id note	d in the	report.					١.	~			. 1	
Relinquished	By / Company Nan	ne		D	Date	Time			Rece	W By	y / Com	pany 1	ame			Date	Ti	me	10	tia	g ar	sen	ic	
Toning Scheft	ver/ Potra	alog	$1'\lambda$	6/10	d2c	5:05	7		V	Th	vr	PX			le	10 20	17	205	CI	AN	ino	DC	P.	
. 0 0	/	0	/	1	1)		V			'						۳P			
									~			2	/											
Matrix Code: DW=Drinkin	g Water, GW=	Ground	d Water, W	W=W	Vaste	Water, S	W=Seav	vater,	S=Sc	il, SL	=Slud	lge, A	A=Air,	WP=V	Wipe, (O=Oth	ler							
Preservative Code: 1=4°C	2=HCl 3=H	$_2$ SO ₄	4=HNO ₃	5=Na	aOH	6=ZnO	Ac/NaO	H 7	=Non	e						5	2	Гетр	_		°C	Initia	ls	
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Page 28 of 32

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McCAMP	CHAIN OF CUSTODY RECORD																								
1534 V	Villow Pass	Rd. Pittsburg	, Ca. 945	65-1701		Turn	Around	d Time	:1 Day R	Rush	2	Day Rusł	1	3 Day Rush			STD • Quote #								
Teleph	one: (877) 2	52-9262 / Fa	ax: (925) 252-9269				/ MDL		ESL		Cle	Cleanup Approved		Dry Weigh EDD W		/eight		Bottle	e Ord	Order #					
www.mccampl	w.mccampbell.com ma		in@mccampbell.com				ery For	rmat:	PDF		GeoTra	cker EDI				Wri	Write On (DW)			Detect Summary					
Report To: DANIEL KRAMER		Bill To:	DANIEL	KRAMER	-							A	nalys	is Re	quest	ed									
Company: Petralogix Engineering, Inc																									
Email: dkramer@petralogix.com																									
Alt Email: tscheftner@petralogix.com		Tele:		209.770.0731			$\widehat{\mathbf{\omega}}$		1.5	. 1															
Project Name: Stockton Site I		Project #:		2019-00014		1A	E E	(m)																	
Project Location: Corner of Westlake Dr	& Regatta L	ane PO #	1-1-			08	ŝ0	10																	
Sampler Signature:	Sho	(Iner)				(8	0	09					-												
SAMPLE ID	Project #: 2019-00014 r & Regatta Lane PO # Sampling Sampling Date Time $\mathcal{O}_{\mathcal{Q}}$ Matrix Preser Image: Date Time $\mathcal{O}_{\mathcal{Q}}$ Image: Date 16:41 1 Soll 10:20 Image: Date 10:20 Image: Date 10:20 Image: Date 2:20				P'S	eni	p																		
Location / Field Point	Date	Time	#Contz	Matrix Pre	servative	00	Ars	Lea					l l												
AG15@0'	6/10/2	16:41	1	SOIL		\mathbb{N}	X	×																	
AG16@0'	<u> </u>	10:24				X																			
AG17@0'		10:20				$ \wedge$																			
AG18@0'		11:49				\mathbb{N}	X	Х													-				
AG19@0'		2:22				IY																			
AG20@0'		2:04				Λ			-																
AG21@0'		2:24				[]																			
AG22@0'		10:56				\backslash	X	X												1					
AG23@0' ^{\/}	17	10:50				ΙŇ																6			
AG24@0'	$ \downarrow$	2:38	4	4		1																			
MAI clients MUST disclose any dangerous chemica Non-disclosure incurs an immediate \$250 surcharge	ls known to be and the client	present in their s s subject to full	submitted sa legal liabili	amples in concen ty for harm suffe	trations tha red. Thank	t may c you for	ause in your u	nmediat ndersta	e harm or nding and	r serio I for al	us future l llowing us	to work s	angerme afely.	ent as a	result of	f brief, j	gloved,	open ai	r, samp	le handl	ing by l	MAI staff.			
* If metals are requested for water samples and	the water typ	e (Matrix) is n	ot specifie	d on the chain	of custody	, MAI	will de	efault	o metals	by F	200.8.							Cor	nments	s / Instr	uction	S			
Please provide an adequate volume of sample.	If the volume	is not sufficier	nt for a MS	S/MSD a LCS/I	.CSD will	be pre	epared	in its p	lace and	noted	d in the r	eport.					1	£1	00			con.e			
Relinquished By / Company	y Name		Date	Time			Recei	vod B	/ Comp	any	Vame	_	1,7	ate	Tir	ne	- 0	Inag	cer	S. 2.34	1 00	30114			
Toroy Schoot W/fe	balog	K	6/10/20	0 5:05	5			F	In	-0	FX		left	0 /20	17	05	CI	ean	nip	0	CPS				
								\sim	/		0										~				
Matrix Code: DW=Drinking Water, C	W=Groun	d Water, W	W=Wast	te Water, SV	V=Seaw	ater,	S=So	il, SL	=Sludg	ge, A	A=Air, V	WP=Wi	pe, O	=Othe	er	Ĺ			0	T	1-				
Preservative Code: 1=4°C 2=HCl	$3 = H_2 SO_4$	$4=HNO_3$	5=NaOF	-1 $6=ZnOA$	c/NaOF	1 7=	=Non	e							Т	emp_			°C	Initia	us –				

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Ganaral	COC
General	COC

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McCAMP	BELL	ANA	LYI	FICAL	, INC.						CH	IAI	N OF	F CL	JST	ODY	REG	COR	D					
1534 1	Villow Pass	Rd. Pittsburg	g, Ca. 9	94565-1701		Turn Around Time: 1 Day Rush 2 Day Rush 3 I			3 Day Rush STD • Ouote #															
Teleph	one: (877) 2	52-9262 / Fa	ax: (92	5) 252-9269)	J-Flag	g / MDL		ESL		Cleanup Approved Dry W			Veight	ight Bottle Order #									
www.mccampl	ell.com	ma	in@n	nccampbell	.com	Deliv	ery Fo	rmat:	PDF		GeoTr	racker	EDF		EDD		Wr	Vrite On (DW) I		Detect Summary				
Report To: DANIEL KRAMER		Bill To:	DANI	EL KRAMEF	2						_		An	alysi	is Re	quest	ed							
Company: Petralogix Engineering, Inc																								
Email: dkramer@petralogix.com																								
Alt Email: tscheftner@petralogix.com		Tele:		209.770.0	0731																			
Project Name: Stockton Site I		Project #:		2019-00	014	R	BO																	
Project Location: Corner of Westlake Dr	& Regatta L	ane PO #	1	-) 80	50	1 E																
Sampler Signature: Tonuga	Schil	6ner/	12	-	2	8		ò				1												
SAMPLE ID	Sam	pling	iners			0 S	enic	D D																
Location / Field Point	Data	Time	Conta	Matrix	Preservative	Ö	LTS6	ea																
	Date	Time)#		+	0	4	1-				_		_				-		-	_		_ +	
AG25@0'	60000	3:17	1	SOIL		\downarrow	1 ×	×													_	\rightarrow	\rightarrow	
AG26@0'	10/20	3:08		1		X																		
AG27@0'	1	2:57				/																		
AG25@ 2,5		3.27				V	X	X																
AG26@		3:12				LÅ																		
AG27@ 4.5		3:03				$ \rangle$																		
AG28@0'		2:35				$\backslash /$	X	X																
AG29@0'		2:41				V																		
AG30@0'	A	2:43	V	↓		$ \wedge$								_										
MAI clients MUST disclose any dangerous chemica Non-disclosure incurs an immediate \$250 surchares	ls known to be and the client i	present in their s subject to full	submitte legal li:	ed samples in c	oncentrations the suffered. Thank	at may you fo	cause in	nmedia indersta	te harm or nding and	r seric I for a	us future	e health us to w	h endan ork safe	igerme elv.	nt as a	result o	f brief,	gloved	, open air	, sampl	le hand	ling by	MAI sta	off.
* If metals are requested for water samples and	the water typ	e (Matrix) is 1	not spec	cified on the c	hain of custody	, MA	I will g	efault	o metals	by E	200.8.								Con	nments	s / Inst	ruction	S	
Please provide an adequate volume of sample.	If the volume	is not sufficie	nt for a	MS/MSD a l	LCS/LCSD wil	l be pr	epareli	in jts p	lage and	note	d in the	repor	t.					3.	flag	ar	ser	ic		
Relinquished By / Compar	ny Name	/ /	D	ate 1	Time		Rece	ived B	//Comp	any I	lame			P	ate	Ti	me		3					
Tonya Schuffner / Petralogix 6/10/20 5:05				:05		A	h	H	×				ψµ	0 120	17	205	Cł	ean	u	q	0C	P3		
							\sim		y	\bigcirc														
Matrix Code: DW=Drinking Water, O	GW=Groun	d Water, W	W=W	aste Wate	r, SW=Seaw	ater,	S=Sc	oil, SL	=Sludg	ge, A	A=Air,	WP	=Wip	e, 0	=Oth	er	Course		r	0	Init	olo		
Preservative Code: 1=4°C 2=HCl	$3 = H_2 S O_4$	$4=HNO_3$	5=Na	aUH 6=Z	nOAC/NaOI	n /	-inon	le									emp			C	miti	als –		

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General COC

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MAI Work Order #_

McCAMP	BELL	ANAI	LYI	TICAL,	INC.						C	HAIN	OF CI	JST	ODY	REC	COR	D				
1534 V	Villow Pass I	Rd. Pittsburg	g, Ca. 9	4565-1701		Turn Around Time: 1 Day Rush 2 Day Rush 3 Day Rush							STD • Quote #									
Teleph	one: (877) 25	52-9262 / Fa	x: (925	5) 252-9269		J-Flag	/ MDL		ESL		(Cleanup	Approved		Dry W	/eight		Bottl	e Ord	er #		
www.mccampb	pell.com	ma	in@m	ccampbell.c	om	Delive	ery For	mat:	PDF		GeoT	racker E	DF	EDD		Wr	ite On ((DW)		Detect	Summ	nary
Report To: DANIEL KRAMER		Bill To:	DANIE	EL KRAMER									Analys	is Re	quest	ed						
Company: Petralogix Engineering, Inc																						
Email: dkramer@petralogix.com									•													
Alt Email: tscheftner@petralogix.com		Tele:		209.770.073	31																	
Project Name: Stockton Site I		Project #:		2019-0001	4	<u></u>	OB	3														
Project Location: Corner of Westlake Dr	& Regatta La	ane PO#	<i>e</i>	17) 80	301	10E														
Sampler Signature. Jonya	Jack +	nin		1	2	(8	0	90,														
SAMPLE ID	Sam	pling	iners			°.	enic) p														
Location / Field Point	Date	Time	#Conta	Matrix	Preservative	OCI	Arse	Lea														
BG1	61020	8:54	1	SOIL	_		×														\top	+
BG2	6/10/20	9:18					X															
BG3	6/10/20	9:47					X															
BG4	6/10/20	11:23					×															
BG5	6/10/20	10:22					\times															5
BG6	6/10/20	11:52					\times															
BG7	6/16/20	10:57					×															
BG8	6/10/20	2:13					×															
BG9	6/10/20	9:04					X															
BG10	6/10/20	2:40					X															
MAI clients MUST disclose any dangerous chemica Non-disclosure incurs an immediate \$250 surcharge	Is known to be p and the client is	present in their s subject to full	submitte legal lia	d samples in con bility for harm su	centrations that offered. Thank	t may c you for	ause in your u	ndersta	e harm nding ar	or serio nd for a	ous futur llowing	e health e us to wor	ndangerme k safely.	nt as a	result of	f brief,	gloved,	open ai	r, sampl	e handli	ng by M	IAI staff.
* If metals are requested for water samples and	the water type	e (Matrix) is n	ot speci	ified on the cha	in of custody	, MAI	will de	efault	o meta	ls by E	200.8.							Cor	nments	/ Instru	ictions	
Please provide an adequate volume of sample.	If the volume	is not sufficie	nt for a	MS/MSD a LC	S/LCSD will	be pre	pared	in its p	lace an	note	d in the	report.					He	H	al	1		
Relinquished By / Compan	y Name		Da	ite Tin	ne		Recei	yed By	Com	pany	Name		P	ate	Tin	ne	* -	4		1	~	
Tonigar Schestner / Pe	ton og	1'x	6/10	120 5:0	5	_	4	M	NF.	\bowtie			0	orw	17	:05	BG		an	npli	-5	
					-	\rightarrow		HC)		_				-	Thank you						
Matrix Code: DW=Drinking Water C	GW=Ground	Water W	W=W	aste Water	SW=Seaw	ater.	S=So	il SL	=Sluc	lge A	A=Air	WP=V	Vine O	=Othe	er					0		
Preservative Code: 1=4°C 2=HCl	3=H ₂ SO ₄	4=HNO ₃	5=Na	OH 6=Zn	OAc/NaOI	H 7=	=Non	e	2.44	-8-, 1				Cult	Т	emp		c	°C	Initia	s	
																					_	~

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Sample Receipt Checklist

Client Name:	Petralogix			Date and Time Received:	6/10/2020 17:05			
Project:	2019-00014; Stockton Site I			Date Logged:	6/11/2020 Tina Daraz			
WorkOrder №	2006544 Matrix: Soil			Logged by:	Tina Perez			
Carrier:	<u>Client Drop-In</u>							
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	d by Client on COC?	Yes		No 🗌				
Date and Time of	f collection noted by Client on COC?	Yes	\checkmark	No 🗌				
Sampler's name	noted on COC?	Yes	✓	No 🗌				
COC agrees with	Quote?	Yes		No 🗌	NA 🔽			
Sample Receipt Information								
Custody seals int	act on shipping container/cooler?	Yes		No 🗌	NA 🗹			
Shipping containe	er/cooler in good condition?	Yes		No 🗌				
Samples in prope	er containers/bottles?	Yes		No 🗌				
Sample containe	rs intact?	Yes		No 🗌				
Sufficient sample	volume for indicated test?	Yes		No 🗌				
	Sample Preservation	on and	<u>Hold Time (I</u>	HT) Information				
All samples recei	ved within holding time?	Yes	✓	No 🗌				
Samples Receive	ed on Ice?	Yes	\checkmark	No 🗌				
	(Ісе Туре	: OTH	HERS)					
Sample/Temp Bla	ank temperature		Temp: 2.6	°C	NA			
Water - VOA vial	s have zero headspace / no bubbles?	Yes		No 🗌	NA 🗹			
Sample labels ch	ecked for correct preservation?	Yes	✓	No 🗌				
pH acceptable up <2; 522: <4; 218.	oon receipt (Metal: <2; Nitrate 353.2/4500NO3: 7: >8)?	Yes		No 🗌	NA 🗹			
<u>UCMR Samples:</u> pH tested and a 530: ≤7; 541: <	acceptable upon receipt (200.8: ≤2; 525.3: ≤4; 3; 544: <6.5 & 7.5)?	Yes		No 🗌	NA 🗹			
Free Chlorine to	ested and acceptable upon receipt (<0.1mg/L)?	Yes		No 🗌	NA 🗹			



McCampbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 2006544 A

Report Created for: Petralogix

26675 Bruella Road Galt, CA 95632

Project Contact: Project P.O.: Project:

Daniel Kramer

ct: 2019-00014; Stockton Site I

Project Received: 06/10/2020

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

Ja Cao

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.



1534 Willow Pass Rd. Pittsburg, CA 94565 ♦ TEL: (877) 252-9262 ♦ FAX: (925) 252-9269 ♦ www.mccampbell.com CA ELAP 1644 ♦ NELAP 4033 ORELAP



Glossary of Terms & Qualifier Definitions

Client:PetralogixProject:2019-00014; Stockton Site IWorkOrder: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 μ m 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 17:0)5
Date Prepared: 06/23/2020	
Project: 2019-00014; Sto	ockton Site I

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

		Ar	senic				
Client ID	Lab ID	Matrix		Date Co	llected	Instrument	Batch ID
BG1	2006544-012A	Soil		06/10/202	0 08:54	ICP-MS4 141SMPL.d	200567
Analytes	Result		MDL	<u>RL</u>	DE		Date Analyzed
Arsenic	3.5		0.15	0.50	1		06/24/2020 11:46
Surrogates	<u>REC (%)</u>			<u>Limits</u>			
Terbium	106			70-130)		06/24/2020 11:46
<u>Analyst(s):</u> MIG							
Client ID	Lab ID	Matrix	I.	Date Co	llected	Instrument	Batch ID
BG2	2006544-013A	Soil		06/10/202	0 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	<u>REC (%)</u>			<u>Limits</u>			
Terbium	103			70-130	1		06/24/2020 11:49
Analyst(s): MIG							
Client ID	Lab ID	Matrix	I.	Date Co	llected	Instrument	Batch ID
BG3	2006544-014A	Soil		06/10/202	0 09:47	ICP-MS4 146SMPL.d	200567
Analytes	Result		MDL	<u>RL</u>	DF		Date Analyzed
Arsenic	2.7		0.15	0.50	1		06/24/2020 12:04
Surrogates	<u>REC (%)</u>			<u>Limits</u>			
Terbium	101			70-130	1		06/24/2020 12:04
Analyst(s): WV							
Client ID	Lab ID	Matrix	Σ.	Date Co	llected	Instrument	Batch ID
BG4	2006544-015A	Soil		06/10/202	0 11:23	ICP-MS4 147SMPL.d	200567
Analytes	<u>Result</u>		MDL	<u>RL</u>	DF		Date Analyzed
Arsenic	2.0		0.15	0.50	1		06/24/2020 12:08
Surrogates	REC (%)			Limits			
Terbium	100			70-130	1		06/24/2020 12:08
Analyst(s): WV							



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

		Arse	nic				
Client ID	Lab ID	Matrix		Date Coll	lected	Instrument	Batch ID
BG5	2006544-016A	Soil		06/10/2020	10:22	ICP-MS4 148SMPL.d	200567
Analytes	Result	N	1DL	<u>RL</u>	DF		Date Analyzed
Arsenic	1.9	0	.15	0.50	1		06/24/2020 12:12
Surrogates	<u>REC (%)</u>			<u>Limits</u>			
Terbium	102			70-130			06/24/2020 12:12
<u>Analyst(s):</u> WV							
Client ID	Lab ID	Matrix		Date Coll	lected	Instrument	Batch ID
BG6	2006544-017A	Soil		06/10/2020	11:52	ICP-MS4 149SMPL.d	200567
Analytes	Result	N	1DL	<u>RL</u>	<u>DF</u>		Date Analyzed
Arsenic	2.1	0	.15	0.50	1		06/24/2020 12:15
Surrogates	<u>REC (%)</u>			<u>Limits</u>			
Terbium	101			70-130			06/24/2020 12:15
Analyst(s): WV							
Client ID	Lab ID	Matrix		Date Coll	lected	Instrument	Batch ID
BG7	2006544-018A	Soil		06/10/2020	10:57	ICP-MS4 150SMPL.d	200567
Analytes	Result	N	1DL	<u>RL</u>	<u>DF</u>		Date Analyzed
Arsenic	1.5	0	.15	0.50	1		06/24/2020 12:19
<u>Surrogates</u>	<u>REC (%)</u>			<u>Limits</u>			
Terbium	103			70-130			06/24/2020 12:19
Analyst(s): WV							
Client ID	Lab ID	Matrix		Date Coll	lected	Instrument	Batch ID
BG8	2006544-019A	Soil		06/10/2020	14:13	ICP-MS4 151SMPL.d	200567
Analytes	Result	N	1DL	<u>RL</u>	DF		Date Analyzed
Arsenic	1.9	0	.15	0.50	1		06/24/2020 12:23
Surrogates	REC (%)			Limits			
Terbium	103			70-130			06/24/2020 12:23
<u>Analyst(s):</u> WV							



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

		Arse	enic				
Client ID	Lab ID	Matrix		Date Col	lected	Instrument	Batch ID
BG9	2006544-020A	Soil		06/10/2020	09:04	ICP-MS4 152SMPL.d	200567
Analytes	Result	<u>I</u>	MDL	<u>RL</u>	DF		Date Analyzed
Arsenic	3.0	(0.15	0.50	1		06/24/2020 12:27
Surrogates	<u>REC (%)</u>			<u>Limits</u>			
Terbium	105			70-130			06/24/2020 12:27
<u>Analyst(s):</u> WV							
Client ID	Lab ID	Matrix		Date Col	lected	Instrument	Batch ID
BG10	2006544-021A	Soil		06/10/2020) 14:40	ICP-MS4 153SMPL.d	200567
Analytes	<u>Result</u>	1	MDL	<u>RL</u>	DF		Date Analyzed
Arsenic	4.0	(0.15	0.50	1		06/24/2020 12:30
Surrogates	<u>REC (%)</u>			<u>Limits</u>			
Terbium	105			70-130			06/24/2020 12:30
<u>Analyst(s):</u> 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 MB MDL RL SPK MB SS Analyte MB SS Result Val %REC Limits Arsenic ND 0.150 0.500 ---Surrogate Recovery 524 Terbium 500 105 70-130 Analyte LCS LCSD SPK LCS LCSD LCS/LCSD RPD RPD %REC %REC Result Result Val Limits Limit Arsenic 49.2 52.3 50 98 105 75-125 5.99 20 Surrogate Recovery 507 Terbium 522 500 101 104 70-130 3.01 20

McCampb 1534 Willow Pittsburg, C	w Pass Rd CA 94565-1701	lnc.			CH Wor	AIN kOrde	I-OF r: 2006	-CU 5544	I ST(A	DDY Client	RE(tCode	COR : plg	RD c		Page	1 of	1
(925) 252-9	0262	WaterTrax	writeC	n 🗌 EDF		Excel		EQuIS		Email		HardCo	ру (Third	Party	🖌 J-fla	ag
						Detection	n Summ	ary		Dry-Weig	ht						
Report to:						Bi	ill to:						Reque	sted TA	.т:	5 days	
Daniel Kramer Petralogix 26675 Bruella R Galt, CA 95632 (209) 400-5729	load FAX:	Email: dl cc/3rd Party: ts PO: Project: 2r	kramer@petra scheftner@pet 019-00014; S	alogix.com tralogix.com; tockton Site I			Accour Petralo 26675 Galt, C	nts Pay ogix Bruella A 9563	able Road 2				Date L Date L Date L	Receive Logged Add-O1	ed: ': 1:	06/10/ 06/11/ 06/23/	2020 2020 2020
									Rec	uested 7	Fests (See leg	end bel	low)			
Lab ID	Client ID		Matrix	Collection Date	Hold	1	2	3	4	5	6	7	8	9	10	11	12
2006544-012	BG1		Soil	6/10/2020 08:54		Α	Α								T		
2006544-013	BG2		Soil	6/10/2020 09:18		А	Α										
2006544-014	BG3		Soil	6/10/2020 09:47		Α	Α										
2006544-015	BG4		Soil	6/10/2020 11:23		Α	Α										
2006544-016	BG5		Soil	6/10/2020 10:22		Α	Α										
2006544-017	BG6		Soil	6/10/2020 11:52		Α	Α										
2006544-018	BG7		Soil	6/10/2020 10:57		Α	Α										
2006544-019	BG8		Soil	6/10/2020 14:13		Α	Α										
2006544-020	BG9		Soil	6/10/2020 09:04		Α	Α								1		

А

Α

6/10/2020 14:40

Test Legend:

2006544-021

1	ASMS_6020_TTLC_S
5	
9	

Project Manager: Rosa Venegas

2	PRHOLD Credit
6	
10	

Soil

3	
7	
11	

4	
8	
12	

Prepared by: Tina Perez

Add-On Prepared By: Maria Venegas

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

BG10

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.



2006544-021A

BG10

Soil

SW6020 (Arsenic)

6/10/2020 14:40

5 days

4OZ GJ, Unpres

WORK ORDER SUMMARY

Client Name:	PETRALOGIX			Project:	2019-00014; Stock	cton Site I		Wo	rk Order:	2006544
Client Contac	et: Daniel Kramer							(QC Level:	LEVEL 2
Contact's Em	ail dkramer@petralogix.com			Comments:	BG samples off HOI	LD 6/23/2020 STAT.		Dat	e Logged:	6/11/2020
								Date	e Add-On:	6/23/2020
Lab ID	Client ID	Matrix	Test Name		Containers /Composites	Bottle & Preservative	Collection Date & Time	ТАТ	Sediment Content	Hold SubOut
2006544-012A	BG1	Soil	SW6020 (Arsenic)		1	4OZ GJ, Unpres	6/10/2020 8:54	5 days		
2006544-013A	BG2	Soil	SW6020 (Arsenic)		1	4OZ GJ, Unpres	6/10/2020 9:18	5 days		
2006544-014A	BG3	Soil	SW6020 (Arsenic)		1	4OZ GJ, Unpres	6/10/2020 9:47	5 days		
2006544-015A	BG4	Soil	SW6020 (Arsenic)		1	4OZ GJ, Unpres	6/10/2020 11:23	5 days		
2006544-016A	BG5	Soil	SW6020 (Arsenic)		1	4OZ GJ, Unpres	6/10/2020 10:22	5 days		
2006544-017A	BG6	Soil	SW6020 (Arsenic)		1	4OZ GJ, Unpres	6/10/2020 11:52	5 days		
2006544-018A	BG7	Soil	SW6020 (Arsenic)		1	4OZ GJ, Unpres	6/10/2020 10:57	5 days		
2006544-019A	BG8	Soil	SW6020 (Arsenic)		1	4OZ GJ, Unpres	6/10/2020 14:13	5 days		
2006544-020A	BG9	Soil	SW6020 (Arsenic)		1	4OZ GJ, Unpres	6/10/2020 9:04	5 days		

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.

1

General COC

	OBB	
MAI Work Order #	200	6544

Leport To: DANIEL KRAMER Bill T	urg, Ca. Fax: (92	94565-1701		Turn	CHAIN OF CUSTODY RECORD															
Telephone: (877) 252-9262 www.mccampbell.com teport To: DANIEL KRAMER Bill T	Fax: (92	E) 252 02(0		Tunn	Around	l Time	1 Day	Rush	2 Da	y Rush	3	Day F	Rush	5	STD	•	Quo	te #		
eport To: DANIEL KRAMER Bill T	main@n	.5) 252-9269		J-Flag	/ MDL		ESL		Clear	up Appr	oved	Γ	Dry Wei	ight		Bottl	e Ord	er #		
eport To: DANIEL KRAMER Bill 7	mannie	nccampbell.	.com	Delive	ery For	mat:	PDF		GeoTrack	er EDF	E	DD		Write	e On	(DW)		Detect	Summa	iry
	o: DAN	IEL KRAMER								An	alysis	Req	uested	1						
Company: Petralogix Engineering, Inc																				
imail: dkramer@petralogix.com							•													
It Email: tscheftner@petralogix.com Te	e:	209.770.0	731		3)															
roject Name: Stockton Site I Project	#:	2019-000)14	<u>A</u>	OE	3)														
roject Location: Corner of Westlake Dr & Regatta Lane PC	#		2	8	301	10E														
ampler Signature. Jonya Schraftante			2	8	c (6	60														
SAMPLE ID Sampling	iners			°.	enic) p														
Location / Field Point Date Time	Conta	Matrix	Preservative	10	Arse	-ea														
3G1 61026 8:5	4 1	SOIL	-	Ĕ	×	_				┼╌┼	+	+	+	+	\neg			-		+
3G2 6/10/20 9:16	,				X					+		+	+	+			-			+
3G3 6/10/20 9. V	7				×			_				+	+	+			-		-	+
3G4 6/10/20 11:	3				X							+		+			-			1
3G5 G/10/20 10:2	2				\times														4	,
3G6 6/10/20 11: C	2				\times															
367 6/16/2010:5	7				×															
368 6/10/20 2:13					\times															
3G9 6/10/20 9:C	4				×		6													
3610 6/10/20 2:4	0				X															
IAI clients MUST disclose any dangerous chemicals known to be present in th lon-disclosure incurs an immediate \$250 surcharge and the client is subject to	eir submitt full legal li	ed samples in co ability for harm	oncentrations that suffered. Thank	at may c you for	ause im your ui	mediat	e harm nding ar	or serio nd for a	ous future hea llowing us to	alth endang work safe	germent ely.	as a re	sult of b	rief, gl	oved,	, open a	ir, samp	le handli	ng by M	AI staff.
If metals are requested for water samples and the water type (Matrix)	is not spe	cified on the cl	hain of custody	, MAI	will de	fault	o meta	by E	200.8.					Т		Co	mment	s / Instr	uctions	
lease provide an adequate volume of sample. If the volume is not suff	cient for a	a MS/MSD a L	CS/LCSD will	be pre	pared	in its p	lace-ar	d note	d in the rep	ort.					Ц.	-1d	01	1		
Relinquished By / Company Name	E	Date T	ime		Recei	yed By	Com	pany	Name		Pate		Time			"				
Tonya Schertney / Petar (201'x	6/1	0/20 5:	05	_	4	N	F	\bowtie			010	20	17,	15	BC	5 9	sar	npl	ح	
					-)		HC	}			+			-	Tha	nk	yo	n	,
Matrix Code: DW=Drinking Water, GW=Ground Water	WW=V	Vaste Water	; SW=Seaw	ater,	S=So	il, SL	=Sluc	ige, A	A=Air, W	P=Wipe	e, O=(Other			F	FF	tor	Dle	23	202
Preservative Code: 1=4°C 2=HCl 3=H ₂ SO ₄ 4=HNC	3 5=N	aOH 6=Z	nOAc/NaOI	H 7=	None	е	x - 9800 (941,943			r			Ter	mp_			°C	Initia	ls	

Ho 40

Page 5 of 5 Page 9 of 9

APPENDIX D – SUMMARY STATISTICS

Petralogix Engineering, Inc. 26675 Bruella Road, Galt, Ca 95632 (209)-400-5729 www.petralogix.com



	0	1				
	As	As w/o				
1	3.5	3.5				
2	3.2	3.2				
3	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					

	А	В	С	D	E	F	G	Н	I	J	К	L		
1	Outlier Tests for Selected Uncensored Variables													
2			User Selec	ted Options										
3	Date	/Time of Co	mputation	ProUCL 5.	17/19/2020 1	7/19/2020 11:12:02 PM								
4				From File	WorkSheet	.xls								
5			Full	Precision	OFF									
6														
7														
8		Dixon's	Outlier Tes	st for C0										
9														
10	Number of	Observation	s = 21											
11	10% critica	l value: 0.39	1											
12 5% critical value: 0.44														
13	1% critical value: 0.524													
14														
15	1. Observation Value 5.7 is a Potential Outlier (Upper Ta													
16														
17	Test Statist	ic: 0.421												
18														
19	For 10% siç	gnificance le	vel, 5.7 is a	n outlier.										
20	For 5% sigr	nificance lev	el, 5.7 is no	t an outlier.										
21	For 1% sigr	nificance lev	el, 5.7 is no	t an outlier.										
22														
23	2. Observa	ition Value 1	I.5 is a Pote	ential Outlie	r (Lower Tai									
24														
25	Test Statist	ic: 0.154												
26														
27	For 10% siç	gnificance le	vel, 1.5 is n	ot an outlier										
28	For 5% sigr	nificance lev	el, 1.5 is no	t an outlier.										
29	For 1% sigr	nificance lev	el, 1.5 is no	t an outlier.										
30														





	А	В	С	D	Е	F	G	Н	I	J	K	L
1				Background	d Statistics	for Uncenso	ored Full Da	ta Sets				
2		User Select	ted Options									
3	Date	e/Time of Co	mputation	ProUCL 5.1	7/19/2020 1	1:21:56 PM						
4			From File	WorkSheet.	.xls							
5		Full	Precision	OFF								
6	(Confidence C	coefficient	95%								
7	N1		Coverage	95%								
8	New or H	-uture K Obs	servations	1								
9	Number of	Booisirap O	perations	2000								
10	Arsonic - v	v/o Outlier										
11												
12	General S	tatistics										
13		uliolioo	Total N	lumber of Ol	bservations	20			Number	of Distinct O	bservations	13
14					Minimum	1.5				F	irst Quartile	2.1
10	Second Larges				ond Largest	4.1					Median	3
17					Maximum	4.1				TI	nird Quartile	3.35
18					Mean	2.9					SD	0.809
19	Coefficient of Variation				of Variation	0.279					Skewness	-0.0152
20	Mean of logged Data				ogged Data	1.025				SD of	logged Data	0.297
21												
22	Critical Values for Background Threshold Values (BTVs)											
23			Tolera	nce Factor k	K (For UTL)	2.396				d2m	ax (for USL)	2.557
24												
25	Normal GOF Test											
26	Shapiro Wilk Test Statistic 0.94 Shapiro Wilk GOF Test											
27	5% Shapiro Wilk Critical Value					0.905		Data appe	ar Normal at	5% Signific	cance Level	
28	Lilliefors Test Statistic					0.139			Lilliefors	GOF Test		
29			5%	Lilliefors Cr	ritical Value	0.192		Data appe	ar Normal at	5% Signific	cance Level	
30					Data appea	r Normal at	t 5% Signific	ance Leve				
31												
32				Bad	ckground St	atistics Ass	uming Norn	nal Distribu	tion			
33			95% U1	L with 95%	6 Coverage	4.839				90% P	ercentile (z)	3.937
34				9	95% UPL (t)	4.334				95% P	ercentile (z)	4.231
35					95% USL	4.969				99% P	ercentile (z)	4.782
36												
37						Gamma (GOF Test	م م ام م	an Dadina	0		
38					est Statistic	0.471	Detected		son-Darling	Gamma GC	JF Test	
39				5% A-D CI	ntical value	0.742	Detected	uata appea	Gamma Di	stributed at		nce Level
40				5% K-S C	ritical Value	0.14	Detected	data anneai	Camma Di	etributed at	5% Significa	nce Level
41				Detected d		Gamma Die	stributed at	5% Signific		stributeu at	5 /6 Significal	
42				Delected				o /o Olgrinic				
43						Gamma	Statistics					
44					k hat (MLE)	12.66			k st	ar (bias cori	rected MLE)	10.79
40				Thet	a hat (MLE)	0.229			Theta st	ar (bias cor	rected MLE)	0.269
40				nı	u hat (MLE)	506.3				nu star (bia	s corrected)	431.7
47	MLE Mean (bias corrected) 2.9 MLE Sd (bias corrected)					0.883						
40				_ ()	-				()	
50				Bac	kground St	atistics Ass	uming Gam	ma Distribu	tion			
51	95% Wilson Hilferty (WH) Approx. Gamma UPL 4.546 90% Percentile				% Percentile	4.073						
52	9	5% Hawkins	Wixley (HW) Approx. G	amma UPL	4.584				95%	% Percentile	4.488
53	95%	WH Approx	. Gamma UT	L with 95%	6 Coverage	5.288				99%	% Percentile	5.337

	А	В	С	D	E	F	G	Н	I	J	К	L			
54	95%	HW Approx.	. Gamma UT	L with 9	5% Coverage	5.371									
55				9	95% WH USL	5.491				95	% HW USL	5.589			
56															
57						Lognorma	I GOF Test								
58			Sha	apiro Wilk	Test Statistic	0.933		Shapiro Wilk Lognormal GOF Test							
59			5% Sha	piro Wilk	Critical Value	0.905		Data appear	Lognormal	at 5% Signi	ficance Level				
60				Lilliefors	Test Statistic	0.154		Lilli	efors Logno	ormal GOF	ſest				
61			5%	Lilliefors	Critical Value	0.192		Data appear	Lognormal	at 5% Signi	ficance Level				
62					Data appear	Lognormal	at 5% Signi	ificance Lev	el						
63															
64				Ba	ckground Sta	tistics assu	iming Logno	ormal Distrib	ution						
65			95% UT	L with 9	5% Coverage	5.676				90% P	ercentile (z)	4.077			
66					95% UPL (t)	4.716				95% P	ercentile (z)	4.541			
67	95% USL 5.954 99% Percentile (z)							5.56							
68															
69	Nonparametric Distribution Free Background Statistics														
70	Data appear Normal at 5% Significance Level														
71															
72				Nonpa	arametric Upp	er Limits fo	r Backgrou	nd Threshole	d Values						
73				Orde	r of Statistic, r	20			95% U	TL with 959	% Coverage	4.1			
74		Appr	ox, f used to	compute	achieved CC	1.053	oproximate	Actual Conf	idence Coel	ficient achie	ved by UTL	0.642			
75							Approxima	te Sample S	ize needed	to achieve s	pecified CC	59			
76	95%	Percentile E	Bootstrap UT	L with 9	5% Coverage	4.1		95% BCA I	Bootstrap U	TL with 959	% Coverage	4.1			
77					95% UPL	4.1				90%	6 Percentile	4.01			
78				90% Ch	ebyshev UPL	5.387				95%	6 Percentile	4.1			
79				95% Ch	ebyshev UPL	6.514				99%	6 Percentile	4.1			
80					95% USL	4.1									
81															
82	N	ote: The use	of USL tend	ts to yield	a conservativ	e estimate	of BTV, esp	ecially wher	n the sample	e size starts	exceeding 2	0.			
83	Т	herefore, on	e may use L	JSL to est	timate a BTV o	only when t	he data set i	represents a	backgroun	d data set f	ree of outliers	5			
84			8	and consi	sts of observat	ions collec	ted from clea	an unimpact	ed locations	•					
85		The u	ise of USL te	ends to pr	rovide a baland	ce between	false positiv	ves and false	e negatives	provided the	e data				
86		repres	ents a back	ground da	ata set and wh	en many oi	nsite observ	ations need	to be comp	ared with the	e BTV.				
87															

	А	В	С	D	E	F	G	Н	I	J	K	L
1				Background	d Statistics	for Uncenso	ored Full Da	ta Sets				
2		User Select	ted Options									
3	Date	e/Time of Co	mputation	ProUCL 5.1	7/19/2020 1	1:21:56 PM						
4			From File	WorkSheet.	.xls							
5		Full	Precision	OFF								
6	(Confidence C	coefficient	95%								
7	N1		Coverage	95%								
8	New or H	-uture K Obs	servations	1								
9	Number of	Booisirap O	perations	2000								
10	Arsonic - v	v/o Outlier										
11												
12	General S	tatistics										
13		uliolioo	Total N	lumber of Ol	bservations	20			Number	of Distinct O	bservations	13
14					Minimum	1.5				F	irst Quartile	2.1
10	Second Larges				ond Largest	4.1					Median	3
17					Maximum	4.1				TI	nird Quartile	3.35
18					Mean	2.9					SD	0.809
19	Coefficient of Variation				of Variation	0.279					Skewness	-0.0152
20	Mean of logged Data				ogged Data	1.025				SD of	logged Data	0.297
21												
22	Critical Values for Background Threshold Values (BTVs)											
23			Tolera	nce Factor k	K (For UTL)	2.396				d2m	ax (for USL)	2.557
24												
25	Normal GOF Test											
26	Shapiro Wilk Test Statistic 0.94 Shapiro Wilk GOF Test											
27	5% Shapiro Wilk Critical Value					0.905		Data appe	ar Normal at	5% Signific	cance Level	
28	Lilliefors Test Statistic					0.139			Lilliefors	GOF Test		
29			5%	Lilliefors Cr	ritical Value	0.192		Data appe	ar Normal at	5% Signific	cance Level	
30					Data appea	r Normal at	t 5% Signific	ance Leve				
31												
32				Bad	ckground St	atistics Ass	uming Norn	nal Distribu	tion			
33			95% U1	L with 95%	6 Coverage	4.839				90% P	ercentile (z)	3.937
34				9	95% UPL (t)	4.334				95% P	ercentile (z)	4.231
35					95% USL	4.969				99% P	ercentile (z)	4.782
36												
37						Gamma (GOF Test	م م ام م	an Dadina	0		
38					est Statistic	0.471	Detected		son-Darling	Gamma GC	JF Test	
39				5% A-D CI	ntical value	0.742	Detected	uata appea	Gamma Di	stributed at		nce Level
40				5% K-S C	ritical Value	0.14	Detected	data anneai	Camma Di	etributed at	5% Significa	nce Level
41				Detected d		Gamma Die	stributed at	5% Signific		stributeu at	5 /6 Significal	
42				Delected				o /o Olgrinic				
43						Gamma	Statistics					
44					k hat (MLE)	12.66			k st	ar (bias cori	rected MLE)	10.79
40				Thet	a hat (MLE)	0.229			Theta st	ar (bias cor	rected MLE)	0.269
40				nı	u hat (MLE)	506.3				nu star (bia	s corrected)	431.7
47	MLE Mean (bias corrected) 2.9 MLE Sd (bias corrected)					0.883						
40				_ ()	-				()	
50				Bac	kground St	atistics Ass	uming Gam	ma Distribu	tion			
51	95% Wilson Hilferty (WH) Approx. Gamma UPL 4.546 90% Percentile				% Percentile	4.073						
52	9	5% Hawkins	Wixley (HW) Approx. G	amma UPL	4.584				95%	% Percentile	4.488
53	95%	WH Approx	. Gamma UT	L with 95%	6 Coverage	5.288				99%	% Percentile	5.337

	А	В	С	D	E	F	G	Н	I	J	K	L			
54	95%	HW Approx.	Gamma U	TL with	95% Coverage	5.371									
55					95% WH USL	5.491				95	5% HW USL	5.589			
56															
57						Lognorma	I GOF Test								
58			Sh	apiro Wi	lk Test Statistic	0.933		Shapiro Wilk Lognormal GOF Test							
59			5% Sha	apiro Wil	k Critical Value	0.905		Data appear	Lognormal	at 5% Signi	ficance Level				
60	Lilliefors Test Statistic					0.154		Lilli	efors Logn	ormal GOF	Test				
61	5% Lilliefors Critical Value					0.192		Data appear	Lognormal	at 5% Signi	ficance Level				
62					Data appear	Lognormal	at 5% Signi	ficance Lev	el						
63															
64				E	Background Sta	tistics assu	iming Logno	rmal Distrib	ution						
65			95% U	TL with	95% Coverage	5.676				90% P	ercentile (z)	4.077			
66					95% UPL (t)	4.716				95% P	ercentile (z)	4.541			
67	95% USL 5.954 99% Percentile (z)							5.56							
68															
69	9 Nonparametric Distribution Free Background Statistics														
70	Data appear Normal at 5% Significance Level														
71															
72				Non	parametric Upp	er Limits fo	or Backgrour	nd Threshole	d Values						
73				Ord	ler of Statistic, r	20			95% U	TL with 959	% Coverage	4.1			
74		Appr	ox, f used to	o compu	te achieved CC	1.053	oproximate	Actual Conf	idence Coe	fficient achie	ved by UTL	0.642			
75							Approximat	te Sample S	ize needed	to achieve s	pecified CC	59			
76	95%	Percentile E	Bootstrap U	TL with	95% Coverage	4.1		95% BCA I	Bootstrap U	TL with 959	% Coverage	4.1			
77					95% UPL	4.1				90%	6 Percentile	4.01			
78				90% C	Chebyshev UPL	5.387				95%	6 Percentile	4.1			
79				95% C	Chebyshev UPL	6.514				99%	6 Percentile	4.1			
80					95% USL	4.1									
81															
82	N	ote: The use	of USL ten	ds to yie	ld a conservativ	ve estimate	of BTV, esp	ecially wher	n the sampl	e size starts	exceeding 2	0.			
83	Т	herefore, on	e may use l	JSL to e	stimate a BTV o	only when t	he data set r	epresents a	backgroun	d data set f	ree of outliers	5			
84				and con	sists of observat	tions collec	ted from clea	an unimpacte	ed locations	S.					
85		The u	ise of USL t	ends to	provide a balan	ce between	false positiv	es and false	e negatives	provided the	e data				
86		repres	ents a back	ground	data set and wh	en many oi	nsite observa	ations need	to be comp	ared with the	e 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)									
	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 PAR	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		typica	l	with pica						
	Pathwa	ay cont	ribution	Pathway contribution						
Pathway	PEF	ug/dl	percent	PEF	ug/dl	percent				
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 PRELMIINARY REMEDIATION GOAL (PRG)

Variable **Description of Variable** Units PbS Soil lead concentration ug/g or ppm 6.1 R_{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 ---PbB₀ Baseline PbB 0.0 ug/dL IRs Soil ingestion rate (including soil-derived indoor dust) 0.050 g/day $AF_{S, D}$ Absorption fraction (same for soil and dust) --0.12 EF_{S, D} Exposure frequency (same for soil and dust) 250 days/yr AT_{S.D} Averaging time (same for soil and dust) 365 days/yr **PbB**adult 0.0 PbB of adult worker, geometric mean ug/dL PbB_{fetal, 0.90} 90th percentile PbB among fetuses of adult workers ug/dL 0.0 PbB₁ Target PbB level of concern (e.g., 10 ug/dL) ug/dL 1.0 P(PbB_{fetal} > PbB_t) Probability that fetal PbB > PbB_t, assuming lognormal distribution % 0.0%

EDIT RED CELL

PRG90

318

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APPENDIX E – PROJECT CORRESPONDENCE

Petralogix Engineering, Inc. 26675 Bruella Road, Galt, Ca 95632 (209)-400-5729 www.petralogix.com



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 soildha aever 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 <<u>kgarrett@agspanos.com</u>> Sent: Tuesday, August 20, 2019 1:39 PM To: Tonya Scheftner <<u>tscheftner@petralogix.com</u>> 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 <<u>tscheftner@petralogix.com</u>>
Sent: Tuesday, August 20, 2019 12:57 PM
To: Karen Garrett <<u>kgarrett@agspanos.com</u>>
Subject: Stockton Westlake School Site

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. 209-770-0731 www.petralogix.com