

**PRELIMINARY ENVIRONMENTAL ASSESSMENT  
NEW ELEMENTARY SCHOOL (SITE C)  
NORTH OF BASS AVENUE AND EAST OF BARBOZA STREET  
MENDOTA, FRESNO COUNTY, CALIFORNIA**

Prepared for:  
MENDOTA UNIFIED SCHOOL DISTRICT

DECEMBER 2012

# padre associates, inc.

ENGINEERS, GEOLOGISTS & ENVIRONMENTAL SCIENTISTS

December 12, 2012  
Project No. 1201-0874

Mr. Neal Hutchison:  
California Department of Toxic Substances Control  
School Property Evaluation and Cleanup Division  
8800 Cal Center Drive  
Sacramento, California 95826-3200

Subject: Preliminary Environmental Assessment, New Elementary School (Site C), North of Bass Avenue and East of Barboza Street, Mendota, Fresno County, California  
Site Code 104709

Dear Mr. Hutchison:

Padre Associates, Inc. (Padre), on behalf of Mendota Unified School District, has prepared this Preliminary Environmental Assessment (PEA) for the New Elementary School (Site C) located north of Bass Avenue and east of Barboza Street, in the city of Mendota, Fresno County, California.

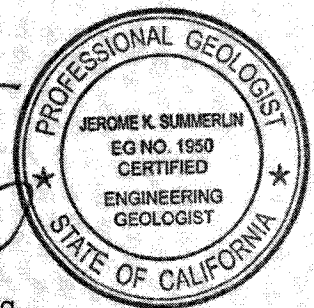
The scope of work for the PEA was performed in accordance with the Padre document titled: *Preliminary Environmental Assessment Work Plan, New Elementary School (Site C), North of Bass Avenue and East of Barboza Street, Mendota, Fresno County, California*, and dated September 2012. The PEA Work Plan was approved by the California Environmental Protection Agency (CalEPA) Department of Toxic Substances Control (DTSC) in a letter to the Mendota Unified School District school district dated October 30, 2012.

The PEA results report will be made available to the public for review and comment pursuant to Option A of the California Education Code (CEC) §17213.1.a (6). If you have any questions or comments please contact the undersigned at (916) 857-1601, Ext. 25.

Sincerely,  
PADRE ASSOCIATES, INC.

  
Alan J. Klein, CPESC  
Senior Environmental Scientist

  
Jerome K. Summerlin, C.E.G., C.Hg.  
Principal



C: Mike Crass, Mendota Unified School District  
Paul Bunton, BCA Architects  
Jerry Suich, Oxbridge Development, Inc

**TABLE OF CONTENTS**

	Page
EXECUTIVE SUMMARY .....	ES1
1.0 INTRODUCTION.....	1-1
1.1 PURPOSE.....	1-1
1.2 OBJECTIVES .....	1-1
2.0 PROPERTY DESCRIPTION AND CONTACTS.....	2-1
2.1 SITE ADDRESS / ASSESSOR'S PARCEL NUMBER .....	2-1
2.2 DESIGNATED CONTACT PERSON AND MAILING ADDRESS.....	2-1
2.3 PROPERTY USE .....	2-1
2.4 TOWNSHIP, RANGE, AND SECTION.....	2-2
2.5 SITE MAPS .....	2-2
2.6 ENVIROSTOR DATABASE NUMBER.....	2-2
2.7 PHYSICAL SETTING .....	2-3
2.8 SURROUNDING PROPERTY LAND USE.....	3-1
3.0 BACKGROUND .....	3-1
3.1 SITE HISTORY .....	3-1
3.2 POTENTIAL ENVIRONMENTAL CONCERNS.....	4-1
4.0 CONCEPTUAL SITE MODEL.....	5-1
5.0 PEA ASSESSMENT .....	5-1
5.1 SAMPLE LOCATIONS .....	5-1
5.1.1 Soil Sampling - Agricultural Use .....	5-2
5.1.2 Quality Assurance / Quality Control Samples.....	5-2
5.2 SAMPLE COLLECTION.....	5-2
5.2.1 Soil Sample Collection.....	5-2
5.2.2 Decontamination Procedures .....	5-2
5.3 SAMPLE ANALYSES.....	5-3
5.3.1 Chain-of-Custody Records .....	5-3
5.4 FIELD VARIANCES .....	6-1
6.0 FINDINGS .....	6-1
6.1 SOIL SAMPLING RESULTS .....	6-1
6.1.1 OCPs – Agricultural Use .....	6-1
6.1.2 Arsenic – Agricultural Use .....	6-1
6.2 QA/QC SAMPLES.....	6-2
6.2.1 Equipment Blank.....	6-2
6.2.2 Field Blank.....	6-2
6.2.3 Laboratory QA/QC.....	6-2

**TABLE OF CONTENTS (CONTINUED)**

	Page
7.0 ECOLOGICAL SCREENING .....	7-1
8.0 HUMAN HEALTH SCREENING .....	8-1
9.0 CONCLUSIONS AND RECOMMENDATIONS .....	9-1
10.0 REFERENCES AND PERSONS CONSULTED .....	10-1

**PLATES**

1-2 Site Plan .....	1-3
1-3 Site Location Map .....	1-4
4-1 Conceptual Site Model .....	4-2
5-1 Site Sampling Plan .....	5-4
6-1 Soil and Sediment Sampling Results .....	6-3

**TABLES**

	Page
5-1 Sample Locations by Latitude/Longitude .....	5-5
5-2 Field Sampling Schedule .....	5-6
5-3 Sample Collection Information .....	5-7
6-1 Soil Results of OCP Analyses .....	6-4
6-2 Results of Arsenic Analyses .....	6-6

**APPENDICES**

- APPENDIX A: DTSC CORRESPONDENCE
- APPENDIX B: ASSESSOR'S PARCEL MAP AND LEGAL DESCRIPTION
- APPENDIX C: QUALITY ASSURANCE PROJECT PLAN (QAPP)
- APPENDIX D: ANALYTICAL LABORATORY REPORTS AND CHAIN-OF-CUSTODYS

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## EXECUTIVE SUMMARY

Padre Associates, Inc. (Padre), on behalf of the Mendota Unified School District (MUSD), has prepared this Preliminary Environmental Assessment (PEA) for a proposed New Elementary School (Site C), which is located north of Bass Avenue and East of Barboza Street, in the city of Mendota, Fresno County, California (Project Site).

The scope of work for the PEA was performed in accordance with the Padre document titled: *Preliminary Environmental Assessment Work Plan, New Elementary School (Site C), North of Bass Avenue and East of Barboza Street, Mendota, Fresno County, California*, dated September 2012. The PEA Work Plan was approved by the California Environmental Protection Agency (CalEPA) Department of Toxic Substances Control (DTSC) in a letter to the Mendota Unified School District school district dated October 30, 2012.

This PEA Report will be made available to the public for review and comment pursuant to Option A of the California Education Code (CEC) §17213.1.a (6).

The Project Site consists of approximately 14.2 acres of land that was partially developed for a planned 63-unit single family subdivision, but was never constructed and completed. The elementary school site is planned for grades K-6, with a capacity of 1,000 students. The school site will consist of 30 classrooms, administrative and multi-purpose rooms, outdoor field areas, and associated parking area. Public water and sewer will be provided to the Project Site. Storm water will be retained onsite by a site-specific designed retention basin.

The Project Site is bordered to the north by a City of Mendota stormwater retention basin; to the east by agricultural property; to the south by Bass Avenue and residential development; and to the west by a United Health Care Facility and residential development.

Potential environmental concerns identified at the Project Site have been determined based on available information regarding historical agricultural land use. Residual concentrations of pesticides and arsenic may potentially pose health risks via ingestion, dermal contact, and inhalation exposure pathways. The general scope of work included the collection of discrete surface soil samples for chemical analyses at locations across the Project Site. Soil samples were chemically analyzed for the presence of organochlorine pesticides (OCPs) and arsenic.

The analytical results of the soil sampling activities did not identify the presence of OCP concentrations at or above the analytical reporting limits. Therefore, OCPs are not considered chemicals of potential concern (COPCs).

Arsenic concentrations ranged from 2.4 to 7.6 milligrams per kilogram (mg/kg) in soil samples collected from the Project Site. Because arsenic results for the Project Site are below

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concentrations of 12 mg/kg, which represents DTSC's school site risk management screening level, arsenic is not considered a COPC.

The PEA screening level risk assessment indicates that the Project Site has not been significantly impacted by historical agricultural practices. Therefore, Padre recommends the issuance of a "No Further Action" designation from the DTSC regarding the proposed new elementary school site.

## 1.0 INTRODUCTION

This document presents the results of the Preliminary Environmental Assessment (PEA) that was completed by Padre Associates, Inc. (Padre) on behalf of the Mendota Unified School District (MUSD) for a proposed New Elementary School (Site C). The Project Site is located north of Bass Avenue and East of Barboza Street, in the city of Mendota, Fresno County, California (Project Site). Refer to Plate 1-1: Site Location; and Plate 1-2: Site Plan.

The scope of work for the PEA was performed in accordance with the Padre document titled: *Preliminary Environmental Assessment Work Plan, New Elementary School (Site C), North of Bass Avenue and East of Barboza Street, Mendota, Fresno County, California*, and dated September 2012. The PEA Work Plan was approved by the California Environmental Protection Agency (CalEPA) Department of Toxic Substances Control (DTSC) in a letter to the Mendota Unified School District school district dated October 30, 2012. A copy of the DTSC approval letter is included in Appendix A.

This PEA Report will be made available to the public for review and comment pursuant to Option A of the California Education Code (CEC) §17213.1.a (6).

### 1.1 PURPOSE

California Department of Education statutes (Assembly Bill 387, Senate Bill 162 and Assembly Bill 2644) require the CalEPA/DTSC to review environmental assessments for proposed new school sites and/or new construction school expansion projects. The role of the DTSC is to ensure that selected properties do not contain hazardous substances that are a threat to public health and the environment.

### 1.2 OBJECTIVES

This PEA was conducted consistent with the DTSC guidance manual for evaluation of hazardous substance release sites titled *Preliminary Environmental Assessment Guidance Manual*, State of California, Environmental Protection Agency (CalEPA 1999). Pursuant to the Health and Safety Code §25355.5 (a) (1) (C), the activities performed to fulfill the requirements of the Environmental Oversight Agreement (EOA) issued to the school district by CalEPA/DTSC.

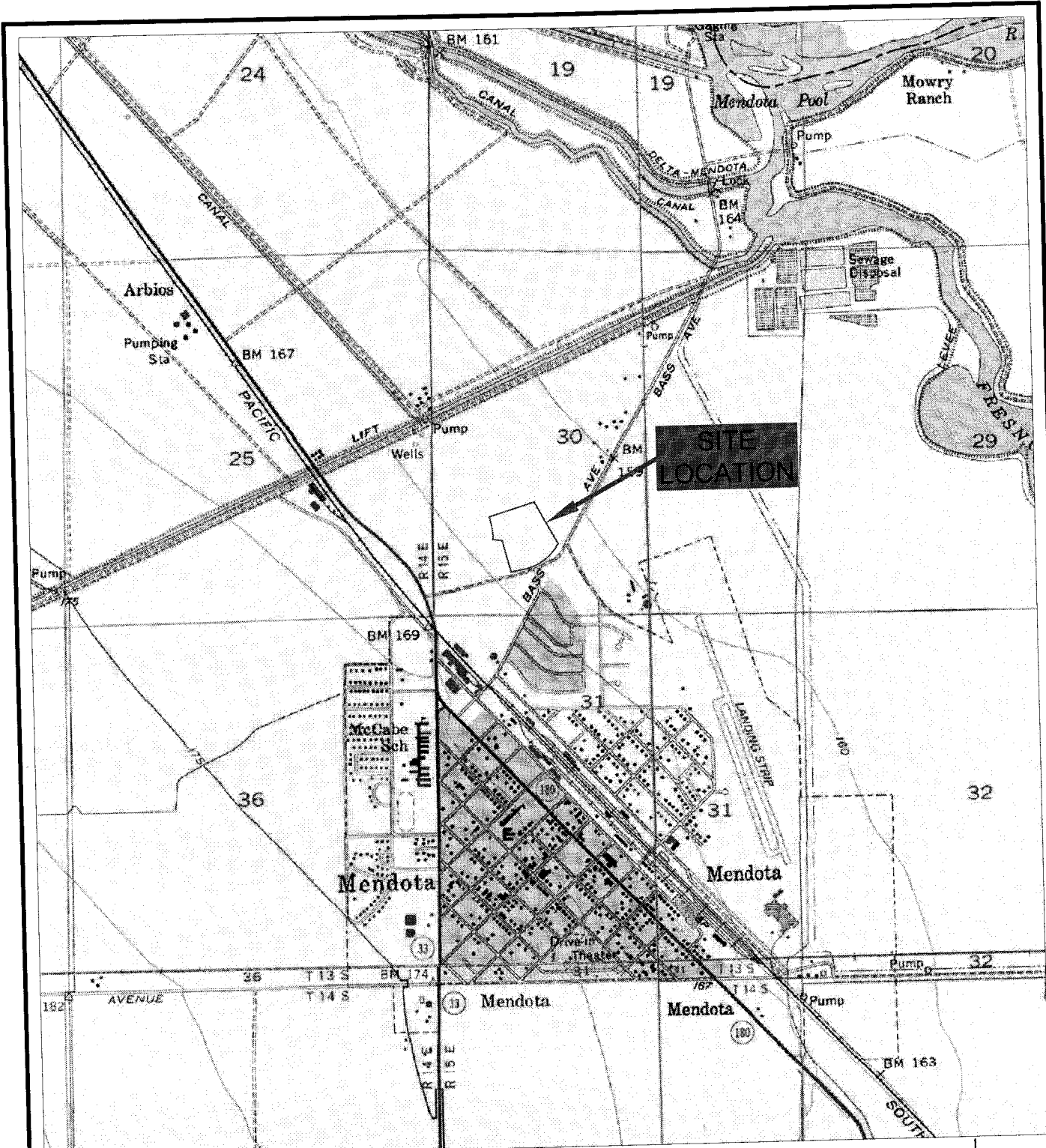
The objectives of the PEA included:

- Evaluating historical information for indications of past use, storage, disposal, and/or release of hazardous substances at the Project Site;
- Establishing through a field sampling and laboratory analysis program the nature, concentration and general extent of hazardous substances that may be present in soil and/or groundwater at the Project Site; and
- Estimating the potential threat to public health and the environment presented by hazardous constituents identified at the property, and providing an indicator of

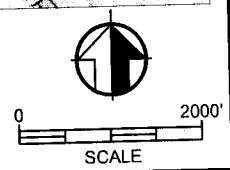
relative risk using a residential land-use scenario.

Possible outcomes of the PEA decision by DTSC include: 1) the issuance of a "No Further Action" designation if the Project Site is not found to be significantly impacted, and risks to human health, and the environment are found to be within acceptable levels based on the conservative screening level risk assessment; 2) the need for further assessment under DTSC oversight, which may include a Supplemental Site Investigation (SSI) and; 3) if necessary a response action to reduce or eliminate the impact of the contaminants. Also, the school district may elect not to pursue acquisition of the site.





U.S.G.S. 7.5 MINUTE QUADRANGLE  
 FIREBAUGH, CA 1956, REVISED 1984



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**PROPOSED SCHOOL SITE 'C'**  
 NORTH OF BASS AVE. AND  
 EAST OF BARBOZA ST.  
 MENDOTA, FRESNO COUNTY, CALIFORNIA

**PLATE 1-1**  
**SITE LOCATION**

PROJECT NO.	DATE	DR. BY	APP. BY
1201-0874	11/30/12	AC	AJK



PLATE 1-2  
**SITE PLAN**

PROPOSED SCHOOL SITE 'C'  
 NORTH OF BASS AVE. AND  
 EAST OF BARBOZA ST.  
 MENDOTA, FRESNO COUNTY, CALIFORNIA

PROJECT NO. 1201-0874	DATE 11/30/12	DR. BY AC	APP. BY AJK
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SOURCE: GOOGLE EARTH MAP DATED APRIL 2011

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## 2.0 PROPERTY DESCRIPTION AND CONTACTS

### 2.1 SITE ADDRESS / ASSESSOR'S PARCEL NUMBER

The Project Site consists of approximately 14.2 acres of land that has been partially developed for a planned 63-unit single family subdivision. The County of Fresno Assessor's Office identifies the Project Site as assessor's parcel numbers (APNs): 013-431-01S through 013-431-26S; 013-432-01S through 013-432-10S; 013-433-01S through 013-433-12S; and 013-434-01S through 013-434-15S. The Project Site also includes the city-designated streets Boyer, Saucedo, Gil, Daniel, Yllan, a continuation of Second Street, and the adjacent drainage channel located along Bass Avenue. A copy of the parcel map and legal description for the included drainage channel is presented in Appendix B.

### 2.2 DESIGNATED CONTACT PERSON AND MAILING ADDRESS

Mr. Mike Crass, Superintendent  
Mendota Unified School District  
115 McCabe Avenue  
Mendota, California 93640  
Phone No. (559) 655-4942

### 2.3 PROPERTY USE

Based on a review of historical aerial photographs and topographic maps, Padre concludes that the Project Site has historically been used for agricultural purposes from approximately the 1950s through the 1980s; and that no building structures have been constructed onsite.

The Project Site was partially developed for the planned residential subdivision that was never completed. Site development included unimproved city roadways and the installation of underground utilities (water, electrical, etc.). The unimproved roads have been graded approximately 4 to 5 feet lower than the Project Site's overall grade surface. There is a large soil pile located in the center of the Project Site and appears to have been generated from grading of the Project Site's city roads. There are no building structures located onsite. No oil and/or chemical containers were observed. No petroleum and/or chemical stained soils or stressed vegetation were observed, and no evidence of aboveground or underground petroleum fuel tanks was observed at the Project Site.

### 2.4 TOWNSHIP, RANGE, AND SECTION

The Project Site is located in Section 30, Township 13 South, Range 15 East, of the Firebaugh Quadrangle, California USGS 7½-Minute Series, Topographic Map. Approximate latitude and longitude are identified to be:

- Latitude (North) 34° 56' 32.5098" (34.942364)
- Longitude (West) -120° 26' 11.6484" (-120.436569)

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## 2.5 SITE MAPS

A site location map is presented as Plate 1-1 and a site plan is presented as Plate 1-2.

## 2.6 ENVIROSTOR DATABASE NUMBER

The EnviroStor database number for the Project Site is 60001768.

## 2.7 PHYSICAL SETTING

Based on a review of the USGS 7.5-minute series topographic map, Firebaugh Quadrangle, California, 1956 (photorevised 1984), the Project Site lies at an approximate elevation of 165 feet above mean sea level (msl), the general topographic gradient for the local area is to the northeast towards the Fresno Slough.

The Project Site is located in the southern segment of the Great Valley Geomorphic Province, a north-south trending valley, approximately 400 miles long by 50 miles wide. The southern segment is referred to as the San Joaquin Valley, which is a sediment-filled basin that is bound to the west by the California Coast Ranges, and to the east by the Sierra Nevada. The San Joaquin Valley has been filled with several thousand feet of sedimentary deposits, derived from the erosion of the Sierra Nevada. Sediments in the valley have deposited sands with lesser silts, minor clays, and gravel by major to minor west-flowing drainages and their tributaries (Norris and Webb, 1990).

According to the California Geological Survey Division of Mines and Geology Geologic Map of California – Santa Cruz Sheet (1958), the Project Site is underlain by Quaternary (Recent) basin deposits.

The USDA Soil Survey of Fresno County, California, Western Part, 2006, identifies the native soil type for the eastern half of the Project Site as Tranquillity clay, saline-sodic, wet, 0 to 1 percent slopes, and the soil type for the western half of the Project Site as Calflax clay loam, saline-sodic, wet, 0 to 1 percent slopes. Tranquillity clay, saline-sodic, wet, occurs in alluvial fan skirts and is derived from the erosion of calcareous sedimentary rock. Surface runoff is high; and permeability is very slow. Calflax clay loam, saline-sodic, wet, occurs in alluvial fan skirts and is derived from the erosion of calcareous sedimentary rock. Surface runoff is low; and permeability is moderately slow.

According to available groundwater levels obtained from the California State Water Resources Control Board (SWRCB) GeoTracker website, the average depth to groundwater for a property located approximately ½ mile south of the Project Site is reported to be approximately 20 feet below ground surface (bgs), and flows in a northeast direction (BSK, Jan. 2012).

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## 2.8 SURROUNDING PROPERTY LAND USE

The Project Site is bordered to the north by a City of Mendota stormwater retention basin; to the east by agricultural property; to the south by Bass Avenue and residential development; and to the west by a United Health Care Facility and residential development.

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## 3.0 BACKGROUND

### 3.1 SITE HISTORY

Padre completed a Phase I environmental site assessment (ESA) for the Project Site dated August 8, 2012. Based on a review of historical aerial photographs and topographic maps, Padre concluded that the Project Site has historically been used for agricultural purposes from approximately the 1950s through the 1980s; and that no buildings or structures have been constructed onsite. A review of the Environmental Data Resources, Inc. (EDR) Radius Map Report obtained from Environmental Data Resources of Milford, Connecticut did not identify any facilities in the database records search within a one-mile radius of the Project Site that presented a REC to the Project Site.

The Phase I ESA report concluded that the DTSC will require the completion of a Preliminary Environmental Assessment (PEA) to address the potential residual pesticides in surface soils from former agricultural use. An electronic copy of the Phase I ESA report was submitted to DTSC.

### 3.2 POTENTIAL ENVIRONMENTAL CONCERNS

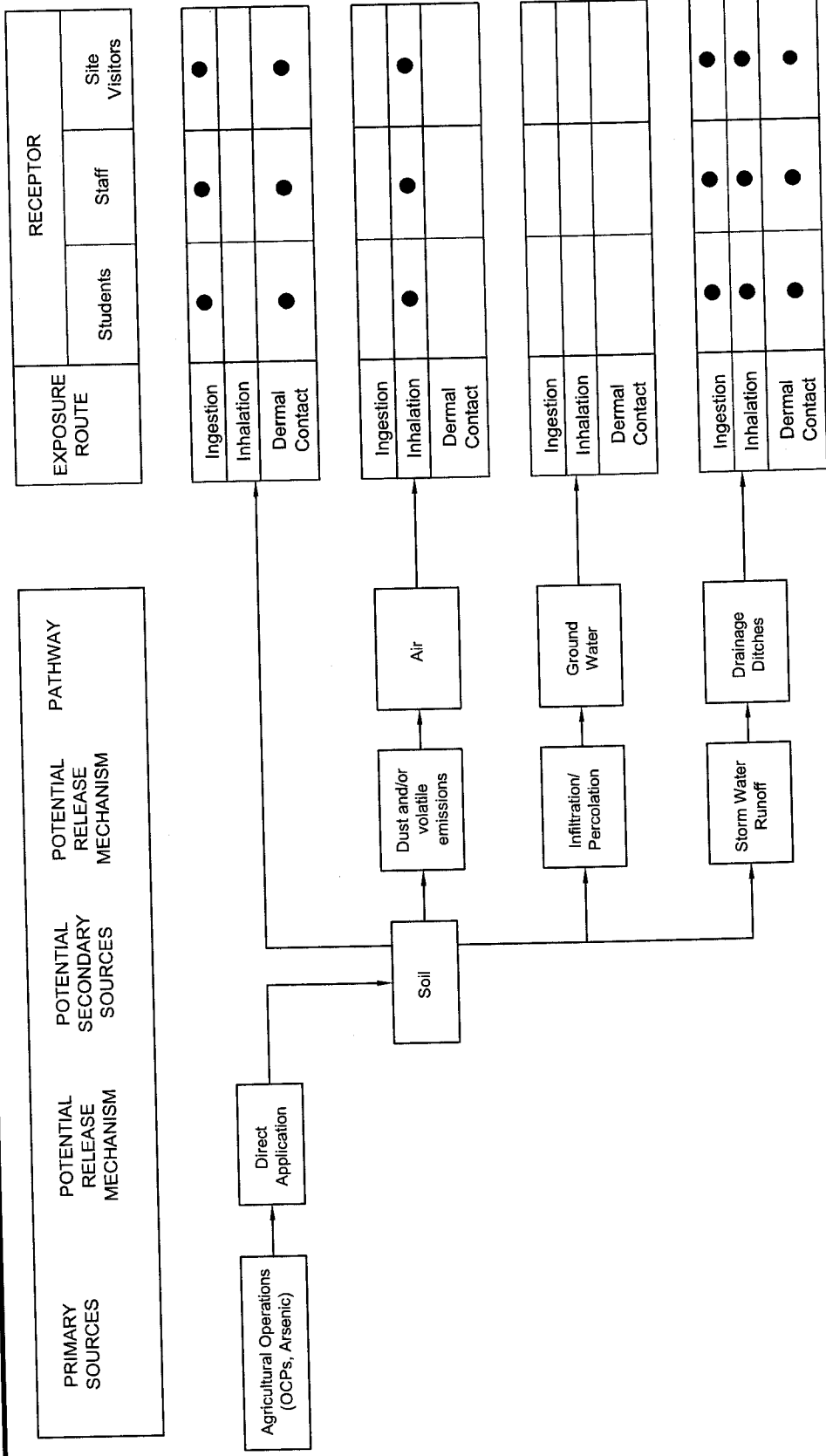
Potential environmental concerns identified at the Project Site have been determined based on available information regarding past agricultural activities, including the application of agricultural chemicals on crops. Residual concentrations of agricultural chemicals in surface soils may potentially pose health risks via ingestion, dermal contact, and inhalation exposure pathways. Selected soil samples were chemically analyzed for the presence of organochlorine pesticides (OCPs) and arsenic.

#### 4.0 CONCEPTUAL SITE MODEL

The conceptual site model is the tool used to identify the complete exposure pathways for the screening level evaluation of chronic health risks. The objective of this PEA is to evaluate the Project Site for an unrestricted land use scenario. The conceptual site model for the Project Site was developed based on the following assumptions:

- The Project Site has historically been used for agricultural purposes from approximately the 1950s through the 1980s. Therefore sampling for OCPs and arsenic in surface soil was proposed;
- The Project Site's eastern and southern property boundaries are bordered by drainage channels that are included as part of the Project Site. Sampling sediment within these drainage features for OCPs and arsenic was proposed;
- There is an approximately 4,000 cubic-yard soil stockpile located near the center of the Project Site. The soil pile was generated during the rough grading of the city designated streets for a previously planned 63-unit residential development project. Sampling of the soil stockpile for the presence of OCPs and arsenic was proposed;
- No building structures were identified to have occupied the Project Site either currently or historically. Therefore, sampling for lead in soil from weathering of lead-based paint; and sampling for termiticides in soil was not proposed;
- No electrical transformers, either pad-mounted and/or pole-mounted were identified on the Project Site. Therefore sampling of polychlorinated biphenyls (PCBs) in soil was not proposed;
- The occurrence of ultramafic rock outcrops has not been identified within 10-miles of the Project Site. Therefore, sampling for naturally occurring asbestos (NOA) in soil was not proposed;
- The elementary school will be provided public drinking water and irrigation water by the City of Mendota. Therefore, groundwater sampling is not proposed;
- Surface water was not observed during Padre's site reconnaissance. Therefore, exposure to surface water was not considered a complete exposure pathway;
- Imported fill-material is not planned for development of the Project Site; and
- Ingestion of vegetation and animals was not considered a complete exposure pathway because of the proposed use as a school site.

The conceptual site model is presented as Plate 4-1, and shows that exposure to soils containing OCPs and arsenic may be possible along the inhalation, ingestion and dermal contact pathways.



EXPOSURE ROUTE	RECEPTOR		
	Students	Staff	Site Visitors

Ingestion	●	●	●
Inhalation			
Dermal Contact	●	●	●

Ingestion			
Inhalation	●	●	●
Dermal Contact			

Ingestion			
Inhalation			
Dermal Contact			

Ingestion	●	●	●
Inhalation	●	●	●
Dermal Contact	●	●	●

NOTE: This Conceptual Site Model represents a residential scenario, as required for school sites.

PLATE 4-1  
CONCEPTUAL SITE MODEL

PROPOSED SCHOOL SITE 'C' NORTH OF BASS AVE. AND EAST OF BARBOZA ST. MENDOTA, FRESNO COUNTY, CALIFORNIA		DR. BY AC	APP. BY AJK
PROJECT NO. 1201-0874	DATE 11/30/12		

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## 5.0 PEA ASSESSMENT

On November 13, 2012 Padre performed soil sampling activities at the Project Site in accordance with the DTSC-approved PEA workplan prepared by Padre and dated September 21, 2012. A copy of the field sampling procedures and QA/QC procedures are presented in Appendix C.

Residents in the immediate area of the Project Site were notified in writing prior to the initiation of field activities at the Project Site. At the time of field sampling activities, Project Site conditions consisted of a weed covered vacant lot.

### 5.1 SAMPLE LOCATIONS

The soil sample collection locations are shown on Plates 5-1. The latitudinal and longitudinal coordinates of each sample location were identified using a Garmin Forerunner 405 handheld electronic navigating device, operating with the United States Government's Global Positioning Satellite system. The sample locations by latitude and longitude are presented in Table 5-1. Specific sample locations are described below.

#### 5.1.1 Soil Sampling

The PEA work plan was implemented in general accordance with the guidelines of the California DTSC, as detailed in the *PEA Guidance Manual* (January 1994, second printing June 1999) and DTSC's *Interim Guidance for Sampling Agricultural Properties (Third Revision)*, dated April 30, 2008. Based on consultation with DTSC the following soil sampling plan was implemented:

- Surface soil samples were collected at eight locations from areas of the Project Site that are considered native grade surface areas;
- Surface soil samples were collected at eight locations from areas of the Project Site that have been graded to a lower depth for planned residential streets and are considered street grade surface areas;
- Surface soil samples were collected at two locations from the drainage ditch located along Bass Avenue;
- Soil samples were collected at four representative locations from the soil stockpile; and
- All discrete soil samples (22) were be analyzed for OCPs and arsenic.

The soil sample locations are presented on Plate 5-1.

### **5.1.2 Quality Analysis/Quality Control Samples**

One equipment blank sample and one field blank sample per soil sampling event (water samples) were also collected and analyzed for the presence of arsenic and lead. The collection of these samples is discussed in more detail in Section 6.0 of this work plan, and a quality assurance project plan (QAPP) is presented in Appendix C.

## **5.2 SAMPLE COLLECTION**

### **5.2.1 Soil Sample Collection**

Padre collected soil samples using hand sampling tools including a hand pick. Soil sampling equipment was decontaminated prior to each sample collection location and sampling event. Soil samples were collected in 2-inch x 6-inch stainless steel sleeves.

Soil sample sleeves and water sample containers were sealed, initialed, labeled with the time and date of collection, project number, and a unique sample identification number, then placed on ice, in a cooler, for delivery to the analytical laboratory under chain-of-custody protocol.

### **5.2.2 Decontamination Procedures**

All equipment that came into contact with potentially contaminated soil was decontaminated consistently so as to assure the quality of samples collected. Disposable equipment intended for one time use was not decontaminated, but was packaged for appropriate disposal. Decontamination occurred prior to and after each use of a piece of equipment. All sampling devices used were decontaminated using the following procedures:

- Non-phosphate detergent and tap water wash, in a 5-gallon plastic bucket, using a brush;
- Deionized/distilled water rinse, in a 5-gallon plastic bucket; and
- Final deionized/distilled water rinse in a 5-gallon plastic bucket.

At the completion of sampling activities the small amount of wash water was dispersed to the ground surface.

## **5.3 SAMPLE ANALYSES**

The sampling schedule is summarized in Table 5-2. Analytical methods, types of containers, preservative, and holding times are summarized in Table 5-3. The laboratory analytical program consisted of chemical analyses of soil samples collected from the Project Site for the presence of:

- OCPs by U.S. Environmental Protection Agency (EPA) Method 8081A; and
- Arsenic by U.S. EPA Method 6020.

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One equipment blank (water sample) and one field blank (water sample) per soil sample event were analyzed for the presence of:

- Arsenic by U.S. EPA Method 200.8.

Detection limits listed in the following DTSC documents were met by each analytical laboratory:

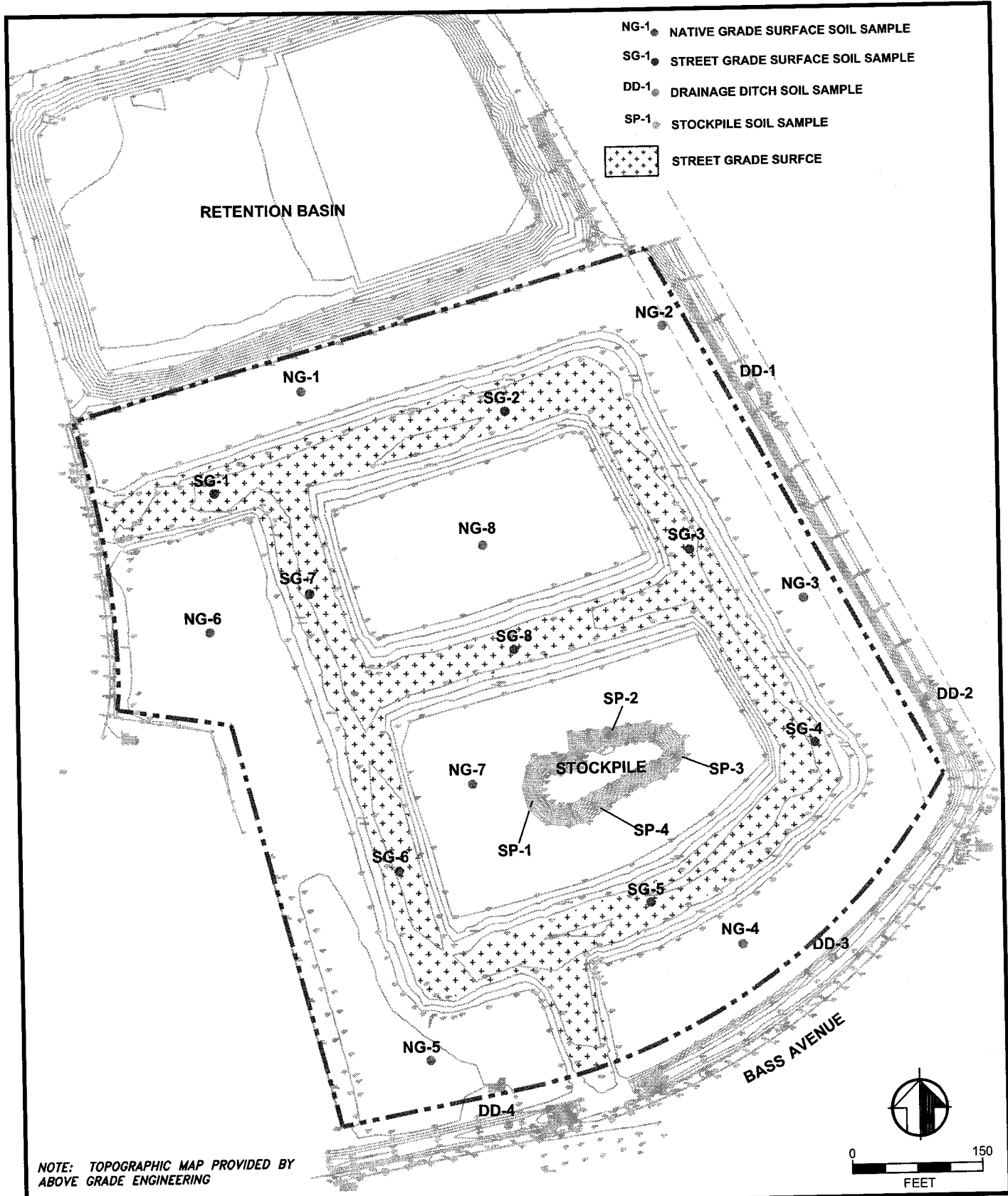
- DTSC's *Interim Guidance for Sampling Agricultural Properties (Third Revision)* dated April 30, 2008.

### **5.3.1 Chain-of-Custody Records**

Chain-of-custody (COC) records are used to document sample collection and shipment to the laboratory for analysis. A COC record accompanied all samples delivered for analysis to California Laboratory Services (CLS) located in Rancho Cordova, California. The COC record identified the contents of each shipment and maintained the custodial integrity of the samples. Generally, a sample is considered to be in someone's custody if it is either in someone's physical possession, in someone's view, locked up, or kept in a secured area that is restricted to authorized personnel. Until receipt by the laboratory, the custody of the samples was the responsibility of the sample collector.

### **5.4 FIELD VARIANCES**

During the course of the PEA field sampling activities, there was one modification to the sampling plan due to a change in the description of the Project Site property boundaries. The drainage ditch located along the eastern property boundary is no longer included in the legal description of the Project Site (Appendix B). Therefore, the drainage ditch soil samples DD-1 and DD-2 (shown on Plate 5-1) were not collected. Padre notified DTSC regarding this change prior to the start of field activities at the Project Site.



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PROPOSED SCHOOL SITE 'C' NORTH OF BASS AVE. AND EAST OF BARBOZA ST. MENDOTA, FRESNO COUNTY, CALIFORNIA			
PROJECT NO.	DATE	DR. BY	APP. BY
1201-0874	10/19/12	AC	AJK

PLATE 5-1  
**SOIL AND SEDIMENT  
 SAMPLING PLAN**

**Table 5-1. Sample Locations by Latitude and Longitude**

Sample Identification	Coordinates	
	Latitude	Longitude
NG-1	36.7681	-120.3828
NG-2	36.7683	-120.3813
NG-3	36.7673	-120.3807
NG-4	36.7664	-120.3811
NG-5	36.7659	-120.3821
NG-6	36.7674	-120.3830
NG-7	36.7669	-120.3823
NG-8	36.7675	-120.3820
SG-1	36.7678	-120.3830
SG-2	36.7680	-120.3821
SG-3	36.7676	-120.3813
SG-4	36.7669	-120.3808
SG-5	36.7665	-120.3814
SG-6	36.7664	-120.3824
SG-7	36.7675	-120.3828
SG-8	36.7673	-120.3819
DD-3	36.7663	-120.3807
DD-4	36.7658	-120.3820
SP-1	36.7668	-120.3819
SP-2	36.7670	-120.3816
SP-3	36.7669	-120.3813
SP-4	36.7668	-120.3816

**Table 5-2. Field Sampling Schedule**

Sample Matrix and Test Method	Sample Depth	Number of Samples	Sample Location	Submittal Status
Soil - Organochlorine Pesticides U.S. EPA Method 8081A, and Arsenic U.S. EPA Method 6020.	Native Grade Samples: (surface to 0.5 feet)	8 (discrete)	NG-1, NG-2, NG-3, NG-4, NG-5, NG-6, NG-7, and NG-8	Analyze
	Street Grade Samples (surface to 0.5 feet)	8 (discrete)	SG-1, SG-2, SG-3, SG-4, SG-5, SG-6, SG-7, and SG-8	
	Drainage Ditch Samples (surface to 0.5 feet)	4 (discrete)	DD-3, and DD-4	
	Soil Stockpile Samples (representative)	4 (discrete)	SP-1, SP-2, SP-3, and SP-4	
Water - Arsenic U.S. EPA Method 200.8	--	1 sample per event	Equipment Blank	Analyze
	--	1 sample per event	Field Blank	

**Table 5-3. Sample Collection Information**

Sample Matrix and Test Method	Container	Preservative	Holding Time From Sample Collection to Extraction
<b>Soil</b>			
OCPs U.S. EPA Method 8081A	2 inch x 6 inch stainless steel sample sleeves and plastic end caps	Ice	14 days
Arsenic U.S. EPA Method 6020	2 inch x 6 inch stainless steel sample sleeves and plastic end caps	Ice	180 days
<b>Water</b>			
Arsenic U.S. EPA Method 200.8	250 mL Poly Bottle	HNO <sub>3</sub> / Ice	180 days

## 6.0 FINDINGS

The following sections describe the results of the field sampling activities performed at the Project Site on November 13, 2012. The laboratory analytical results are also summarized in Tables 6-1 and 6-2. Certified analytical laboratory reports and chain-of-custody documentation are provided in Appendix D.

### 6.1 SOIL SAMPLING RESULTS

The following subsections describe soil sample analytical results, locations, and depth intervals for each sample collected at the Project Site.

#### 6.1.1 OCPs

Discrete soil samples were collected at sixteen locations across the Project Site, and two discrete soil samples were collected from within the south drainage channel at depths of surface to 0.5 feet. Four discrete soil samples were collected from the soil stockpile. The collected soil samples were chemically analyzed for the presence of OCPs by U.S. EPA Method 8081A. Results of the laboratory analyses are summarized in Table 6-1 and below:

- OCPs were not detected at concentrations at or above their respective analytical reporting limits.

#### 6.1.2 Arsenic

At sixteen locations discrete soil samples were collected across the Project Site, and two discrete soil samples were collected from within the south drainage channel at depths of surface to 0.5 feet. Four discrete soil samples were collected from the soil stockpile. The collected soil samples were chemically analyzed for the presence of arsenic by U.S. EPA Method 6020. Results of the laboratory analysis are summarized in Table 6-2 and below.

- Arsenic was detected at concentrations ranging from 2.4 to 7.6 milligrams per kilogram (mg/kg).

### 6.2 QA/QC SAMPLES

#### 6.2.1 Equipment Blank

Distilled water was used as rinseate for decontaminating sampling equipment. The equipment blank sample was collected by pouring rinseate water over and through recently cleaned equipment, and collected directly into the appropriate sample container.

One equipment blank samples was collected and chemically analyzed for arsenic by U.S. EPA Method 200.8. The results of the laboratory analysis are summarized below.



- 
- The laboratory analyses did not identify arsenic above the analytical reporting limits. The reporting limit for arsenic was 2.0 micrograms per liter ( $\mu\text{g/l}$ ).

### 6.2.2 Field Blank

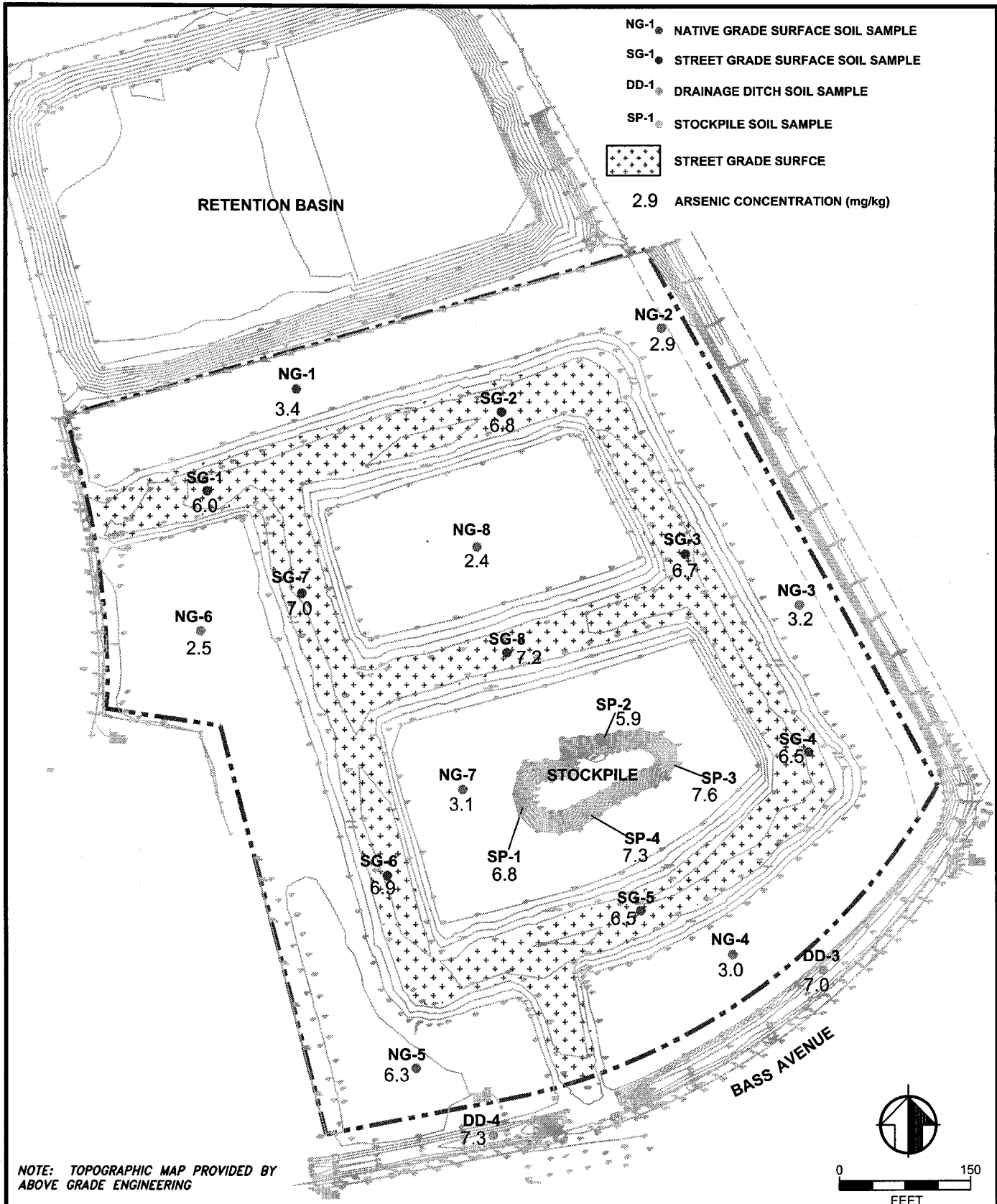
Distilled water was used as rinseate for decontaminating sampling equipment. The field blank sample was collected by pouring rinseate water into the appropriate sample container.

One field blank samples was collected and chemically analyzed for arsenic by U.S. EPA Method 200.8. The results of the laboratory analysis are summarized below.

- The laboratory analyses did not identify arsenic above the analytical reporting limits. The reporting limit for arsenic was 2.0  $\mu\text{g/l}$ .

### 6.2.3 Laboratory QA/QC

A cover letter with the signature of the laboratory director accompanies every laboratory report received for this project. According to the lab director, samples were analyzed utilizing EPA or other ELAP approved methodologies, and that the results are in compliance both technically and for completeness. The data quality objectives (DQO) met by the analytical laboratory for this project was level II.



NOTE: TOPOGRAPHIC MAP PROVIDED BY ABOVE GRADE ENGINEERING

**padre**  
 associates, inc.  
 ENGINEERS, GEOLOGISTS &  
 ENVIRONMENTAL SCIENTISTS

**PROPOSED SCHOOL SITE 'C'**  
 NORTH OF BASS AVE. AND  
 EAST OF BARBOZA ST.  
 MENDOTA, FRESNO COUNTY, CALIFORNIA

PROJECT NO.	DATE	DR. BY	APP. BY
1201-0874	12/4/12	AC	AJK

PLATE 6-1  
**SOIL AND SEDIMENT  
 SAMPLING RESULTS**

**Table 6-1. Soil Results of OCPs Analyses  
(results in µg/kg)**

Sample Identification	Aldrin	alpha-BHC	beta-BHC	delta-BHC	Lindane	Chlordane-technical	DDD	DDE	DDT	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan Sulfate	Endrin	Endrin Aldehyde	Heptachlor	Heptachlor Epoxide	Methoxychlor	Mirex	Toxaphene
<b>Native Grade Soil Samples</b>																				
NG-1 (Surf)	<10	<20	<100	<100	<100	<200	<150	<150	<150	<10	<150	<150	<150	<150	<150	<50	<20	<150	<100	<200
NG-2 (Surf)	<10	<20	<100	<100	<100	<200	<150	<150	<150	<10	<150	<150	<150	<150	<150	<50	<20	<150	<100	<200
NG-3 (Surf)	<10	<20	<100	<100	<100	<200	<150	<150	<150	<10	<150	<150	<150	<150	<150	<50	<20	<150	<100	<200
NG-4 (Surf)	<10	<20	<100	<100	<100	<200	<150	<150	<150	<10	<150	<150	<150	<150	<150	<50	<20	<150	<100	<200
NG-5 (Surf)	<10	<20	<100	<100	<100	<200	<150	<150	<150	<10	<150	<150	<150	<150	<150	<50	<20	<150	<100	<200
NG-6 (Surf)	<10	<20	<100	<100	<100	<200	<150	<150	<150	<10	<150	<150	<150	<150	<150	<50	<20	<150	<100	<200
NG-7 (Surf)	<10	<20	<100	<100	<100	<200	<150	<150	<150	<10	<150	<150	<150	<150	<150	<50	<20	<150	<100	<200
NG-8 (Surf)	<10	<20	<100	<100	<100	<200	<150	<150	<150	<10	<150	<150	<150	<150	<150	<50	<20	<150	<100	<200
<b>Street Grade Soil Samples</b>																				
SG-1 (Surf)	<10	<20	<100	<100	<100	<200	<150	<150	<150	<10	<150	<150	<150	<150	<150	<50	<20	<150	<100	<200
SG-2 (Surf)	<10	<20	<100	<100	<100	<200	<150	<150	<150	<10	<150	<150	<150	<150	<150	<50	<20	<150	<100	<200
SG-3 (Surf)	<10	<20	<100	<100	<100	<200	<150	<150	<150	<10	<150	<150	<150	<150	<150	<50	<20	<150	<100	<200
SG-4 (Surf)	<10	<20	<100	<100	<100	<200	<150	<150	<150	<10	<150	<150	<150	<150	<150	<50	<20	<150	<100	<200
SG-5 (Surf)	<10	<20	<100	<100	<100	<200	<150	<150	<150	<10	<150	<150	<150	<150	<150	<50	<20	<150	<100	<200
SG-6 (Surf)	<10	<20	<100	<100	<100	<200	<150	<150	<150	<10	<150	<150	<150	<150	<150	<50	<20	<150	<100	<200
SG-7 (Surf)	<10	<20	<100	<100	<100	<200	<150	<150	<150	<10	<150	<150	<150	<150	<150	<50	<20	<150	<100	<200
SG-8 (Surf)	<10	<20	<100	<100	<100	<200	<150	<150	<150	<10	<150	<150	<150	<150	<150	<50	<20	<150	<100	<200
<b>Drainage Ditch Soil Samples</b>																				
DD-3 (Surf)	<10	<20	<100	<100	<100	<200	<150	<150	<150	<10	<150	<150	<150	<150	<150	<50	<20	<150	<100	<200
DD-4 (Surf)	<10	<20	<100	<100	<100	<200	<150	<150	<150	<10	<150	<150	<150	<150	<150	<50	<20	<150	<100	<200

**Table 6-1. Soil Results of OCPs (continued)  
(results in µg/kg)**

Sample Identification	Aldrin	alpha-BHC	beta-BHC	delta-BHC	Lindane	Chlordane-technical	DDD	DDE	DDT	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan Sulfate	Endrin	Endrin Aldehyde	Heptachlor	Heptachlor Epoxide	Methoxychlor	Mirex	Toxaphene
Stockpile Soil Samples																				
SP-1	<10	<20	<100	<100	<100	<200	<150	<150	<150	<10	<150	<150	<150	<150	<150	<50	<20	<150	<100	<200
SP-2	<10	<20	<100	<100	<100	<200	<150	<150	<150	<10	<150	<150	<150	<150	<150	<50	<20	<150	<100	<200
SP-3	<10	<20	<100	<100	<100	<200	<150	<150	<150	<10	<150	<150	<150	<150	<150	<50	<20	<150	<100	<200
SP-4	<10	<20	<100	<100	<100	<200	<150	<150	<150	<10	<150	<150	<150	<150	<150	<50	<20	<150	<100	<200
CHHSL	33	--	--	--	500	430	2,300	1,600	1,600	35	--	--	--	--	--	130	--	--	--	460

Notes:  
ug/kg – micrograms per kilogram  
CHHSL – California Human Health Screening Level

**Table 6-2. Results of Arsenic Analyses  
 (results in mg/kg)**

Sample Identification	Matrix	Arsenic
U.S. EPA Method		6020
NG-1 (Surf)	Soil	3.4
NG-2 (Surf)	Soil	2.9
NG-3 (Surf)	Soil	3.2
NG-4 (Surf)	Soil	3.0
NG-5 (Surf)	Soil	6.3
NG-6 (Surf)	Soil	2.5
NG-7 (Surf)	Soil	3.1
NG-8 (Surf)	Soil	2.4
SG-1 (Surf)	Soil	6.0
SG-2 (Surf)	Soil	6.8
SG-3 (Surf)	Soil	6.7
SG-4 (Surf)	Soil	6.5
SG-5 (Surf)	Soil	6.5
SG-6 (Surf)	Soil	6.9
SG-7 (Surf)	Soil	7.0
SG-8 (Surf)	Soil	7.2
SP-1	Soil	6.8
SP-2	Soil	5.9
SP-3	Soil	7.6
SP-4	Soil	7.3
DD-3	Soil	7.0
DD-4	Soil	7.3
DTSC School Site Risk Management Screening Level	Soil	12 mg/kg

---

## 7.0 HUMAN HEALTH SCREENING EVALUATION

The results of the PEA did not identify OCPs in soil at the Project Site at concentrations at or above the analytical method reporting limits. Arsenic was detected in soil samples collected from the Project Site at concentrations ranging from 2.4 to 7.6 mg/kg. The arsenic results support the conceptual site model, and did not exceed the school site risk management screening level of 12 mg/kg. Therefore, arsenic is not considered a COPC.

## 8.0 ECOLOGICAL SCREENING

A detailed ecological screening evaluation was not performed during this PEA because the site has historically been utilized for agricultural purposes. Natural wildlife habitat areas were not noted on the Project Site during the PEA. Therefore, based on the available information, there does not appear to be a significant pathway of exposure to nonhuman, sensitive ecological species.

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## 9.0 CONCLUSIONS AND RECOMMENDATIONS

The purpose of this PEA was to establish whether a release or potential release of hazardous substances, which pose a threat to human health, exists at the Project Site.

Based on historical agricultural activities at the Project Site, shallow surface soil samples were chemically analyzed for the presence of OCPs and arsenic. The potential exposure pathways identified at the Project Site were inhalation of contaminated particulates, and ingestion and dermal contact of residual pesticide and metals containing soils.

The results of the soil sampling activities did not identify the presence of OCP concentrations at or above the analytical method reporting limits. Therefore, OCPs are not considered COPCs.

Arsenic concentrations ranged from 2.4 to 7.6 mg/kg in soil samples collected from the Project Site. Because arsenic results for the Project Site are below concentrations of 12 mg/kg, which represents DTSC's school site risk management screening level, arsenic is not considered a COPC.

The PEA screening level risk assessment indicates that the Project Site has not been significantly impacted by agricultural practices. Therefore, Padre recommends the issuance of a "No Further Action" designation from the DTSC regarding the proposed elementary school site.



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## 10.0 REFERENCES AND PERSONS CONSULTED

- California Department of Toxic Substances Control, Envirostor Database.
- California Department of Water Resources (<http://www.water.ca.gov/waterdatalibrary/>)
- California Geological Survey, *A General Location Guide For Ultramafic Rocks in California - Areas More Likely to Contain Naturally Occurring Asbestos*. Open File Report 2000-19, 2000.
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- City of Mendota, General Plan Update 2005-2025, August 2009.
- City of Mendota, Public Works Department, Cristian Gonzalez.
- County of Fresno, Agricultural Commissioner's Office.
- County of Fresno, Assessor's Office.
- Department of Toxic Substances Control, Mr. Neal Hutchinson – Project Manager
- Department of Toxic Substances Control, *Interim Guidance for Sampling Agricultural Properties (Third Revision)*, April 30, 2008.
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- Google Earth.
- Hutchison, Neal, Project Manager, Department of Toxic Substances Control, Comments to Draft PEA Work Plan, October 12, 2012.
- Jennings, C.W., Fault Activity Map of California and Adjacent Areas, California Division of Mines and Geology, 1994.
- Jennings and Bryant, Fault Activity Map of California, California Geological Survey, 2010.
- Norris, R. M., & R. W. Webb, 1976 (Second Edition 1990), *Geology of California*, John Wiley & Sons, New York, pp. 412-427.

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San Joaquin Valley Air Pollution Control District, Donny Hockett.

State of California Division of Oil, Gas, and Geothermal Resources Regional Maps, <http://www.consrv.ca.gov/DOG/index.htm>.

State Water Resources Control Board Geotracker website (<http://geotracker.swrcb.ca.gov>)

U.S. Geological Survey, Topographic Map; Firebaugh Quadrangle, California, 1956, photorevised 1984.

United State Department of Agriculture, National Resources Conservation Service, Soil Survey of Fresno County, California, Western Part, 2006.

**APPENDIX A**  
**DTSC CORRESPONDENCE**

---



Department of Toxic Substances Control



Matthew Rodriguez  
Secretary for  
Environmental Protection

Deborah O. Raphael, Director  
8800 Cal Center Drive  
Sacramento, California 95826



Edmund G. Brown Jr.  
Governor

October 30, 2012

Mr. Michael Crass, Superintendent  
Mendota Unified School District  
115 McCabe Avenue  
Mendota, California 93640-2000

APPROVAL OF PRELIMINARY ENVIRONMENTAL ASSESSMENT WORKPLAN,  
MENDOTA SCHOOL SITE C, NORTH OF BASS AVENUE AND EAST OF BARBOZA  
STREET, MENDOTA, (SITE CODE 104709)

Dear Mr. Crass:

The Department of Toxic Substances Control (DTSC) has reviewed the revised *Preliminary Environmental Assessment (PEA) Workplan for Mendota School Site C* (Padre Associates, Inc., September 2012) received October 30, 2012. The PEA workplan was revised in response to DTSC comments on the draft workplan that were submitted to the District in an e-mail dated October 12, 2012. The PEA workplan includes site background information and a field sampling plan for the proposed PEA investigation activities.

The 14.2 acre site was used for agriculture purposed since the 1950s to 1980s, with no known structures identified. The site has been partially developed with underground utilities for a planned residential development. The PEA investigation will focus on potential impacts to the site from chlorinated pesticides and arsenic used during farming activities. DTSC has determined that all comments were addressed in the revised PEA workplan and approves the workplan as final.

If site conditions differ from those presented in the approved work plan, additional work may be necessary. In accordance with California Education Code §17210.1(b), the District should provide notice to residents in the immediate area, approved in form by DTSC, at least five days in advance of field investigation activities. Please notify DTSC a minimum of 48 hours in advance of fieldwork or schedule changes.

Mr. Michael Crass  
October 30, 2012  
Page 2

If you have any questions regarding this project, you may contact me at (916) 255-4369  
or by e-mail at [hhutchis@dtsc.ca.gov](mailto:hhutchis@dtsc.ca.gov).

Sincerely,



Neal Hutchison  
Northern California Schools Unit  
Brownfields and Environmental Restoration Program

cc: (via e-mail)

Mr. Juan Koponen, Supervising HSE I  
Northern California Schools Unit  
[juan.koponen@dtsc.ca.gov](mailto:juan.koponen@dtsc.ca.gov)

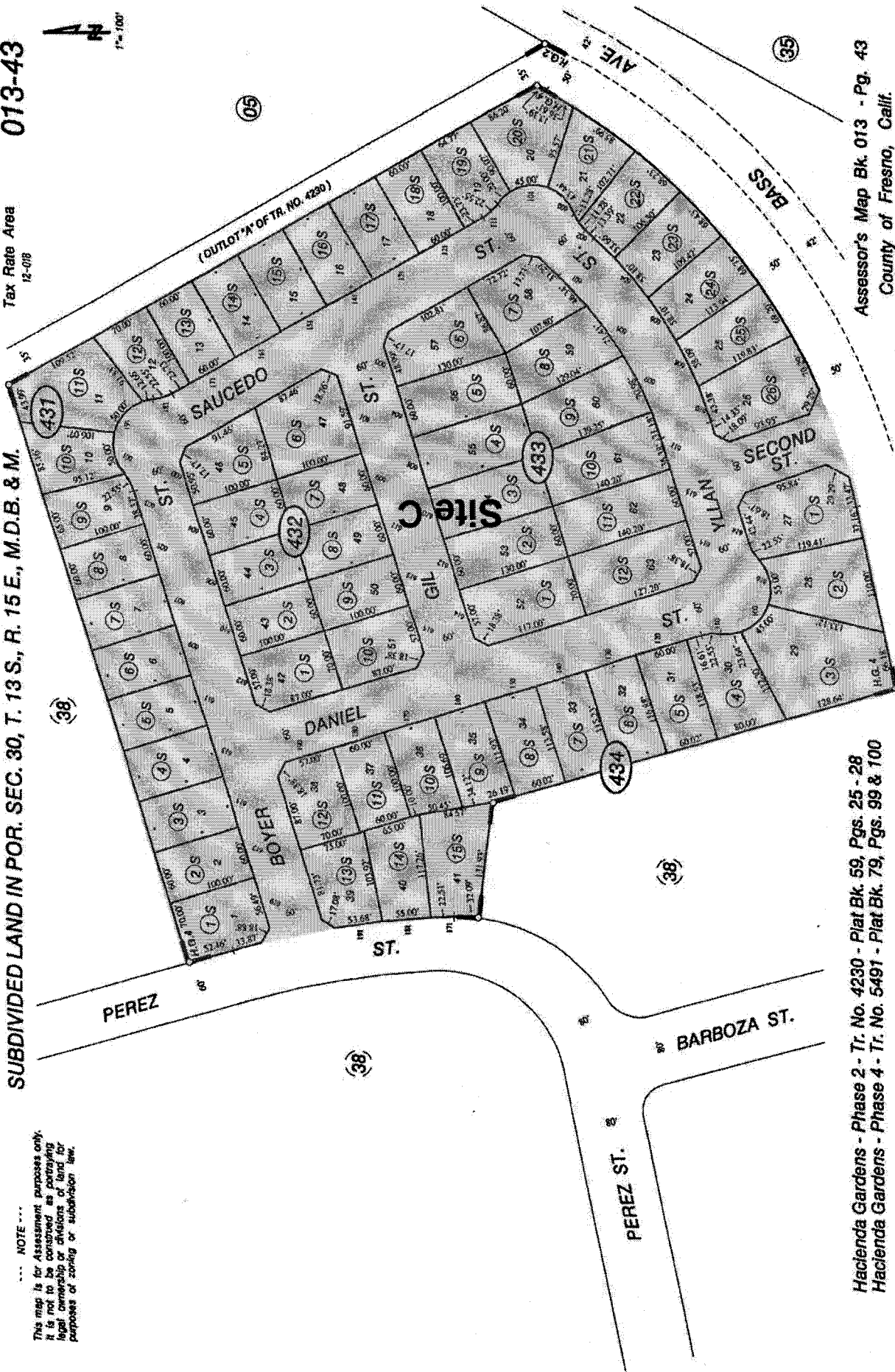
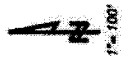
Mr. Thomas Booze, Ph.D., Staff Toxicologist  
HERO – Sacramento Office  
[thomas.booze@dtsc.ca.gov](mailto:thomas.booze@dtsc.ca.gov)

Mr. Alan Klein, Sr. Environmental Scientist  
Padre Associates, Inc.  
[aklein@padreinc.com](mailto:aklein@padreinc.com)

**APPENDIX B**  
**ASSESSOR'S PARCEL MAP AND LEGAL DESCRIPTION**

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... NOTE ...  
This map is for Assessment purposes only.  
It is not to be construed as conveying  
legal ownership or divisions of land for  
purposes of zoning or subdivision law.



Assessor's Map Bk. 013 - Pg. 43  
County of Fresno, Calif.

NOTE - Assessor's Block Numbers Shown in Ellipses.  
Assessor's Parcel Numbers Shown in Circles.

Hacienda Gardens - Phase 2 - Tr. No. 4230 - Plat Bk. 59, Pgs. 25 - 28  
Hacienda Gardens - Phase 4 - Tr. No. 5491 - Plat Bk. 79, Pgs. 99 & 100

**EXHIBIT "A"**

**LEGAL DESCRIPTION**

That real property in the City of Mendota, County of Fresno, State of California, described as follows:

That portion of Outlot "A" of Tract No. 4230, Hacienda Gardens – Phase 2 per map recorded November 2<sup>nd</sup>, 1995 in Volume 59 of Plats, pages 25, 26, 27 and 28 in the Office of the County Recorder of said County, described as follows:

That strip of land lying Southerly of the Southerly boundary of Lot 200 of the aforementioned Tract, bounded by the South-Easterly prolongation of the Westerly lot line of Lot 200 having a bearing of South 15°19'13" East and the North-Easterly prolongation of the Southerly lot line of said lot labeled as "L16" with a bearing of North 29°18'06" East, consisting of 1 acre, more or less.

The above described property is shown graphically on Exhibit B attached hereto.

**END OF LEGAL DESCRIPTION**

