APPENDIX G

Phase I ESA

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All Appropriate Inquiry-
Phase 1 Environmental Site Assessment
Leisure Town Road and Elmira Road
Vacaville, California

APN 0135-070-030 & 050

Prepared for:

Hartford Land Management
7509 Madison Avenue, Suite B-108
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Prepared by:

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1.0 EXECUTIVE SUMMARY

Pursuant to the request and assignment of Hartford Land Management, Harris & Lee Environmental Sciences has performed a Phase 1 Environmental Site Assessment on the property identified as Solano County Assessor's Parcel Numbers 0135-070-030 & 050. These parcels of land are located in the unincorporated areas of Solano County in California. There are no applicable street addresses for these parcels.

The purpose of this All Appropriate Inquiry, Environmental Site Assessment Phase 1 Investigation is to provide information as to the Recognized Environmental Conditions on or near the subject property noted above. Recognized Environmental Conditions are defined with respect to the range of contaminants within the scope of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and petroleum products. This Environmental Site Assessment follows the guidelines established by the American Society for Testing and Materials (ASTM) in the document entitled "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process" and designated E 1527-05. As such, this assessment is intended to permit a user to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner, or bona fide prospective purchaser protection as noted in CERCLA and the California Health and Safety Code; that is the "all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice as defined at 42 U.S. C. 9601(35)(B).

The Scope of Service for this Phase I Environmental Site Assessment consists of four overall tasks:

Task I: Research and review of regulatory information
Task II: A site reconnaissance of subject and nearby property
Task III: Interviews of persons with knowledge of subject and surrounding property
Task IV: Preparation of the final Environmental Site Assessment report

Site Description and Current Use
The subject property is located in the unincorporated area of Solano County. It is approximately 2.8 miles to the east of U. S. Highway 80 off Elmira Road and about 2.25 miles south of U.S. Highway 80 off of Leisure Town Road. The general characteristic of the property's vicinity is agricultural and rural residential. The site is currently used for agricultural farming.

Adjoining Properties Use
- **North:** Agricultural fields, Hawkins Road and a rural residential dwellings
- **East:** Meridian Road (dirt road) and agricultural fields
- **South:** A single-family rural residence and agricultural fields
- **West:** Byrnes Canal and Leisure Town Road**; w**est of Leisure Town Road are single family residences.

Land Use Designations
The zoning designation for the subject property is A40: Agriculture Use with minimum 40 acre size.

Zoning designations for the surrounding adjoining properties are also A40: Use with minimum 40 acre size.

Standard and Additional Environmental Records Search
The EDR report (attached to this document as a component of Exhibit G) did not identify any sites of concern.

Physical Setting
The elevation of the subject property is at 81 feet above sea level with the general topographic gradient towards the east-northeast. Soils consist of moderately well drained soils with moderate infiltration rates. The predominant regional groundwater flow direction in the Solano Sub-basin is undetermined due to several large pumping depressions and the advent of the Solano Project.

Historical and Present Use of Subject Property
Historically, the property appears to have been farmed from 1937 and possibly before.

Recognized Environmental Conditions
In the course of performing this All Appropriate Inquiry-Environmental Site Assessment, Phase 1 Investigation evidence of Recognized Environmental Conditions was not identified on the subject property.

Historical Recognized Environmental Conditions
One historical Recognized Environmental Condition was discovered on the subject property. This historical REC was the soil investigation and remediation in 1988 and 1989 on the subject property by Kleinfelder Associates, under the direction of the Sammis Company. Residual levels of Toxaphene, an Organochlorine pesticide, were left in the floor of the soil remediation excavation at 3.5 feet below ground surface. The excavation was back-filled with clean soil. The residual Toxaphene levels are slightly above the DTSC-developed California Human Health Screening Level for Toxaphene in residential soil. The residual Toxaphene levels appear to be confined to a portion of the approximate ½-acre portion on the property referred to as the Open Area. It was suspected that the Open Area was historically utilized for pesticide mixing and farm vehicle refueling.

De Minimis Conditions and Data Gaps:
No *de minimis* conditions and no data gaps were encountered.

Conclusions
Harris & Lee Environmental Sciences has performed an All Appropriate Inquires-Phase 1 Environmental Site Assessment in conformance with the scope and limitations of

ASTM Standard Practice E-1527-05 of the property within the designated as Solano County Assessor Parcels 0135-070-030 and 050.

In the course of performing this All Appropriate Inquiry-Environmental Site Assessment, Phase 1 Investigation evidence of Recognized Environmental Conditions was not identified on the subject property.

This report is governed by the Limitations set forth in Sections 2.4 and 2.5 of this report. This Executive Summary is not to be used without the accompaniment of the entire report.

2.0 INTRODUCTION

2.1 Purpose

Pursuant to the request and assignment of Hartford Land Management, Harris & Lee Environmental Sciences has performed a Phase 1 Environmental Site Assessment on the property identified as Solano County Assessor's Parcel Numbers 0135-070-030 & 050. These parcels of land are located in the unincorporated areas of Solano County in California. There are no available street addresses for these parcels.

The purpose of this All Appropriate Inquiry, Environmental Site Assessment Phase 1 Investigation is to provide information as to the Recognized Environmental Conditions on or near the subject property noted above. Recognized Environmental Conditions are defined with respect to the range of contaminants within the scope of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and petroleum products. This Environmental Site Assessment follows the guidelines established by the American Society for Testing and Materials (ASTM) in the document entitled "Standard Practice for Environmental Site Assessments: Phase 1 Environmental Site Assessment Process" and designated E-1527-05. As such, this assessment is intended to permit a user to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner, or bona fide prospective purchaser protection as noted in CERCLA and the California Health and Safety Code; that is the "all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice as defined at 42 U.S. C. 9601(35)(B).

Recognized Environmental Conditions are defined as:

"The presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, ground water, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include de minimis conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be de minimis are not recognized environmental conditions." (ASTM E 1527-05, § 1.1.1 and § 3.2.74)

Pursuant to the ASTM E-1527-05 Standard Practice for Environmental Site Assessments: Phase 1 Environmental Site Assessment Process, Recognized Environmental Conditions do not include Controlled Substances, Asbestos Containing

Materials or Lead-base paint or other non-CERCLA related conditions (i.e., regulatory compliance, wetlands, indoor air quality, vapor intrusion, etc.).

2.2 Scope of Services

The Scope of Services for this All Appropriate Inquiry, Environmental Site Assessment Phase 1 Investigation consists of four overall tasks:

Task I: Research and review of regulatory information
Task II: A site reconnaissance of subject and nearby properties
Task III: Interviews of persons with knowledge of subject and surrounding property
Task IV: Preparation of the final Environmental Site Assessment report

The Scope of Services for this All Appropriate Inquiry, Environmental Site Assessment, Phase 1 Investigation follows the Standard Practice for Environmental Site Assessments designated as E-1527-05 of the ASTM. Accordingly, the All Appropriate Inquiry, Environmental Site Assessment, Phase 1 Investigation is targeted towards the range of contaminants within the scope of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and petroleum products. As such, "all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice" as defined in 42 USC 9601(35)(B) is applied. However, an evaluation of business environmental risk associated with a parcel of commercial real estate may necessitate investigation beyond that identified in this assessment.

The Scope of Services includes observations for Recognized Environmental Conditions, as well as information that can be obtained from regulatory files that are obtainable without investigation into archives of the various agencies. Accordingly, it cannot be guaranteed that all files are examined or that every contingency is investigated. These limitations are in conformance with the stated guidelines of ASTM E 1527-05 § 8.1.4.1, § 8.1.4.2 and § 8.1.4.3.

The Records Review includes files available at state, county and local offices listed in Section 5.2 of this report. In some cases the status of a site is determined from telephone interviews of staff persons of these offices. The site reconnaissance consists of the subject property and the identification of nearby properties. Interviews are conducted of persons reasonably available at the time of the site reconnaissance, and on occasion, by telephone when such interviews are possible. The report follows the Standard Practice of ASTM E-1527-05.

The Scope of Services for this All Appropriate Inquiry, Environmental Site Assessment, Phase 1 Investigation does not include analysis of Controlled Substances (CS) or Asbestos Containing Materials (ACM), although if obvious visual indications of CS or ACM are observed, they are reported. Neither does the Scope of Services include analysis of the building constituents for Lead based paint or other non-CERCLA related

conditions (i.e., regulatory compliance, wetlands, indoor air quality, etc.). If there is suspicion that these substances or conditions may be present, professionals licensed to assess their presence should be contacted. Harris & Lee Environmental Sciences can supply references for such professionals, if requested.

2.3 Significant Assumptions

The All Appropriate Inquiry, Environmental Site Assessment, Phase 1 Investigation is intended to assess the environmental conditions of a specific parcel of commercial real estate. It is intended to constitute all appropriate inquiry for purposes of the CERCLA liability, i.e., innocent landowner, contiguous property owner or bona fide prospective purchaser limitations on CERCLA liability. This Phase 1 is intended to reflect a commercially prudent and reasonable inquiry designed to recognized environmental conditions in connection with a property.

2.4 Limitations and Exceptions

The Scope of Services performed to complete this All Appropriate Inquiry, Environmental Site Assessment, Phase 1 Investigation was limited in nature. While we consider work of this type to be valuable in the preliminary evaluation of potential hazardous materials or waste at the site, we also must alert the Client that this study may not reveal hazardous materials releases that have occurred. Also, the site conditions can change with time, and our assessment was not intended to predict future site conditions. Because of the limited nature of this assessment, this report is not a risk assessment and the Scope of Services does not include a determination of the extent of business environmental risk nor the public health impact of, known or suspected hazardous materials or wastes. This assessment does not address whether requirements in addition to all appropriate inquiry have been met in order to qualify for the innocent landowner, contiguous property owner or bona fide prospective purchaser limitations on liability protections under CERCLA. Furthermore, this assessment does not address requirements of state or local laws or federal laws other than the all appropriate inquiry provisions of the landowner liability protections. Client(s) are cautioned that federal, state and local laws may impose environmental assessment obligations that are beyond the scope of the all appropriate inquiry provisions of this assessment.

This service has been performed in accordance with generally accepted environmental investigation practices for similar investigations conducted at this time and in this geographic area. No other guarantees or warranties, expressed or implied are provided.

It is understood by the parties hereto that the Client who has requested this assessment will use the assessment (in addition to other information) to provide information to a lender, investors in the property, for the purposes of refinancing or purchasing said property or to satisfy regulatory agency requirements. Consultant intends no other use or disclosure. Client agrees to hold Consultant harmless for any inverse condemnation

or devaluation of said property that may result if the Consultant's report or information generated is used for other purposes. Also, this report is issued with the understanding that it is to be used only in its entirety.

2.5 User Reliance

Only Hartford Land Management, the financing institution providing financing for the purchase and redevelopment of the property and any pertinent regulatory agencies may rely upon this report. No other person or entity may rely upon the report without written consent of Harris & Lee Environmental Sciences.

2.6 Involved Parties

Cameron A. Stewart, the listed current owner of the property identified as Solano County Assessor's Parcel Numbers 0135-070-030 & 050, and Hartford Land Management, who retained Harris & Lee Environmental Sciences to conduct this All Appropriate Inquiry, Environmental Site Assessment, Phase 1 Investigation are the parties involved in this proposed transaction.

3.0 SITE DESCRIPTION

3.1 Site Locations and Description

Exhibit A is a vicinity map of the general area of the subject property. Exhibit B presents an Assessor's Parcel Map for the subject property. The Assessor's Parcel Numbers are 0135-070-030 & 050. The legal description of the subject property may be found in the title report, which is not included in this report.

Using the Earth's Grid System, the coordinates of the subject property location are:

Latitude (North): N 38.353800° - 38° 21' 13.7''
Longitude (West): W 121.924900° - 121° 55' 29.6''
Elevation: 84 feet above sea level

Using the Congressional Land Survey System (aka, U. S. Geological Survey rectangular system of subdivision of public land), the subject property's location may be described as:

A portion of the northwest ¼ and the northeast ¼ of Section 24, Township 6 North, Range 1 West in the Mount Diablo Baseline & Meridian in Solano County California; the USGS topographic map associated with this designation may be found in the Elmira Quadrangle.

3.2 Site and Vicinity General Characteristics

The subject property is located in the unincorporated area of Solano County. It is approximately 2.8 miles to the east of U. S. Highway 80 off Elmira Road and about 2.25 miles south of U.S. Highway 80 off of Leisure Town Road. The general characteristic of the property's vicinity is agricultural and rural residential.

3.3 Current Use of the Property

The subject property is used for agriculture farming.

3.4 Descriptions of Current Improvements

3.4.1 Structures

There are no structures on the subject property.

3.4.2 Roads

Hawkins Road: Hawkins Road is a two-lane county roadway that begins at the intersection with Leisure Town Road and traverses from west to east. Hawkins Road is on the northern boundary of the subject property with parcel 0135-070-030.

Leisure Town Road: Leisure Town Road traverses in a north-south direction, and is the primary exit from U.S. Highway 80 to access the subject property. It is the western terminus of Hawkins Road, to the north of the subject property, and Elmira Road to the south of the subject property.

Meridian Road: Meridian Road is a dirt road and traverses south from Hawkins Road to Elmira Road, a distance of about 3,600 feet. Meridian Road bounds the subject property to the east.

Elmira Road: Elmira Road traverses in an east west direction and bounds the subject property to the south. Its western terminus is at Leisure Town Road.

3.4.3 Sewage Disposal

Not Applicable.

3.4.4 Water Supply

The Solano Irrigation District provides water for agricultural irrigation for the farming operations on the subject property.

3.4.5 Heating and cooling systems

Not applicable.

3.4.6 Utilities

Not Applicable. Power lines are present through approximately the center of the subject properties and traverse in a north-south direction. No transformers appear to be on the power lines running through the subject property. Transformers are present on power poles adjacent and to the west of the subject property along Meridian Road. None of the transformers nearby appear to be PCB transformers, based on labeling of the transformers by Pacific Gas and Electric Company.

3.5 Commonly Known or Reasonably Ascertainable Information

According to the 40 CFR 312.10, "adjoining properties are defined as any real property or properties the border of which is (are) shared in part or in whole with that of the subject property, or that would be shared in part or in whole with that of the subject property but for a street, road, or other public thoroughfare separating the properties." Taking this definition into account, Table 3.4 lists the commonly known or reasonably ascertainable information about the subject properties and the adjoining properties; street boundaries are also identified.

Table 3.4: Commonly Known or Reasonably Ascertainable Information concerning the Subject and Adjoining Properties

Direction	APN	Address	Recorded Owner	Size Acres	Structure Year Sq-ft Story	Use	Zone
Site	0135-070-030	None	Cameron A. Stewart	148.01	None	Agricultural	A40
Site	0135-070-050	None	Cameron A. Stewart	99.96	None	Agricultural	A40
North	--	Byrnes Canal	Solano Irrigation District	60-feet wide	--	Irrigation	--
North	--	Hawkins Road	Solano County Road	60-feet wide	--	County Road	--
North	0135-070-040	None	Tanner Family Trust	62.09	None	Agricultural	A40

Direction	APN	Address	Recorded Owner	Size Acres	Structure Year Sq-ft Story	Use	Zone
East of APN 0135-070-030 & West of APN 0135-070-050	--	Locke Drain	Solano Irrigation District	45-feet wide	--	Irrigation	--
East of APN 0135-070-030 & West of APN 0135-070-050	--	Byrnes Canal	Solano Irrigation District	40-feet wide	--	Irrigation	--
East of APN 0135-070-050	--	Meridian Road	Solano County Road	60-feet wide	--	County Road	--
East & South of APN 0135-070-050	0135-070-060	6111 Meridian Road	Stephen M. Papin	6.48	1956 1,909 1-story	Single-Family Residence	A40
South	0135-070-080	--	Bay Ventures	50-feet wide lot; 6.30 acres	--	Industrial acreage	AG
South	--	Elmira Road	Solano County Road	60-feet wide	--	County Road	--
South & West	0135-070-020	6144 Leisure Town Road	Robert R. Papin	3.55	1990 1,680 1-story	Single-Family Residence	A40

Direction	APN	Address	Recorded Owner	Size Acres	Structure Year Sq-ft Story	Use	Zone
South & West	0135-070-010	6140 Leisure Town Road	Robert R. Papin	0.82	1950 1,206 1-story	Single-Family Residence	A40
West	--	Byrnes Canal	Solano Irrigation District	70-feet wide		Irrigation	--
West	--	Leisure Town Road	Solano County Road	60-feet wide		County Road	--

Information was obtained from RealQuest.com, the County of Solano Department of Resource Management and the City of Vacaville. Zoning Abbreviations: A40 -- Agriculture District (Solano County); AG – Agricultural (City of Vacaville).

4.0 USER PROVIDED INFORMATION

The purpose of this section is to identify general tasks that will help identify the possibility of recognized environmental conditions in connection with the subject property. The general tasks are 1) Searches for Environmental Liens; 2) Valuation Reduction for Environmental Issues; and 3) Assessments of Specialized Knowledge. These tasks do not require technical expertise and Environmental Professionals do not normally perform these tasks. These tasks are the responsibility of the client. However, the results of these tasks must be made available for the Environmental Professionals to review; if none are provided they will be identified as "data gaps". The Environmental Professional(s) are required to review these items in order to formulate an opinion regarding the obviousness of the presence or likely presence of contamination at the property or identify them as missing "data gaps."

4.1 Searches for Environmental Liens

Searches for environmental cleanup liens against the subject property that are filed or recorded under federal, tribal, state or local law as required under 40 CFR Part 312 Section 312.25.

40 CFR Part 312 Section 312.25(b) states: "All information collected regarding the existence of such environmental cleanup liens associated with the property must be provided to the environmental professional."

Preliminary Title Report

A contemporary title report was not provided or obtained in connection with this report. First American Title Company, 2300 Boynton Avenue, Suite 101, Fairfield, California

provided a Preliminary Title Report for review. The report Order Number is 606241sol and is updated through November 13, 2006.

As of the date of this report, no environmental liens were discovered in connection with the subject property.

4.2 Valuation Reduction for Environmental Issues

An assessment of the relationship of the purchase price to the fair market value of the subject property, assuming there is no contamination of the property, is required under 40 CFR Part 312 Section 312.29 to maintain the innocent landowner defense. The sections from the federal document are reproduced (with edits for clarity) following:

a) Persons to whom this part is applicable must consider whether the purchase price of the subject property reasonably reflects the fair market value of the property, assuming there is no contamination of the property;

b) Persons who conclude that the purchase price of the subject property does not reasonably reflect the fair market value of that property, if the property were not contaminated, should consider whether or not the differential in purchase price and fair market value is due to the presence of releases or threatened releases of hazardous substances.

An appraisal of the subject property was not available for review.

4.3 Assessments of Specialized Knowledge

Assessments of any specialized knowledge or experience on the part of the purchaser or landowner is required by 40 CFR Part 312 Section 312.28 to maintain the innocent landowner defense. The sections from the federal document are reproduced (with edits for clarity) following:

a) Persons to whom this part is applicable must take into account, their specialized knowledge of the subject property, the area surrounding the subject property, the conditions of adjoining properties, and any other experience relevant to the inquiry, for the purpose of identifying conditions indicative of releases or threatened releases at the subject property.

b) All appropriate inquiries are not complete unless the results of the inquiries take into account the relevant and applicable specialized knowledge and experience of the persons responsible for undertaking the inquiry.

Specialized knowledge relating to the subject property was obtained via interviews of persons with knowledge of the status and history of the property, and review of historic soil investigation reports.

5.0 RECORDS REVIEW

The purpose of the records review is to obtain and review records that will help identify recognized environmental conditions in connection with the subject property. This is one of the Criteria required under the All Appropriate Inquiry, Environmental Site Assessment Phase 1 Investigation.

5.1 Standard and Additional Environmental Record Sources

The *Standard Environmental Record Sources* and the *Additional Environmental Record Sources* were obtained through a computer data bank search company, Environmental Data Resources, Inc. of Milford, Connecticut. Computer data bank searches for active sites can be useful in locating sites that may have the potential to adversely impact the subject site. It is important to keep in mind that computer database searches provide general overview data and may not be precise in the data that is presented. Consequently, an investigator needs additional familiarity with active sites to properly interpret the data that is provided.

The Environmental Data Resources (EDR) Report is dated January 24, 2007 with Inquiry Number: 1841949.2s. This 76-page report accessed a large number of active federal, state and local databases—some are Standard Environmental Record Sources and others are Additional Environmental Record Sources. A comprehensive listing of government records searched is listed in the EDR Report and is not repeated in the text.

The Standard Environmental Record Sources reviewed include the following list (Section 8.2.1 ASTM E-1527-05). The Additional Environmental Record Sources are to enhance and supplement the standard environmental record sources. These sources are meant to provide additional data to support the opinion of the environmental professional. The EDR Report, which lists the Standard Environmental Record Sources and the Additional Environmental Record Sources, is a component of Exhibit G of this report.

Standard and Additional Environmental Record Sources

U.S. Federal Records	
Database	Search Distance
Federal NPL site list (Superfund sites)	1.0 mile
Federal Delisted NPL site list	0.5 mile
Federal CERCLIS list	0.5 mile
Federal CERCLIS NFRAP site list	0.5 mile
Federal CORRACTS facilities list	1.0 mile
Federal RCRA non-CORRACTS TSD facilities	0.5 mile
Federal RCRA generators list	Property; adjoining properties

Federal institutional control/engineering control registries	Property only
Federal ERNS list	Property only
State, Tribal and Local Records	
State & tribal-equivalent NPL	1.0 mile
State & tribal-equivalent CERCLIS	0.5 mile
State & tribal landfill and/or solid waste disposal site lists	0.5 mile
State & tribal leaking storage tank lists	0.5 mile
State & tribal registered storage tank lists	Property; adjoining properties
State & tribal institutional control/engineering control registries	Property only
State & tribal voluntary cleanup sites	0.5 mile
State & tribal Brownfield sites	0.5 mile

EDR Database Search

Subject Property: The subject property does not appear on any standard record sources or any additional environmental record sources searched and reported upon by EDR.

Neighboring Properties: Summary of relevant findings of the EDR database search within the minimum radius search distance of the property as specified by ASTM E-1527-05, Section 8.2.1 is as follows.

U.S. Federal Databases		
Database	ASTM Criteria Search Distance (miles)	Number of Properties within the Search Distance
NPL	1.0	0
Delisted NPL	0.5	0
CERCLIS	0.5	0
CERCLIS NFRAP	0.5	0
RCRA CORRACTS facilities	1.0	0
RCRA non-CORRACTS TSD facilities	0.5	0
Generators list: RCRA_LQG	Property; adjoining property	0
Generators list: RCRA_SQG	Property; adjoining property	0
Federal Institutional / Engineering Control	Property	0
Federal ERNS List	Property	0

State, Tribal and Local Databases		
Database	ASTM Search Distance (miles)	Properties within the Search Distance
ENVIROSTOR[1]	0.5	1
SLIC	0.5	0
LUST	0.5	0
SWF/LS	0.5	0
AST	Property; adjoining property	0
UST	Property; adjoining property	0
Old Databases[2]	Property; adjoining property	0

Note 1: The following databases are part of Envirostor under DTSC; they are not listed individually: Cal-Sites (State equivalent to NPL is AWP, BE), Hist. Cal-Sites, Response, Institutional & Engineering Controls, VCP and Brownfield sites.
Note 2: The following databases are old and are not updated; unless the sites listed are on the subject property or adjoining properties, they are not discussed; the databases include: Cortese; CA FID; HIST UST; SWEEPS; & Notify 65.

EDR Proprietary Databases
EDR Proprietary Databases are listed under Table 5.1.3. These databases are listings of facilities and are for informational purposes only. They are not required under ASTM criteria to be reviewed.

Table 5.1.3. EDR Proprietary Databases

EDR Proprietary Databases		
Database	ASTM Search Distance (miles)	Number of Properties Identified
Manufactured Gas Plants	None	0
Historical Auto Stations	None	0
Historical Cleaners	None	0

Discussion of ASTM Database Search
The Environmental Data Resources, Inc. (EDR) Report is attached to this report. The relevant summary of those sites in the EDR report pertinent for the subject property is discussed below. Sites not mentioned are judged insignificant for the subject property. In some cases, rather than engage in an exhaustive discussion of the various sites, these are grouped together in a summary discussion.

Surrounding Properties

ENVIROSTOR: The Department of Toxic Substances Control (DTSC) Site Mitigation and Brownfields Reuse Program (SMBRP) EnviroStor database identifies sites that

have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the ENVIROSTOR list as provided by EDR and dated 11/28/2006 reveals that there is 1 ENVIROSTOR site within approximately 1 mile of the subject property.

The site is known as High School B at Leisure Town Road and El Mira Road. This site is located at the southwest corner of the intersection of Leisure Town Road and Elmira Road. This is approximately 350 feet west-southwest of the subject property. The site is at an elevation of 93 feet above sea level. This site is in the database known as "School Evaluation" program. A Preliminary Endangerment Assessment Report was prepared for this site and is dated July 27, 2005. Findings from this report indicate no further action required. This site does not represent a potential threat to the subject property. However, findings of the Preliminary Endangerment Assessment performed by Padre Associates for the High School District are applicable to the subject site, and are discussed in Section 5.2, below.

5.2 Other Environmental Record Sources

To enhance and supplement the Environmental Data Resources report data bank searches for active sites, local records and / or additional state or tribal records were independently searched through their various websites. These records are reasonably ascertainable, and are sufficiently useful, accurate and complete in light of the objective of the records review. Other Environmental Record Sources contacted for information pertaining to the subject and nearby properties were as follows:

U.S. EPA (http://www.epa.gov/region09/)
California Environmental Protection Agency, Department of Toxic Substances Control (http://www.calepa.ca.gov/ and http://www.envirostor.dtsc.ca.gov/public/)
County of Sonoma — all departments (http://www.co.sonoma.ca.us/)
California State Water Resources Control Board (http://geotracker.swrcb.ca.gov/)

California Environmental Protection Agency, Department of Toxic Substances Control
The Department of Toxic Substance Control (DTSC) EnviroStor database provides site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed

restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A Preliminary Endangerment Assessment (PEA) by Padre and Associates (2005) was prepared for the site known as High School B at Leisure Town Road and El Mira Road, an adjacent property to the southeast of the subject property. The PEA was prepared for the Vacaville Unified School District. The PEA subject site is an 82.5 acre tract (parcel 0135-080-040) that has been used for agricultural farming as far back as 1937 (similar to the subject property). The PEA was performed consistent with DTSC guidelines for sampling agricultural fields, and the DTSC guidance manual for evaluation of hazardous substance release sites titled, *Preliminary Endangerment Assessment Guidance Manual*, Cal/EPA (1999).

The potential presence of residual pesticides associated with past agriculture use was identified based on historical property use, as well as pesticide usage reports provided by the Solano County Agricultural Commissioner. The scope of work was performed in accordance with a DTSC-approved work plan, and included: the collection of discrete soil samples from the surface to depths of 0.5 feet, and discrete subsurface soil samples from 2.0 to 2.5 feet at 82 locations across the Project Site. Samples were analyzed for Organochlorine pesticides, arsenic, and Title 22 metals (CAM 17). Additionally two soil samples were collected at the base of pole-mounted electrical transformers located on and adjacent to the Project Site, and analyzed for the presence of polychlorinated biphenyls (PCBs). Four discrete soil samples were collected from a depth of approximately 5.0 to 5.5 feet to evaluate background metals concentrations. All Organochlorine analyses were below the limits of detection. Chemicals of potential concern (COPCs) identified for a screening human health risk assessment were copper, zinc and Aroclor 1260 (PCB). The total human health risk estimate and hazard index for the site based on the COPCs were: 8.7×10^{-7}, and 0.15 respectively. These values were well below the PEA targets of 1×10^{-6} and 1, respectively. Arsenic levels on the site were determined to be in the range of background concentrations, and lead levels on site (6.0 to 7.7 mg/kg) resulted in modeled blood lead concentrations well below the DTSC's *LeadSpread* screening model. Based on the PEA results, Padre concluded that the site had not been significantly impacted by past agricultural activities. DTSC has classified the site as requiring "No Further Action."

Water Resources Control Board

GeoTracker is a geographic information system (GIS) that provides online access to environmental data. GeoTracker is the interface to the Geographic Environmental Information Management System (GEIMS), a data warehouse which tracks regulatory data about underground fuel tanks, fuel pipelines and public drinking water supplies.

Collins & Aikman Product Co. at 6109 A Street, Elmira (formerly known as Wickes Forest Industries), Case Number SLT5S1033144: The site is approximately 2,310 feet east of the subject property; it consists of three parcels, as follows: parcels 0142-010-

130; 0142-042-010 & 0142-010-140. The site has site management requirements imposed upon it. These include the following: 1) Asphalt cover not to be disturbed; 2) Deed Restriction; 3) No excavation at any depth without notification; 4) Maintain fencing to control access; 5) Check for cracks in foundation; 6) Land use covenant; and 7) Notify prior to subsurface work. DTSC covenant filed with county Instrument Number 1995-00068154.

Remediation accomplished to date includes: 1) Pump & Treat Groundwater, installed in 1991; 2) Cap site (soil), completed in 1996; and 3) In situ treatment, started March, 2005.

This site is slightly less than ½-mile east of the subject property. The reported groundwater flow direction for this site is to the east. Due to its location, this site is not likely to represent a potential threat to the subject property.

5.3 Physical Setting

5.3.1 Regional Physiographic Conditions

Topographic Map
Exhibit C is the U. S. Department of Interior, Geological Survey, Elmira Quadrangle 7.5-Minute Series topographic map. The general topographic gradient at the subject property is generally east-southeast. Surface topography may be indicative of the direction of surficial groundwater flow.

In the north-south direction and one-mile north from the subject property the elevation is 80 feet above sea level. The elevation ascends gradually and at the subject property it is 84 feet; the elevation remains relatively flat and at one-mile south of the subject property the elevation is 85 feet above sea level.

In the west-east direction, the elevation one-mile west of the subject property is 99 feet above sea level. The elevation descends gradually past the subject property at 84 feet above sea level and continues to descend to 72 feet above sea level at one-mile east of the subject property.

Surface Waters
There are two primary drainage patterns in Solano County. The eastern two-thirds of the county drain east and southeast to the Yolo Bypass and the Sacramento River. Putah Creek, along the northern edge of the county drains east to the Yolo Bypass. The Vacaville-Dixon area drains to the southeast via a number of small creeks, which eventually empty into the Sacramento River. The western third of the county drains south into the Suisun Marsh.

The subject property is located within the Ulatis Creek watershed area. Ulatis Creek is located about 1 mile north of the north boundary of the subject property. New Ulatis Creek, a tributary of Ulatis Creek, is located at about 0.8 mile from the north boundary of the subject property. New Ulatis Creek splits off of Ulatis Creek at about 1-mile northwest of the subject property.

Alamo Creek runs through the subject property. It enters the southwest corner and meanders through the center of parcel 0135-070-030 and then exits the property near the southeast corner near Locke Drain and Byrnes Canal. It enters the subject property (parcel 0137-070-050) and meanders along the south property line and exits the property near the southeast corner.

Alamo Creek (cut off) branches off of the main Alamo Creek at about 585 feet north of the former Southern Pacific Railroad tracks, which ran parallel with Elmira Road. It joins back with the main stem of the Alamo Creek at about 300 feet west of Lock Drain.

Alamo Creek is a tributary of Ulatis Creek. The Ulatis Creek watershed area drains to the southeast via a number of small creeks, which eventually empty into the Sacramento River via Cache Slough.

Flood Insurance Rate Map
According to FEMA Flood Panel Map 0606310256B, portions of the subject property along the Alamo Creek (cut off) and along the southern portion of APN 0135-070-050 are within the 100-year flood zone and 500-year flood zone.

5.3.2 Soil Conditions

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name:	YOLO
Soil Surface Texture:	loam
Hydrologic Group:	Class B - Moderate infiltration rates; Deep and moderately deep, moderately well and well drained soils with moderately coarse textures
Drainage Class:	Well drained; Soils have intermediate water holding capacity. Depth to water table more than 6 feet

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Bedrock Max: > 0 inches

Note: The definition of a hydric soil is a soil that formed under conditions of saturation, flooding or ponding long enough during the growing season to develop anaerobic conditions in the upper part. The concept of hydric soils includes soils developed under sufficiently wet conditions to support the growth and regeneration of hydrophytic vegetation.

5.3.3 Geologic Conditions

Geomorphic Provinces
California is divided into eleven geomorphic provinces. The subject property in Solano County lies within the geomorphic province known as the Great Valley. The California Division of Mines and Geology describes the Great Valley as follows:

> *"The Great Valley is an alluvial plain, about 50 miles wide and 400 miles long, between the Coast Ranges and Sierra Nevada. The Great Valley is drained by the Sacramento and San Joaquin rivers, which join and enter San Francisco Bay. The eastern border is the west-sloping Sierran bedrock surface, which continues westward beneath alluvium and older sediments. The western border is underlain by east-dipping Cretaceous and Cenozoic strata that form a deeply buried synclinal trough, lying beneath the Great Valley along its western side. The southern part of the Great Valley is the San Joaquin Valley. Its great oil fields follow anticlinal uplifts that mark the southwestern border of San Joaquin Valley and its southern basin. To the north, the Sacramento Valley plain is interrupted by the Marysville Buttes, an isolated Pliocene volcanic plug about 2,000 feet high."*

Geology
According to the "Geologic Map of California" (C. W. Jennings, 1977), the geologic rocks surrounding the subject property is predominantly classified as alluvium, lake, playa, and terrace deposit; unconsolidated and semi-consolidated. Mostly non-marine, but includes marine deposits near the coast. Portions of the subject property may also be within the generalized geologic rock description of Pliocene and /or Pleistocene sandstone, shale, and gravel deposits; mostly loosely consolidated.

EDR GeoCheck-Physical Setting Source Summary classified the rock stratigraphic unit as:
Era: Cenozoic
System: Quaternary
Series: Quaternary

EDR GeoCheck-Physical Setting Source Summary categorized the Geologic Age Identification as:
Category: Stratified Sequence
Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

5.3.4 Groundwater Characteristics

The subject property lies within the Solano Groundwater Sub-basin of the Sacramento Groundwater Basin. The following descriptive excerpts are from California DWR Bulletin 118.

> *"The Solano Sub-basin lies in the southwestern portion of the Sacramento Basin and the northern portion of the Sacramento-San Joaquin Delta. The elevation varies from 120 feet in the northwest corner to sea level in the south. Sub-basin boundaries are defined by; Putah Creek on the north, the Sacramento River on the East (from Sacramento to Walnut Grove), the North Mokelumne River on the southeast (from Walnut Grove to the San Joaquin River), and the San Joaquin River on the South (from the North Mokelumne River to the Sacramento River. The western sub-basin border is defined by the hydrologic divide that separates lands draining to the San Francisco Bay from those draining to the Sacramento-San Joaquin River Delta. That divide is roughly delineated by the English Hills and the Montezuma Hills. Primary waterways in and bordering the basin include the Sacramento, Mokelumne and San Joaquin Rivers, the Sacramento River Deep Water Ship Channel, and Putah Creek."*

The primary water-bearing formations comprising the Solano sub-basin are sedimentary continental deposits of Late Tertiary (Pliocene) to Quaternary (Recent) age. Fresh water-bearing units include younger alluvium, older alluvium, and the Tehama Formation (Thomasson and others 1960).

Thickness of the younger alluvium ranges from 0 to 40 feet, however with the exception of the Delta, they generally lie above the saturated zone. Flood basin deposits occur along the eastern margin of the sub-basin. These deposits consist primarily of silts and clays, and may be locally interbedded with stream channel deposits of the Sacramento River. Recent stream channel deposits consist of unconsolidated silt, fine- to medium grained sand, gravel and in some cases cobbles deposited in and adjacent to active streams in the sub-basin.

Older alluvium consists of loose to moderately compacted silt, silty clay, sand, and gravel deposited in alluvial fans during the Pliocene and Pleistocene. Thickness of the unit ranges from 60 to 130 feet, about one quarter of which is coarse sand and gravel generally found as lenses within finer sands, silts, and clays. Permeability of the older alluvium is highly variable.

The Tehama Formation is the thickest water-bearing unit underlying the Solano sub-basin, ranging in thickness from 1500 to 2500 feet. Surface exposures of the Tehama Formation are limited mainly to the English Hills along the western margin of the basin. It consists of moderately compacted silt, clay, and silty fine sand enclosing lenses of sand and gravel, silt and gravel, and cemented conglomerate. Permeability of the Tehama Formation is variable, but generally less than the overlying younger units.

Groundwater Level

Water well identification system used by the State of California is based on Township, Range, and Section number referenced to the Mount Diablo base and meridian. Utilizing this system, the subject property may be located as Township 6 North, Range 1 West, Section 24 and within the quarter-quarter section of A and B (T6NR1W24 AB).

A review of the California Department of Water Resources, Division of Planning and Local Assistance Website shows that there are three nearby wells. The data from these wells as they relate to the subject property are summarized below in Table 5.3.4.

Table 5.3.4: Water Level data from nearby wells

Well ID	Elevation (Ft) MSL	Dates	High Low Water (Ft)	High Date Low Date	Acceptable Unacceptable Records	Longitude Latitude (Degree)	Direction from Site
06N01W13R001	74.5	12/20/29 05/04/06	1.3 73	03/21/83 03/16/95	123 7	121.9150 38.3598	NNE
06N01W24N001	88	01/31/49 04/26/06	3.8 62.1	03/28/95 11/21/52	91 1	121.9323 38.3443	SW
06N01W24N002	90	11/01/63 04/26/06	77.7 175.3	03/04/74 10/13/82	85 11	121.9323 38.3468	SW
Subject site: 06N01W24 (CDEFGH)	84					121.9214 38.3593	

Source: California Department of Water Resources, Division of Planning and Local Assistance Website http://well.water.ca.gov/

Due to its close proximity, the water level at the subject property is probably similar to that at the well identified as 06N01W13R001. Water level can be expected to range from 7 feet to 123 feet below ground surface.

Regional Groundwater Flow Direction

EDR GeoCheck-Physical Setting Source Summary provides the following site-specific hydrogeologic data.

Search Radius:	1.25 miles
Location Relative to TP:	1/2 - 1 Mile SE
Site Name:	Wickes Forest Industries
Site EPA ID Number:	CAD000627109
Surficial Aquifer Flow Dir.:	East
Measured Depth to Water:	5 to 7 feet
Hydraulic Connection:	Information is not available about the hydraulic connection between aquifer(s) underlying the site.
Sole Source Aquifer:	No information available

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

No sites with groundwater flow directions were identified within a radius of one mile of the subject property.

According to DWR Bulletin 118 (update 2/27/04), the historic general direction of groundwater flow in the Solano sub-basin was from northwest to southeast. After 1941, groundwater levels continued to decline due to increasing agricultural and urban development, reaching their lowest historical levels in the late 1950s. A large pumping depression between Davis and Dixon was one of the more notable groundwater level depressions in the Solano sub-basin. Surface water deliveries from the Solano Project beginning in 1959 caused groundwater levels to rise slightly or slow their descent. Consequently, the groundwater flow direction for the subject property is unpredictable.

5.4 Results of Site History and Land Use Review

The objective of consulting historical sources is to develop a history of the previous uses of the subject property and surrounding area in order to identify the likelihood of past uses having led to recognized environmental conditions. All obvious uses of the property must be identified from the present back to the property's first developed use or back to 1940, whichever is earlier (§ 8.3.2 ASTM 1527-05). The Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (ASTM E 1527-05) requires a review of reasonably ascertainable standard historical sources. Reasonably ascertainable is defined by ASTM as information that is publicly available, obtainable from a source with reasonable time and cost constraints, and practically reviewable. The reviews of the following standard historical sources for the subject property were reviewed: Sanborn Fire Insurance Maps, City Directories, County Records Review, personal interviews, historical aerial photographs and previous environmental investigations.

Sanborn Fire Insurance Maps

Environmental Data Resources (EDR) of Southport, Connecticut investigated the historic Sanborn Fire Insurance Maps. The inquiry Number is 1841949.3, and is dated January 24, 2007. No coverage was reported.

The report prepared by EDR is attached to this Environmental Site Assessment as a component of Exhibit G.

5.4.1 City Directory

Environmental Data Resources (EDR) of Southport, Connecticut investigated historic City Directory; this report is documented in the EDR-City Directory Abstract Report dated January 25, 2007 with Inquiry Number 1841949.6. It is included in this report as a component of Exhibit G.

Business directories including city, cross-reference and telephone directories were reviewed, if available, at approximately five-year intervals for the years spanning 1970 through 2005. (These years are not necessarily inclusive.)

The report indicates the subject property was not listed from 1970-2005.

In regards to neighboring properties, only 6315 Katleba Lane was listed as a residence in 2005.

5.4.2 Local Records Review

Solano County Department of Agriculture
The Agricultural Commissioner of Solano County was contacted to identify pesticide use reporting on the subject property. The Agricultural Commissioner's office provided general information consistent with the grower on the subject property (See Section 7.2).

5.4.3 Aerial Photographs

Environmental Data Resources (EDR) of Southport, Connecticut performed a search for historic aerial photographs. The photographs are presented in the EDR report number 1841949.5 and dated January 24, 2007. The report is reproduced in Exhibit F of this report. A synopsis of the aerial photography is presented in Table 5.4.4.

Table 5.4.4: Description of the subject property from aerial photographs

Date	ON SITE DESCRIPTION	Offsite Description
1937	No structures on site. Property appears to be farmland.	***North:*** No structures; appears to be mainly farmland. ***East:*** No structures; appears to be mainly farmland. ***South:*** No structures; appears to be mainly farmland. ***West:*** No structures; appears to be mainly farmland.
1957	Same as above.	***North:*** Same as above. ***East:*** Same as above. ***South:*** Same as above. ***West:*** Same as above.
1965	Alamo Creek appears to be altered. The main branch appears to be have been eliminated and replaced with the by-pass.	***North:*** Same as above. ***East:*** Same as above. ***South:*** Same as above. ***West:*** Same as above.
1970	Same as above.	***North:*** Same as above. ***East:*** Same as above. ***South:*** Same as above; rural residential units appear at the corner of Leisure Town Road and Elmira Road. ***West:*** Same as above.
1984	Same as above.	***North:*** Same as above. ***East:*** Same as above. Residential home at the corner of Meridian and Elmira Road. ***South:*** Same as above. ***West:*** Same as above. Developments appear at the southwest corner of Leisure Town and Elmira Roads.
1993	Same as above.	***North:*** Same as above. ***East:*** Same as above. ***South:*** Same as above. ***West:*** Same as above.
1998	Same as above.	***North:*** Same as above. ***East:*** Same as above. ***South:*** Same as above. ***West:*** Same as above.

5.4.4 Historical Topographic Maps

Environmental Data Resources (EDR) of Southport, Connecticut performed a search for historical topographic maps. The topographic maps are presented in the EDR report number 1841949.4 and dated January 24, 2007. The report is reproduced in Exhibit G of this report.

The historical topographic maps report prepared by EDR did not reveal any significant potential liability resulting from past activities. However, the 1980 topographic map shows residential development occurring along the southwest corner of Leisure Town Road and Elmira Road.

5.4.5 Synopsis of Previous and Current Environmental Investigations

In 1988, Kleinfelder was hired by The Sammis Company to perform a Preacquisition Site Assessment (PSA). The scope of the PSA included a records review, an aerial photography review, a site visit and a limited soil investigation. This PSA led to an additional soil investigation and a limited site soil remediation event. The following is a listing of the Kleinfelder reports generated from 1988 to early 1989 and reviewed as part of this evaluation:

Kleinfelder, Preacquisition Site Assessment, Leisure Town Road Project, 248 Acre Tract, Vacaville, California, September 7, 1988.

Kleinfelder, *Limited Soil and Water Sampling Investigation*, Sammis/Vacaville, Vacaville CA. July 1, 1988.

Kleinfelder, Outline Bid Specifications for Removal of Contaminated Soil, Leisure Town Road Project, Vacaville, California. October 10, 1988.

Kleinfelder, Leisure Town Road Soil Remediation Report, January 26, 1989.

The PSA document summarized two sets of soil sampling investigations along with the records and aerial photograph review. A synopsis of the key findings of the Kleinfelder reports is presented below. All the work conducted appeared to be on a voluntary basis and there was not agency oversight related to any of the work discussed below.

Pre-acquisition Site Assessment and Limited Soil Investigation, June and July, 1988

The subject property was used for agriculture purposes and was farmed by two agricultural contractors, Papin Farms and Lum and Young Farms. Crops grown on the site included alfalfa, peppers, wheat, tomatoes, sugar beets, sunflower, Chinese beans among others. The Solano County Agricultural Commissioner's Office provided 3 years of pesticide use (1985 to 1988) with approximately 20 registered pesticides recorded as used on the subject property. The most common restricted pesticides used were Organochlorine, Organophosphate, Triazine, Phenoxy herbicides and Carbamate compounds. Toxaphene was not recorded as being applied to the property in the years noted.

The Wickes Forest Industries site was identified in the Kleinfelder PSA report as a potential concern to the subject properly. Wickes owned a wood treating facility in Elmira, about 2,500-feet east of the subject property. Soil and groundwater contamination containing arsenic, copper, and chromium were found by the RWQCB in 1980 and 1982. Off site migration of these contaminants was found in 1983. These metals were evaluated in the Kleinfelder soil investigation in order to identify potential

contamination from Wickes on the subject property. Elevated levels of metals were not found on the subject property.

As part of this investigation, a limited soil investigation was conducted in June 1988 to assess the presence of pesticide residues and the selected heavy metals arsenic, copper, and chromium. This limited sampling event consisted of composite sample analysis. Initially 14 discrete samples were collected across 248 acres; these were composited into 4 samples for analysis. Three of the four composite samples detected the Organochlorine pesticides (OCPs) Toxaphene and DDT/DDE. The other non-metal analytes (organophosphate and Triazine pesticides, and Phenoxy herbicides) were below limits of detection. Metals were eliminated from concern based on comparison to background.

Two of the composite samples were collected from the large field area (location unable to be determined due to missing pages in the report). These two composite samples were comprised of 7 distinct surface soil samples that were then analyzed individually after initial review of the composite results. DDT, DDE and Toxaphene were detected at low levels. Toxaphene was detected in three of the seven samples.

A subsequent and more detailed investigation followed whereby 40 more soil samples and 6 surface water samples from the creek and ditches were collected in July 1988. This investigation focused in four specific areas of the site: 1) Alamo Creek; 2) Open Area; 3) Ditches and Depressions; and 4) Well and Standpipes.

Elevated levels of DDT, DDE and Toxaphene were identified in an area on the south-central portion of the property, just north of Alamo Creek referred to as the "Open Area". A diesel stain was also observed in this area; the initial site visit ad revealed a fuel tank in this area. The Open Area was presumed to be used for farm vehicle refueling and as a pesticide mixing area. The Open Area is estimated to be approximately ½ acre in size.

Leisure Town Road Soil Remediation Report. January 26, 1989
Soil remediation was recommended and completed for a portion of the Open Area. In January 1989, 117 tons of soil was removed in an approximate area 35' x 25' to 3.5 feet below grade. The excavated area was triangular in shape.

Twenty-four post-remediation soil samples were collected and composited to six samples for analysis – 2 composites for the walls of the excavation and 4 from the excavation floor. The composite results revealed that the walls of the excavation were below analytical detection limits for OCPs and TPH. DDT was detected at very low levels in one floor sample. TPH was considered successfully remediated. Levels of Toxaphene in the four composite floor samples of the excavated area were as follows: 0.16, 1.5, 0.56, and 0.83 mg/kg, respectively. The levels were well-below the TTLC limits of 5 mg/kg Toxaphene and the remediation was considered successful and the excavated area was back-filled with clean soil.

Levels of Toxaphene observed in the Open Area, just north of the excavated area were as follows: 0.46 mg/kg, 0.12 mg/kg, 0.55 mg/kg, and 0.37 mg/kg. These sample points were well-below the TTLC limits and thus not included in the excavated area. DDT and DDT were also detected, but at very low levels, in the area north of the excavation.

Interpretation of the Historical Soil Investigations

Kleinfelder utilized the TTLC (Total Threshold Limit Concentrations) values as published by EPA to determine if the levels of OCPs remaining in the soil were acceptable. TTLC are values utilized for classifying a material as hazardous waste. It has been almost twenty years since the Kleinfelder investigations occurred. The current practice for determining if levels of residual contamination are acceptable is to utilize human health-based soil screening levels as a point of departure in determining if materials present in the soil present harm to human health for potential future use of properties. The Cal/EPA publishes such values, referred to as California Human Health Screening Levels (CHHSLs) for residential and commercial land-uses (Cal/EPA 2005). The CHHSLs are not regulatory levels, but rather are to be used as a guide in determining if a site may be acceptable for future use, or if additional evaluation is warranted. The CHHSL for Toxaphene is 0.46 mg/kg (residential scenario) and 1.8 mg/kg (commercial/industrial scenario). The CHHSLs for DDT and DDE are 1.6 mg/kg (residential) and 6.3 mg/kg (commercial/industrial scenario). Levels of DDT and DDE observed on the site in 1989 were well below the TTLC and CHHSL levels and are not considered a concern for the subject property today.

Levels of Toxaphene from the samples in the base of the excavated area are slightly above the residential CHHSL, and below the commercial/industrial CHHSL. However, direct comparison of the residual Toxaphene levels from the base of the 1989 soil excavation event is not necessarily appropriate, as these data are from composited soil samples. Comparison to CHHSLs should be done with statistically determined site concentration data from discrete soil sample data. The highest residual concentrations of Toxaphene are present below grade (at 3.5 feet bgs) and covered with clean fill.

Surface soil samples in the Open Area, just north of the excavation were present essentially at the residential Toxaphene CHHSL of 0.46 mg/kg. There were three detections of Toxaphene in three of the seven field surface samples in the initial investigation in June 1988. Of the three detections, one was at the CHHSL of 0.46 mg/kg, and the other two were at 0.05 mg/kg. The soils north of the excavation in the Open Area, and in the larger field areas have had nearly 20 years of tilling and planting since this data was collected. It is likely the surface soils Toxaphene levels detected in 1988 have decreased to *de minimis* levels.

With the exception of the portion of the approximate ½-acre Open Area (rectangular shape north of Alamo Creek and west of Byrnes Canal) the remainder of the site is comparable to the 82.5 acre parcel to the southwest for which the PEA was completed in 2005. Organochlorine pesticides were a concern on this property as well due its use

for agricultural farming back to 1937 or prior, and all the field data was non-detect for OCPs during the 2005 sampling event.

6.0 SITE RECONNAISSANCE

On January 26, 2007 a California Registered Environmental Assessor (REA) performed a site reconnaissance of the subject property and nearby properties. The objective of the site reconnaissance is to obtain information indicating the likelihood of identifying recognized environmental conditions in connection with the property. It is not an environmental compliance audit; this process does not determine if the operations of an existing facility are in compliance with applicable environmental laws and regulations.

Photo-documentation of the property is presented in Exhibit D of this report.

6.1 Methodology and Limiting Conditions

The method used in conducting the site reconnaissance consisted of walking the perimeter of the subject property and inspecting as closely as possible the features of the property. Visual observations of nearby properties were performed in an effort to identify conditions that potentially could negatively impact the subject site.

6.2 General Site Setting

The general setting is agricultural land used for farming. Sporadic rural residences exist throughout the area.

6.3 Subject Property

The subject property consists of two large tracts of active agricultural fields. On the day of the site reconnaissance, the fields were fallow. PG&E electrical transmission lines traverse through the center of the eastern parcel 0135-070-050. The Byrnes Canal separates the two parcels in the north-south direction and was empty on the day of the site reconnaissance. An attempt was made to identify the former Open Area as discussed in the Kleinfelder reports (Section 5.4.6), but was unsuccessful. The former Open Area location now appears to be tilled field used for planting.

No indications of underground fuel storage tanks or any environmental impacts were observed on the property. In the course of the site reconnaissance no indications of recognized environmental conditions were observed.

6.3.1 Adjacent Properties

- **North:** Agricultural fields, Hawkins Road and a rural residential dwellings
- **East:** Meridian Road (dirt road) and agricultural fields
- **South:** A single-family rural residence and agricultural fields

- **West:** Byrnes Canal and Leisure Town Road**.** West of Leisure Town Road are single family residences.

7.0 INTERVIEWS

7.1 Interviews with Past and Present Owners, Operators, and Occupants

The following individuals were interviewed in connection with the subject property:

Cameron Stewart: Cameron Stewart is the listed current owner, having just purchased the property in late 2006. Mr. Stewart provided the Kleinfelder reports and the contact information for the previous owner representative and the current contract grower for the subject property, the Woody Brothers.

Dennis Boss: Mr. Boss (of B&L Properties) was the representative for the former owner of the subject property, The Yarborough Trust. According to Mr. Boss, the Yarborough Trust owned the subject property from 2001 until its sale to Mr. Stewart. The property was actively farmed during this time by the Woody Brothers. Mr. Boss had no knowledge of any historical contamination issues on the subject property.

Dave Woody: Dave Woody, of Woody Brothers, is the grower currently contracted on the subject property. The Woody Brothers have farmed on the subject property since 2001. The primary crops grown in that time have included sunflowers, alfalfa, and Sudan grass. Mr. Woody confirmed that pesticides are used on the fields and that his company reports use as required by the Solano County Department of Agriculture. Mr. Woody indicated that standard, and approved materials are used on the crops, such as 2,4-D (Sudan grass), Sonalan® (sunflowers) and Paraquat for alfalfa. The pesticides are mixed off-site, transported to the subject property, and applied to the crops from the ground (no aerial spraying due to the proximity of rural residences).

7.2 Interviews with Local Government Officials

The Deputy Agricultural Commissioner, Janet Jessen, of Solano County was briefly interviewed. According to Ms. Jessen, Pesticide Use Records are kept for several years for properties according to grower, field number and topographic map references. Ms. Jessen indicated that limited enforcement is done in regards to pesticide use reporting and records may be available only if the grower reports use.

Representatives from the Solano County Department of Resource Management the City of Vacaville Department of Resource Management were contacted to verify zoning information.

7.2.1 Interviews with Others

Various individuals encountered while conducting the site reconnaissance of the site were interviewed. These brief interviews were conducted in a casual conversational manner in an attempt to determine if there are any historic factors that would indicate an impact on the property.

8.0 FINDINGS

Site Description and Current Use
The subject property is located in the unincorporated area of Solano County. It is approximately 2.8 miles to the east of U. S. Highway 80 off Elmira Road and about 2.25 miles south of U.S. Highway 80 off of Leisure Town Road. The general characteristic of the property's vicinity is agricultural and rural residential. The site is currently used for agricultural farming.

Adjoining Properties Use
- **North:** Agricultural fields, Hawkins Road and a rural residential dwellings
- **East:** Meridian Road (dirt road) and agricultural fields
- **South:** A single-family rural residence and agricultural fields
- **West:** Byrnes Canal and Leisure Town Road**.** West of Leisure Town Road are single family residences.

Land Use Designations
The zoning designation for the subject property is A40: Agriculture Use with minimum 40 acre size.

Zoning designations for the surrounding adjoining properties are also A40: Use with minimum 40 acre size.

Standard and Additional Environmental Records Search:
The EDR report did not identify any sites of potential concern.

Physical Setting
The elevation of the subject property is at 81 feet above sea level with the general topographic gradient towards the east-northeast. Soils consist of moderately well drained soils with moderate infiltration rates. The predominant regional groundwater flow direction in the Solano Sub-basin is undetermined due to several large pumping depressions and the advent of the Solano Project.

Historical and Present Use of Subject Property
Historically, the property appears to have been farmed from 1937 and possibly before.

Recognized Environmental Conditions
In the course of performing this All Appropriate Inquiry-Environmental Site Assessment, Phase 1 Investigation evidence of Recognized Environmental Conditions was not identified on the subject property.

Historical Recognized Environmental Conditions
One historical Recognized Environmental Condition was discovered on the subject property. This historical REC was the soil investigation and remediation in 1988 and 1989 on the subject property by Kleinfelder, under the direction of the Sammis Company. Residual levels of Toxaphene, an Organochlorine pesticide, were left in the floor of the soil remediation excavation at 3.5 feet below ground surface. The excavation was back-filled with clean soil. The residual Toxaphene levels are slightly above the DTSC-developed California Human Health Screening Level for Toxaphene in residential soil. The residual Toxaphene levels appear to be confined to a portion of the approximate ½-acre portion on the property referred to as the Open Area. It was suspected that the Open Area was historically utilized for pesticide mixing and farm vehicle refueling.

De Minimis Conditions and Data Gaps
No *de minimis* conditions and no data gaps were encountered.

9.0 CONCLUSIONS

Harris & Lee Environmental Sciences has performed an All Appropriate Inquires-Phase 1 Environmental Site Assessment in conformance with the scope and limitations of ASTM Standard Practice E-1527-05 of the property within the designated as Solano County Assessor Parcels 0135-070-030 & 050.

In the course of performing this All Appropriate Inquiry-Environmental Site Assessment, Phase 1 Investigation evidence of Recognized Environmental Conditions was not identified on the subject property.

10.0 OPINION

Based on the review of the historic soil investigation and remediation of a portion of the subject property known as the Open Area (approximate ½ acre area just north of Alamo Creek and to the west of the Byrnes Canal), residual Toxaphene levels at concentrations near the residential California Human Health Screening Level (CHHSL) (Cal/EPA 2005) are likely present, primarily at 3.5 feet below grade. An alternate use, such as a park or open space, is suggested for consideration for future planned development. Since the levels are below grade, the potential for human contact is limited for such an alternate scenario.

The vast majority of the subject property (over 247 of the 248 acres) is believed to have limited impact from its historic and current agricultural use. A recent PEA for a potential

school site performed on a nearby property for the Vacaville Unified School District under the oversight of the Department of Toxic Substances Control (See Section 5.2) showed no excess human health risk from potential residual Organochlorine pesticides, PCBs, or metals. This property for which the PEA was performed (Padre 2005) has the same agricultural use over the same several decades, with similar crops grown. It is our opinion that the current site risk from any residual agricultural chemicals on the subject property, other than the limited portion of the Open Area, is comparable to the nearby School site and may be considered *de minimis*.

Harris & Lee Environmental Sciences reminds the client that it is always prudent to maintain care in handling chemicals and any hazardous materials in any building or any property. It is pertinent to be reminded that the building / property owner is ultimately responsible for the environmental compliance that occurs in any building or on any property. Thus, if a tenant is not in compliance, the owner, who has nothing to do with the tenant's operations, can be held responsible.

11.0 DEVIATIONS

There are no deviations in the preparation of this Environmental Site Assessment from the Standard Practice for Environmental Site Assessments: Phase 1 Environmental Site Assessment Process (ASTM Designation: E-1527-05).

12.0 ADDITIONAL SERVICES

No additional services beyond the All Appropriate Inquiry, Environmental Site Assessment Phase 1 Investigation ASTM E-1527-05 Standard Practice for Environmental Site Assessments: Phase 1 Environmental Site Assessment Process were added to this report.

13.0 REFERENCES

13.1 Published References

ASTM 2005, Standard Practice for Environmental Site Assessments: Phase 1 Environmental Site Assessment Process, Annual Book of ASTM Standards, Standard Practice E 1527-05

Environmental Protection Agency 2005, Standards and Practices for All Appropriate Inquiries; Final Rule, Part III Environmental Protection Agency, 40 Code of Federal Regulations Part 312, Federal Register Vol. 70, No. 210, Rules and Regulations, November 1, 2005

Bailey, Edgar H. 1966, Geology of Northern California, Bulletin 190, California Division of Mines and Geology, San Francisco, California

California Department of Water Resources, 1994, Historical Ground Water Levels in Solano County, Central District Report, 386 p.

California Department of Water Resources 2003, Bulletin 118 Update, California's Groundwater, Sacramento Valley Groundwater Basin, Solano Sub-basin Update February 27, 2004

California Environmental Protection Agency, Use of California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties. January 2005

Jennings, Charles W. 1977, Geologic Map of California, Scale 1:750,000, California Division of Mines and Geology, Geologic Data Map #2, 1991 printing

Padre Associates, Inc. Preliminary Endangerment Assessment for the Proposed High/Middle School Site B – East of Leisure Town Road and South of Elmira Road, Vacaville, CA Solano County, California. May 2005

U. S. Geological Survey, 7.5-Minute Elmira Quadrangle Topographical Map: Scale 1:24,000

US Code Title 42, The Public Health and Welfare, Chapter 103--Comprehensive Environmental Response, Compensation, And Liability, Subchapter I- Hazardous Substances Releases, Liability, Compensation

13.2 Unpublished References

Environmental Data Resources, Inc, The EDR-Radius Map, Inquiry Number 1841949.2s for Hartford Land Company, Leisure Town Road and Elmira Lane, Vacaville, California 95687, January 24, 2007

Environmental Data Resources, Inc., Sanborn Map Report, Inquiry Number 1841949.3s for Hartford Land Company, Leisure Town Road and Elmira Lane, Vacaville, California 95687, January 24, 2007

Environmental Data Resources, Inc., EDR-Historical Topographic Map Report, Inquiry Number 1841949.4 for Hartford Land Company, Leisure Town Road and Elmira Lane, Vacaville, California 95687, January 24, 2007

Environmental Data Resources, Inc., The EDR-Aerial Photo Decade Package, Inquiry Number 1841949.5 for Hartford Land Company, Leisure Town Road and Elmira Lane, Vacaville, California 95687, January 24, 2007

Environmental Data Resources, Inc., EDR-City Directory Abstract, Inquiry Number 1841949.6 for Hartford Land Company, Leisure Town Road and Elmira Lane, Vacaville, California 95687, January 25, 2007

California Department of Toxic Substances, California EPA Website at www.envirostor.dtsc.ca.gov/public/

California Department of Water Resources, Division of Planning and Local Assistance Website at http://well.water.ca.gov/

California State Water Resources Control Board, Water Quality, Geographic Information System (GIS) at http://www.geotacker.swrcb.ca.gov

California Department of Conservation, Division of Mines and Geology Website at http://www.consrv.ca.gov/dmg/pubs/notes/36/index.htm

U. S. Environmental Protection Agency, Brownfields Cleanup and Redevelopment, All Appropriate Inquiries at http://www.epa.gov/

14.0 QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

PROFESSIONAL PROFILE

Robert S. Harris

TITLE: Partner/Senior Scientist: Harris & Lee Environmental Sciences
Partner: Lee Seeley & Harris

EXPERTISE: Thirty-six (36) years experience in Environmental Analytical Chemistry and Environmental Toxicology. Efforts involved full research laboratory supervision for the University of California as well as commercial laboratories involved in Environmental Analytical Chemistry. Developed and refined the now standard method for PCB Analysis in various matrices. Mr. Harris has supported Risk Assessments, Site Audits, Health and Safety Management programs, and Hazardous Waste Management Programs. In addition, Mr. Harris has brought electronic data management technology into major petroleum industry members including Exxon, USA, Chevron USA, Texaco, USA, Mobil Oil Corporation, Atlantic Richfield (ARCO), Amarada Hess, Unocal, and Pacific Gas and Electric Company.

EXPERIENCE: Laboratory Director for the University of California for 11 years beginning in 1964; operated laboratories on the Davis Campus and the Hopland Field Station in Mendocino County, California. Published 12 research papers during time with the University of California

Founded Multi-Tech Laboratories in Ukiah in 1974. Established laboratories in Ukiah, California and Santa Rosa, California. Multi-Tech Laboratories was for several years one of the larger laboratories in California. During this time Mr. Harris developed several methodologies for environmental analysis, including the standard method for the analyses of Polychlorinated Biphenyls (PCB's) in water, soils and oils. When the laboratory became a part of Environmental Testing and Certification Corporation, Mr. Harris was an Executive Vice President of the company in charge of western United States operations.

Established American Technologies in 1992 and developed it in the United States and Mexico. Changed name of American Technologies to Harris & Lee Environmental Sciences in 1997. Development and refinement of the concept of environmental

management where toxic risk evaluation and regulatory requirements guide the project oversight. Supervised the management and orchestration of source monitoring in Southern California. In Northern California, development of a waste minimization program that converted a waste costing $120,000 per month for disposal into a usable fuel to operate high pressure steam boilers.

Has carried out property transfer assessments and aided in the control and management of environmental as well as health and safety risk. In this capacity, Mr. Harris has used his knowledge of the sciences of chemistry and toxicology to properly identify risks that are real and to separate these from situations where the risk is suspected but not real. In this capacity, Mr. Harris has assisted lending institutions, insurance companies, real estate professionals and law firms in identifying chemical profiles and characteristics in toxic situations and managing environmental risk. Mr. Harris has extensive experience in litigation support and expert testimony in areas of environmental chemistry and industrial process chemistry.

ACADEMIC BACKGROUND: BS. Zoology, Minor, Chemistry, University of California, Davis, 1964
MS, Biology, emphasis Biochemistry, California State University, Sonoma, 1972

PUBLICATIONS: Published approximately 12 times in the fields of agricultural chemistry, neurophysiology and animal physiology.

SPECIALIZED TRAINING:
Varian Gas Chromatography Course
Varian Electronic Chromatograph Data Reduction
Hewlett Packard GC/MS Course I
Hewlett Packard GC/MS Course II
Risk Assessment for Hazardous Chemicals
University of California Hazardous Materials Courses
University of California Advanced Environmental Auditing
University of California, Risk Assessment Modeling, The Cal Tox Model; Presented in association with California Dept of Toxic Substances Control
American Society for Testing and Materials, Risk Based Corrective Action

PROFESSIONAL AFFILIATIONS:

American Chemical Society
American Association for the Advancement of Science
American Water Works Association
Rotary International

CERTIFICATIONS:

California Registered Environmental Assessor
REA #4966

PROFESSIONAL PROFILE

Jack M. Lee

TITLE: Partner/Senior Scientist: Harris & Lee Environmental Sciences
Partner: Lee, Seeley & Harris

EXPERTISE: Thirty-five (35) years of experience in all aspects of environmental regulatory compliance and management that includes Public Health aspects. Mr. Lee has been a leader and team member in many environmental projects, both public and private. Mr. Lee initiated environmental programs for several environmental firms. Mr. Lee established and implemented the Hazardous Material Program for the County of Sonoma. At Stanford Linear Accelerator Center, he implemented the Hazardous Materials and Environmental Program.

EXPERIENCE: Mr. Lee handles all matters relating to regulatory interface, matters pertaining to public health, as well as project planning at Harris & Lee Environmental Sciences. Since joining American Technologies (which later became Harris & Lee Environmental Sciences), Mr. Lee has planned and managed many projects including large and small investigations, remediation projects, implementation of innovative remediation strategies, and complex regulatory interface. He has carried out property transfer assessments and aided in the control and management of environmental health and safety risk. With his regulatory background and his knowledge of the environmental sciences, Mr. Lee has assisted lending institutions, insurance companies, real estate professionals, and law firms in assessing and managing environmental risk that are significant verse those that are perceived.

Mr. Lee has managed a number of environmental audits and investigations of underground tank sites. His activities included regulatory permit applications, evaluation of tank systems, inventory reconciliation procedures for leak detection, and groundwater investigation of leaking fuel tanks. Mr. Lee has conducted operator training, inspections and evaluations of tanks and upgrading or removal of tanks. He has developed and implemented sampling programs for groundwater investigations and soil contamination studies. Relevant clients included Hewlett Packard, Port of Oakland and U. S. Army Corps of Engineers.

As a Hazardous Materials Specialist, Mr. Lee was responsible for the planning, implementing and administering of a comprehensive regulatory Hazardous Materials Management Program for the County of Sonoma. This included programs in underground storage tank management, leaking underground storage tank investigation, and emergency incident response. Mr. Lee interacted with state and federal agencies to standardize these regulations. Provided training to other Environmental Health Specialists in all aspects of hazardous materials/waste management. Conducted seminars for underground storage tank owners and operators.

Mr. Lee was responsible for the implementation of a hazardous materials management and environmental compliance programs for Stanford Linear Accelerator Center. This included analysis and classification of hazardous materials, maintenance of required records, and submission of reports. He has performed routine environmental audits and assessments. He served as the interface between the Technical Services Director and all regulatory agencies. This required extensive knowledge of regulatory statutes and their implementing regulations with their specific impacts on the facility. He provided training to employees in emergency response incidents to minor chemical spills, health and safety practices, and general industrial hygiene.

As a member of EPA Region IX Field Investigation Team of Uncontrolled Hazardous Waste Sites, Mr. Lee was involved with a number of investigations, both as a team member and as a project leader. Several of these projects became major Superfund Sites; among them were General Disposal in Santa Fe Springs, Stringfellow Acid Pits, McColl dumpsite and Tucson Water. Was commended for outstanding work accomplished under adverse conditions on the quality assurance project using the MITRE model. This is the forerunner to the Hazardous Ranking System (HRS) used by EPA to rank and place sites on the national priority list (NPL). This is still being used today.

ASSOCIATIONS AND REGISTRATIONS:

Registered Environmental Assessor, California # 01521
Registered Environmental Health Specialist, # 3355
National Environmental Health Association
Association for the Environmental Health of Soils

ACADEMIC BACKGROUND: BS Fisheries Biology, Humboldt State University, 1965
Postgraduate Studies: Certificate in Hazardous Materials Management, University of California, Davis, 1986.

PROFESSIONAL PROFILE

Patricia A. Beach, CIH

TITLE: Partner/Senior Scientist: Harris & Lee Environmental Sciences

EXPERTISE: As a Certified Industrial Hygienist (CIH), Ms. Beach has extensive experience in the recognition, evaluation and control of hazards in the workplace and the environment. She has over thirteen years of experience in environmental risk assessment, toxicology and occupational health and safety. She specializes in chemical exposure assessment and control with a wide-array of experience in assessing and managing chemical safety issues across industry sectors. She has extensive experience in the risk reduction and control of unique chemical hazards, namely potent pharmaceutical and R&D compounds. As the senior industrial hygienist for a major Bay Area biopharmaceutical company, she established numerous health and safety programs from inception with measured results and success, including the Potent Pharmaceutical Safety program. She offers a unique blend of strong technical skills with business acumen to effectively communicate the issues to a range of stakeholders from industrial operators to executive leaders to solve problems always with the business needs and goals in mind.

EXPERIENCE: As an Associate Toxicologist for over five years with two leading environmental consulting firms, Ms. Beach served clients in environmental site cleanup activities by supporting the establishment of cleanup criteria, human health risk assessment, preparing health and safety plans for hazardous waste site remediation programs, conducting exposure assessments under Proposition 65, and preparing Material Safety Data Sheets for new and existing chemicals. She also provided support to a Bay Area School District on issues ranging from potential exposures and cleanup of toxic mold to management of lead and asbestos remediation activities.

Ms. Beach worked in the Pico Rivera enforcement office of Cal/OSHA, widely considered the most active Cal/OSHA office in the state, where she assisted compliance inspectors during site inspections of alleged work place violations. She evaluated numerous worksites and hazardous processes ranging from indoor air quality issues in office buildings, to hazards of commercial

laundry facilities, lead smelters and electroplating operations to name a few. She has been on both sides of OSHA inspections and is adept at guiding clients how to prepare for, and most importantly, how to avoid OSHA inspections by implementing effective health and safety programs.

Ms. Beach worked for over seven years as the Associate Director of Corporate Occupational Health and Industrial Hygiene for a leading global biopharmaceuticals company. Ms. Beach developed, gained support for, implemented and provided management oversight for numerous occupational health and safety programs related to risk reduction and OSHA and EPA compliance. She authored the corporate policies and established the program elements for the following: Laboratory Chemical Safety, Hazard Communication/Community Right-to-Know, Potent Pharmaceutical Compound Safety, Respiratory Protection, Hearing Conservation, Confined Space Safety, Indoor Air Quality, Lead and Asbestos Management Programs, Third-Party Contractor Safety, and the Environment, Health and Safety (EH&S) Change Management Program. She also provided support and guidance on numerous building design projects that facilitated the incorporation of EH&S requirements from design inception through construction and commissioning. Ms. Beach has provided support and oversight for Injury, Illness Incident Prevention Programs, Lockout/Tagout, Fire Safety, Ergonomics, and EH&S metrics development and reporting. She was instrumental in bringing EH&S data management software to fruition in her company and also managed the implementation of an occupational health and industrial hygiene data management tool, Medgate.

ACADEMIC BACKGROUND:

BS, Environmental Toxicology, University of California, Davis, 1993
MS, Environmental Health Sciences, emphasis Industrial Hygiene, University of California, Los Angeles, 1998

PRESENTATIONS:

"A Biotechnology Company in Transition: Lessons Learned." Presented May 25, 2005. Pharma/Biotechnology Forum. American Industrial Hygiene Conference and Exposition, Anaheim CA.

"Building a New Facility for Potent Compound Containment." Presented June 17, 2003. Conference sponsored by the Institute for International Research, Pharmaceutical Division.

Sabty-Daily, R., Harris, P., Hinds, W., Froines, J. "Size Distribution and Speciation of Chromium in Paint Spray Aerosol at an Aerospace Facility". (submitted *to Annals of Industrial Hygiene*, July 2001).

SPECIALIZED TRAINING: Hazardous Waste Operations and Emergency Response, 40 Hour.

PROFESSIONAL AFFILIATIONS: American Industrial Hygiene Association
American Industrial Hygiene Association, Northern California Chapter.

CERTIFICATIONS:
Certified Industrial Hygienist, #8494
Registered Environmental Assessor, #08178

Exhibit A: Vicinity Map

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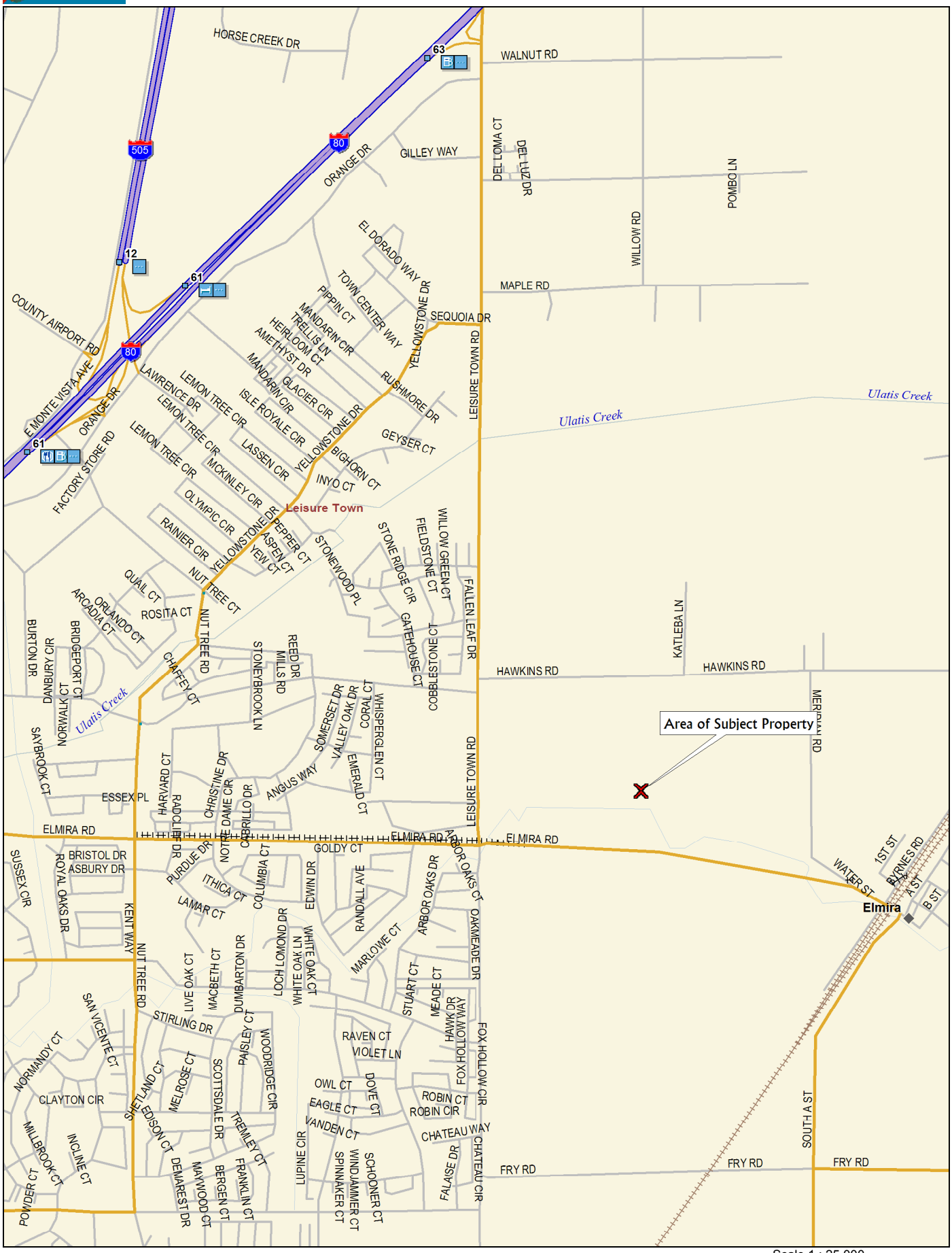

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www.delorme.com

TN
MN (14.7°E)

Scale 1 : 25,000

0 600 1200 1800 2400 3000 ft
0 200 400 600 800 1000 m

1" = 2,083.3 ft

Data Zoom 13-0

Exhibit B: Assessor's Parcel Map

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Solano, CA, 2006-2007 - 0135-070-050, .CA , Sheet: 1 of 1

POR. LOT 37, RANCHO LOS PUTOS
POR. SEC. 24, T.6N., R1W., M.D.B. & M.

Bk. 134

Tax Area Code 91021

135-

Adj Pg. 86 Rm	6-12-01	FG
Adj Pg 85 Rm	7-10-00	DJ
070-08&09 SBE PU	2-2-00	Pd
070-08&09 SBE PU	1-24-97	Pd
CONVERSION	7-21-94	SS
070-08 & 09	4-14-88	DJ
REVISION	DATE	BY

NOTE: This map is for assessment purposes only and is not for the intent of interpreting legal boundary rights, zoning regulations and/or legality of land division laws.

NOTE: Assessor's Block Numbers Shown in Ellipses
Assessor's Parcel Numbers Shown in Circles

Survey for M.J. Dorney and others , R.M. Bk. 03 Pg. 35

Assessor's Map Bk. 135 Pg. 07
County of Solano, Calif.

02/03

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Exhibit C: U.S.G.S 7.5-Minute Topographic Map Elmira Quadrangle

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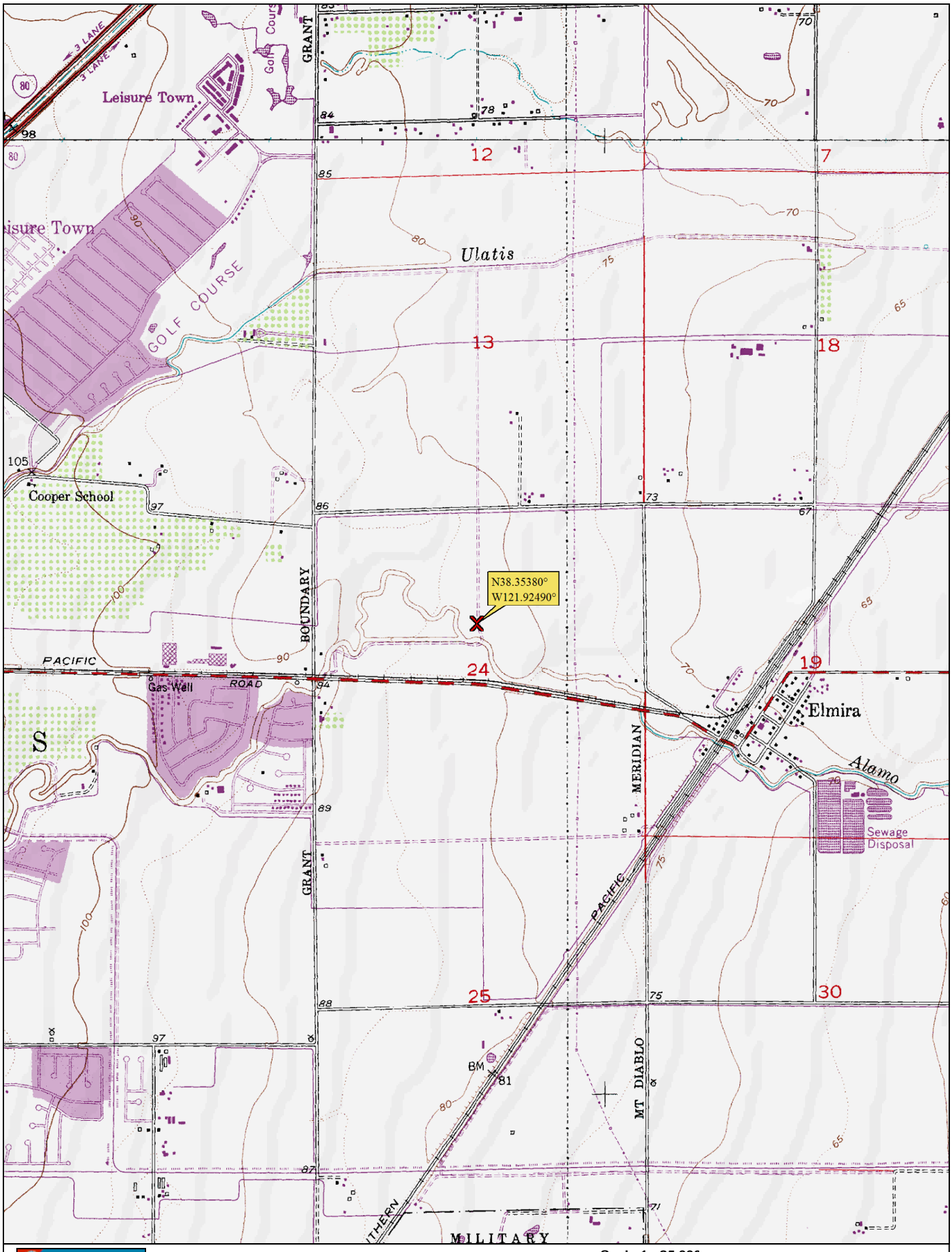

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www.delorme.com

Scale 1 : 25,000
1" = 2080 ft

0 600 1200 1800 2400 3000 ft
0 200 400 600 800 1000 m

TN
MN
15.4°E

Exhibit D: Site Photographs

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Yellowstone Dr
McKinley Cir
Olympic Cir
Stonegate Dr
Fairgate Dr
Fremont Dr
Stoneybrook Ln
Yale Ave
Harvard Ave
Gatehouse Dr
Chrisline Dr
Cobblestone Dr
Ulatis Dr
Leisure Town Rd
Hawkins Rd
Byrnes Rd
Notre Dame Dr
Arabian Cir
Alison Dr
Topeka Ln
Zepher Ln
Syracuse Dr
Vassar Dr
Commerce Pl
Union Way
Meridian Rd
Elmira Rd
Holdener Rd
A St
B St
California Pacific Rd
S A St
Purdue Dr
Temple Dr
Ralph Ave
Arroyo Ct
Oakmeade Dr
Roberl Rd
Arbian Ct
Keith Ct
Dumbarton Ct
Loch Lomond Ct
Marshall Rd
Cedar Brook Ln
Creek Ln
Hawk Dr
Scotsdale Dr
St Andrews Dr
Raven Dr
Violet Ln
Bluebird Dr
Woodridge Dr
Carlton Ave
Owl Dr
Robin Dr
Fox Hollow Way
Eagle Ln
Chateau Way
Vaca Station Rd
3701 ft
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© 2007 Google™

Looking west across the subject property from Meridian Road, the eastern edge of the subject property

Looking from Meridian Road towards the adjacent property to the east

On the bank of the Byrnes Canal adjacent to Hawkins Road, looking south onto the subject property

Looking at the subject property from Elmira Road, facing northwest

Exhibit E: Preliminary Endangerment Assessment High School Site B

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Alan C. Lloyd, Ph.D.
Agency Secretary
Cal/EPA

Department of Toxic Substances Control

1011 North Grandview Avenue
Glendale, California 91201

Arnold Schwarzenegger
Governor

July 27, 2005

Ms. Leigh Coop
Director of Facilities
Vacaville Unified School District
751 School Street
Vacaville, California 95688

APPROVAL OF PRELIMINARY ENDANGERMENT ASSESSMENT, PROPOSED HIGH SCHOOL SITE B, EAST OF LEISURE TOWN ROAD AND SOUTH OF ELMIRE ROAD, VACAVILLE (SITE CODE 104426)

Dear Ms. Coop:

The Department of Toxic Substances Control (DTSC) received a notice dated July 18, 2005 indicating the Vacaville Unified School District (District) has complied with all public review and comment requirements set forth in the California Education Code (CEC), §17213.1(a)(6)(A) for the site. According to the notice, the District held a 30-day review and comment period from June 13, 2005 through July 14, 2005, and held a public hearing on July 14, 2005 on the draft Preliminary Endangerment Assessment (PEA) report for the site. No comments were received regarding the draft PEA.

DTSC reviewed the draft PEA report, dated May 19, 2005 and received on May 23, 2005, and determined no revision was necessary. The PEA, prepared by Padre Associates, presents data collected during PEA investigation activities and conclusions based on a PEA risk screening evaluation for the site.

The approximate 82-acre site has been used for agriculture (row crops) since at least 1937. There is no indication that any structures have ever been present on site. The site was investigated for PCBs, metals and organochlorine pesticides. None of the chemicals were found to be of potential concern and the PEA concludes no further action is required.

Based on the findings of the PEA investigation, neither an actual or potential release of hazardous materials nor the presence of a naturally occurring hazardous material, which would posed a threat to human health or the environment under unrestricted land use, was indicated at the site. The PEA concludes no further action is required. DTSC concurs and hereby approves the draft PEA as final.

In accordance with CEC, §17213.2, (e), if at anytime during construction at a school site, a previously unidentified release or threatened release of a hazardous material or the presence of a naturally occurring hazardous material is discovered, the District shall cease all construction activities at the site and notify DTSC. Additional assessment, investigation, or cleanup may be required.

If you have any questions, please call, the Project Manager, Mr. Michael Kenning at (916) 255-3625 or me at (818) 551-2821.

Sincerely,

Javier Hinojosa, Acting Chief
Glendale/Sacramento Branch
School Property Evaluation and Cleanup Division

cc: Alan J. Klein, R.E.A. II
Senior Environmental Scientist
Padre Associates, Incorporated
3020 Explorer Drive, Suite 5
Sacramento, California

Mr. Michael O'Neill
Consultant/Environmental Coordinator
School Facilities Planning Division
California Department of Education
1430 N Street, Suite 3207
Sacramento, California 95814

bcc: Mr. Mark Malinowski, Acting Chief
Schools Unit – Sacramento Office

Mr. Michael Kenning, Project Manager
Schools Unit – Sacramento Office

Ms. Gabriele Windgasse, DrPH.
HERD – Sacramento Office

SPECD Reading File – Sacramento Office

padre associates, inc.
ENGINEERS, GEOLOGISTS & ENVIRONMENTAL SCIENTISTS

PRELIMINARY ENDANGERMENT ASSESSMENT PROPOSED HIGH/MIDDLE SCHOOL SITE B EAST OF LEISURE TOWN ROAD AND SOUTH OF ELMIRA ROAD VACAVILLE, SOLANO COUNTY, CALIFORNIA

Prepared for:
VACAVILLE UNIFIED SCHOOL DISTRICT

May 2005

STATE OF CALIFORNIA
DTSC
MAY 23 2005
RECEIVED
SCHOOLS UNIT-SACRAMENTO

padre
associates, inc.
ENGINEERS, GEOLOGISTS & ENVIRONMENTAL SCIENTISTS

STATE OF CALIFORNIA
DTSC

MAY 23 2005

RECEIVED
SCHOOLS UNIT-SACRAMENTO

May 19, 2005
Project No. 0401-0881

Department of Toxic Substances Control
School Evaluation Unit
8800 Cal Center Drive
Sacramento, California 95826

Attention: Mr. Michael Kenning

Subject: Preliminary Endangerment Assessment for Proposed High/Middle School Site B, East of Leisure Town Road and South of Elmira Road, Vacaville, Solano County, California (Site Code 104426-11)

Dear Mr. Kenning:

Padre Associates, Inc. (Padre), on behalf of the Vacaville Unified School District, is presenting this Preliminary Endangerment Assessment (PEA) report for the proposed High/Middle School Site B located east of Leisure Town Road and south of Elmira Road in Vacaville, Solano County, California.

The PEA was performed to fulfill the requirements of the Environmental Oversight Agreement (EOA), Docket Number HSA-A-04/05-014 issued by the California DTSC to the Vacaville Unified School District. If you have any questions or require additional information, please contact the undersigned at (916) 857-1601, ext. 24.

Sincerely,

PADRE ASSOCIATES, INC.

Alan Churchill
Project Geologist

Alan J. Klein, R.E.A. II
Senior Environmental Scientist
Project Manager

REGISTERED ENVIRONMENTAL ASSESSOR II
ALAN J. KLEIN
No. 20090
Expires 10/08
STATE OF CALIFORNIA

Jerome K. Summerlin, C.E.G., C.Hg., R.E.A. II
Principal

REGISTERED ENVIRONMENTAL ASSESSOR II
JEROME K. SUMMERLIN
No. REA II-20013
Expires 11.30.09
STATE OF CALIFORNIA

c: Gabrielle Windgasse, DTSC HERD
Leigh Coop, Vacaville Unified School District
Jerry Suich, Oxbridge Development, Inc.
Wallace Browe, Capital Program Management, Inc.

PRELIMINARY ENDANGERMENT ASSESSMENT
PROPOSED HIGH/MIDDLE SCHOOL SITE B
EAST OF LEISURE TOWN ROAD AND
SOUTH OF ELMIRA ROAD
VACAVILLE, SOLANO COUNTY, CALIFORNIA

Prepared for:
VACAVILLE UNIFIED SCHOOL DISTRICT

May 2005

padre associates, inc. ENGINEERS, GEOLOGISTS & ENVIRONMENTAL SCIENTISTS

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PLATES

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APPENDICES

EXECUTIVE SUMMARY

Padre Associates, Inc. (Padre), on behalf of the Vacaville Unified School District (VUSD), performed a Preliminary Endangerment Assessment (PEA) at the proposed High/Middle School Site B property located east of Leisure Town Road and south of Elmira Road, Vacaville, Solano County, California (Project Site).

This PEA was performed consistent with California Environmental Protection Agency (CalEPA) Department of Toxic Substances Control (DTSC) guidelines for sampling agricultural fields, and the DTSC guidance manual for evaluation of hazardous substance release sites titled *Preliminary Endangerment Assessment Guidance Manual*, State of California, Environmental Protection Agency (CalEPA 1999). The 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 82.5 acres of agricultural land. The potential presence of residual pesticides associated with past agriculture use was identified based on historical property use, as well as pesticide usage reports provided by the Solano County Agricultural Commissioner. The scope of work for this PEA was performed in accordance with the DTSC-approved PEA workplan prepared by Padre dated September 30, 2004, as well as the addendum to the PEA workplan dated March 1, 2005. The general scope of work included the collection of discrete soil samples from the surface to depths of 0.5 feet, and discrete subsurface soil samples collected from depths of 2.0 feet to 2.5 feet at 82 locations across the Project Site. Soil samples were chemically analyzed for the presence of organochlorine pesticides, arsenic, and Title 22 Metals (CAM 17). Additionally, two soil samples were collected at the base of pole-mounted electrical transformers located on and adjacent to the Project Site, and chemically analyzed for the presence of polychlorinated biphenyls (PCBs). Four discrete soil samples were collected from a depth of approximately 5.0 to 5.5 feet to evaluate background metals concentrations.

The potential exposure pathways identified at the Project Site were inhalation of contaminated particulates, and ingestion and dermal contact of residual pesticide-containing soils. The results of the PEA screening level risk assessment indicate that the inhalation pathway and ingestion/dermal contact pathway for soil impacted by Aroclor 1260 (PCB), and two metals (copper and zinc) compared with background levels does not provide an excess cancer risk greater than 1 in 1,000,000 ($>10^{-6}$). The total risk (summation of each identified exposure pathway) for the chemicals of potential concern (COPCs) was identified in surface soils at 8.7×10^{-7}. Based on the model assumptions, the total hazard (summation of each identified exposure pathway) for soil containing COPCs does not provide a significant health hazard (>1). The total hazard for the COPCs identified in surface soils was 0.15.

Concentrations of lead ranged from 6.0 milligrams per kilogram (mg/kg) to 7.7 mg/kg in soil samples collected from the planting area and irrigation ditches. A risk assessment was performed (utilizing the highest concentration) using DTSC's *LeadSpread* model. Based on the *LeadSpread* output, exposure to the lead concentrations indicated at the Project Site will result in a 99th percentile blood lead concentration of 4.8 micrograms per decaliter (µg/dl) in children and 3.4 µg/dl in adults. These values are below the 10 µg/dl blood lead level of concern established by the U.S. Centers for Disease Control.

Arsenic concentrations ranged from 4.5 mg/kg to 9.2 mg/kg in soil samples collected from the planting area and irrigation ditches. Background soil samples collected at the Project Site identified arsenic concentrations ranging from 5.2 mg/kg to 7.0 mg/kg. The arithmetic mean for arsenic concentrations detected in soil samples collected from the planting area and irrigation ditches was 7.1 mg/kg. The arithmetic mean for arsenic detected in background samples was 6.0 mg/kg. Additionally, as reported in *Background Concentrations of Trace and Major Elements in California Soils*, Bradford et al., March 1996, soil samples collected from within Solano County contained arsenic at concentrations ranging from 4.5 to 9.6 mg/kg. Therefore, arsenic was not considered a COPC, and additional assessment and/or remediation for arsenic is not recommended. Additionally, a screening-level evaluation for arsenic using analytical models provided in the PEA guidance manual was not performed.

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

1.0 INTRODUCTION

This document presents the results of the Preliminary Endangerment Assessment (PEA) completed by Padre Associates, Inc. (Padre) on behalf of the Vacaville Unified School District (VUSD) for the proposed High/Middle School Site B located east of Leisure Town Road and south of Elmira Road, Vacaville, Solano County, California (Project Site). The PEA was performed to fulfill the requirements of the Environmental Oversight Agreement (EOA), Docket Number HSA-A-04/05-014 issued to the VUSD by the California Environmental Protection Agency (CalEPA) Department of Toxic Substances Control (DTSC).

The Project Site, identified as assessor's parcel number (APN) 0135-080-040, consists of 82.5-acres of land that is currently used for growing corn. The property has been owned by Edelweiss Corporation and Marisa, Inc. since 1976, and has been utilized for agricultural purposes since at least 1937.

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 Endangerment Assessment Guidance Manual*, State of California, Environmental Protection Agency (CalEPA, Second Printing June 1999). Pursuant to the Health and Safety Code Section 25355.5 (a) (1) (C), the activities performed under the EOA were performed under the oversight of the 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: the issuance of a "No Further Action" finding 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; the need for further assessment through the Remedial Investigation/Feasibility Study (RI/FS) process if the Project Site is found to be significantly impacted by hazardous substances release(s); and the need to perform a Removal Action if localized impacts by hazardous substances release(s) are found. The abandonment of the property as a proposed school site is also an alternative.

2.0 PROPERTY DESCRIPTION AND CONTACTS

2.1 SITE ADDRESS AND ASSESSOR'S PARCEL NUMBER

The Project Site is located east of Leisure Town Road and south of Elmira Road, Vacaville, Solano County, California. The Solano County Assessor's Office identifies the Project Site as APN 0135-080-040.

Ms. Leigh Coop, Director of Facilities
Vacaville Unified School District
751 School Street
Vacaville, California 95688-3987
Phone No. (707) 453-6139

2.2 PROPERTY USE

The Project Site consists of 82.5-acres of land that is currently used for growing corn. The property has been owned by Edelweiss Corporation and Marisa, Inc. since 1976, and has been utilized for agricultural purposes since at least 1937.

2.3 TOWNSHIP, RANGE, AND SECTION

The Project Site is located in Township 6 North, Range 1 West, Section 24 of the USGS 7½-Minute topographic series, Elmira, California Quadrangle Map.

2.4 SITE MAPS AND PHOTOGRAPHS

A site location map is included as Plate 1-1, a site plan is included as Plate 1-2, and a site sampling plan is included as Plate 5-1.

2.5 PHYSICAL SETTING

The Project Site is located on a relatively flat parcel of land that slopes gently towards the east. According to the United States Geological Survey (USGS) Elmira Quadrangle, California topographic map (1992), the Project Site is located at an elevation of approximately 90 feet above mean sea level (msl).

The Project Site is located near the western edge of the Sacramento Valley, a sub-province of the Great Valley geomorphic province, and its border with the California Coast Range sub-province. Sequences of marine and overlying continental, detrital sediment material fills the valley. The Coast Ranges of California consist mainly of ultramafic ophiolite, including serpentinite. The upper tectonic plate of the Coast Range thrust consists of Great Valley sequence rocks with Coast Range ophiolite at the base. It is traversed by the San Andreas fault only along the west side of the Diablo Range in Central California. The upper plate of the Coast Range thrust forms a broad blanket over underlying Franciscan rocks. Metasedimentary and

metavolcanic rocks form the border zone in the Franciscan immediately below the Coast Range Thrust Plate.

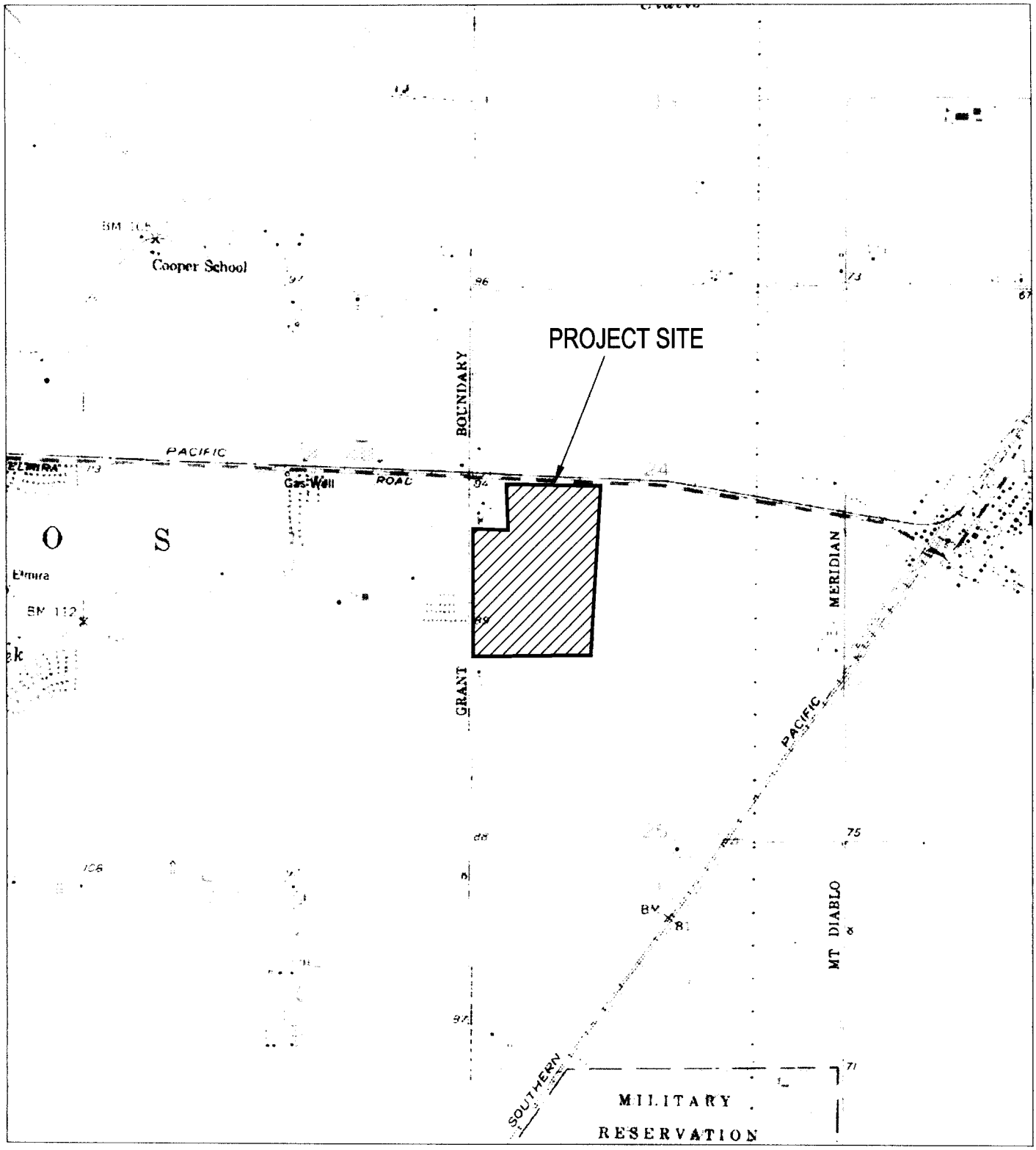
The Project Site is underlain by mid and late Pleistocene-age alluvium consisting of dissected alluvial deposits and poorly sorted stream and basin deposits of clay to boulder-size material. These deposits are underlain by undifferentiated early Tertiary marine deposits.

The Soil Survey of Solano County General Soil Map identifies soil at the Project Site to be Brentwood clay loam and Rincon clay loam. Brentwood clay loam (BrA) consists of a well-drained soil on alluvial fans with slopes of 0 to 2 percent. Runoff is very slow and erosion is a slight hazard. This soil is used mainly for irrigated apricots, walnuts, almonds, prunes, alfalfa, tomatoes, sugar beets, and for dry-farmed barley. Rincon clay loam (RoA) consists of a well-drained soil on alluvial fans with slopes of 0 to 9 percent. Runoff is slow to medium and erosion is a slight hazard. This soil is used mostly for irrigated sugar beets, tomatoes, and alfalfa.

The average rainfall is 20 to 25 inches and the average annual temperature is 60 to 62 degrees Fahrenheit The nearest bodies of water are unnamed intermittent creeks, which flow from west to east towards Putah South Canal, which is located approximately 4,000-feet east of the Project Site. According to water well records from the California Department of Water Resources (Well No. 06N01W24N001M), the depth to first groundwater is located at approximately 10 to 20 feet below ground surface and is inferred to flow in an easterly direction.

2.6 SURROUNDING PROPERTY LAND USE

The Project Site is bordered to the north by Elmira Road, beyond which is agricultural land. Residential development is present at the southeast corner of the intersection of Leisure Town Road and Elmira Road. The Project Site is bordered to the east and south by agricultural land, and to the west by Leisure Town Road, beyond which is residential housing.



U.S.G.S. 7.5 MINUTE QUADRANGLE
ELMIRA, CALIFORNIA 1953 (PHOTOREVISED 1980)

NORTH

0 2000'

SCALE

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PROPOSED HIGH/MIDDLE SCHOOL SITE 'B'
EAST OF LEISURE TOWN ROAD
AND SOUTH OF ELMIRA ROAD
VACAVILLE, CALIFORNIA

PROJECT NO.	DATE	DR. BY	APP. BY
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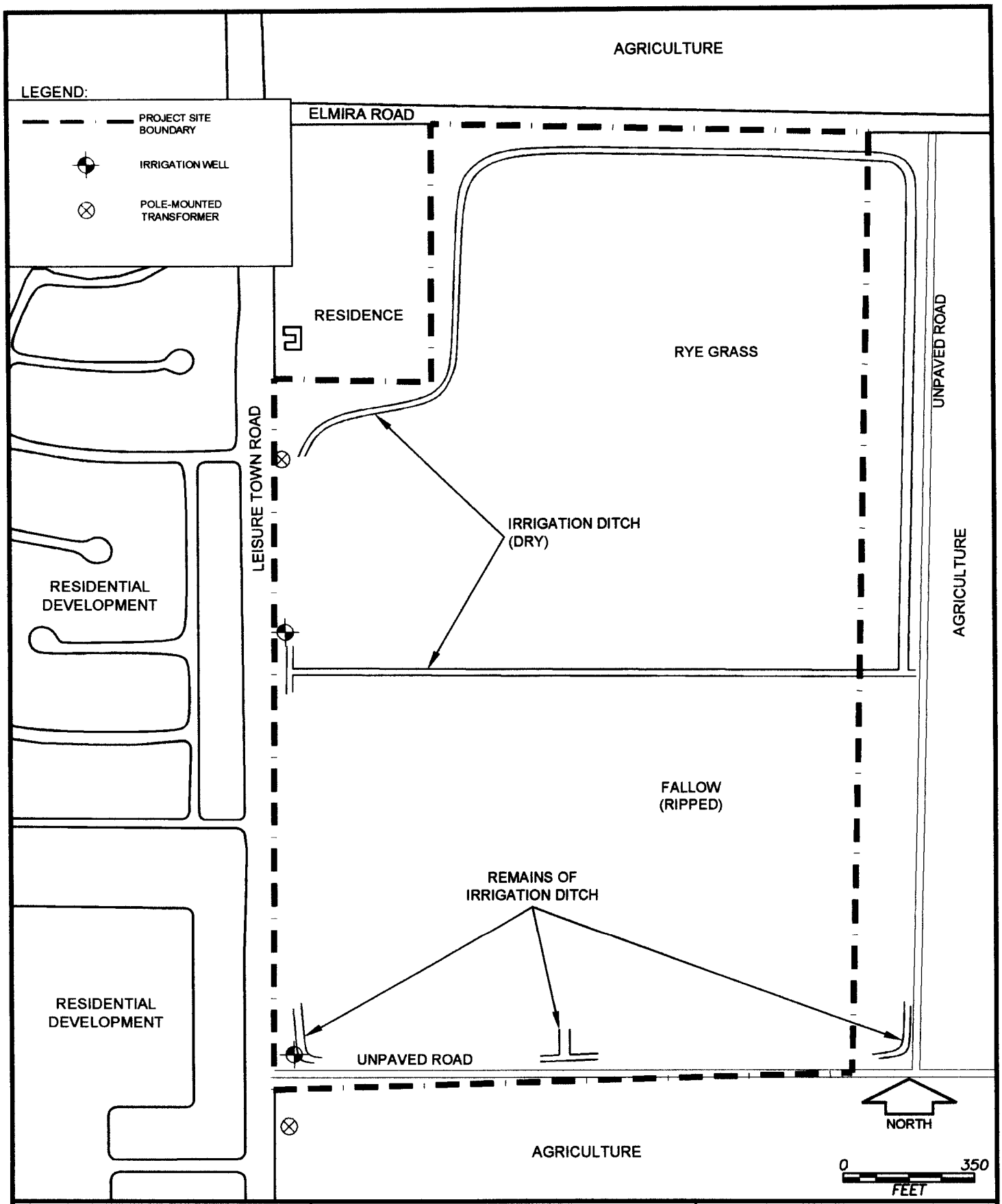
PLATE 2-1

SITE LOCATION



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PROPOSED HIGH/MIDDLE SCHOOL SITE 'B'
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VACAVILLE, CALIFORNIA

PROJECT NO.	DATE	DR. BY	APP. BY
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PLATE 2-2

SITE PLAN

3.0 BACKGROUND

3.1 SITE HISTORY

The Project Site, identified as assessor's parcel number (APN) 0135-080-040, consists of 82.5-acres of land that is currently used for growing corn. The property has been owned by Edelweiss Corporation and Marisa, Inc. since 1976, and has been utilized for agricultural purposes since at least 1937.

Two inactive groundwater wells are located at the Project Site along Leisure Town Road. One well is located at approximately the mid-section of the western property boundary, and the other well is located at the southwest corner of the Project Site. Additionally, one pole-mounted electrical transformer is on the Project Site along Leisure Town Road.

3.2 POTENTIAL ENVIRONMENTAL ISSUES

According to the Solano County Agricultural Commissioner's Office located in Fairfield, California, pesticide usage reports were on file for the Project Site indicated as APN 0135-080-040, Section 24, Township 6N, Range 1W. According to the pesticide usage reports, the following chemicals have been applied at the Project Site within the last three years:

- Hoelon (herbicide)
- Nufarm Weedar (broadleaf herbicide)
- 41-A (drift retardant)

Residual concentrations of agricultural chemicals in surface soils may pose a potential health risk via ingestion, dermal contact, and inhalation exposure pathways. Selected soil samples were chemically analyzed for the presence of organochlorine pesticides and metals, including arsenic and lead. Additionally, residual concentrations of polychlorinated biphenyls (PCBs) in surface soils beneath the pole-mounted electrical transformers may pose a potential health risk via ingestion, dermal contact and inhalation exposure pathways. Selected soil samples were analyzed for the presence of PCBs. The chemical analysis of soil samples was based on the following available information:

- Past agricultural chemical use at the Project Site - uniform application of pesticides to the fields; and

- Presence of pole-mounted electrical transformers – leaks/spills of oils containing polychlorinated biphenyls.

Ingestion of groundwater is not considered an exposure pathway because the proposed school facilities will be connected to the local water district's water system, and groundwater beneath the Project Site will not be utilized as irrigation or potable water. Inhalation of impacted soil vapor is not considered a complete exposure pathway because there is no evidence to

suggest that volatiile organic compounds (VOCs) are present in soil vapor at concentrations in excess of background (ambient air) concentrations. Surface water was not identified at the Project Site, therefore it is not considered a complete exposure pathway. Ingestion of vegetation and animals was not considered a complete exposure pathway because of the proposed use of the Project Site as a high/middle school.

4.0 PEA ASSESSMENT

On April 11, 12, 13, and 14, 2005, Padre collected 82 discrete soil samples on one-acre centers at locations across the Project Site in accordance with the DTSC-approved PEA workplan prepared by Padre dated September 30, 2004 and the addendum to the PEA workplan dated March 1, 2005 (refer to Plate 4-1). During the course of the field activities, the southern half of the Project Site was fallow (ripped) and the northern portion appeared to be planted with rye grass. Prior to the initiation of field activities, a licensed land surveyor delineated the boundaries of the proposed high/middle school site. The longitudinal and latitudinal coordinates of each sample location were identified by Padre using an electronic navigating device operating with the United States Government's Global Positioning Satellite system. The longitudinal and latitudinal coordinates are presented in Table 4-1, and are transposed on Plate 4-3. Copies of correspondence between Padre and DTSC is included in Appendix A.

Surface soil samples were collected by manually advancing brass sample tubes into the soil. The deeper soil samples were collected using a hand auger and slide hammer. The soil sampling equipment was decontaminated prior to each sampling location and sampling event. Soil samples were collected in pre-cleaned, 2-inch by 6-inch brass sample liners. All sample containers were sealed and delivered under chain-of-custody documentation to California Laboratory Services (CLS) located in Rancho Cordova, California. A copy of the field sampling plan (Section 4.0 of the PEA work plan) and quality assurance/quality control procedures (Section 5.0 of the PEA work plan) are presented in Appendix B.

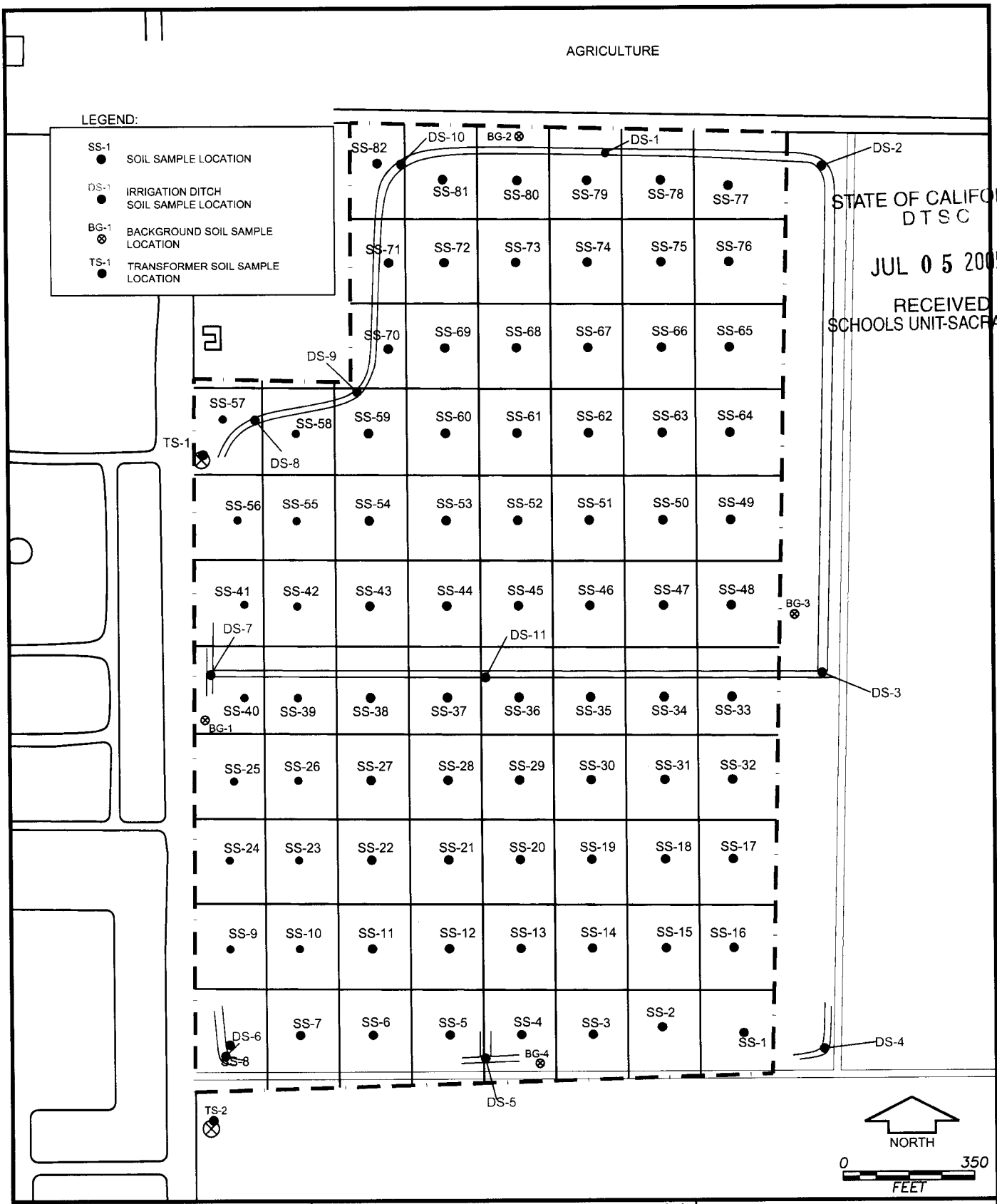
The laboratory combined 54 of the 82 surface soil samples into 18, 3-point composite soil samples, and the remaining 28 soil samples into 7, 4-points composite soil samples for a total of 25 composite soil samples. Plate 4-2 shows the configuration of the composite soil samples. At each location, soil samples were collected from the surface to depths of 0.5 feet, and from a depth of 2.0 to 2.5 feet. The 25 composite soil samples were chemically analyzed for the presence of organochlorine pesticides (OCPs) by U.S. EPA Method 8081A. Additionally, twenty-seven discrete surface soil samples were chemically analyzed for the presence of arsenic by U.S. EPA Method 7060, and four discrete surface samples were analyzed for CAM 17 Metals by U.S. EPA Method 6010/7000 series.

During Padre's initial site visit in July 2004, the Project Site was transected by irrigation ditches that ran north-south, east-west, and around the perimeter of the Project Site. However, when field activities were performed in April 2005, some sections of the ditches had been disced and plowed over. The ditch bends and outfalls were still present. One half of the discrete soil samples were collected from the top of the bank and one half were collected from just above the water line, or at the base of a dry ditch. The discrete soil sample locations were situated at the bends and outfalls of the irrigation ditches and collected from the surface to depths of approximately 0.5 feet at 11 locations from within the irrigation ditches. The 11 discrete soil samples were chemically analyzed for the presence of OCPs and arsenic. Additionally, two of the eleven soil samples were analyzed for the presence of CAM 17 metals.

During Padre's initial site visit in July 2004, two pole-mounted electrical transformers appeared to be located on the Project Site along Leisure Town Road. However, after reviewing the surveyor's map, the pole-mounted transformer identified as TS-2 in the PEA Workplan is actually located approximately 60 feet south of the southwest corner of the Project Site. Nevertheless, to be conservative, one discrete soil sample was collected at the base of each pole-mounted transformer from the surface to a depth of 0.5 feet. The surface soil samples were chemically analyzed for the presence of PCBs by U.S. EPA Method 8082.

Four background soil samples (BG-1, BG-2, BG-3, and BG-4) were collected at the locations shown on Plate 4-1. These background soil samples were collected from depths of 5.0 to 5.5 feet. The background samples were chemically analyzed for the presence of CAM 17 Metals by U.S. EPA method 6010/7000 and for arsenic by U.S. EPA method 7060.

As part of the quality assurance/quality control (QA/QC) program, three equipment blank samples and three field blank samples (water samples) were collected and analyzed for the presence of arsenic and lead.



STATE OF CALIFORNIA
DTSC

JUL 05 2005

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EAST OF LEISURE TOWN ROAD
AND SOUTH OF ELMIRA ROAD
VACAVILLE, CALIFORNIA

PROJECT NO.	DATE	DR. BY	APP. BY
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PLATE 4-1

SITE SAMPLING PLAN

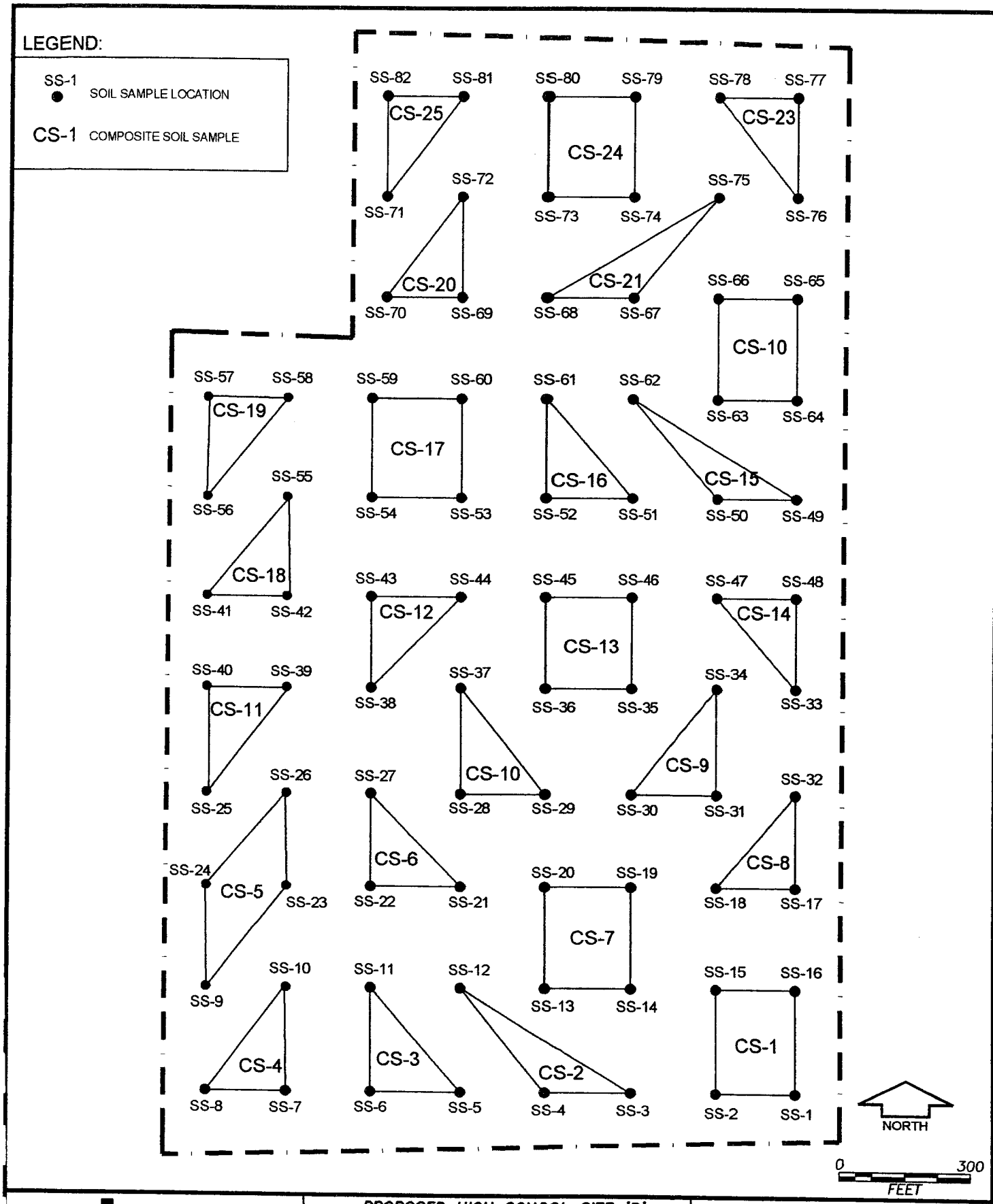

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PLATE 4-2

SITE SAMPLING PLAN (COMPOSITE SAMPLES)

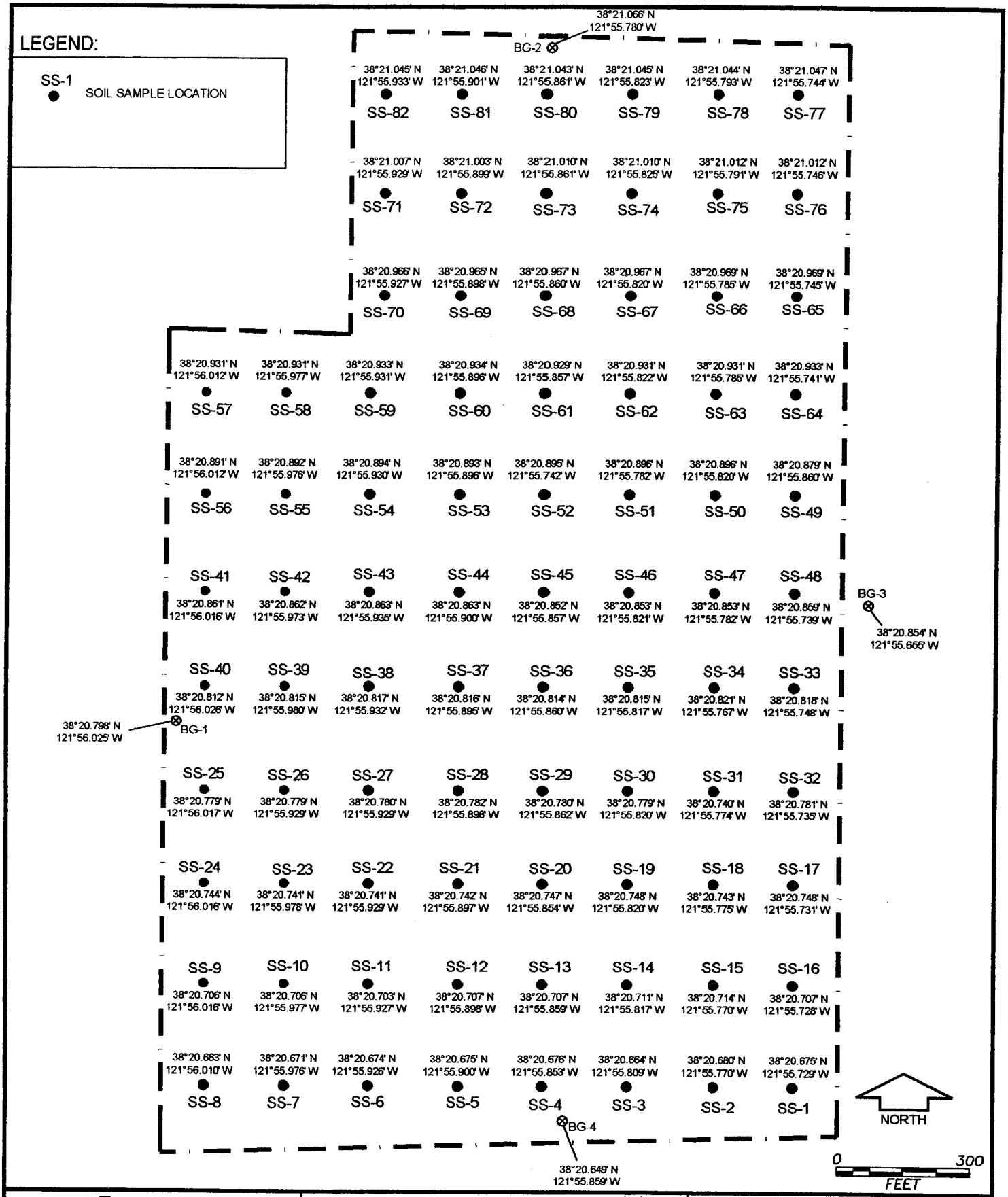

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PLATE 4-3

SAMPLE LOCATION COORDINATES

Table 4-1. Sample Locations by Latitude and Longitude

Sample Identification	Coordinates	
	Latitude	Longitude
SS1	38° 20.675'	121° 55.729'
SS2	38° 20.680'	121° 55.770'
SS3	38° 20.664'	121° 55.809'
SS4	38° 20.676'	121° 55.853'
SS5	38° 20.675'	121° 55.900'
SS6	38° 20.674'	121° 55.926'
SS7	38° 20.671'	121° 55.976'
SS8	38° 20.663'	121° 56.010'
SS9	38° 20.706'	121° 56.016'
SS10	38° 20.706'	121° 55.977'
SS11	38° 20.703'	121° 55.927'
SS12	38° 20.707'	121° 55.898'
SS13	38° 20.707'	121° 55.859'
SS14	38° 20.711'	121° 55.817'
SS15	38° 20.714'	121° 55.770'
SS16	38° 20.707'	121° 55.728'
SS17	38° 20.748'	121° 55.731'
SS18	38° 20.743'	121° 55.775'
SS19	38° 20.748'	121° 55.820'
SS20	38° 20.747'	121° 55.854'
SS21	38° 20.742'	121° 55.897'
SS22	38° 20.741'	121° 55.929'
SS23	38° 20.741'	121° 55.978'
SS24	38° 20.744'	121° 56.016'
SS25	38° 20.779'	121° 56.017'
SS26	38° 20.779'	121° 55.980'
SS27	38° 20.780'	121° 55.929'
SS28	38° 20.782'	121° 55.898'

Table 4-1. Sample Locations by Latitude and Longitude (continued)

Sample Identification	Coordinates	
	Latitude	Longitude
SS29	38° 20.780'	121° 55.862'
SS30	38° 20.779'	121° 55.820'
SS31	38° 20.740'	121° 55.774'
SS32	38° 20.781'	121° 55.735'
SS33	38° 20.818'	121° 55.748'
SS34	38° 20.821'	121° 55.767'
SS35	38° 20.815'	121° 55.817'
SS36	38° 20.814'	121° 55.860'
SS37	38° 20.816'	121° 55.895'
SS38	38° 20.817'	121° 55.932'
SS39	38° 20.815'	121° 55.980'
SS40	38° 20.812'	121° 56.026'
SS41	38° 20.861'	121° 56.016'
SS42	38° 20.862'	121° 55.973'
SS43	38° 20.863'	121° 55.935'
SS44	38° 20.863'	121° 55.900'
SS45	38° 20.852'	121° 55.857'
SS46	38° 20.853'	121° 55.821'
SS47	38° 20.853'	121° 55.782'
SS48	38° 20.859'	121° 55.739'
SS49	38° 20.879'	121° 55.860'
SS50	38° 20.896'	121° 55.820'
SS51	38° 20.896'	121° 55.782'
SS52	38° 20.895'	121° 55.742'
SS53	38° 20.893'	121° 55.896'
SS54	38° 20.894'	121° 55.930'
SS55	38° 20.892'	121° 55.976'
SS56	38° 20.891'	121° 56.012'

Table 4-1. Sample Locations by Latitude and Longitude (continued)

Sample Identification	Coordinates	
	Latitude	Longitude
SS57	38° 20.931'	121° 56.012'
SS58	38° 20.931'	121° 55.977'
SS59	38° 20.933'	121° 55.931'
SS60	38° 20.934'	121° 55.896'
SS61	38° 20.929'	121° 55.857'
SS62	38° 20.931'	121° 55.822'
SS63	38° 20.931'	121° 55.785'
SS64	38° 20.933'	121° 55.741'
SS65	38° 20.969'	121° 55.745'
SS66	38° 20.969'	121° 55.785'
SS67	38° 20.967'	121° 55.820'
SS68	38° 20.967'	121° 55.860'
SS69	38° 20.965'	121° 55.898'
SS70	38° 20.966'	121° 55.927'
SS71	38° 21.007'	121° 55.929'
SS72	38° 21.003'	121° 55.899'
SS73	38° 21.010'	121° 55.861'
SS74	38° 21.010'	121° 55.825'
SS75	38° 21.012'	121° 55.791'
SS76	38° 21.012'	121° 55.746'
SS77	38° 21.047'	121° 55.744'
SS78	38° 21.044'	121° 55.793'
SS79	38° 21.045'	121° 55.823'
SS80	38° 21.043'	121° 55.861'
SS81	38° 21.046'	121° 55.901'
SS82	38° 21.045'	121° 55.933'
BG-1	121° 56.025'	38° 20.798"
BG-2	121° 55.780'	38° 21.066"
BG-3	121° 55.655'	38° 20.854"
BG-4	121° 55.859'	38° 20.649"

Note: Coordinates recorded using Garmin etrex Vista with accuracy of ±20 feet.

5.0 FINDINGS

The following sections describe the results of the field sampling activities performed at the Project Site on April 11, 12, 13, and 14, 2005. The laboratory analytical results are also summarized in Tables 5-1, 5-2, and 5-3. Soil sample collection locations are presented on Plate 4-1. Certified analytical laboratory reports and chain-of-custody documentation are provided in Appendix C.

5.1 FIELD AREA SOIL SAMPLING AND ANALYSIS

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

5.1.1 Organochlorine Pesticides

A total of 82 discrete surface soil samples (SS1 through SS82) were collected at locations indicated on Plate 4-1 at depths of 0 to 0.5 feet. Twenty-five, four-point composite soil samples combined by the analytical laboratory were chemically analyzed for the presence of OCPs by U.S. EPA Method 8081A. Results of the laboratory analyses are summarized in Table 5-1 and below:

- Organochlorine pesticides were not detected at or above their respective analytical method reporting limits.

5.1.2 Arsenic

A total of 27 discrete surface soil samples were collected at depths of 0 to 0.5 feet, and analyzed for arsenic by U.S. EPA Method 7060. Results of the laboratory analysis are summarized in Table 5-2 and below.

- Arsenic was detected at concentrations ranging from 5.8 to 9.2 mg/kg.

5.1.3 CAM 17 Metals

Four discrete soil samples were collected at a depth of 0 to 0.5 feet from the planting field. These soil samples were analyzed for CAM 17 Metals by U.S. EPA Method 6010/7000 series. Results of the laboratory analysis are summarized in Table 5-2 and below:

- Antimony, mercury, molybdenum, selenium, silver, and thallium were not detected at concentrations at or above the analytical method reporting limit;
- Barium, beryllium, cadmium, chromium, and cobalt were detected at or below the highest background concentration; and

- Arsenic, copper, lead, nickel, vanadium, and zinc were detected at concentrations that were above the highest background concentrations.

5.2 IRRIGATION DITCH SOIL SAMPLING AND ANALYSIS

5.2.1 Organochlorine Pesticides

A total of 11 discrete soil samples (DS1 through DS11) were collected from the former irrigation ditch at locations indicated on Plate 5-1 at depths of surface to 0.5 feet. The eleven 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 5-1 and below:

- Organochlorine pesticides were not detected at or above their respective analytical method reporting limits.

5.2.2 Arsenic

A total of 11 discrete surface soil samples were collected at depths of 0 to 0.5 feet, and analyzed for arsenic by U.S. EPA Method 7060. Results of the laboratory analysis are summarized in Table 5-2 and below.

- Arsenic was detected at concentrations ranging from 4.5 to 7.9 mg/kg.

5.2.3 CAM 17 Metals

Two discrete soil samples (DS-3 and DS-8) collected from the irrigation ditch were chemically analyzed for CAM 17 Metals by U.S. EPA Method 6010/7000 series. Results of the laboratory analysis are summarized in Table 5-2 and below:

- Antimony, beryllium, cadmium, mercury, molybdenum, selenium, silver, and thallium were not detected at concentrations at or above the analytical method reporting limit;
- Barium, chromium, cobalt nickel, and vanadium were detected below the highest background concentration; and
- Arsenic, copper, lead, and zinc were detected at concentrations that were above the highest background concentrations.

5.3 POLE-MOUNTED TRANSFORMER SAMPLING AND ANALYSIS

5.3.1 Polychlorinated Biphenyls

Discrete soil samples (TS1 and TS2) were collected at the base of the two pole-mounted electrical transformers. The soil samples were collected from surface to a depth of 0.5 feet and chemically analyzed for the presence of PCBs by U.S. EPA Method 8082. Results of the laboratory analyses are summarized in Table 5-3 and below:

- Aroclor 1260 was detected at a concentration of 41 micrograms per kilogram (µg/kg) in soil sample TS-1 (0-0.5').

5.4 QA/QC SAMPLES

5.4.1 Duplicate Soil Samples

Three duplicate soil samples were split by the analytical laboratory and chemically analyzed for the presence of organochlorine pesticides by U.S. EPA method 8081A. The analytical results of the laboratory analyses are presented in Table 5-1 and summarized below.

- OCPs were reported as 'not detected' in composite soil sample CS-18 DUP. The corresponding soil sample CS-18 reported OCPs as 'not detected';
- OCPs were reported as 'not detected' in composite soil sample CS-24 DUP. The corresponding soil sample CS-24 reported OCPs as 'not detected'; and
- OCPs were reported as 'not detected' in composite soil sample CS-25 DUP. The corresponding soil sample CS-25 reported OCPs as 'not detected'.

Three duplicate soil samples were split by the analytical laboratory and chemically analyzed for the presence of arsenic by U.S. EPA method 7060. The analytical results of the laboratory analyses are presented in Table 5-1 and summarized below.

- Arsenic was identified at a concentration of 7.3 mg/kg in discrete soil sample SS40 (0-0.5') DUP. The corresponding soil sample SS40 (0-0.5') contained arsenic at a concentration of 7.1 mg/kg;
- Arsenic was identified at a concentration of 7.7 mg/kg in discrete soil sample SS75 (0-0.5') DUP. The corresponding soil sample SS75 (0-0.5') contained arsenic at a concentration of 6.8 mg/kg; and
- Arsenic was identified at a concentration of 6.9 mg/kg in discrete soil sample DS9 (0-0.5') DUP. The corresponding soil sample DS9 (0-0.5') contained arsenic at a concentration of 7.7 mg/kg;

5.4.2 Equipment Blank

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

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

- The laboratory analysis did not identify arsenic or lead above applicable analytical reporting limits. The reporting limit for arsenic and lead was 2.0 (micrograms per liter) µg/l and 5.0 µg/l, respectively.

5.4.3 Field Blank

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

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

- The laboratory analysis did not identify arsenic or lead above applicable analytical reporting limits. The reporting limit for arsenic and lead was 2.0 µg/l and 5.0 µg/l, respectively.

5.4.4 Laboratory QA/QC

The laboratory reported the following issues regarding analytical QA/QC: The MS (matrix spike) /MSD (matrix spike duplicate) for CAM 17 Metals analyzed by U.S. EPA Method 3050B reported the recovery of selenium outside of established control limits. The MS/MSD control limit for selenium is 75 to 125%, and the reported MS recovery was 48.0% and MSD recovery was 30.4%. Because the LCS (laboratory control spike) / LCSD (laboratory control spike duplicate) are within acceptance limits, the data is validated.

The MS/MSD for CAM 17 Metals analyzed by U.S. EPA Method 3050B reported the recovery of antimony outside of established control limits. The MS/MSD control limit for selenium is 75 to 125%, and the reported MS recovery was 39.1% and MSD recovery was 32.6%. Because the LCS/LCSD are within acceptance limits, the data is validated.

The MS for CAM 17 Metals analyzed by U.S. EPA Method 3050B reported the recovery of copper outside of established control limits. The MS control limit for copper is 75 to 125%, and the reported MS recovery was 48.0. Because the LCS/LCSD are within acceptance limits, the data is validated.

The MS for CAM 17 Metals analyzed by U.S. EPA Method 3050B reported the recovery of zinc outside of established control limits. The MS control limit for zinc is 75 to 125%, and the reported MS recovery was 62.4. Because the LCS/LCSD are within acceptance limits, the data is validated.

The MS for Metals analyzed by U.S. EPA Method 3050B reported the recovery of arsenic outside of established control limits. The MS control limit for arsenic is 75 to 125%, and the reported MS recovery was 130. Because the LCS/LCSD are within acceptance limits, the data is validated.

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Table 5-1. Results of Organochlorine Pesticides Analysis

Sample Identification	Matrix	Constituent (µg/kg)																				
		Aldrin	alpha-BHC	beta-BHC	delta-BHC	Lindane	Chlordane	DDD	DDE	DDT	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan Sulfate	Endrin	Endrin Aldehyde	Heptachlor	Heptachlor Epoxide	Kepone	Methoxychlor	Mirex	Toxaphene
CS-1	Soil	<1.7	<1.7	<1.7	<1.7	<1.7	<20	<3.3	<3.3	<3.3	<3.0	<1.7	<3.3	<3.3	<3.3	<3.3	<1.7	<1.7	<2.5	<17	<3.3	<20
CS-2	Soil	<1.7	<1.7	<1.7	<1.7	<1.7	<20	<3.3	<3.3	<3.3	<3.0	<1.7	<3.3	<3.3	<3.3	<3.3	<1.7	<1.7	<2.5	<17	<3.3	<20
CS-3	Soil	<1.7	<1.7	<1.7	<1.7	<1.7	<20	<3.3	<3.3	<3.3	<3.0	<1.7	<3.3	<3.3	<3.3	<3.3	<1.7	<1.7	<2.5	<17	<3.3	<20
CS-4	Soil	<1.7	<1.7	<1.7	<1.7	<1.7	<20	<3.3	<3.3	<3.3	<3.0	<1.7	<3.3	<3.3	<3.3	<3.3	<1.7	<1.7	<2.5	<17	<3.3	<20
CS-5	Soil	<1.7	<1.7	<1.7	<1.7	<1.7	<20	<3.3	<3.3	<3.3	<3.0	<1.7	<3.3	<3.3	<3.3	<3.3	<1.7	<1.7	<2.5	<17	<3.3	<20
CS-6	Soil	<1.7	<1.7	<1.7	<1.7	<1.7	<20	<3.3	<3.3	<3.3	<3.0	<1.7	<3.3	<3.3	<3.3	<3.3	<1.7	<1.7	<2.5	<17	<3.3	<20
CS-7	Soil	<1.7	<1.7	<1.7	<1.7	<1.7	<20	<3.3	<3.3	<3.3	<3.0	<1.7	<3.3	<3.3	<3.3	<3.3	<1.7	<1.7	<2.5	<17	<3.3	<20
CS-8	Soil	<1.7	<1.7	<1.7	<1.7	<1.7	<20	<3.3	<3.3	<3.3	<3.0	<1.7	<3.3	<3.3	<3.3	<3.3	<1.7	<1.7	<2.5	<17	<3.3	<20
CS-9	Soil	<1.7	<1.7	<1.7	<1.7	<1.7	<20	<3.3	<3.3	<3.3	<3.0	<1.7	<3.3	<3.3	<3.3	<3.3	<1.7	<1.7	<2.5	<17	<3.3	<20
CS-10	Soil	<1.7	<1.7	<1.7	<1.7	<1.7	<20	<3.3	<3.3	<3.3	<3.0	<1.7	<3.3	<3.3	<3.3	<3.3	<1.7	<1.7	<2.5	<17	<3.3	<20
CS-11	Soil	<1.7	<1.7	<1.7	<1.7	<1.7	<20	<3.3	<3.3	<3.3	<3.0	<1.7	<3.3	<3.3	<3.3	<3.3	<1.7	<1.7	<2.5	<17	<3.3	<20
CS-12	Soil	<1.7	<1.7	<1.7	<1.7	<1.7	<20	<3.3	<3.3	<3.3	<3.0	<1.7	<3.3	<3.3	<3.3	<3.3	<1.7	<1.7	<2.5	<17	<3.3	<20
CS-13	Soil	<1.7	<1.7	<1.7	<1.7	<1.7	<20	<3.3	<3.3	<3.3	<3.0	<1.7	<3.3	<3.3	<3.3	<3.3	<1.7	<1.7	<2.5	<17	<3.3	<20
CS-14	Soil	<1.7	<1.7	<1.7	<1.7	<1.7	<20	<3.3	<3.3	<3.3	<3.0	<1.7	<3.3	<3.3	<3.3	<3.3	<1.7	<1.7	<2.5	<17	<3.3	<20
CS-15	Soil	<1.7	<1.7	<1.7	<1.7	<1.7	<20	<3.3	<3.3	<3.3	<3.0	<1.7	<3.3	<3.3	<3.3	<3.3	<1.7	<1.7	<2.5	<17	<3.3	<20
CS-16	Soil	<1.7	<1.7	<1.7	<1.7	<1.7	<20	<3.3	<3.3	<3.3	<3.0	<1.7	<3.3	<3.3	<3.3	<3.3	<1.7	<1.7	<2.5	<17	<3.3	<20
CS-17	Soil	<1.7	<1.7	<1.7	<1.7	<1.7	<20	<3.3	<3.3	<3.3	<3.0	<1.7	<3.3	<3.3	<3.3	<3.3	<1.7	<1.7	<2.5	<17	<3.3	<20
CS-18	Soil	<1.7	<1.7	<1.7	<1.7	<1.7	<20	<3.3	<3.3	<3.3	<3.0	<1.7	<3.3	<3.3	<3.3	<3.3	<1.7	<1.7	<2.5	<17	<3.3	<20
CS-18 DUP	Soil	<1.7	<1.7	<1.7	<1.7	<1.7	<20	<3.3	<3.3	<3.3	<3.0	<1.7	<3.3	<3.3	<3.3	<3.3	<1.7	<1.7	<2.5	<17	<3.3	<20
CS-19	Soil	<1.7	<1.7	<1.7	<1.7	<1.7	<20	<3.3	<3.3	<3.3	<3.0	<1.7	<3.3	<3.3	<3.3	<3.3	<1.7	<1.7	<2.5	<17	<3.3	<20
CS-20	Soil	<1.7	<1.7	<1.7	<1.7	<1.7	<20	<3.3	<3.3	<3.3	<3.0	<1.7	<3.3	<3.3	<3.3	<3.3	<1.7	<1.7	<2.5	<17	<3.3	<20

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Table 5-1 (cont'). Results of Organochlorine Pesticides Analysis

Sample Identification	Matrix	Constituent (µg/kg)																				
		Aldrin	alpha-BHC	beta-BHC	delta-BHC	Lindane	Chlordane	DDD	DDE	DDT	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan Sulfate	Endrin	Endrin Aldehyde	Heptachlor	Heptachlor Epoxide	Kepone	Methoxychlor	Mirex	Toxaphene
CS-21	Soil	<1.7	<1.7	<1.7	<1.7	<1.7	<20	<3.3	<3.3	<3.3	<3.0	<1.7	<3.3	<3.3	<3.3	<3.3	<1.7	<1.7	<2.5	<17	<3.3	<20
CS-22	Soil	<1.7	<1.7	<1.7	<1.7	<1.7	<20	<3.3	<3.3	<3.3	<3.0	<1.7	<3.3	<3.3	<3.3	<3.3	<1.7	<1.7	<2.5	<17	<3.3	<20
CS-23	Soil	<1.7	<1.7	<1.7	<1.7	<1.7	<20	<3.3	<3.3	<3.3	<3.0	<1.7	<3.3	<3.3	<3.3	<3.3	<1.7	<1.7	<2.5	<17	<3.3	<20
CS-24	Soil	<1.7	<1.7	<1.7	<1.7	<1.7	<20	<3.3	<3.3	<3.3	<3.0	<1.7	<3.3	<3.3	<3.3	<3.3	<1.7	<1.7	<2.5	<17	<3.3	<20
CS-24 DUP	Soil	<1.7	<1.7	<1.7	<1.7	<1.7	<20	<3.3	<3.3	<3.3	<3.0	<1.7	<3.3	<3.3	<3.3	<3.3	<1.7	<1.7	<2.5	<17	<3.3	<20
CS-25	Soil	<1.7	<1.7	<1.7	<1.7	<1.7	<20	<3.3	<3.3	<3.3	<3.0	<1.7	<3.3	<3.3	<3.3	<3.3	<1.7	<1.7	<2.5	<17	<3.3	<20
CS-25 DUP	Soil	<1.7	<1.7	<1.7	<1.7	<1.7	<20	<3.3	<3.3	<3.3	<3.0	<1.7	<3.3	<3.3	<3.3	<3.3	<1.7	<1.7	<2.5	<17	<3.3	<20
DS-1 (0-0.5')	Soil	<1.7	<1.7	<1.7	<1.7	<1.7	<20	<3.3	<3.3	<3.3	<3.0	<1.7	<3.3	<3.3	<3.3	<3.3	<1.7	<1.7	<2.5	<17	<3.3	<20
DS-2 (0-0.5')	Soil	<1.7	<1.7	<1.7	<1.7	<1.7	<20	<3.3	<3.3	<3.3	<3.0	<1.7	<3.3	<3.3	<3.3	<3.3	<1.7	<1.7	<2.5	<17	<3.3	<20
DS-3 (0-0.5')	Soil	<1.7	<1.7	<1.7	<1.7	<1.7	<20	<3.3	<3.3	<3.3	<3.0	<1.7	<3.3	<3.3	<3.3	<3.3	<1.7	<1.7	<2.5	<17	<3.3	<20
DS-4 (0-0.5')	Soil	<1.7	<1.7	<1.7	<1.7	<1.7	<20	<3.3	<3.3	<3.3	<3.0	<1.7	<3.3	<3.3	<3.3	<3.3	<1.7	<1.7	<2.5	<17	<3.3	<20
DS-5 (0-0.5')	Soil	<1.7	<1.7	<1.7	<1.7	<1.7	<20	<3.3	<3.3	<3.3	<3.0	<1.7	<3.3	<3.3	<3.3	<3.3	<1.7	<1.7	<2.5	<17	<3.3	<20
DS-6 (0-0.5')	Soil	<1.7	<1.7	<1.7	<1.7	<1.7	<20	<3.3	<3.3	<3.3	<3.0	<1.7	<3.3	<3.3	<3.3	<3.3	<1.7	<1.7	<2.5	<17	<3.3	<20
DS-7 (0-0.5')	Soil	<1.7	<1.7	<1.7	<1.7	<1.7	<20	<3.3	<3.3	<3.3	<3.0	<1.7	<3.3	<3.3	<3.3	<3.3	<1.7	<1.7	<2.5	<17	<3.3	<20
DS-8 (0-0.5')	Soil	<1.7	<1.7	<1.7	<1.7	<1.7	<20	<3.3	<3.3	<3.3	<3.0	<1.7	<3.3	<3.3	<3.3	<3.3	<1.7	<1.7	<2.5	<17	<3.3	<20
DS-9 (0-0.5')	Soil	<1.7	<1.7	<1.7	<1.7	<1.7	<20	<3.3	<3.3	<3.3	<3.0	<1.7	<3.3	<3.3	<3.3	<3.3	<1.7	<1.7	<2.5	<17	<3.3	<20
DS-10 (0-0.5')	Soil	<1.7	<1.7	<1.7	<1.7	<1.7	<20	<3.3	<3.3	<3.3	<3.0	<1.7	<3.3	<3.3	<3.3	<3.3	<1.7	<1.7	<2.5	<17	<3.3	<20
DS-11 (0-0.5')	Soil	<1.7	<1.7	<1.7	<1.7	<1.7	<20	<3.3	<3.3	<3.3	<3.0	<1.7	<3.3	<3.3	<3.3	<3.3	<1.7	<1.7	<2.5	<17	<3.3	<20

Notes:

CS Composite sample (4:1)
µg/kg Micrograms per kilogram

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Table 5-2. Results of Metals Analysis

Sample Identification	Matrix	Constituent (mg/kg)																
		Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
SS-2 (0-0.5')	Soil	NA	**7.0**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-9 (0-0.5')	Soil	NA	**7.4**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-11 (0-0.5')	Soil	NA	**6.5**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-16 (0-0.5')	Soil	<2.5	**6.8**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-17 (0-0.5')	Soil	<2.5	**6.8**	**160**	**0.52**	**0.50**	**37**	**10**	**35**	**6.8**	<0.10	<1.0	**28**	<1.0	<0.50	<1.0	**63**	**71**
SS-20 (0-0.5')	Soil	NA	**6.6**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-24 (2-2.5')	Soil	NA	**7.5**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-26 (0-0.5')	Soil	NA	**7.2**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-29 (0-0.5')	Soil	NA	**7.1**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-32 (0-0.5')	Soil	NA	**7.2**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-34 (0-0.5')	Soil	NA	**6.9**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-39 (0-0.5')	Soil	<2.5	**7.7**	**170**	<0.50	<0.50	**31**	**10**	**60**	**6.2**	<0.10	<1.0	**27**	<1.0	<0.50	<1.0	**52**	**89**
SS-40 (0-0.5')	Soil	NA	**7.1**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-40 (0-0.5') DUP	Soil	NA	**7.3**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-43 (0-0.5')	Soil	<2.5	**8.6**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-46 (0-0.5')	Soil	NA	**8.3**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-48 (0-0.5')	Soil	<2.5	**5.8**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-52 (2-2.5')	Soil	NA	**8.2**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-56 (0-0.5')	Soil	NA	**8.2**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Table 5-2 (cont'). Results of Metals Analysis

Sample Identification	Matrix	Constituent (mg/kg)																
		Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
SS-58 (0-0.5')	Soil	NA	**6.8**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-59 (0-0.5')	Soil	<2.5	**9.2**	**200**	**0.53**	<0.50	**36**	**12**	**33**	**7.3**	<0.10	<1.0	**31**	<1.0	<0.50	<1.0	**62**	**79**
SS-60 (0-0.5')	Soil	NA	**7.3**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-62 (0-0.5')	Soil	NA	**7.1**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-66 (0-0.5')	Soil	NA	**7.2**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-72 (0-0.5')	Soil	NA	**6.6**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-73 (0-0.5')	Soil	<2.5	**7.4**	**220**	**0.50**	**0.52**	**35**	**12**	**220**	**6.0**	<0.10	<1.0	**33**	<1.0	<0.50	<1.0	**61**	**160**
SS-75 (0-0.5')	Soil	<2.5	**6.8**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-75 (0-0.5') DUP	Soil	<2.5	**7.7**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SS-77 (0-0.5')	Soil	<2.5	**7.2**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DS-1 (0-0.5')	Soil	NA	**7.5**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DS-2 (0-0.5')	Soil	<2.5	**6.2**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DS-3 (0-0.5')	Soil	<2.5	**7.2**	**180**	<0.50	<0.50	**35**	**12**	**35**	**6.9**	<0.10	<1.0	**29**	<1.0	<0.50	<1.0	**59**	**68**
DS-4 (0-0.5')	Soil	<2.5	**4.5**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DS-5 (0-0.5')	Soil	NA	**4.9**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DS-6 (0-0.5')	Soil	<2.5	**6.4**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DS-7 (0-0.5')	Soil	NA	**6.6**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DS-8 (0-0.5')	Soil	<2.5	**7.9**	**180**	<0.50	<0.50	**34**	**11**	**45**	**7.7**	<0.10	<1.0	**29**	<1.0	<0.50	<1.0	**56**	**92**

Table 5-2 (cont'). Results of Metals Analysis

Sample Identification	Matrix	Constituent (mg/kg)																
		Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
DS-9 (0-0.5')	Soil	NA	**7.7**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DS-9 (0-0.5') DUP	Soil	NA	**6.9**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DS-10 (0-0.5')	Soil	NA	**7.1**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DS-11 (0-0.5')	Soil	NA	**6.7**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BG1 (5-5.5')	Soil	<2.5	**5.2**	**320**	**0.62**	<0.50	**37**	**7.9**	**27**	**5.6**	<0.10	<1.0	**28**	<1.0	<0.50	<1.0	**58**	**58**
BG2 (5-5.5')	Soil	<2.5	**5.8**	**58**	**0.50**	<0.50	**30**	**7.5**	**23**	**4.6**	<0.10	<1.0	**22**	<1.0	<0.50	<1.0	**49**	**51**
BG3 (5-5.5')	Soil	<2.5	**7.0**	**170**	**0.56**	**0.52**	**36**	**13**	**32**	**6.0**	<0.10	<1.0	**31**	<1.0	<0.50	<1.0	**60**	**74**
BG4 (5-5.5')	Soil	<2.5	**5.9**	**320**	<0.50	<0.50	**27**	**11**	**19**	**4.8**	<0.10	<1.0	**24**	<1.0	<0.50	<1.0	**47**	**47**
Field Blank #1	Water[A]	NA	<2.0	NA	NA	NA	NA	NA	NA	<5.0	NA	NA	NA	NA	NA	NA	NA	NA
Equip Blank #1	Water[A]	NA	<2.0	NA	NA	NA	NA	NA	NA	<5.0	NA	NA	NA	NA	NA	NA	NA	NA
Field Blank #2	Water[A]	NA	<2.0	NA	NA	NA	NA	NA	NA	<5.0	NA	NA	NA	NA	NA	NA	NA	NA
Equip Blank #2	Water[A]	NA	<2.0	NA	NA	NA	NA	NA	NA	<5.0	NA	NA	NA	NA	NA	NA	NA	NA
Field Blank #3	Water[A]	NA	<2.0	NA	NA	NA	NA	NA	NA	<5.0	NA	NA	NA	NA	NA	NA	NA	NA
Equip Blank #3	Water[A]	NA	<2.0	NA	NA	NA	NA	NA	NA	<5.0	NA	NA	NA	NA	NA	NA	NA	NA
Mean Onsite		<2.5	7.1	185	0.52	0.51	35	11	71	6.8	<0.10	<1.0	30	<1.0	<0.50	<1.0	59	93
Mean Background		<2.5	6.0	217	0.56	0.52	33	10	25	5.3	<0.10	<1.0	26	<1.0	<0.50	<1.0	54	58

Notes:

mg/kg Milligram per kilogram

A Water results reported in micrograms per Liter (µg/L)

Table 5-3. Results of Polychlorinated Biphenyls Analysis

Sample Identification	Matrix	Constituent (µg/kg)						
		Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260
TS-1 (0-0.5')	Soil	<20	<20	<20	<20	<20	<20	**41**
TS-2 (0-0.5')	Soil	<20	<20	<20	<20	<20	<20	<20

Notes:
µg/kg Micrograms per kilogram

6.0 HUMAN HEALTH SCREENING

A screening-level evaluation was conducted consistent with PEA guidance (CalEPA, 1994) to provide an estimate of the potential chronic health risk resulting from exposure to impacted soils and groundwater identified at the Project Site. The evaluation was conducted using the analytical models provided in the PEA guidance document, which are structured to provide a conservative estimate of the chronic risk from contaminated media along exposure pathways that are most frequently encountered in a residential setting. The default factors contained in the analytical models are conservative in nature and represent a reasonable maximum exposure as defined by the U.S. EPA to the chemicals of potential concern (COPC). Acute or sub-chronic (short-term) risks were not evaluated as part of the PEA screening level modeling. The screening level evaluation was conducted for all organochlorine pesticides detected in onsite soil samples and individual metals as compared with off-site background levels. Additionally, a screening level evaluation was conducted for all metals detected in groundwater samples from nearby irrigation wells.

The components of the screening-level evaluation includes: 1) a conceptual site model, 2) identification of COPCs, 3) identification of toxicity values for each identified COPC, and 4) a risk characterization. The purpose of these elements and their relevance to the screening level risk assessment are provided below.

- **Conceptual Site Model** - The conceptual site model identifies the potential exposure pathways (i.e., ingestion of contaminated soils/groundwater, inhalation of contaminated particulates, dermal contact with contaminated soils/groundwater) for the contaminated media at the Project Site. The pathways that were identified as having a probability of leading to an exposure to the COPCs were carried into the risk evaluation.
- **Chemicals of Potential Concern** - COPCs are those chemical constituents detected within the soil, air, or groundwater media at concentrations in excess of background concentrations. For the PEA evaluation, each COPC was modeled along a complete exposure pathway using the highest concentration of each COPC reported.
- **Toxicity Values** - The PEA analytical models require the use of toxicity data for each of the COPCs. Toxicity values promulgated into California regulations and listed by the Cal/EPA Office of Environmental Health and Hazard Assessment (OEHHA) where used in the PEA. For those compounds not listed by OEHHA, toxicity values were obtained from the most current U.S. EPA's Integrated Risk Information System (IRIS). For those compounds not listed in any of the above sources, toxicity values listed in the U.S. EPA's Health Effects Assessment Summary Tables (HEAST) were used in the analytical models.
- **Risk Characterization** - The screening level evaluation of risk involves the integration of the above-mentioned elements into an analytical model to determine

the level of risk or hazard quotient along a complete exposure pathway. An excess cancer risk was calculated for chemical species thought by the U.S. EPA or CalEPA to pose a carcinogenic risk to humans. The hazard quotient is calculated for all non-carcinogenic compounds as a measure of the non-carcinogenic toxicity of a compound. The hazard quotient is the ratio of the estimated dose from exposure to a value that is believed not to produce adverse health affects.

6.1 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:

- Potential environmental issues identified at the Project Site have been determined based on available information regarding past and current agricultural activities including the potential application of agricultural chemicals on fields. Residual concentrations of agricultural chemicals in surface soils may potentially pose health risks via ingestion, dermal contact, and inhalation exposure pathways.
- Residual concentrations of polychlorinated biphenyls in surface soils around the base of pole-mounted electrical transformers may pose a potential health risk via ingestion, dermal contact, and inhalation exposure pathways.
- The proposed high/middle school will be serviced by the local water district; therefore the ingestion of groundwater located beneath the Project Site is not considered an exposure pathway.
- Exposure to surface water was not considered a complete exposure pathway because surface water is only present during flood irrigation activities.
- 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 (CSM) presented as Plate 6-1, shows that exposure to soils containing COPCs may be possible along the inhalation, ingestion, and dermal contact pathways.

6.2 CHEMICALS OF POTENTIAL CONCERN

The COPCs used in the human health screening-level model included those compounds detected above background levels or laboratory reporting limits in soil and groundwater samples collected during the PEA field activities. The COPCs are as follows:

Soil:

- Polychlorinated Biphenyls: Aroclor 1260
- Metals: Copper (Cu), Lead (Pb), and Zinc (Zn).

For the purpose of this human health screening-level model, the COPCs were considered non-volatile compounds. Thus, an analysis of risk for inhalation of respirable particles was performed for Aroclor 1260. Risk estimates were calculated by using the highest concentration of constituents reported in surface soils.

The laboratory results of soil sample analyses for heavy metals identified three metals at concentrations outside the range of their respective background samples. One of the three metals (lead) was included as a COPC, and is evaluated using the DTSC lead risk assessment spreadsheet model (*LeadSpread Version 7*). The following approach was used to evaluate individual metals as potential COPCs:

- The highest onsite concentrations for arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, vanadium, and zinc were compared with their respective highest background concentrations. Comparing the highest concentrations, barium, beryllium, cadmium, chromium, cobalt, nickel, and vanadium were eliminated as COPCs;
- The arithmetic mean concentrations for arsenic, copper, lead, and zinc were compared with their respective background arithmetic mean concentrations. If the arithmetic means were comparable, and/or if the highest site concentration was below the concentration associated with unacceptable risk or hazard, the metal was eliminated as a COPC. Based on this evaluation, arsenic was eliminated as a COPC.

Concentrations of lead ranged from 6.0 mg/kg to 7.7 mg/kg in soil samples collected from the planting area and irrigation ditch. A risk assessment was performed (utilizing the highest concentration) using DTSC's LeadSpread model. Based on the LeadSpread output, exposure to the lead concentrations indicated at the Project Site will result in a 99th percentile blood lead concentration of 4.8 µg/dl in children and 3.4 µg/dl in adults. These values are below the 10 µg/dl blood lead level of concern established by the U.S. Centers for Disease Control.

Arsenic concentrations ranged from 4.5 mg/kg to 9.2 mg/kg in soil samples collected from the planting area and irrigation ditches. Background soil samples collected at the Project Site identified arsenic concentrations ranging from 5.2 mg/kg to 7.0 mg/kg. The arithmetic mean for arsenic concentrations detected in soil samples collected from the planting area and irrigation ditches was 7.1 mg/kg. The arithmetic mean for arsenic detected in background samples was 6.0 mg/kg. Additionally, as reported in *Background Concentrations of Trace and Major Elements in California Soils*, Bradford et al., March 1996, soil samples collected from within Solano County contained arsenic at concentrations ranging from 4.5 to 9.6 mg/kg. Therefore, arsenic was not considered a COPC, and additional assessment and/or remediation for arsenic is not recommended. Additionally, a screening-level evaluation for arsenic using analytical models provided in the PEA guidance manual was not performed.

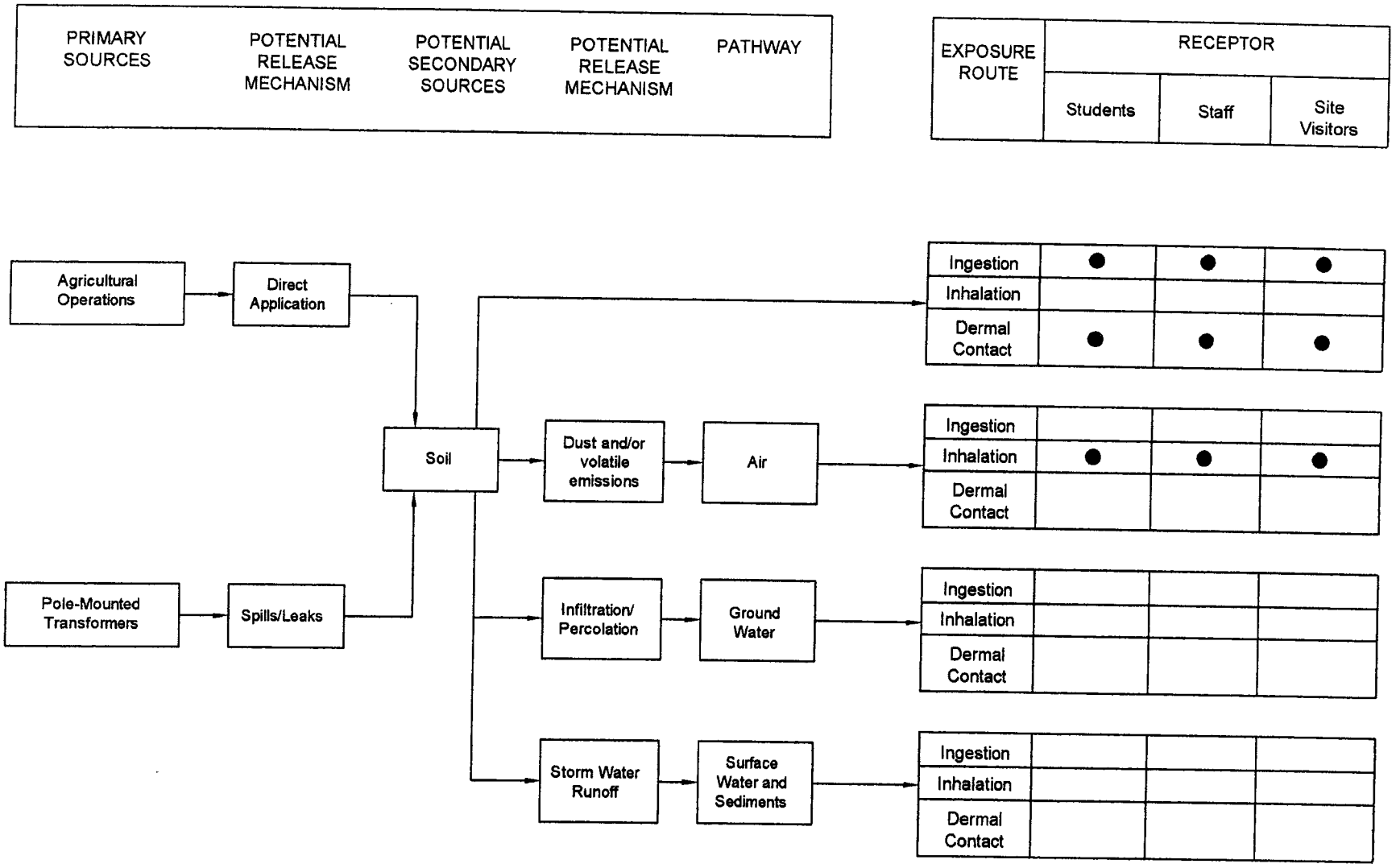
6.3 RESULTS OF PEA SCREENING LEVEL MODEL

The results of the PEA model are summarized in Tables 6-1 and below. A complete copy of the Human Health Screening Level Model is presented as Appendix D.

- The PEA model for the carcinogenic compound Aroclor 1260 indicated a cumulative increased cancer risk of 8.7×10^{-7} for surface soils, along the inhalation pathway and ingestion/dermal contact pathways for soil. Based on the model assumptions, the total risk (summation of each identified exposure pathway) for the COPCs does not provide an excess cancer risk of 1 in 1,000,000 ($>10^{-6}$);

- The PEA model for the carcinogenic compound Aroclor 1260 and the metals, copper and zinc indicated a cumulative hazard of 0.15 for surface soils along the inhalation pathway and ingestion/dermal contact pathways for soil. Based on the model assumptions, the total hazard (summation of each identified exposure pathway) for the COPCs does not provide a significant health hazard (i.e., >1);

- The DTSC model LeadSpread calculates percentile estimates of blood lead concentrations for adults and children. Based on the LeadSpread output, exposure to the lead concentrations detected on site will result in a 99th percentile blood lead concentration of 4.8 µg/dl in children and 3.4 µg/dl in adults. These values are below the 10 µg/dl blood lead level of concern established by the U.S. Centers for Disease Control.



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

padre associates, inc.
ENGINEERS, GEOLOGISTS & ENVIRONMENTAL SCIENTISTS

PROPOSED HIGH/MIDDLE SCHOOL SITE B
EAST OF LEISURE TOWN ROAD
AND SOUTH OF ELMIRA ROAD
VACAVILL, SOLANO COUNTY, CALIFORNIA

PROJECT NO.	DATE	DR. BY	APP. BY
0401-0881	04/18/05	AC	AK

PLATE 6-1

CONCEPTUAL SITE MODEL

padre associates, inc.
ENGINEERS, GEOLOGISTS & ENVIRONMENTAL SCIENTISTS

Table 6-1. Results of PEA Screening Level Risk Assessment

Surficial Soils (0-2.5 feet bgs)			
COPC (1)	**Inhalation**	**Ingestion and Dermal**	**Risk by COPC (2)**
Aroclor 1260	6.1E-10	8.6E-07	8.6E-07
			Risk (Soil)
Risk by Pathway (3)	6.1E-10	8.6E-07	**8.6E-07**

Surficial Soils (0-2.5 feet bgs)			
COPC (1)	**Inhalation**	**Ingestion and Dermal**	**Hazard by COPC (4)**
Aroclor 1260	6.5E-05	6.3E-02	6.3E-02
Copper	NA	7.7E-02	7.7E-02
Zinc	NA	7.5E-03	7.5E-03
			Hazard (Soil)
Hazard by Pathway (5)	6.5E-05	1.5E-01	**1.5E-01**

Notes
(1) Chemical of Potential Concern (COPC)
(2) Risk from each COPC along both pathways (Cumulative)
(3) Cumulative risk along each pathway
(4) Hazard from each COPC along both pathways (Cumulative)
(5) Hazard along each pathway
(6) Total calculated cancer risk
(7) Total calculated hazard quotient
NA Not Applicable

7.0 CONCLUSIONS AND RECOMMENDATIONS

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

Based on historical and current agricultural activities at the Project Site, shallow surface soil samples were chemically analyzed for the presence of organochlorine pesticides and metals. Also, soil samples were collected at the base of two pole-mounted electrical transformers and chemically analyzed for the presence of PCBs. The potential exposure pathways identified at the Project Site were inhalation of contaminated particulates, and ingestion and dermal contact of residual pesticide-containing soils.

The results of the PEA screening level risk assessment indicate that the inhalation pathway and ingestion/dermal contact pathway for soil impacted by Aroclor 1260 and two metals (copper and zinc) compared with background levels does not provide an excess cancer risk greater than 1 in 1,000,000 ($>10^{-6}$). The total risk (summation of each identified exposure pathway) for the COPCs was identified in surface soils at 8.6×10^{-7}.

Based on the model assumptions, the total hazard along the inhalation pathway and ingestion/dermal contact pathway for soil containing COPCs does not provide a significant health hazard (>1). The total hazard (summation of each identified exposure pathway) for the COPCs identified in surface soils was 0.15.

Concentrations of lead ranged from 6.0 mg/kg to 7.7 mg/kg in soil samples collected from the planting area and irrigation ditch. A risk assessment was performed (utilizing the highest concentration) using DTSC's LeadSpread model. Based on the LeadSpread output, exposure to the lead concentrations indicated at the Project Site will result in a 99th percentile blood lead concentration of 4.8 µg/dl in children and 3.4 µg/dl in adults. These values are below the 10 µg/dl blood lead level of concern established by the U.S. Centers for Disease Control.

Arsenic concentrations ranged from 4.5 mg/kg to 9.2 mg/kg in soil samples collected from the planting area and irrigation ditches. Background soil samples collected at the Project Site identified arsenic concentrations ranging from 5.2 mg/kg to 7.0 mg/kg. The arithmetic mean for arsenic concentrations detected in soil samples collected from the planting area and irrigation ditches was 7.1 mg/kg. The arithmetic mean for arsenic detected in background samples was 6.0 mg/kg. Additionally, as reported in *Background Concentrations of Trace and Major Elements in California Soils*, Bradford et al., March 1996, soil samples collected from within Solano County contained arsenic at concentrations ranging from 4.5 to 9.6 mg/kg. Therefore, arsenic was not considered a COPC, and additional assessment and/or remediation for arsenic is not recommended. Additionally, a screening-level evaluation for arsenic using analytical models provided in the PEA guidance manual was not performed.

The results of the PEA screening level risk assessment do not indicate that the Project Site has been significantly impacted by past agricultural practices or the presence of

pole-mounted electrical transformers. Therefore, Padre recommends the issuance of a "No Further Action" designation from the DTSC regarding the proposed high/middle school site.

8.0 REFERENCES

Archer, Gary; Archer & Ficklin, Dixon, California; Agent for Property Owner

California Geological Survey, 2000, *A General Location Guide For Ultramafic Rocks in California – Areas More Likely to Contain Naturally Occurring Asbestos.* Open File Report 2000-19.

_____ 2002, *Guidelines for Geologic Investigations of Naturally Occurring Asbestos in California.* Special Publication 124.

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Department of Toxic Substances Control, *Interim Guidance for Sampling Agricultural Fields for School Sites* (Second Revision), August 6, 2002.

Farm Chemicals Handbook 2000, Volume 86, Meister Publishing Company.

Norris and Webb, *Geology of California (Second Edition)*, 1990

Padre Associates, Inc., *Preliminary Endangerment Assessment Work Plan, Proposed High School Site B, East of Leisure Town Road and South of Elmira Road, Vacaville, Solano County, California*, September 2004.

Padre Associates, Inc., *Addendum to Preliminary Endangerment Assessment Work Plan, Proposed High School Site B, Vacaville Unified School District (Site Code 104426-11)*

PRG, *Preliminary Remediation Goals Database:* U.S. EPA database (updated October 2004); http://www.epa.gov/region09/waste/sfund/prg/index.htm

Solano County Agricultural Commissioner, Ms. Lora S. Hayes, (707) 421-7465.

United States Department of Agriculture, National Resources Conservation Service, Soil Survey of Solano County, California, May 1977,

USGS Geological Survey; Elmira, California, Topographic Maps, 1917, photorevised 1953-1968, photorevised 1953-1973, and photorevised 1953-1980.

APPENDIX A
DTSC CORRESPONDENCE

Terry Tamminen
Agency Secretary
Cal/EPA

Department of Toxic Substances Control

Edwin F. Lowry, Director
8800 Cal Center Drive
Sacramento, California 95826-3200

Arnold Schwarzenegger
Governor

December 22, 2004

Ms. Leigh Coop
Director of Facilities
Vacaville Unified School District
751 School Street
Vacaville, California 95688

DRAFT PRELIMINARY ENDANGERMENT ASSESSMENT WORKPLAN (WORKPLAN), PROPOSED HIGH SCHOOL SITE B, EAST OF LEISURE TOWN ROAD AND SOUTH OFELMIRE ROAD, VACAVILLE (SITE CODE: 104426-11)

Dear Ms. Coop:

The Department of Toxic Substances Control (DTSC) has reviewed the Draft Preliminary Endangerment Assessment Workplan (Workplan), prepared by Padre Associates, dated September 30, 2004 and received by DTSC on October 18, 2004, for the subject site. The PEA Workplan includes site background information and a Field Sampling Plan for the proposed investigation activities.

The proposed high school site is located in Vacaville, Solano County, south of Interstate 80. The site has been used for agriculture (row crops) since at least 1937 and occupies approximately 82 acres. The surrounding land to the north, east, and south is also used for agriculture except for residential development at the southeast corner for the intersection of Leisure Town Road and Elmira Road. Additional residential areas lie west of Leisure Town Road.

DTSC has identified discrepancies in the Workplan that require clarification and/or modification. Comments identifying these discrepancies are enclosed. Please submit three (3) hard copies of the response to the enclosed comments in tabular form and a revised PEA by January 14, 2005.

If you have any questions, please call Mr. Michael Kenning, Project Manager, at (916) 255-3625 or me at (916) 255-6422.

Sincerely,

Chein Ping Kao, Chief
Schools Unit – Sacramento Office
School Property Evaluation and Cleanup Division

Printed on Recycled Paper

Enclosures

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Mr. Michael O'Neill
Consultant/Environmental Coordinator
School Facilities Planning Division
California Department of Education
1430 N Street, Suite 3207
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DTSC COMMENTS
DRAFT PEA WORKPLAN
PROPOSED HIGH SCHOOL, SITE B
EAST OF LEISURE TOWN ROAD AND SOUTH OF ELMIRA ROAD, VACAVILLE

The site consists of approximately 82 acres flat land, sloping gently towards the east. Depth to groundwater in the vicinity is 10 – 20 ft bgs, groundwater is inferred to flow towards the east. Since at least 1937 the site has been in agricultural use (row crops). No structures are located on the site. Several unlined ditches are located on the property: along the perimeter and intersecting the site. Two existing wells and two pole-mounted transformers are located along Leisure Town Rd. The surrounding area consists of agricultural land (north, east and south) and residential housing (west). The proposed school will use water supplied from the local water district. The Solano County Agricultural Office has records of approved pesticides for this site for the last years (herbicides). The following site concerns will be investigated: potential presence of agricultural pesticides, arsenic and other metals in the field and the ditches; 2 transformers near Leisure Town Road.

The following DTSC staff reviewed and provided comments herein to the Draft Preliminary Environmental Assessment (PEA) for the subject site. Please contact the Project Manager if your have any questions on the comments. Original comments from the DTSC Human and Ecological Risk Division (HERD) are available for review in the DTSC project files.

Michael Kenning, RG
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Specific Comments

1. Please provide a site map that shows the surveyed property boundary locations (distance and bearing from a reference point) of the site.

2. Section 5.1, Background.
   Although the two on-site wells are described as inactive and will not be used as drinking water wells, there is no indication on their possible use for site irrigation after school construction. If the school district plans on using the wells for irrigation, then they should be sampled for Organochlorine Pesticides (OCPs) and CAM-17 metals. An exposure pathway would then need to include exposure from water used for irrigation.

3. Section 5.2.5, Quality Analysis/Quality Control Samples and Section 6.1, Field QA/QC Procedures.
   Please clarify the number of duplicates to be analyzed. The sections state that one discrete and one composite soil sample will be split by the laboratory, but that will be 10% of the total samples, which would be 8 samples.

4. The updated map (Plate 5-1) should indicate which samples are to be composited.

5. Discrete and composite samples (field)
   Twenty 4-point composites plus one 3-point composite could be substituted for the proposed composite samples for the field investigation (total of 21 composite samples). One discrete sample from each composite must be further analyzed: a total of 4 discrete samples must be analyzed for CAM 17, and the remainder of discrete samples (17) must be analyzed for arsenic. The discrete samples of the composite sample with the highest Organochlorine Pesticide (OCP) concentration need to be analyzed individually for OCPs. Archive sub-surface samples.

6. Discrete and composite samples (ditch)
   Since exposure cannot be assumed to be uniform in the ditches, DTSC does not recommend compositing of the samples. Also, one half of the soil samples should be collected from the top of the bank (where excavated soil would be deposited), and one half of the soil samples should be collected just above the water line or in the bottom of the dry ditch. All surface discretes should be analyzed for OCPs, 9 samples for arsenic and 2 samples for CAM 17. Archive sub-surface samples.

7. LUSTs
   Indicate the exact locations of the Leaking Underground Storage Tanks (Leisure Town Beacon and BP #11244) in a figure. Indicate the status of the investigation, the

type of contaminants, the media and the extent of the contamination.

8. Background
   Indicate the location of the background samples in a figure in the PEA report.

9. High pressure gas line
   Include further information on a 41/2 inch high pressure gas line in the addendum to the WP.

Alan C. Lloyd, Ph.D.
Agency Secretary
Cal/EPA

Department of Toxic Substances Control

8800 Cal Center Drive
Sacramento, California 95826-3200

Arnold Schwarzenegger
Governor

March 25, 2005

Ms. Leigh Coop
Director of Facilities
Vacaville Unified School District
751 School Street
Vacaville, California 95688

PRELIMINARY ENDANGERMENT ASSESSMENT WORKPLAN (WORKPLAN), PROPOSED HIGH SCHOOL SITE B, EAST OF LEISURE TOWN ROAD AND SOUTH OF ELMIRE ROAD, VACAVILLE (SITE CODE 104426)

Dear Ms. Coop:

The Department of Toxic Substances Control (DTSC) has reviewed the Addendum to the Preliminary Endangerment Assessment Workplan (PEA Workplan), prepared by Padre Associates, dated March 1, 2005 and received by DTSC on March 4, 2005, for the subject site. The PEA Workplan includes site background information and a Field Sampling Plan for the proposed investigation activities.

The PEA Workplan is hereby approved. DTSC understands that a site survey map will be provided prior to the start of field activities. The Vacaville Unified School District (VUSD) should provide a notice, approved in form by DTSC, to residents in the immediate area, preferably five (5) days prior to the field sampling activities. Please notify DTSC a minimum of 48 hours in advance of field work activities or schedule changes.

If you have any questions, please call Mr. Michael Kenning, Project Manager, at (916) 255-3625 or me at (916) 255-3717.

Sincerely,

Mark Malinowski, Acting Chief
Schools Unit – Sacramento Office
School Property Evaluation and Cleanup Division

cc: next page

Printed on Recycled Paper

cc: Alan J. Klein, R.E.A. II
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School Facilities Planning Division
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APPENDIX B
FIELD SAMPLING PLAN AND QA/QC PROCEDURES

5.0 FIELD SAMPLING PLAN

5.1 BACKGROUND

The Project Site consists of 82.5-acres of land that has historically been utilized for agricultural purposes. At the time of Padre's site visit, the Project Site was planted with corn. The Project Site is transected by irrigation ditches that run north and south, east and west, and around the perimeter of the Project Site. Two inactive groundwater wells were observed along Leisure Town Road. One well is located at approximately the mid-section of the western property boundary, and the other well is located at the southwest corner of the Project Site. Additionally, two pole-mounted electrical transformers were observed along Leisure Town Road.

According to the Solano County Agricultural Commissioner's Office located in Fairfield, California, pesticide usage reports were on file for the site indicated as APN 0135-080-040, Section 24, Township 6N, Range 1W. According to the pesticide usage reports, the following chemicals have been applied within the last three years:

- Hoelon (herbicide)
- Nufarm Weedar (broadleaf herbicide)
- 41-A (drift retardant)

Copies of the material safety data sheets (MSDS) for the above chemicals are included in Appendix B along with the pesticide usage reports.

5.1.1 Potential Environmental Issues

Potential environmental issues identified at the Project Site have been determined based on available information regarding past and current agricultural activities including the application of agricultural chemicals on fields. Residual concentrations of agricultural chemicals in surface soils may potentially pose health risks via ingestion, dermal contact, and inhalation exposure pathways. Selected soil samples will be chemically analyzed for the presence of organochlorine pesticides and CAM 17 metals including arsenic.

The proposed high school will be serviced by the local water district; therefore the ingestion of contaminated groundwater is not considered an exposure pathway.

5.2 SAMPLE LOCATIONS

The proposed sample locations are shown on Plate 5-1 - Site Sampling Plan, and the sampling schedule is summarized in Table 5-1 - Field Sampling Schedule. Specific sample locations are described below.

5.2.1 Planting Fields

Discrete soil samples will be collected from the surface soil to depths of 0.5 feet, as well as from depths of approximately 2.0 feet to 2.5 feet at 83 locations (one-acre centers) across the Project Site. Twenty-seven, three-point composite soil samples and one, two-point composite soil sample will be chemically analyzed for the presence of organochlorine pesticides (OCPs). Additionally, twenty-eight discrete soil samples will be chemically analyzed for the presence of arsenic, and four discrete soil samples will be chemically analyzed for CAM 17 metals.

The soil sample location indicating the highest detection of OCPs, will have each surface two-point sample location (if applicable) analyzed for the presence of OCPs. If the highest OCP concentration comes from a single point discrete sample location, then the deeper sample at the same location will be analyzed for the presence of OCPs. The remaining soil samples will be appropriately archived by the laboratory. Additionally, two randomly selected deeper samples will be chemically analyzed for the presence of arsenic.

5.2.2 Irrigation Ditch

The Project Site is transected by irrigation ditches that run north-south, east-west, and around the perimeter of the Project Site. Discrete soil samples will be collected from the base of the irrigation ditch to 0.5 feet, as well as from depths of approximately 2.0 feet to 2.5 feet at 11 locations from within the irrigation ditches. The soil sample locations are situated at the bends and outfalls of irrigation ditches. Five, two-point composite soil samples and one discrete soil sample will be chemically analyzed for the presence of OCPs. Additionally, six discrete samples will be chemically analyzed for the presence of arsenic, and two discrete samples will analyzed for the presence of CAM 17 metals. The subsurface soil samples will be archived by the laboratory.

5.2.3 Pole-Mounted Electrical Transformers

There are two pole-mounted electrical transformers located on the Project Site along Leisure Town Road. One discrete soil sample will be collected from the surface soil to depths of 0.5 feet, as well as from depths of approximately 2.0 feet to 2.5 feet at the base of each transformer. The surface soil samples will be chemically analyzed for the presence of polychlorinated biphenyls (PCBs). The subsurface soil samples will be archived by the laboratory for potential chemical analyses.

5.2.4 Background Soil Samples

Four background soil samples will be collected from areas surrounding the Project Site. If possible, soil samples will be collected from areas that do not appear to have been impacted by agricultural activities. The background soil samples will be collected from the surface to a depth of 0.5 feet, and chemically analyzed for the presence of CAM 17 metals. If there are no undisturbed areas located at the site boundaries, then the samples will be collected from a depth of 5 feet at each of the four site boundaries and chemically analyzed for CAM 17 metals.

5.2.5 Quality Analysis/Quality Control Samples

For quality assurance/quality control (QA/QC), Padre will have the laboratory split one discrete soil sample and one composite soil sample to be chemically analyzed as duplicates for OCPs, and two discrete soil samples will be split by the laboratory to be analyzed as a duplicates for arsenic. One equipment blank sample and one field blank sample per sampling event (water samples) will also be collected and analyzed for the presence of arsenic and lead. The collection of these samples is discussed in more detail in Section 5.0 of this work plan.

5.3 SAMPLE COLLECTION

Padre will collect all soil samples using hand auger and slide-hammer sampling tools. Soil sampling equipment will be decontaminated prior to each sample collection location and sampling event. Soil samples will be collected in 2-inch x 6-inch brass or stainless steel sleeves. Sample sleeves will be advanced beneath the subsurface inside a stainless steel, slide-hammer sample driver. Field sampling methods will conform to guidelines set forth in the Health and Safety Plan included in Appendix E.

All sample sleeves and water sample containers will be 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 laboratory under chain-of-custody protocol.

5.3.1 Decontamination Procedures

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

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

5.4 SAMPLE ANALYSIS

The sampling schedule is summarized in Table 5-1 - Field Sampling Schedule. Analytical methods, types of containers, preservative, and holding times are summarized in Table 5-2.

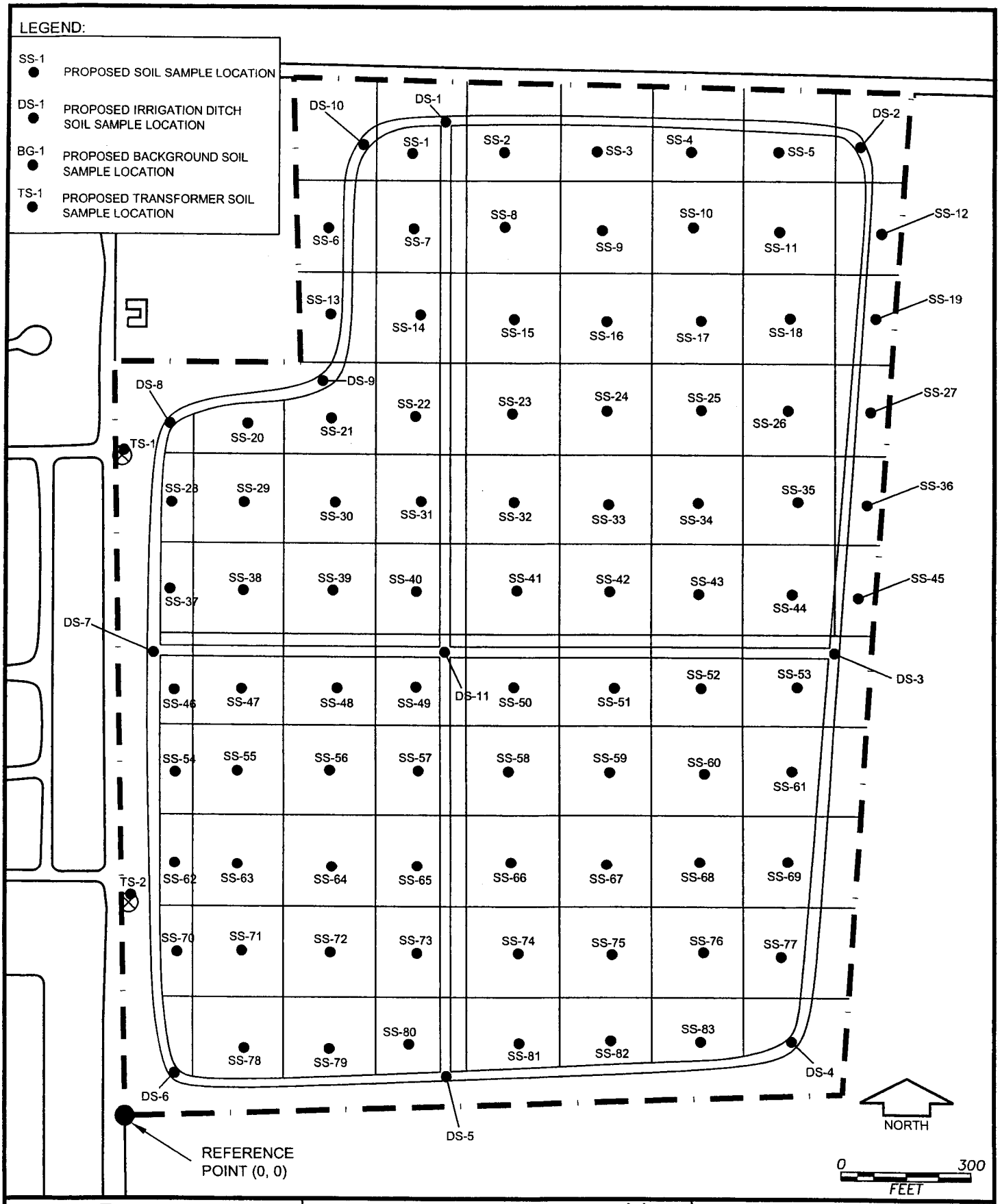
Based on available information regarding past agricultural chemical use activities at the Project Site, soil sample analyses will include one or more of the following COPCs:

- Organochlorine pesticides by U.S. Environmental Protection Agency (EPA) Method 8081A;
- Arsenic by U.S. EPA Method 7060; and
- CAM 17 metals by U.S. EPA Method 6010/7000 Series.

Analytical methods and detection limits for selected OCPs are presented in Appendix F. Additionally, the detection limits listed in the DTSC's *Interim Guidance for Sampling Agricultural Soils* (DTSC, August 26, 2002) will be met by the analytical laboratory.

5.4.1 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 will accompany all samples shipped for analysis. Form(s) will be completed and sent with the samples for each laboratory and each shipment. If multiple coolers are sent to a single laboratory on a single day, COC form(s) will be completed and sent with the samples for each cooler. The COC record will identify the contents of each shipment and maintain 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 will be the responsibility of the sample collector.



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PROPOSED HIGH SCHOOL SITE 'B'
EAST OF LEISURE TOWN ROAD
AND SOUTH OF ELMIRA ROAD
VACAVILLE, CALIFORNIA

PROJECT NO.	DATE	DR. BY	APP. BY
0401-0881	09/10/04	AC	AK

PLATE 5-1

SITE SAMPLING PLAN

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Table 5-1. 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	Surface to 0.5 feet bgs	1(discrete)	DS-11	Analyze
		6 (2-pt composite)	SS-77,83(comp), DS-1,2(comp), DS-3,4(comp), DS-5,6(comp), DS-7,8(comp), DS-9,10(comp)	Analyze
		27 (3-pt composite)	SS-1,6,7(comp), SS-2,3,9(comp), SS-4,5,11(comp), SS-8,14,15(comp), SS-10,16,17(comp), SS-12,18,19(comp) SS-13,20,21(comp), SS-22,30,31(comp), SS-23,24,32(comp), SS-25,33,34(comp), SS-26,27,36(comp), SS-35,44,45(comp) SS-28,29,37(comp), SS-38,46,47(comp), SS-39,48,49(comp), SS-40,41,50(comp), SS-42,43,51(comp), SS-52,53,61(comp) SS-54,55,62(comp), SS-56,63,64(comp), SS-57,58,65(comp), SS-59,66,67(comp), SS-60,68,69(comp), SS-70,71,78(comp) SS-72,73,79(comp), SS-74,80,81(comp), SS-75,76,82	Analyze
		3 (duplicate) (a)	DS-11, DS-5,6(comp), SS-22,30,31(comp)	Analyze
	Subsurface - 2.0 feet to 2.5 feet bgs	1(discrete)	DS-11	Hold (b)
		6 (2-pt composite)	SS-77,83(comp) DS-1,2(comp), DS-3,4(comp), DS-5,6(comp), DS-7,8(comp), DS-9,10(comp)	Hold (b)
		27 (3-pt composite)	SS-1,6,7(comp), SS-2,3,9(comp), SS-4,5,11(comp), SS-8,14,15(comp), SS-10,16,17(comp), SS-12,18,19(comp) SS-13,20,21(comp), SS-22,30,31(comp), SS-23,24,32(comp), SS-25,33,34(comp), SS-26,27,36(comp), SS-35,44,45(comp) SS-28,29,37(comp), SS-38,46,47(comp),	Hold (b)

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Sample Matrix and Test Method	Sample Depth	Number of Samples	Sample Location	Submittal Status
			SS-39,48,49(comp), SS-40,41,50(comp), SS-42,43,51(comp), SS-52,53,61(comp) SS-54,55,62(comp), SS-56,63,64(comp), SS-57,58,65(comp), SS-59,66,67(comp), SS-60,68,69(comp), SS-70,71,78(comp) SS-72,73,79(comp), SS-74,80,81(comp), SS-75,76,82(comp)	
Polychlorinated Biphenyls U.S. EPA Method 8082	Surface to 0.5 feet bgs	2 (discrete)	TS-1, TS-2	Analyze
	Subsurface – 2.0 feet to 2.5 feet bgs	2 (discrete)	TS-1, TS-2	Hold
Arsenic U.S. EPA Method 7060	Surface to 0.5 feet bgs	34 (discrete)	SS-2, SS-9, SS-11, SS-14, SS-16, SS-17, SS-20, SS-24, SS-26, SS-29, SS-32, SS-34, SS-40, SS-43, SS-46, SS-48, SS-52, SS-56, SS-58, SS-60, SS-62, SS-66, SS-68, SS-72, SS-75, SS-78, SS-81, SS-83 DS-1, DS-4, DS-6, DS-8, DS-10, DS-11	Analyze
		3 (duplicate) (a)	SS-40, SS-75, DS-9	Analyze
	Subsurface - 2.0 feet to 2.5 feet bgs	34 (discrete)	SS-2, SS-9, SS-11, SS-14, SS-16, SS-17, SS-20, SS-24, SS-26, SS-29, SS-32, SS-34, SS-40, SS-43, SS-46, SS-48, SS-52, SS-56, SS-58, SS-60, SS-62, SS-66, SS-68, SS-72, SS-75, SS-78, SS-81, SS-83 DS-1, DS-4, DS-6, DS-8, DS-10, DS-11	Hold
CAM 17 Metals U.S. EPA Method 6010/7000 Series	Surface to 0.5 feet bgs	10 (discrete)	SS-17, SS-39, SS-59, SS-73 DS-3, DS-8 BG-1, BG-2, BG-3, BG-4	Analyze
	Subsurface - 2.0 feet to 2.5 feet bgs	10 (discrete)	SS-17, SS-39, SS-59, SS-73 DS-3, DS-8 BG-1, BG-2, BG-3, BG-4	Hold

Notes:

(a) Split by the laboratory
(b) Surface sample with the highest detection of OCPs, will have discrete samples (if applicable), and the associated subsurface samples analyzed for the presence of OCPs

Table 5-2. Sample Collection Information

Sample Matrix and Test Method	Container	Preservative	Holding Time From Sample Collection to Extraction
Soil			
Organochlorine Pesticides U.S. EPA Method 8081A	2 inch x 6 inch brass sample sleeves and plastic caps to seal.	Ice	14 days
Polychlorinated Biphenyls U.S. EPA Method 8082	Same As Above	Ice	14 days
CAM 17 Metals U.S. EPA Method 6010/7000 Series	Same As Above	Ice	28 days (a)
Arsenic U.S. EPA Method 7060	Same As Above	Ice	6 months
Lead U.S. EPA Method 6010	Same As Above	Ice	6 months
Water			
Arsenic U.S. EPA Method 200.8	250 mL Poly Bottle	Ice (b)	180 days
Lead U.S. EPA Method 200.8	Same as Above	Ice (b)	180 days

Notes:

(a) 28 days for mercury; 6 months for all other elements.
(b) Rinse water samples will be filtered by the analytical laboratory and not preserved in the field.

6.0 QUALITY ASSURANCE/QUALITY CONTROL (QA/QC) PROCEDURES

The QA/QC procedures will be employed in both the field and the laboratory. QA/QC samples include the collection of equipment rinsate samples, field blank samples, and duplicate split samples.

6.1 FIELD QA/QC PROCEDURES

Field QA/QC procedures will be performed at the site and consist of the following measures:

- COC forms will be used for sample submittal to the laboratory; and
- Daily information regarding soil sample collection will be recorded by Padre in Field Logbooks. Sample types, soil descriptions, sample identification numbers, and sample times will be collected and recorded on Field Data Sheets and in the Field Logbooks. Pages will be numbered, dated, and signed by the person performing data entry.

Field QA/QC samples will be collected and submitted for analysis along with the discrete soil samples using the following sampling frequency:

- Equipment blanks - One equipment rinsate blank per sample event;
- Field blanks - One field blank sample per sample event; and
- Field duplicates - One discrete soil sample and one composite soil sample (10% of total samples) will be split by the laboratory and analyzed as duplicate soil samples.

6.1.1 Equipment Rinsate Blanks

An equipment rinsate blank (equipment blank) will be collected from the final water rinsed over equipment after cleaning activities have been performed. The equipment blank will be collected from non-dedicated (reusable) sampling equipment such as soil sampling tools. The equipment blank will be analyzed for metals using the same analytical method used on the unique soil samples.

To collect an equipment blank sample, rinse water will be carefully poured over or through the recently cleaned equipment, and collected directly into an appropriate sample container held over a bucket. Equipment blank samples will be labeled and handled in the same manner as all other samples.

6.1.2 Field Blanks

Field blank samples consist of a sample of the deionized water that was mixed with soap to wash sampling equipment during equipment cleaning activities. The purpose of the field blank sample is to evaluate the rinse water for compounds detected in the soil samples. A field blank sample will be collected by pouring rinse water into the appropriate sample container. The field blank samples will be handled in the same manner as all other samples.

6.1.3 Field Duplicate Sample

The duplicate soil sample(s) will be analyzed in order to evaluate the analytical procedures and methods employed by the laboratory. The field duplicate sample(s) will be selected from the original soil samples, and split by the laboratory.

6.1.4 Laboratory QA/QC Procedures

Laboratory QA/QC procedures include the following:

- Laboratory analyses will be performed within the required holding time for all samples;
- Appropriate minimum reporting limits (RLs) will be used for each analysis;
- A state-certified hazardous waste testing laboratory will conduct the required analysis;
- The laboratory will provide the following information for each sample:
  - Method blank data;
  - Surrogate recovery, instrument tuning, and calibration data; and
  - Signed laboratory reports including the sample designation, date of sample collection, date of sample analysis, laboratory analytical method employed, sample volume, and the minimum RL.

Padre proposes to utilize CLS Labs located in Rancho Cordova, California, to provide the required chemical analyses of the collected samples. CLS Labs is certified (DHS #1233) by the State of California to provide the required chemical analyses.

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COPY

March 1, 2005
Project No. 0401-0881

Department of Toxic Substances Control
School Evaluation Unit
8800 Cal Center Drive
Sacramento, California 95826

Attention: Mr. Michael Kenning,

Subject: **Addendum** to Preliminary Endangerment Assessment Work Plan
Proposed High School Site B, Vacaville Unified School District
(Site Code 104426-11)

Dear Mr. Kenning:

Padre Associates, Inc. (Padre), on behalf of the Vacaville Unified School District (VUSD), is presenting this addendum to the Preliminary Endangerment Assessment (PEA) workplan dated September 30, 2004 for proposed high school site B, located east of Leisure Town Road and south of Elmira Road, Vacaville, Solano County, California (Project Site).

This addendum to the work plan was prepared in response to the Department of Toxic Substances Control (DTSC) letter dated December 22, 2004. A copy of the DTSC letter is attached, and specific comments to the PEA Workplan are discussed below.

SPECIFIC COMMENTS

1) The Project Site is in the process of being surveyed by a California licensed land surveyor and a site survey map will be provided to DTSC prior to conducting field activities.

2) The irrigation wells will not be used for site irrigation. The irrigation wells will be properly abandoned in accordance with state and county regulations.

3) According to the DTSC guidance document for sampling agricultural fields for school sites, dated August 26, 2002, a minimum of 25 composite samples are required for an 82.5-acre site. Three composite soil samples (10% of 25) will be split by the laboratory and analyzed as duplicates for organochlorine pesticides (OCPs) and three discrete soil samples (10% of 25) will be split by the laboratory and analyzed as duplicates for arsenic.

4) Composite samples are depicted on Plate 5-2 (attached).

5) According to the DTSC guidance document for sampling agricultural fields a minimum of 25 composite samples are required for an 82.5-acre site. Eight 4-point composites and 17 3-point composites will be analyzed for OCPs. One discrete sample from each composite will be further analyzed: a total of four discrete soil samples will be analyzed for CAM 17 metals, and twenty one discrete soil samples will be analyzed for arsenic. The discrete soil samples of the composite soil sample with the highest OCP concentration will be analyzed individually for OCPs. All subsurface soil samples will be archived by the laboratory.

6) Soil samples collected from irrigation ditches will be analyzed for OCPs as discrete soil samples. One half of the irrigation ditch samples will be collected from the top of the bank and one half of the samples will be collected just above the water line or from the bottom of a dry ditch. Nine discrete soil samples will be analyzed for arsenic and two discrete soil samples will be analyzed for CAM 17 metals. All subsurface soil samples will be archived by the laboratory.

7) The BP #11244 facility is located on the south side of the intersection of the 80 Freeway and Leisure Town Road, greater than 2 miles north of the proposed school site (Thomas Guide pg. 433). The current phase of the site is groundwater monitoring and remedial design/installation. The contaminants are gasoline, benzene and MtBE. The extent of the plume is defined by downgradient monitoring wells MW-7 and MW-8. Information from the most recent groundwater monitoring report is attached.

8) The locations of background soil samples will be identified on a figure in the PEA results report.

9) There is an 8.6-inch diameter natural gas pipeline owned and operated by Pacific Gas & Electric (PG&E) located approximately 450-feet northwest of the Project Site (refer to Plate 2, attached).

A pipeline risk assessment was performed for the school district and the report was submitted to the California Department of Education (CDE) for review. The individual risk for a "worst case scenerio" ignited ruptured at the nearest distance of the school site to the pipeline was calculated to be well below the individual risk threshold value of 1.0×10^{-6}.

The societal risk was presented as an "F/N" curve that gives the probability "F" that "N" or more individuals would be casualties. The F/N curve for the Project Site falls well within the green zone (Santa Barbara County Fatality Risk Thresholds), meaning that the societal impact is evaluated as insignificant with no mitigation required for purposes of compliance with standards and regulations established by the California Department of Education.

Padre trusts that the information provided herein meets with your satisfaction. If you have any comments or questions, please feel free to contact Mr. Alan Klein at (916) 857-1601, ext. 24.

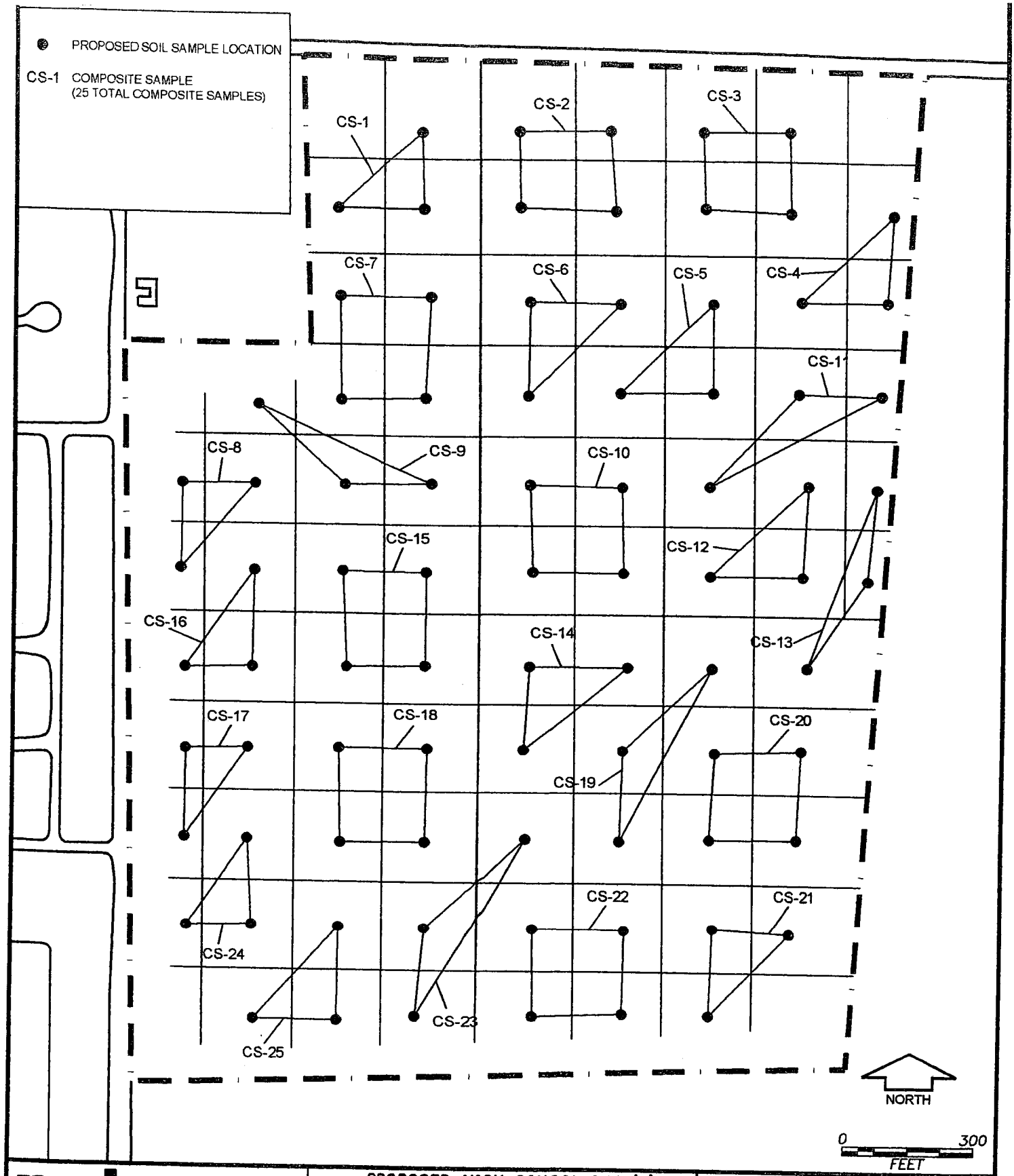
Sincerely,

PADRE ASSOCIATES, INC.

Alan J. Klein, R.E.A. II
Senior Environmental Scientist

Attachments: Plate 5-2
Table 5-1
Thomas Guide pg.433
BP #11244
Plate 2 (pipeline)
DTSC Correspondence

c: Gabriele Windgasse, DTSC HERD
Leigh Coop, Vacaville Unified School District
Jerry Suich, Oxbridge Development, Inc.
Wally Browe, Capital Program Management, Inc.



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PROPOSED HIGH SCHOOL SITE 'B'
EAST OF LEISURE TOWN ROAD
AND SOUTH OF ELMIRA ROAD
VACAVILLE, CALIFORNIA

PROJECT NO.	DATE	DR. BY	APP. BY
0401-0881	03/01/05	AC	AK

PLATE 5-2

SITE SAMPLING PLAN
(COMPOSITE SAMPLES)

Table 5-1. 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	Surface to 0.5 feet bgs	11 (discrete)	DS-1, DS-2, DS-3, DS-4, DS-5, DS-6 DS-7, DS-8, DS-9, DS-10, DS-11	Analyze
		17 (3-pt composite)	SS-1,6,7(comp), SS-12,18,19(comp), SS-15,16,23(comp), SS-17,24,25(comp), SS-20,30,31(comp), SS-26,27,34(comp) SS-28,29,37(comp), SS-35,43,44(comp), SS-36,45,53(comp), SS-38,46,47(comp), SS-50,51,58(comp), SS-52,59,67(comp) SS-54,55,62(comp), SS-63,70,71(comp), SS-72,78,79(comp), SS-66,73,80(comp), SS-76,77,83(comp)	Analyze
		8 (4-pt composite)	SS-2,3,8,9(comp), SS-4,5,10,11(comp), SS-13,14,21,22(comp), SS-32,33,41,42(comp), SS-39,40,48,49(comp) SS-56,57,64,65(comp), SS-74,75,81,82(comp),	Analyze
		3 (duplicate) (a)	SS-1,6,7(comp), SS-38,46,47(comp), SS-13,14,21,22(comp)	Analyze
	Subsurface - 2.0 feet to 2.5 feet bgs	94(discrete)	DS-1, DS-2, DS-3, DS-4, DS-5, DS-6 DS-7, DS-8, DS-9, DS-10, DS-11 SS-1, SS-2, SS-3, SS-4, SS-5, SS-6, SS-7 SS-8, SS-9, SS-10, SS-11, SS-12, SS-13, SS-14, SS-15, SS-16, SS-17, SS-18, SS-19, SS-20, SS-21, SS-22, SS-23, SS-24, SS-25, SS-26, SS-27, SS-28, SS-29, SS-30, SS-31, SS-32, SS-33, SS-34, SS-35, SS-36, SS-37, SS-38, SS-39, SS-40, SS-41, SS-42, SS-43, SS-44, SS-45, SS-46, SS-47, SS-48, SS-49, SS-50, SS-51, SS-52, SS-53, SS-54, SS-55, SS-56, SS-57, SS-58, SS-59, SS-60, SS-61, SS-62, SS-63, SS-64, SS-65, SS-66, SS-67,	Hold (b)

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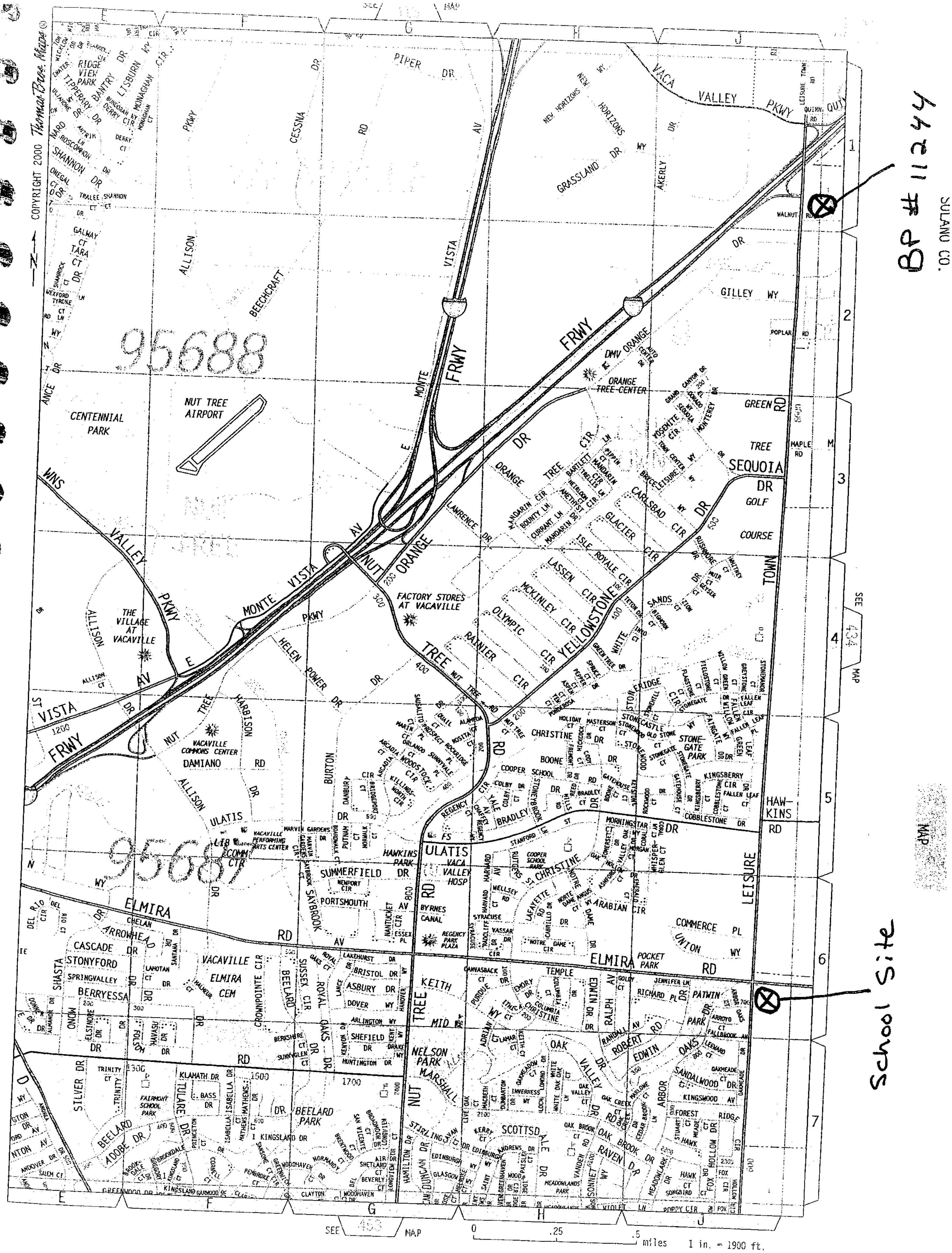
Sample Matrix and Test Method	Sample Depth	Number of Samples	Sample Location	Submittal Status
			SS-68, SS-69, SS-70, SS-71, SS-72, SS-73, SS-74, SS-75, SS-76, SS-77, SS-78, SS-79, SS-80, SS-81, SS-82, SS-83	
Polychlorinated Biphenyls U.S. EPA Method 8082	Surface to 0.5 feet bgs	2 (discrete)	TS-1, TS-2	Analyze
	Subsurface – 2.0 feet to 2.5 feet bgs	2 (discrete)	TS-1, TS-2	Hold
Arsenic U.S. EPA Method 7060	Surface to 0.5 feet bgs	32 (discrete)	DS-1, DS-2, DS-4, DS-5, DS-6, DS-7, DS-9, DS-10, DS-11 SS-2, SS-9, SS-11, SS-14, SS-16, SS-20, SS-24, SS-26, SS-29, SS-32, SS-34, SS-40, SS-43, SS-46, SS-48,SS-52, SS-56, SS-58, SS-60, SS-62,SS-66, SS-68, SS-72	Analyze
		3 (duplicate) (a)	SS-40, SS-75, DS-9	Analyze
	Subsurface - 2.0 feet to 2.5 feet bgs	94 (discrete)	DS-1, DS-2, DS-3, DS-4, DS-5, DS-6 DS-7, DS-8, DS-9, DS-10, DS-11 SS-1, SS-2, SS-3, SS-4, SS-5, SS-6, SS-7 SS-8, SS-9, SS-10, SS-11, SS-12, SS-13, SS-14, SS-15, SS-16, SS-17, SS-18, SS-19, SS-20, SS-21, SS-22, SS-23, SS-24, SS-25, SS-26, SS-27, SS-28, SS-29, SS-30, SS-31, SS-32, SS-33, SS-34, SS-35, SS-36, SS-37, SS-38, SS-39, SS-40, SS-41, SS-42, SS-43, SS-44, SS-45, SS-46, SS-47, SS-48, SS-49, SS-50, SS-51, SS-52, SS-53, SS-54, SS-55, SS-56, SS-57, SS-58, SS-59, SS-60, SS-61, SS-62, SS-63, SS-64, SS-65, SS-66, SS-67, SS-68, SS-69, SS-70, SS-71, SS-72, SS-73, SS-74, SS-75, SS-76, SS-77, SS-78, SS-79, SS-80, SS-81, SS-82, SS-83	Hold
CAM 17 Metals U.S. EPA Method 6010/7000 Series	Surface to 0.5 feet bgs	10 (discrete)	SS-17, SS-39, SS-59, SS-73 DS-3, DS-8 BG-1, BG-2, BG-3, BG-4	Analyze
	Subsurface - 2.0 feet to 2.5 feet bgs	10 (discrete)	SS-17, SS-39, SS-59, SS-73 DS-3, DS-8 BG-1, BG-2, BG-3, BG-4	Hold

Notes:

(a) Split by the laboratory


BP #11244
School Site
SOLANO CO.
COPYRIGHT 2000 Thomas Bros. Maps
95688
95687
NUT TREE AIRPORT
CENTENNIAL PARK
THE VILLAGE AT VACAVILLE
FACTORY STORES AT VACAVILLE
VACAVILLE COMMONS CENTER
ORANGE TREE CENTER
DMV
ULATIS COMM CTR
VACAVILLE PERFORMING ARTS CENTER
HAWKINS PARK
ULATIS
VACA VALLEY HOSP
REGENCY PARK PLAZA
COOPER SCHOOL
COOPER SCHOOL PARK
STONEGATE PARK
GOLF COURSE
POCKET PARK
VACAVILLE ELMIRA CEM
FAIRMONT SCHOOL PARK
BEELARD PARK
NELSON PARK
MEADOWLANDS PARK
MONTE VISTA AV
VACA VALLEY PKWY
ELMIRA RD
NUT TREE RD
LEISURE TOWN RD
ORANGE TREE DR
YELLOWSTONE DR
SEQUOIA DR
ALLISON DR
PEABODY RD
MARSHALL RD
ALAMO DR
BYRNES CANAL
FRWY
SEE 434 MAP
SEE 453 MAP
0 .25 .5 miles 1 in. = 1900 ft.

BP# 11244

Date: January 18, 2005
Quarter: 4th Quarter, 2004

ARCO QUARTERLY GROUNDWATER MONITORING REPORT

Facility No:	11244
Address:	817 Leisure Town Road, Vacaville, CA
ARCO Environmental Engineer:	Kyle Christie
Consulting Co./Contact Person:	URS/ Vernon Elarth
Consultant Project No:	38466554.0A152
Primary Agency/Regulatory ID No:	Misty Kaltreider, Solano County Department of Environmental Management
Assembly Bill 681 Status:	Property owned by Alex Bananzadeh

WORK PERFORMED THIS QUARTER (Fourth 2004):

1. Performed quarterly groundwater monitoring and sampling.
2. Prepared and submitted quarterly groundwater monitoring report.
3. Destroyed several groundwater and former remediation wells to prepare for new station construction.
4. Begin construction of SVE/air sparge groundwater treatment system.

WORK PROPOSED FOR NEXT QUARTER (First 2005):

1. Perform quarterly groundwater monitoring and sampling.
2. Prepare and submit quarterly groundwater monitoring report.
3. Startup treatment system.

QUARTERLY RESULTS SUMMARY (Fourth 2004):

Current Phase of Project:	Monitoring/Remedial Design and Installation
Frequency of Groundwater Sampling:	MW-1, MW-4, and MW-11 – Quarterly; MW-2 and MW-7 through MW-9 – Semi-Annually (1st and 3rd Quarters)
Frequency of Groundwater Monitoring:	Quarterly
Is Free Product (FP) Present on Site:	No
FP Recovered This Quarter:	NA
Cumulative FP Recovered to Date:	NA
Approximate Depth to Groundwater:	12.81 to 16.96 feet below ground surface (ft bgs)
Direction of Groundwater Flow:	Southeast to South
Groundwater Gradient:	0.003 to 0.004 feet/foot (ft/ft)

ANALYTICAL DATA REVIEW:

Based on the review of the analytical and hardcopy data (chain-of-custody records, blanks, dilutions, holding times, LCS/LCSD results, MS/MSD results, and surrogate recoveries), the data are acceptable as reported by the laboratory with the following limitations:

- The reported results for gasoline range organics (GRO) in samples MW-1, MW-4, and MW-11 may be biased low since the analyses for these analytes were performed 11 days beyond the U.S. EPA recommended holding time of 14 days.

Leaking Underground Fuel Tank Report

BP #11244 (VACAVILLE)
817 LEISURE TOWN RD
VACAVILLE , CA 95688
CASE STATUS: OPEN
SHOW THIS SITE ON MAP
RETURN TO REPORT MAIN MENU

REGIONAL BOARD - CASE #: 480115
CENTRAL VALLEY RWQCB (REGION 5S) - **(JLB)**
CONTACT: JAMES L. BARTON - (916) 464-3291

LOCAL AGENCY (LEAD AGENCY) - CASE #: 50028
SOLANO COUNTY LOP - **(MCK)**

ELECTRONIC SUBMITTALS - ANALYTICAL DATA (Show all Analytical Submittals)

EDF Data for GW Monitoring Report
Report Title: "Groundwater Monitoring Report 4th Quarter 2004"
Analysis performed by *Sequoia Analytical Laboratories, Inc., Petaluma, CA*
EDF Submitted: 1/21/2005
# of Field Points Sampled: 4

(QC Data | Client Data | Detections)

								REPORTING RESULTS	
SAMPLING DATE	ANALYSIS DATE	MATRIX	BATCH #	FIELD PT NAME	SAMPLE ID	METHOD	PARAMETER	QUALIFIER	VALUE
11/22/2004	12/4/2004	W	4120094	MW-1	MW-1	8260FAB	BENZENE	=	24000
11/22/2004	12/4/2004	W	4120094	MW-4	MW-4	8260FAB	BENZENE	=	27000
11/22/2004	12/4/2004	W	4120094	MW-11	MW-11	8260FAB	BENZENE	ND	0
11/22/2004	12/4/2004	W	4120094	MW-1	MW-1	8260FAB	TOLUENE	ND	0
11/22/2004	12/4/2004	W	4120094	MW-11	MW-11	8260FAB	TOLUENE	ND	0
11/22/2004	12/4/2004	W	4120094	MW-4	MW-4	8260FAB	TOLUENE	ND	0
11/22/2004	12/4/2004	W	4120094	MW-1	MW-1	8260FAB	DI-ISOPROPYL ETHER (DIPE)	ND	0
11/22/2004	12/4/2004	W	4120094	MW-11	MW-11	8260FAB	DI-ISOPROPYL ETHER (DIPE)	ND	0
11/22/2004	12/4/2004	W	4120094	MW-4	MW-4	8260FAB	DI-ISOPROPYL ETHER (DIPE)	ND	0
11/22/2004	12/4/2004	W	4120094	MW-1	MW-1	8260FAB	ETHYLBENZENE	=	1600
11/22/2004	12/4/2004	W	4120094	MW-11	MW-11	8260FAB	ETHYLBENZENE	ND	0
11/22/2004	12/4/2004	W	4120094	MW-4	MW-4	8260FAB	ETHYLBENZENE	=	1700
11/22/2004	12/4/2004	W	4120094	MW-1	MW-1	8260FAB	ETHYL TERT-BUTYL ETHER (ETBE)	ND	0
11/22/2004	12/4/2004	W	4120094	MW-4	MW-4	8260FAB	ETHYL TERT-BUTYL ETHER (ETBE)	ND	0
11/22/2004	12/4/2004	W	4120094	MW-11	MW-11	8260FAB	ETHYL TERT-BUTYL ETHER (ETBE)	ND	0
11/22/2004	12/4/2004	W	4120094	MW-1	MW-1	8260FAB	ETHANOL (ETOH)	ND	0
11/22/2004	12/4/2004	W	4120094	MW-4	MW-4	8260FAB	ETHANOL (ETOH)	ND	0
11/22/2004	12/4/2004	W	4120094	MW-11	MW-11	8260FAB	ETHANOL (ETOH)	ND	0
11/22/2004	12/4/2004	W	4120094	MW-1	MW-1	8260FAB	METHYL-TERT-BUTYL ETHER (MTBE)	ND	0
11/22/2004	12/4/2004	W	4120094	MW-4	MW-4	8260FAB	METHYL-TERT-BUTYL ETHER (MTBE)	ND	0
11/22/2004	12/4/2004	W	4120094	MW-11	MW-11	8260FAB	METHYL-TERT-BUTYL ETHER (MTBE)	ND	0
11/22/2004	12/4/2004	W	4120094	MW-1	MW-1	8260FAB	TERT-AMYL METHYL ETHER (TAME)	ND	0
11/22/2004	12/4/2004	W	4120094	MW-4	MW-4	8260FAB	TERT-AMYL METHYL ETHER (TAME)	ND	0
11/22/2004	12/4/2004	W	4120094	MW-11	MW-11	8260FAB	TERT-AMYL METHYL ETHER (TAME)	ND	0
11/22/2004	12/4/2004	W	4120094	MW-1	MW-1	8260FAB	TERT-BUTYL ALCOHOL (TBA)	ND	0
11/22/2004	12/4/2004	W	4120094	MW-11	MW-11	8260FAB	TERT-BUTYL ALCOHOL (TBA)	ND	0
11/22/2004	12/4/2004	W	4120094	MW-4	MW-4	8260FAB	TERT-BUTYL ALCOHOL (TBA)	ND	0
11/22/2004	12/4/2004	W	4120094	MW-1	MW-1	8260FAB	XYLENES	=	5300
11/22/2004	12/4/2004	W	4120094	MW-11	MW-11	8260FAB	XYLENES	ND	0
11/22/2004	12/4/2004	W	4120094	MW-4	MW-4	8260FAB	XYLENES	=	2000
11/22/2004	12/17/2004	W	4120365	MW-1	MW-1	SW8015B	GASOLINE RANGE ORGANICS (C4-C12)	=	56000
11/22/2004	12/17/2004	W	4120365	MW-4	MW-4	SW8015B	GASOLINE RANGE ORGANICS (C4-C12)	=	53000
11/22/2004	12/17/2004	W	4120365	MW-11	MW-11	SW8015B	GASOLINE RANGE ORGANICS (C4-C12)	ND	0

Geotracker Home | Site/Facility Finder | Case Finder | MTBE/Case Reports

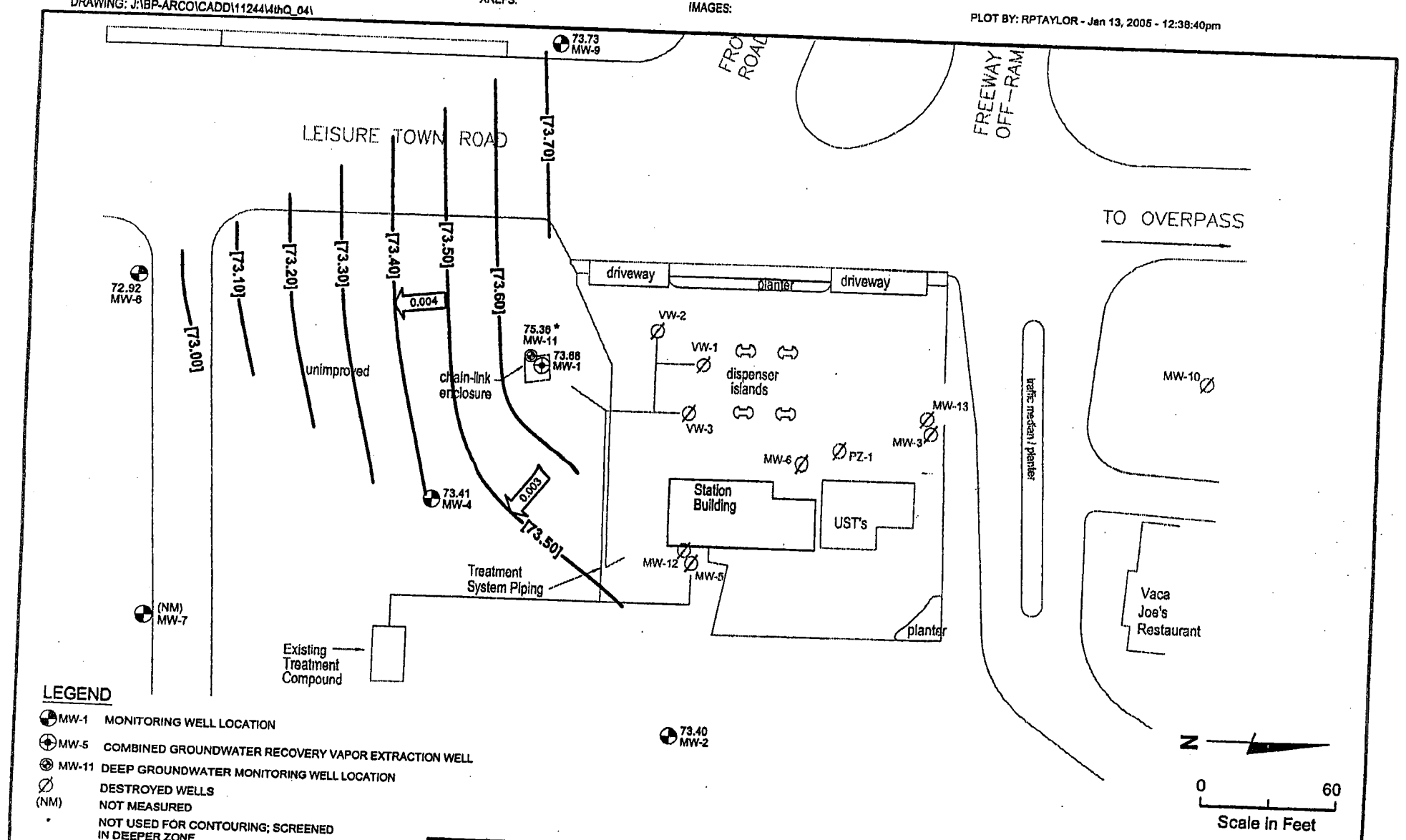
DRAWING: 11244_101104-4Q04_F1gwcont.dwg

DRAWING: J:\BP-ARCO\CADD\11244\4thQ_04\

XREFS:

IMAGES:

PLOT BY: RPTAYLOR - Jan 13, 2005 - 12:38:40pm



LEGEND

- MW-1 — MONITORING WELL LOCATION
- MW-5 — COMBINED GROUNDWATER RECOVERY VAPOR EXTRACTION WELL
- MW-11 — DEEP GROUNDWATER MONITORING WELL LOCATION
- ∅ — DESTROYED WELLS
- (NM) — NOT MEASURED
- * — NOT USED FOR CONTOURING; SCREENED IN DEEPER ZONE
- 73.41 — GROUND WATER ELEVATION (FEET MEAN SEA LEVEL)
- -[73.40]- — WATER TABLE CONTOUR (FEET MEAN SEA LEVEL)
- 0.004 — INFERRED DIRECTION OF GROUND WATER MOVEMENT WITH GRADIENT (FT/FT)
- WATER LEVEL DATA COLLECTED ON 11/22/2004

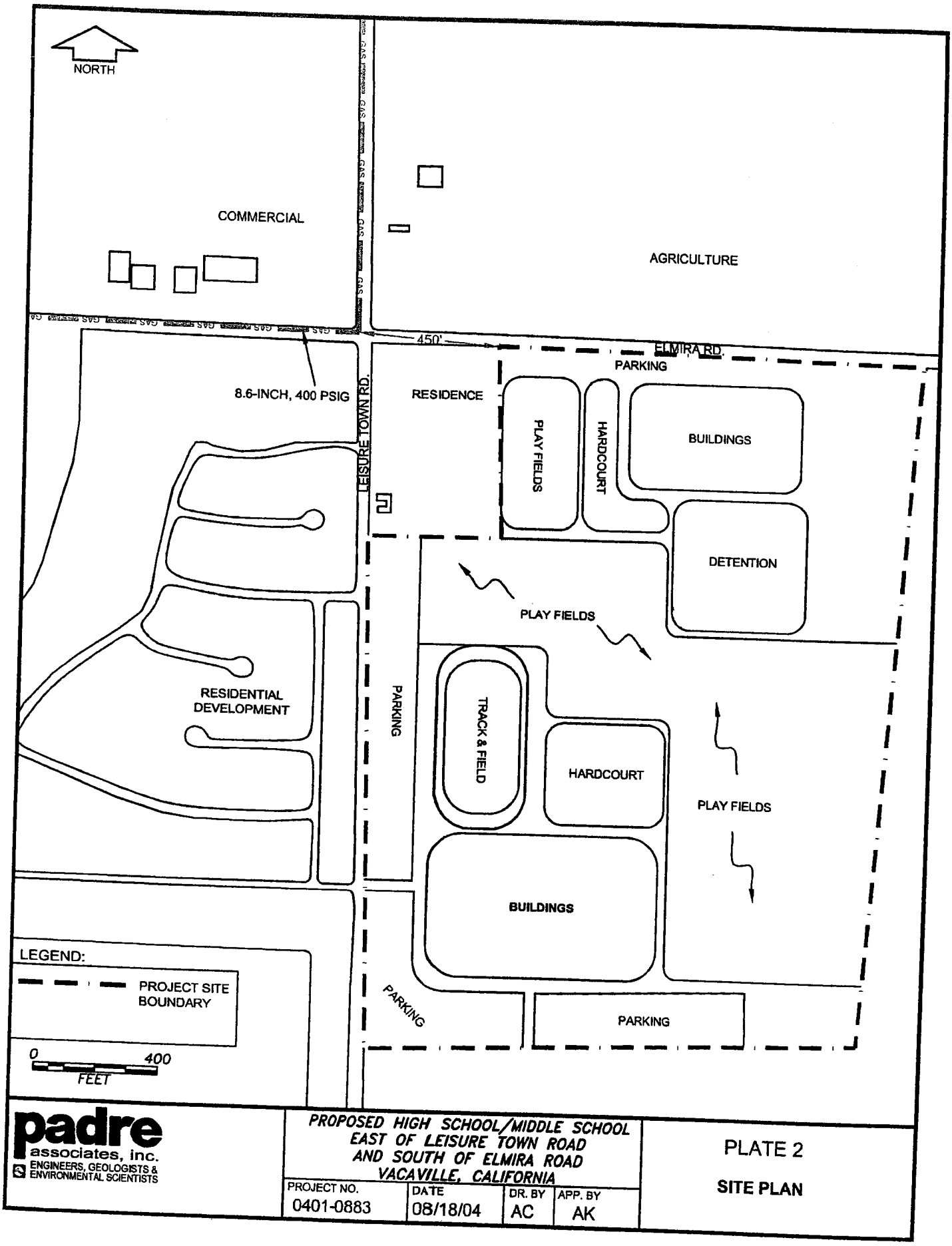
URS
2870 Gateway Oaks Drive, Ste. 300
Sacramento, CA 95833-3200
TEL: (916) 679-2000
FAX: (916) 679-2900

GROUNDWATER ELEVATION CONTOURS

Former BP Retail Site No. 11244
817 Leisure Town Road
Vacaville, California

ARCO Quarterly Groundwater Monitoring Report - 4th Quarter 2004

FIGURE 1



padre associates, inc.
ENGINEERS, GEOLOGISTS & ENVIRONMENTAL SCIENTISTS

PROPOSED HIGH SCHOOL/MIDDLE SCHOOL
EAST OF LEISURE TOWN ROAD
AND SOUTH OF ELMIRA ROAD
VACAVILLE, CALIFORNIA

PROJECT NO.	DATE	DR. BY	APP. BY
0401-0883	08/18/04	AC	AK

PLATE 2

SITE PLAN

APPENDIX D
HUMAN HEALTH SCREENING MODEL

APPENDIX D
HUMAN HEALTH SCREENING MODEL

A screening-level evaluation was conducted consistent with PEA guidance (CalEPA, 1994), to provide an estimate of the potential chronic health risk from impacted soils identified at the Project Site. The evaluation was conducted using the analytical models provided in the PEA guidance, which are structured to provide a conservative estimate of the chronic risk from contaminated media along exposure pathways that are most frequently encountered in a residential setting. The default factors contained in the analytical models are conservative in nature and represent a reasonable maximum exposure as defined by the U.S. EPA to the chemicals of potential concern (COPC). Acute or sub-chronic (short-term) risks were not evaluated as part of the PEA screening level modeling. The screening level evaluation was conducted for all polychlorinated biphenyls (Aroclor 1260) detected in onsite soil samples and individual metals as compared with site background levels.

The components of the screening-level evaluation includes: 1) a conceptual site model, 2) identification of COPCs, 3) identification of toxicity values for each COPC, and 4) a risk characterization. The purpose of these elements and their relevance to the screening level risk assessment are provided below:

- **Conceptual Site Model** - The conceptual site model identifies the potential exposure pathways (i.e., ingestion of contaminated soils, inhalation of contaminated particulates, dermal contact with contaminated soils) for the contaminated media at the Project Site. The pathways that were identified as having a probability of leading to an exposure to the COPCs were carried into the risk evaluation.
- **Chemicals of Potential Concern** - COPCs are those chemical constituents detected within the soil, air, or groundwater media above background concentrations. For the PEA evaluation, each COPC was modeled along a complete exposure pathway using the highest concentration of each COPC reported in soil.
- **Toxicity Values** - The PEA analytical models require the use of toxicity data for each of the COPCs. Toxicity values promulgated into California regulations and listed by the Cal/EPA Office of Environmental Health and Hazard Assessment (OEHHA) where used in the PEA. For those compounds not listed by OEHHA, toxicity values were obtained from the most current U.S. EPA's Integrated Risk Information System (IRIS). For those compounds not listed in any of the above sources, toxicity values listed in the U.S. EPA's Health Effects Assessment Summary Tables (HEAST) were used in the analytical models.
- **Risk Characterization** - The screening level evaluation of risk involves the integration of the above-mentioned elements into an analytical model to determine the level of risk or hazard quotient along a complete exposure pathway. An excess cancer risk was calculated for chemical species thought by the EPA or CalEPA to pose a carcinogenic risk to humans. The hazard quotient is calculated for all non-carcinogenic compounds as a measure of the non-carcinogenic toxicity of a

compound. The hazard quotient is the ratio of the estimated dose from exposure to a value that is believed not to produce adverse health affects.

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:

- Potential environmental issues identified at the Project Site have been determined based on available information regarding past and current agricultural activities including the potential application of agricultural chemicals on fields. Residual concentrations of agricultural chemicals in surface soils may potentially pose health risks via ingestion, dermal contact, and inhalation exposure pathways.
- Residual concentrations of polychlorinated biphenyls in surface soils around the base of pole-mounted electrical transformers may pose a potential health risk via ingestion, dermal contact, and inhalation exposure pathways.
- The proposed high/middle school will be serviced by the local water district; therefore the ingestion of groundwater located beneath the Project Site is not considered an exposure pathway.
- Exposure to surface water was not considered a complete exposure pathway because surface water is only present during flood irrigation activities.
- 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 (CSM) presented as Plate 6-1, shows that exposure to soils containing COPCs may be possible along the inhalation, ingestion, and dermal contact pathways.

CHEMICALS OF POTENTIAL CONCERN

The COPCs used in the human health screening-level model included those compounds detected above background levels or laboratory reporting limits in soil samples collected during the PEA field activities. The COPCs are as follows:

Soil:

- Polychlorinated Biphenyls: Aroclor 1260
- Metals: Copper (Cu) and Lead (Pb).

For the purpose of this human health screening-level model, the COPCs were considered non-volatile compounds. Thus, an analysis of risk for inhalation of respirable particles was performed for Aroclor 1260. Risk estimates were calculated by using the highest concentration of constituents reported in surface soils.

The laboratory results of soil sample analysis for heavy metals identified three metals at concentrations outside the range of their respective background samples. One of the three metals (lead) was included as a COPC and is evaluated using the DTSC lead risk assessment spreadsheet model (*LeadSpread Version 7*). The following approach was used to evaluate individual metals as potential COPCs:

- The highest onsite concentrations for arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, vanadium, and zinc were compared with their respective highest background concentrations. Comparing the highest concentrations, barium, beryllium, cadmium, chromium, cobalt, nickel, and vanadium were eliminated as COPCs;

- The arithmetic mean concentrations for arsenic, copper, lead, and zinc were compared with their respective background arithmetic mean concentrations. If the arithmetic means were comparable, and/or if the highest site concentration was below the concentration associated with unacceptable risk or hazard, the metal was eliminated as a COPC. Based on this evaluation, arsenic was eliminated as a COPC.

An analysis of risk for inhalation of respirable particles (soil) was performed for Aroclor 1260. Additionally, a hazard quotient was calculated for copper. Risk and hazard estimates were calculated by using the highest concentration of constituents reported in surface soils.

Concentrations of lead ranged from 6.0 mg/kg to 7.7 mg/kg in soil samples collected from the planting area and irrigation ditch. A risk assessment was performed (utilizing the highest concentration) using DTSC's LeadSpread model. Based on the LeadSpread output, exposure to the lead concentrations indicated at the Project Site will result in a 99th percentile blood lead concentration of 4.8 µg/dl in children and 3.4 µg/dl in adults. These values are below the 10 µg/dl blood lead level of concern established by the U.S. Centers for Disease Control.

Arsenic concentrations ranged from 4.5 mg/kg to 9.2 mg/kg in soil samples collected from the planting area and irrigation ditches. Background soil samples collected at the Project Site identified arsenic concentrations ranging from 5.2 mg/kg to 7.0 mg/kg. The arithmetic mean for arsenic concentrations detected in soil samples collected from the planting area and irrigation ditches was 7.1 mg/kg. The arithmetic mean for arsenic detected in background samples was 6.0 mg/kg. Additionally, as reported in *Background Concentrations of Trace and Major Elements in California Soils*, Bradford et al., March 1996, soil samples collected from within Solano County contained arsenic at concentrations ranging from 4.5 to 9.6 mg/kg. Therefore, arsenic was not considered a COPC, and additional assessment and/or remediation for arsenic is not recommended. Additionally, a screening-level evaluation for arsenic using analytical models provided in the PEA guidance manual was not performed.

TOXICITY

The following are brief discussions of the human toxicity information for Aroclor 1260, copper, lead, and zinc. Information on carcinogenicity and human toxicity were taken from the

CalEPA OEHHA, the USEPA's IRIS website (www.epa.iris/gov), and the most recent USEPA Region 9 PRG Tables (updated October 2004) provided on the EPA's website (www.epa.gov/region09/waste/sfund/prg).

- **Aroclor 1260 (PCB)** – Polychlorinated biphenyls are mixtures of up to 209 individual chlorinated compounds (known as cogeners) that are either oily liquids or solids that are colorless to light yellow. There are no known natural sources of PCBs. While some PCBs can exist as a vapor in air, they have no known smell or taste. Many commercial PCB mixtures are known in the United States (U.S.) by the trade name Aroclor. PCBs have been used as coolants and lubricants in transformers, capacitors, and other electrical equipment because they do not burn easily and are good insulators. The manufacture of PCBs in the U.S. stopped in August 1977 because of evidence they build up in the environment and can cause harmful health effects. The U.S. EPA has determined PCBs to be a probable human carcinogen (B2 classification).
- **Copper** – Copper compounds are most commonly used in agriculture to treat plant diseases, like mildew. Most copper compounds found in the environment are strongly attached to dust and dirt and cannot easily affect human health. Soluble copper compounds that are most commonly used in agriculture are more likely to effect human health. Copper occurs naturally in soil, surface water and groundwater. Soil generally contains between 2 and 250 mg/kg of copper and the average concentration in the Earth's crust is 50 mg/kg. Copper is necessary for good health, however very large single or daily doses can harm human health. Copper is not classifiable as a human carcinogen, as determined by the U.S. EPA.
- **Lead** - Lead is a naturally occurring bluish-gray metal found in small amounts in the earth's crust. The amount of lead added to paints and ceramic products, caulking, gasoline, and solder has been reduced in recent years to minimize lead's harmful effects on people and animals. Sources of lead in dust and soil include lead that falls to the ground from the air, and weathering and chipping of lead-based paint from buildings and other structures. Approximately, 900,000 U.S. children between the ages of 1 and 5 years are believed to have blood lead levels equal or greater than 10 µg/dL, the CDC level of concern. The U.S. EPA has determined lead to be a probable human carcinogen (B2 classification).
- **Zinc** – Zinc is one of the most common elements in the earth's crust and is an essential element for human health. Exposure to high levels can be harmful. Zinc compounds are widely used in industry to make paint, rubber, dyes, wood, preservatives and ointments. Most zinc in soil stays bound to soil particles. It is bioaccumulative in fauna but not in flora. Zinc is not classifiable as a human carcinogen, as determined by the U.S. EPA.

To provide a screening level evaluation of risk, the COPCs were subdivided into compounds that have the potential for causing cancer (B2 and C classifications) and those where no current data suggests they may be cancer causing chemicals (D classification). The COPCs were evaluated separately using different PEA models as part of the screening level

evaluation. The models used for Aroclor 1260 provide an estimate of chronic risk in excess of 1 in 1,000,000 (10^{-6}). These models for the chronic risk evaluation require toxicity values that were not available for the metals copper and zinc. These COPCs were evaluated as part of the hazard assessment. Values greater than 1 indicate that impacted soil and/or groundwater may pose a health hazard at the Project Site.

As stated in the PEA guidance, the hazard quotient should be calculated for both carcinogenic and non-carcinogenic compounds. Therefore, a hazard quotient was also calculated for Aroclor 1260.

RISK CHARACTERIZATION

To provide an estimate of the potential chronic risk for the COPCs along the ingestion, dermal contact and inhalation pathways, analytical models provided in the PEA guidance were used along with the toxicological data shown on **Table 1**. An excess cancer risk was calculated for Aroclor 1260 along the inhalation, dermal contact and ingestion pathways. Additionally, a hazard quotient was calculated for Aroclor 1260. The risk and hazard quotients were calculated for the COPC using the highest concentration reported in surface soils.

The models used for the inhalation, dermal contact and ingestion pathways are shown below along with their foundational assumptions, which provide a conservative estimate of chronic health risk or hazard.

Inhalation Pathway - Soil

Since the COPCs were determined to be non-volatile, two models were used to estimate the chronic health risk along the inhalation pathway. The initial model was used to approximate the particulate concentration in air for inclusion in the inhalation model to estimate chronic risk. The analytical model used to estimate the air concentration for the COPCs is as follows:

$C_a = C_s * (5.0 \times 10^{-8}\ kg/m^3)$
C_a = particulate concentration in air (mg/kg^3)
C_s = concentration in soil (mg/kg)

This model assumes that ambient air particulates are equal to the National Ambient Air Quality Standard for the annual average respirable portion (PM10) of suspended particulate matter (0.05 mg/m^3). Further, it is assumed the 100% of the particulates have the same contaminant concentration as the highest soil value. Given that the Project Site will have various areas of exposed soil, these assumptions of respirable portion and contaminant loading across the entire Project Site provide a reasonable assessment of the potential risk.

Subsequent to the calculation of air concentration, a measure of the risk or hazard for the COPCs was calculated using the following equations:

$$\mathbf{Risk_a = SFi * C_a * 0.149}$$
$$\mathbf{Hazard_a = (C_a/RFDi) * 0.639}$$

SFi = inhalation cancer slope factor (1/mg/kg-day) (see **Table 1**)
C_a = concentration in air (mg/m^3)
RfDi = inhalation reference dose (mg/kg-day)

In the application of a constant (0.149 or 0.639), these equations assume the following default exposure factors for estimating chronic risk along the inhalation pathway:

Default Exposure Factors: Risk Assessment

- Exposure Duration - 24 years for Adults; 6 years for Children;
- Exposure Frequency - 350 days/year;
- Inhalation rate - 20 m^3/day (adults); 10m^3/day (children); and
- Averaging Time - 70 years.

Default Exposure Factors: Hazard Assessment

- Exposure Duration - 6 years for children (birth to six years);
- Exposure Frequency - 350 days/year;
- Inhalation rate - 10 m^3/day (children); and
- Averaging Time - 6 years.

These default exposure factors provide a conservative estimate (i.e., intentionally biased to be the most protective) of chronic risk to human health along the inhalation pathway. The analytical models for the inhalation pathway and the calculations of risk and hazard are provided in **Table 2**.

Ingestion and Dermal Contact - Soil

To provide an evaluation of chronic risk along the ingestion and dermal contact pathways the following equations for risk and hazard were used consistent with PEA guidance:

Risk $= (SFo * C_s * (1.57E\text{-}6)) + (SFo * C_s * (1.87E\text{-}5) * ABS)$
Hazard $= (C_s/RFDo * (1.28E\text{-}5)) + (C_s/RFDo * (1.28E\text{-}4) * ABS)$

SFo = oral cancer slope factor (1/mg/kg-day) (see **Table 1**)
C_s = concentration in soil (mg/kg)
RFDo = oral reference dose (mg/kg-day)
ABS = absorption fraction (dimensionless)

In the application of a constant (1.57E-6, 1.87E-5, etc), these equations assume the following default exposure factors for estimating chronic risk or hazard along the ingestion and dermal contact pathways:

Default Exposure Factors: Risk Assessment

- Exposure Duration - 24 years for Adults; 6 years for Children;
- Exposure Frequency (ingestion) - 350 days/year;

- Exposure Frequency (dermal contact) - 100 days/year (adults) and 350 days/year (children);
- Incidental Soil Ingestion Rate - 100 mg/day (adults) and 200 mg/day (children)
- Exposed Skin Area - 5,800 cm^2 (adult) and 2,000 cm^2 (children); and
- Averaging Time - 70 years.

Default Exposure Factors: Hazard Assessment

- Exposure Duration - 6 years for children (birth to six years);
- Exposure Frequency (ingestion and dermal contact) - 350 days/year;
- Incidental Soil Ingestion Rate - 200 mg/day (children);
- Exposed Skin Area - 2,000 cm^2 (children); and
- Averaging Time - 6 years.

These default exposure factors provide a conservative estimate of chronic risk to human health along the ingestion and dermal contact pathway. The analytical models for the ingestion and dermal contact pathway and the calculations of risk and hazard are provided in **Table 3**.

RESULTS OF PEA SCREENING LEVEL MODEL

The results of the PEA model are summarized in **Table 4** and below:

- The PEA model for the carcinogenic compound Aroclor 1260 indicated a cumulative increased cancer risk of 8.7×10^{-7} for surface soils, along the inhalation pathway and ingestion/dermal contact pathways for soil. Based on the model assumptions, the total risk (summation of each identified exposure pathway) for the COPCs does not provide an excess cancer risk of 1 in 1,000,000 ($>10^{-6}$);
- The PEA model for the carcinogenic compound Aroclor 1260 and the metals, copper and zinc indicated a cumulative hazard of 0.15 for surface soils along the inhalation pathway and ingestion/dermal contact pathways for soil. Based on the model assumptions, the total hazard (summation of each identified exposure pathway) for the COPCs does not provide a significant health hazard (i.e., >1);
- The DTSC model LeadSpread calculates percentile estimates of blood lead concentrations for adults and children. Based on the LeadSpread output, exposure to the lead concentrations detected on site will result in a 99th percentile blood lead concentration of 4.8 µg/dl in children and 3.4 µg/dl in adults. These values are below the 10 µg/dl blood lead level of concern established by the U.S. Centers for Disease Control.

TABLE 1
CHEMICALS OF POTENTIAL CONCERN
Vacaville Unified School District
Proposed High/Middle School Site B
Vacaville, California

COPCs (1)	TOXICITY VALUES (2)					PHYSICAL CONSTANTS (3)					CARCINOGENICITY (4)
	SFo (1/mg/kg-d)	RfDo (mg/kg-d)	SFi (5) (1/mg/kg-d)	RfDi (5) (mg/kg-d)	ABS (6) (mg/kg-d)	Molecular Weight (g/mol)	Organic Carbon Partition Coeff. (L/kg)	Vapor Pressure (mmHg @ 25C)	Solubility (mg/L @ 25C)	Henrys Constant (atm-m3/mole)	
Aroclor 1260	5.0E+00	2.00E-05	2.0E+00	2.00E-05	0.14	395.33	207,000	4.1E-05	2.8E-04	1.4E-02	B2
Copper	---	4.0E-02	---	---	0.01	63.55	14.3	NA	NA	NA	D
Zinc	---	3.00E-01	---	---	0.01	67.41	14.3	NA	NA	NA	D

Notes:

NA - Not available in the reference cited.
--- - Not listed in references cited.
(1) - Chemical of Potential Concern (COPC)
(2) - Toxicity Values were taken from the CalEPA Office of Environmental Health and Hazard Assessment (OEHHA).
For compounds not listed by the CalEPA OEHHA, EPA Region 9 PRG Table, Toxicity Information (October 2004) was used.
SFo - Slope Factor (oral pathway)
SFi - Slope Factor (inhalation pathway)
RfDo - Reference Dose (oral pathway)
RfDi - Reference Dose (inhalation pathway)
(3) - References for Physical Constants
Agency for Toxic Substances and Disease Registry (www.atsdr.cdc.gov)
(4) - As defined in the IRIS database (www.epa.gov/iris) and USEPA Region 9 PRGs Table (October 2004)
B2 = Probable Human Carcinogen
D = Not Classifiable as to Human Carcinogenicity
(5) - Inhalation values determined by route to route extrapolation (CalEPA OEHHA and/or USEPA Region 9 PRGs Table, Toxicity Values, October 2004)
(6) - Absorption fraction (constant provided by CalEPA OEHHA, EPA Region 9 PRGs Table, October 2004, and/or Risk Assessment Information System (http://risk.lsd.ornl.gov/)

TABLE 2
PEA EVALUATION OF RISK/HAZARD
(INHALATION PATHWAY)
Proposed High/Middle School Site B
Vacaville Unified School District

NON-VOLATILE CHEMICALS of POTENTIAL CONCERN

Polychlorinated Biphenyls
Aroclor 1260

Metals
Copper
Zinc

Estimation of AIR Concentration for NON VOLATILE COMPOUNDS

	Aroclor 1260		Copper		Zinc	
	Cs (mg/kg)	Ca (mg/m3)	Cs (mg/kg)	Ca (mg/m3)	Cs (mg/kg)	Ca (mg/m3)
Highest Concentration in Surface Soils (0 - 2.5 ft.)	0.041	2.1E-09	220	1.1E-05	160	8.0E-06

Cs -Concentration in soil (mg/kg); the highest concentration was used in the analysis
PM10 -Respirable portion of Particulate Emissions (0.05 mg/m^3)
Ca = Cs * PM10 * ($1*10^{-6}$ kg/mg) (DTSC, PEA January 1994, equation shown on Figure 2.8)

Estimation of RISK (Compounds thought to cause cancer)

	Aroclor 1260		
	Ca	SFi	RISK
	mg/m3	1/mg/kg-day	unitless
Surface Soils (0 - 2.5 ft.)	2.1E-09	2.0	6.1E-10

RISK = SFi * Ca * 0.149 (DTSC PEA Guidance Manual, January 1994)

Sfi - Inhalation CANCER Slope Factor $(mg/kg\text{-}day)^{-1}$.
Ca - Concentration in AIR (mg/m^3).
0.149 - A constant provided in PEA guidance manual equal to the exposure factor for adults and children.

NOTES:
(1) -Slope factors (SFi) taken from CalEPA Office of Environmental Health and Hazard Assessment (OEHHA). For compounds not listed by OEHHA, EPA Region 9 PRG Table, Toxicity Information (October 2004) was used.
NA - Not Applicable

TABLE 2
PEA EVALUATION OF RISK/HAZARD
(INHALATION PATHWAY)
Proposed High/Middle School Site B
Vacaville Unified School District

Estimation of HAZARD (non cancer causing compounds)

	Aroclor 1260			Copper			Zinc		
	Ca	RfDi	HAZARD	Ca	RfDi	HAZARD	Ca	RfDi	HAZARD
	mg/m3	mg/kg-day	unitless	mg/m3	mg/kg-day	unitless	mg/m3	mg/kg-day	unitless
Surface Soils (0 - 2.5 ft.)	2.1E-09	2.0E-05	6.5E-05	1.1E-05	NA	NA	8.0E-06	NA	NA

HAZARD = (Ca/RfDi) * 0.639 (DTSC PEA Guidance Manual, January 1994)

RfDi - Inhalation Reference Dose (mg/kg-day).
Ca - Concentration in air (mg/m^3).
0.639 - A constant provided in PEA guidance manual equal to the exposure factor for adults and children.

NOTES:
(1) - Reference dose (RfDi) for each COPC taken from CalEPA Office of Environmental Health and Hazard Assessment (OEHHA). For compounds not listed by OEHHA, EPA Region 9 PRG Table, Toxicity Information (October 2004) was used.
NA - Not Applicable

TABLE 3
PEA EVALUATION OF RISK/HAZARD
(INGESTION and DERMAL CONTACT PATHWAY)
Vacaville Unified School District
Proposed High/Middle School Site B
Vacaville, California

NON-VOLATILE CHEMICALS of POTENTIAL CONCERN

Polychlorinated Biphenyls	Metals
Aroclor 1260	Copper
	Zinc

Estimation of RISK (Compounds thought to cause cancer)

	Aroclor 1260			
	Cs	SFo	ABS	RISK
	mg/kg	1/mg/kg-day	dimensionless	unitless
Surficial Soils (0 - 2.5 ft.)	0.041	5.0	0.14	8.6E-07

RISK =(SFo * Cs * 0.00000157) + (SFo * Cs * (0.0000187) * ABS) (DTSC PEA Guidance Manual, January 1994)

SFo - Oral Cancer Slope Factor $(mg/kg\text{-}day)^{-1}$.
Cs - Concentration in soil (mg/kg); the highest site concentration was used in the analysis .
ABS - Absorption fraction (constant provided in PEA guidance manual).
0.00000157 - A constant provided in PEA guidance manual equal to exposure factors for adults and children (ingestion pathway)
0.0000187 - A constant provided in PEA guidance manual equal to exposure factors for adults and children (dermal pathway)

NOTES:
(1) -Slope factors (SFo) taken from CalEPA Office of Environmental Health and Hazard Assessment (OEHHA).
For compounds not listed by OEHHA, EPA Region 9 PRG Table, Toxicity Information (October 2004) was used.
NA -Not Applicable

Estimation of HAZARD (non cancer causing compounds)

	Aroclor 1260				Copper				Zinc			
	Cs	RfDo	ABS	HAZARD	Cs	RfDo	ABS	HAZARD	Cs	RfDo	ABS	HAZARD
	mg/kg	mg/kg-day	dimensionless	unitless	mg/kg	mg/kg-day	dimensionless	unitless	mg/kg	mg/kg-day	dimensionless	unitless
Surficial Soils (0 - 2.5 ft.)	0.041	2.0E-05	0.14	6.3E-02	220	4.0E-02	0.01	7.7E-02	160	3.0E-01	0.01	7.5E-03

HAZARD =((Cs/RfDo) * 0.0000128)+((Cs/RfDo)*0.000128*ABS) (DTSC PEA Guidance Manual, January 1994)

RfDo - Oral Reference Dose (mg/kg-day)
Cs - Concentration in soil (mg/kg); the highest concentration was used in the analysis.
ABS - Absorption fraction (constant provided in PEA Guidance Manual).
0.0000128 - A constant provided in PEA guidance manual equal to exposure factors for adults and children (ingestion pathway)
0.000128 - A constant provided in PEA guidance manual equal to exposure factors for adults and children (dermal pathway)

NOTES:
(1) - Reference dose (RfDo) for each COPC taken from CalEPA Office of Environmental Health and Hazard Assessment (OEHHA).
For compounds not listed by OEHHA, EPA Region 9 PRG Table, Toxicity Information (October 2004) was used.
NA - Not Applicable

TABLE 4
RESULTS OF PEA SCREENING LEVEL RISK ASSESSMENT
Vacaville Unified School District
Proposed High/Middle School Site B
Vacaville, California

SURFICIAL SOILS (0 - 2.5 ft. bgs)

COPC (1)	INHALATION	INGESTION and DERMAL	RISK by COPC (2)
Aroclor 1260	6.1E-10	8.6E-07	8.6E-07
			RISK (SOIL)
RISK by PATHWAY(3)	6.1E-10	8.6E-07	8.6E-07

SURFICIAL SOILS (0 - 2.5 ft. bgs)

COPC (1)	INHALATION	INGESTION and DERMAL	HAZARD by COPC (4)
Aroclor 1260	6.5E-05	6.3E-02	6.3E-02
Copper	NA	7.7E-02	7.7E-02
Zinc	NA	7.5E-03	7.5E-03
			HAZARD (SOIL)
HAZARD by PATHWAY (5)	6.5E-05	1.5E-01	1.5E-01

NOTES:

(1) Chemical of Potential Concern (COPC)
(2) Risk from each COPC along both pathways (Cumulative)
(3) Cumulative risk along each pathway
(4) Hazard from each COPC along both pathways (Cumulative)
(5) Hazard along each pathway
(6) Total calculated cancer risk
(7) Total calculated hazard quotient
NA Not Applicable

LEAD RISK ASSESSMENT SPREADSHEET

CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL

Proposed High/Middle School Site B- Vacaville Unified School District, Vacaville, California

INPUT	
MEDIUM	LEVEL
Lead in Air (ug/m^3)	0.028
Lead in Soil/Dust (ug/g)	7.7
Lead in Water (ug/l)	15
% Home-grown Produce	7%
Respirable Dust (ug/m^3)	1.5

OUTPUT							
	Percentile Estimate of Blood Pb (ug/dl)					PRG-99	PRG-95
	50th	90th	95th	98th	99th	(ug/g)	(ug/g)
BLOOD Pb, ADULT	1.1	2.1	2.4	3.0	3.4	676	1063
BLOOD Pb, CHILD	1.6	2.9	3.5	4.2	4.8	146	247
BLOOD Pb, PICA CHILD	1.7	3.0	3.6	4.3	4.9	94	159
BLOOD Pb, OCCUPATIONAL	1.1	2.0	2.4	2.9	3.3	3475	5464

EXPOSURE PARAMETERS			
	units	adults	children
Days per week	days/wk	7	
Days per week, occupational		5	
Geometric Standard Deviation		1.6	
Blood lead level of concern (ug/dl)		10	
Skin area, residential	cm^2	5700	2900
Skin area occupational	cm^2	2900	
Soil adherence	ug/cm^2	70	200
Dermal uptake constant	(ug/dl)/(ug/day)	0.0001	
Soil ingestion	mg/day	50	100
Soil ingestion, pica	mg/day		200
Ingestion constant	(ug/dl)/(ug/day)	0.04	0.16
Bioavailability	unitless	0.44	
Breathing rate	m^3/day	20	6.8
Inhalation constant	(ug/dl)/(ug/day)	0.08	0.192
Water ingestion	l/day	1.4	0.4
Food ingestion	kg/day	1.9	1.1
Lead in market basket	ug/kg	3.1	
Lead in home-grown produce	ug/kg	3.5	

Click here for REFERENCES

PATHWAYS						
ADULTS	Residential			Occupational		
	Pathway contribution			Pathway contribution		
Pathway	PEF	ug/dl	percent	PEF	ug/dl	percent
Soil Contact	3.8E-5	0.00	0%	1.4E-5	0.00	0%
Soil Ingestion	8.8E-4	0.01	1%	6.3E-4	0.00	0%
Inhalation, bkgrnd		0.05	4%		0.03	3%
Inhalation	2.5E-6	0.00	0%	1.8E-6	0.00	0%
Water Ingestion		0.84	74%		0.84	76%
Food Ingestion, bkgrnd		0.22	19%		0.23	21%
Food Ingestion	2.4E-3	0.02	2%			0%

CHILDREN	typical			with pica		
	Pathway contribution			Pathway contribution		
Pathway	PEF	ug/dl	percent	PEF	ug/dl	percent
Soil Contact	5.6E-5	0.00	0%		0.00	0%
Soil Ingestion	7.0E-3	0.05	3%	1.4E-2	0.11	7%
Inhalation	2.0E-6	0.00	0%		0.00	0%
Inhalation, bkgrnd		0.04	2%		0.04	2%
Water Ingestion		0.96	60%		0.96	58%
Food Ingestion, bkgrnd		0.50	31%		0.50	30%
Food Ingestion	5.5E-3	0.04	3%		0.04	3%

Exhibit F: Historic Aerial Photographs

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The EDR Aerial Photo Decade Package

Hartford Land Management
Leisure Town Rd and Elmira Lane
Vacaville, CA 95687

Inquiry Number: 1841949.5

January 24, 2007

EDR® Environmental Data Resources Inc

The Standard in Environmental Risk Management Information

440 Wheelers Farms Road
Milford, Connecticut 06461

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

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Date EDR Searched Historical Sources:

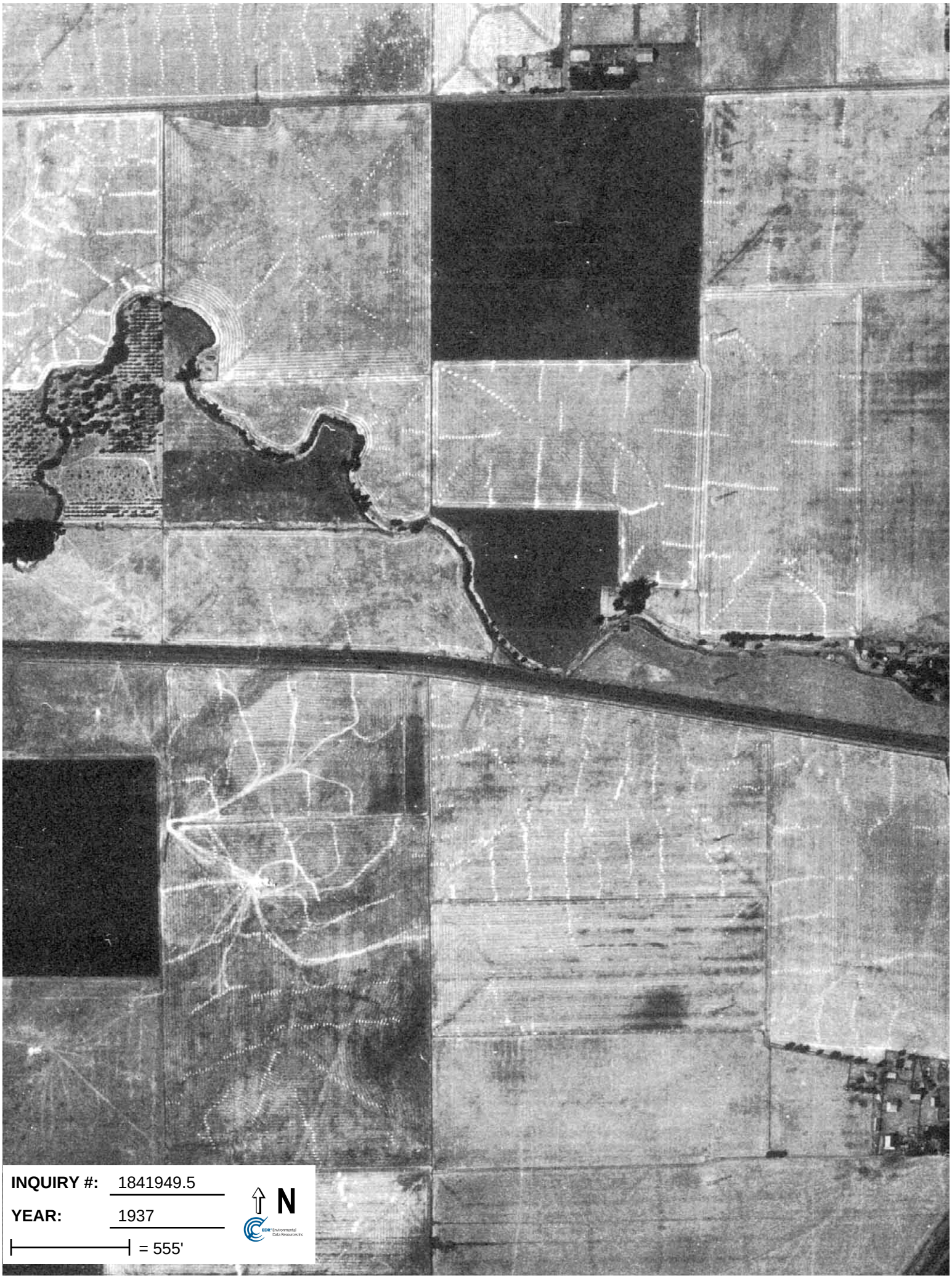
Aerial Photography January 24, 2007

Target Property:

Leisure Town Rd and Elmira Lane

Vacaville, CA 95687

Year	***Scale***	***Details***	***Source***
1937	Aerial Photograph. Scale: 1"=555'	Flight Year: 1937	Laval
1957	Aerial Photograph. Scale: 1"=555'	Flight Year: 1957	Cartwright
1965	Aerial Photograph. Scale: 1"=333'	Flight Year: 1965	Cartwright
1970	Aerial Photograph. Scale: 1"=555'	Flight Year: 1970	Cartwright
1984	Aerial Photograph. Scale: 1"=690'	Flight Year: 1984	WSA
1993	Aerial Photograph. Scale: 1"=666'	Flight Year: 1993	USGS
1998	Aerial Photograph. Scale: 1"=666'	Flight Year: 1998	USGS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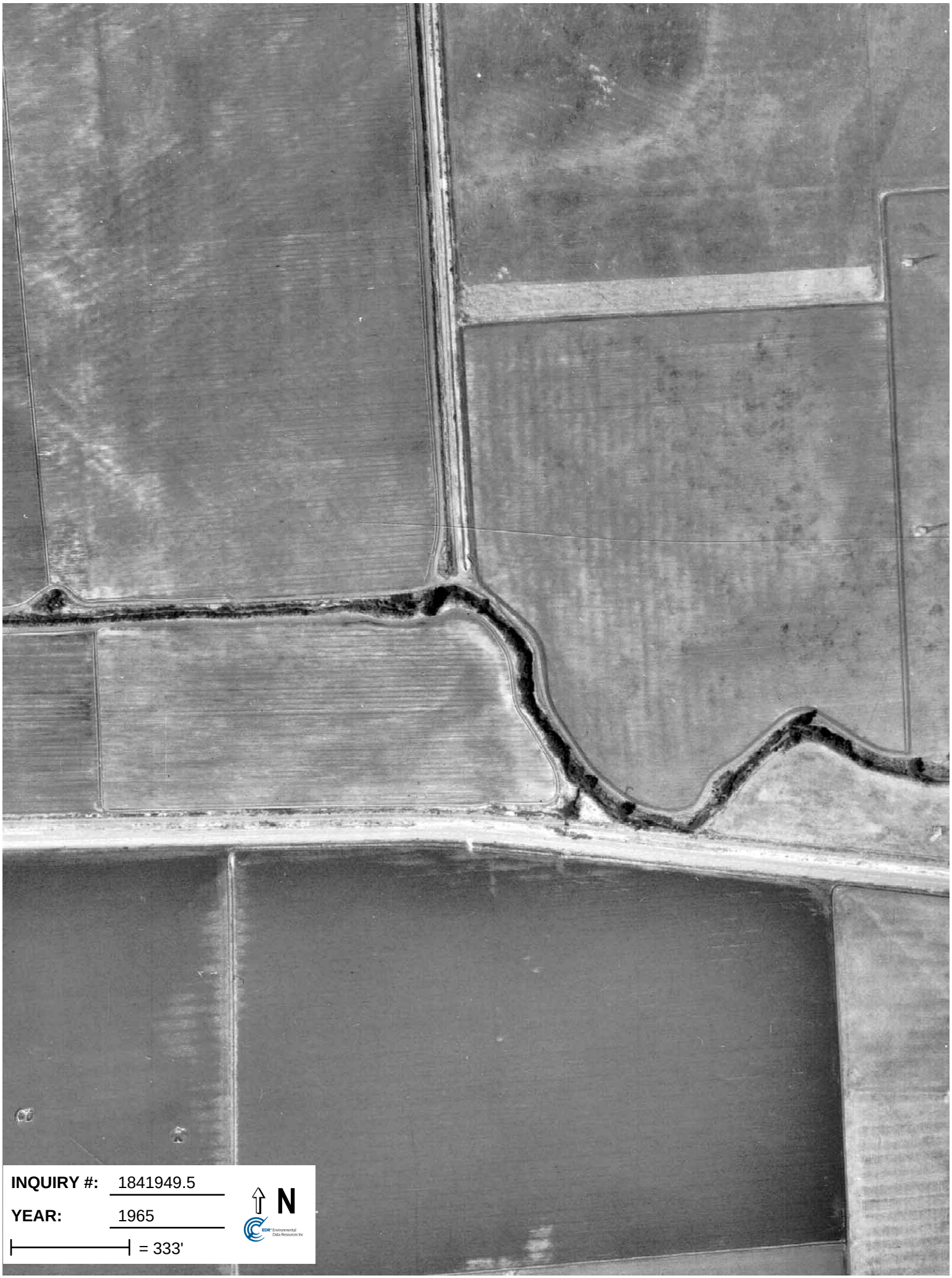
YEAR: 1957
= 555'
N
EDR Environmental Data Resources Inc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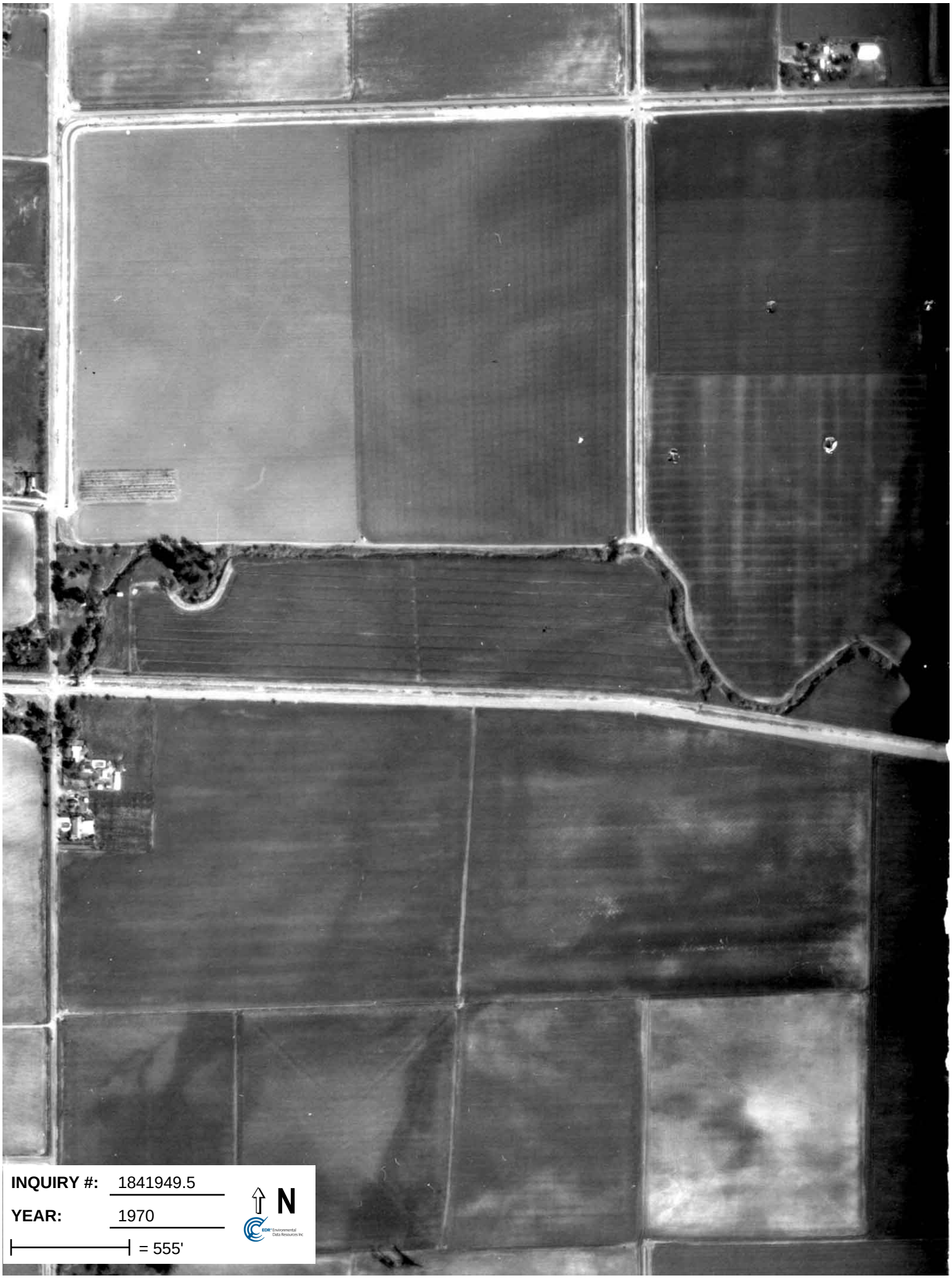
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EDR Environmental Data Resources Inc


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EDR Environmental Data Resources Inc


INQUIRY #: 1841949.5
YEAR: 1993
= 666'
N


INQUIRY #: 1841949.5
YEAR: 1998
= 666'
N
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Exhibit G: Environmental Data Resources Reports

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"Linking Technology with Tradition"®

Sanborn® Map Report

Ship To: Bob Harris
Harris & Lee Env.
2508 Saddleback Court
Santa Rosa, CA 95401

Order Date: 1/24/2007 **Completion Date:** 1/24/2007
Inquiry #: 1841949.3
P.O. #: Leisure Twn & Elmira
Site Name: Hartford Land Management
Address: Leisure Town Rd and Elmira Lane
City/State: Vacaville, CA 95687
Cross Streets:

Customer Project: Hartford Land
1017904VLA 707-571-8961

This document reports that the largest and most complete collection of Sanborn fire insurance maps has been reviewed based on client supplied information, and fire insurance maps depicting the target property at the specified address were not identified.

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EDR Historical Topographic Map Report

Hartford Land Management
Leisure Town Rd and Elmira Lane
Vacaville, CA 95687

Inquiry Number: 1841949.4

January 24, 2007

EDR® Environmental Data Resources Inc

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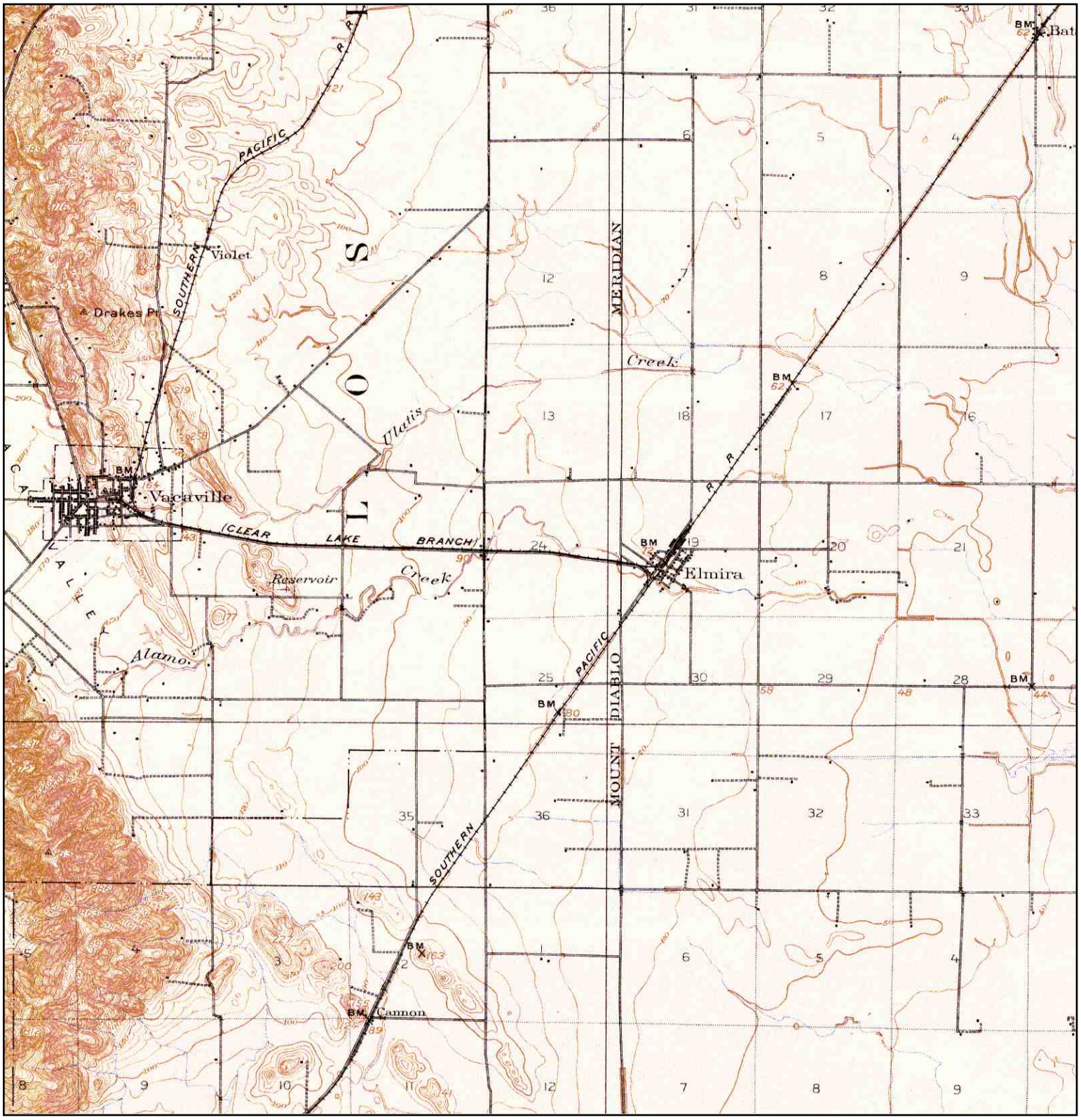
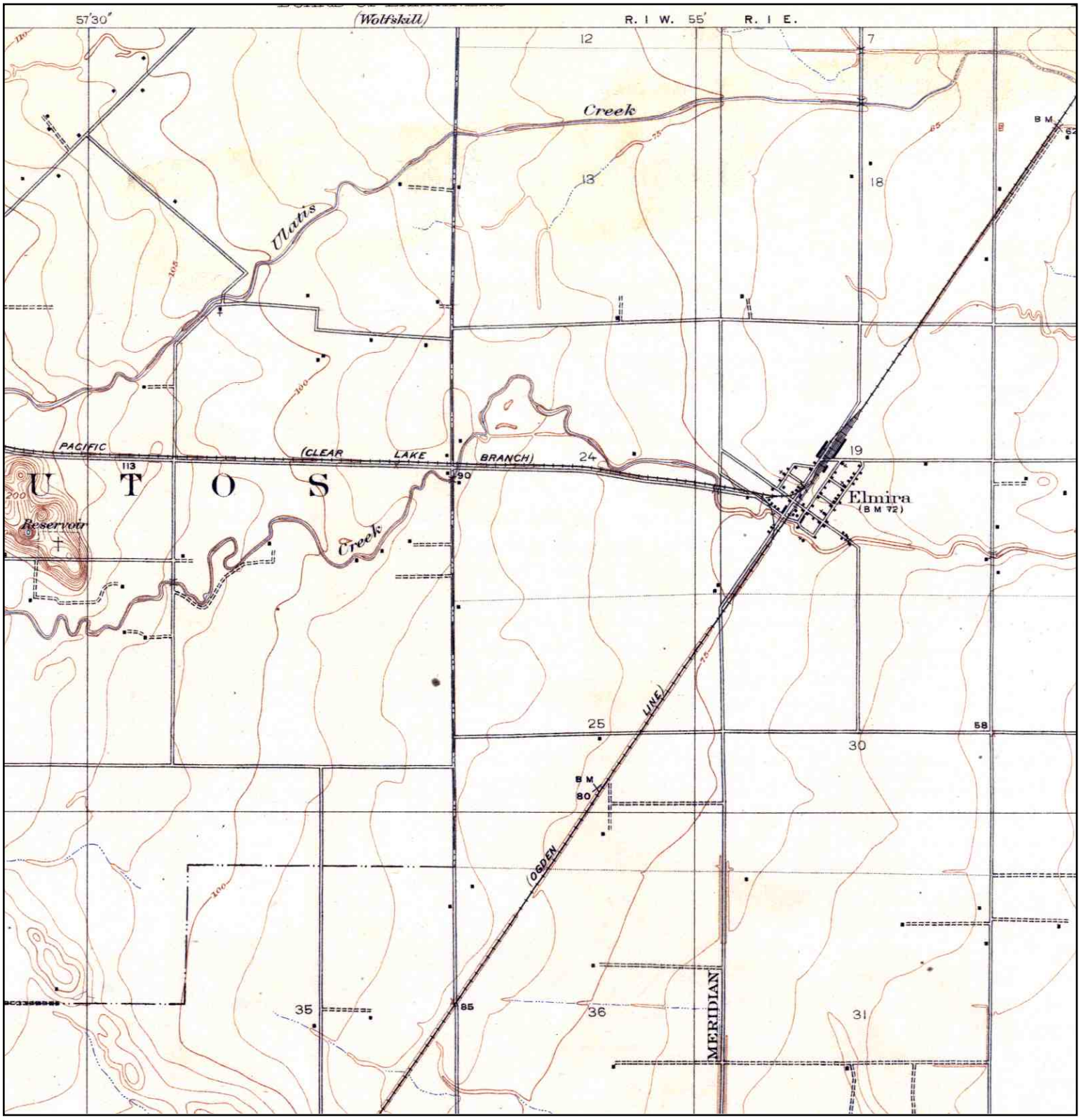
Historical Topographic Map



N	TARGET QUAD NAME: VACAVILLE MAP YEAR: 1908 SERIES: 15 SCALE: 1:62500	SITE NAME: Hartford Land Management ADDRESS: Leisure Town Rd and Elmira Lane Vacaville, CA 95687 LAT/LONG: 38.3538 / 121.9249	CLIENT: Harris & Lee Env. Sciences CONTACT: Bob Harris INQUIRY#: 1841949.4 RESEARCH DATE: 01/24/2007

Historical Topographic Map



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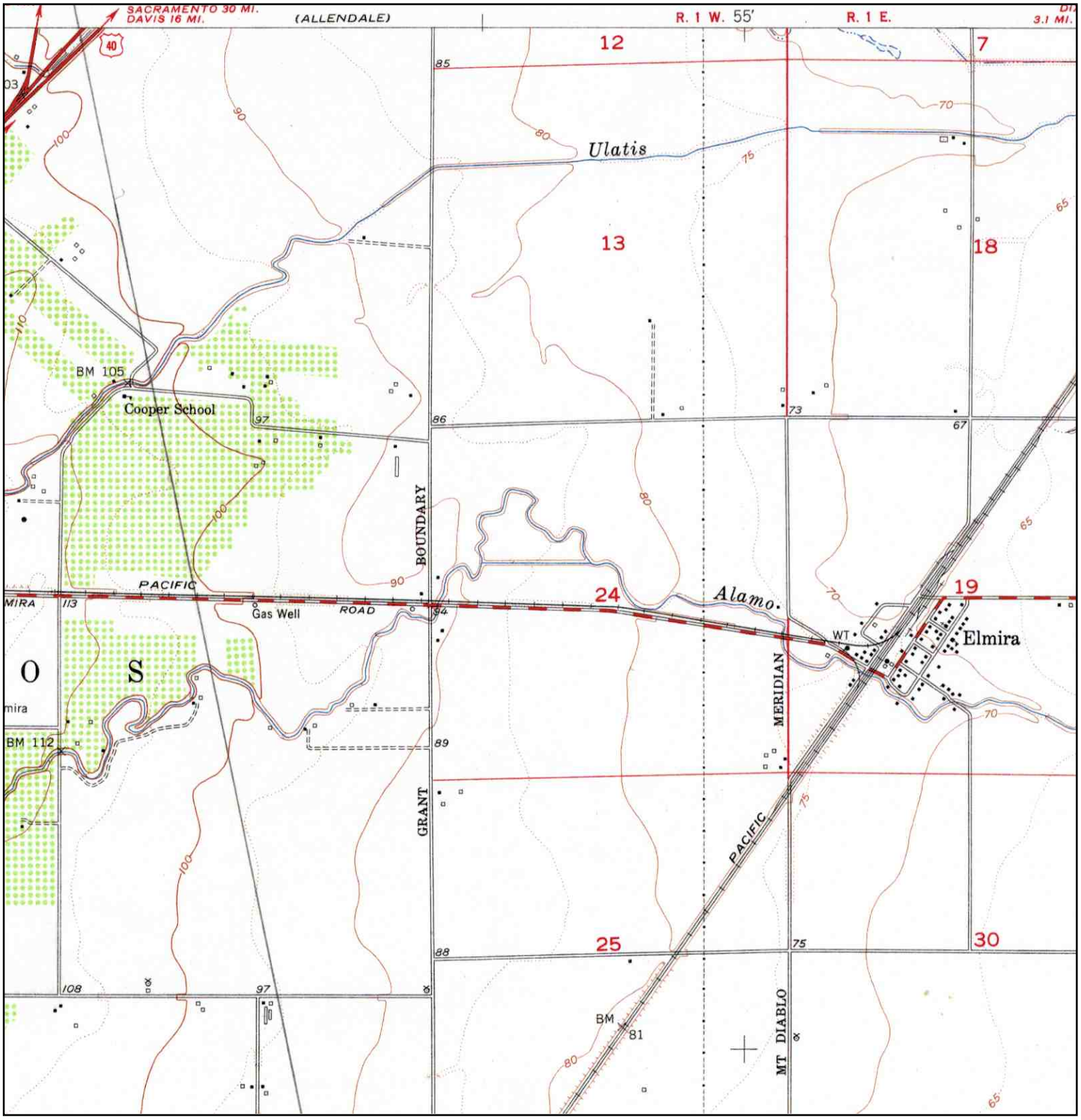
Historical Topographic Map



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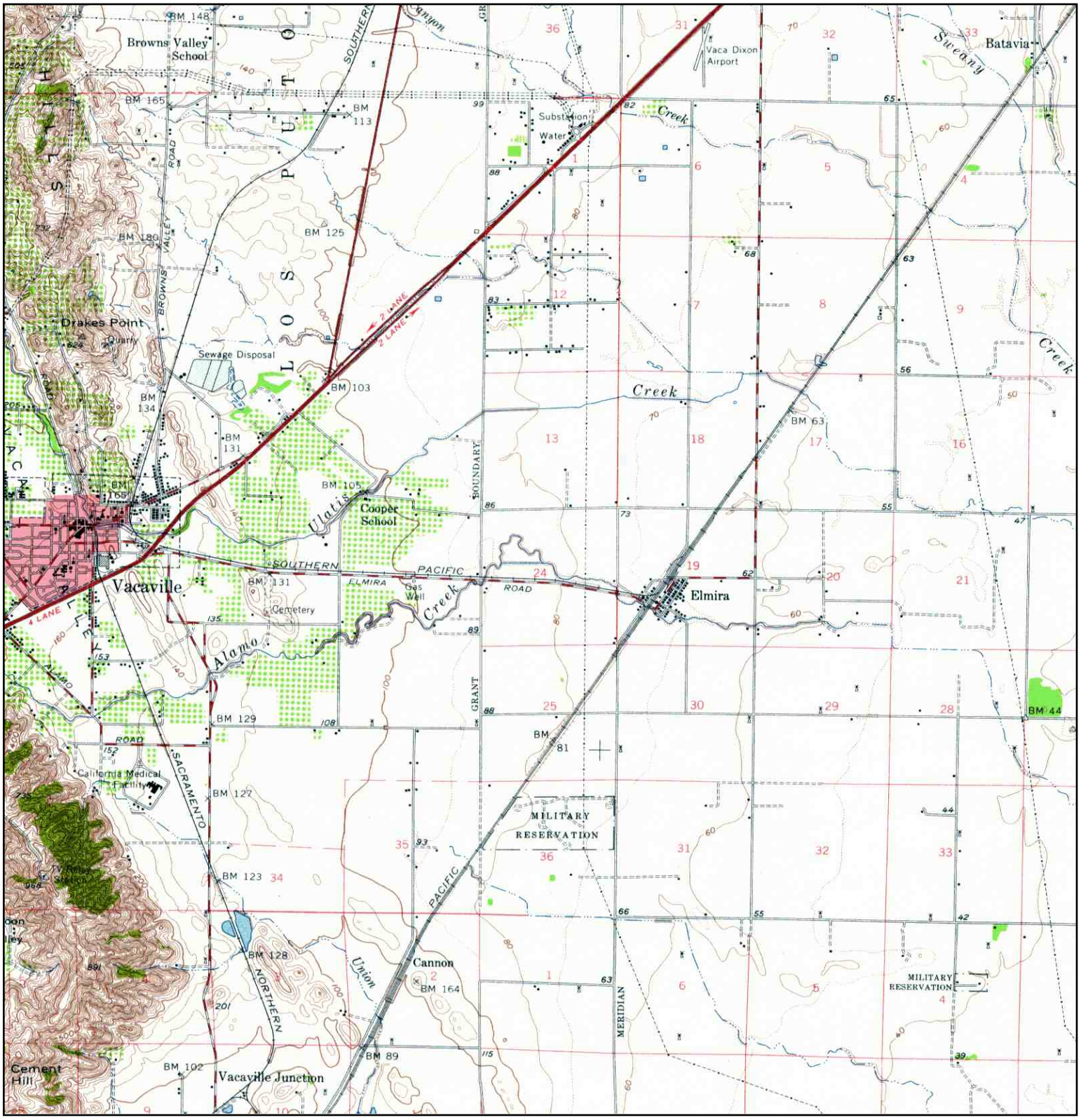
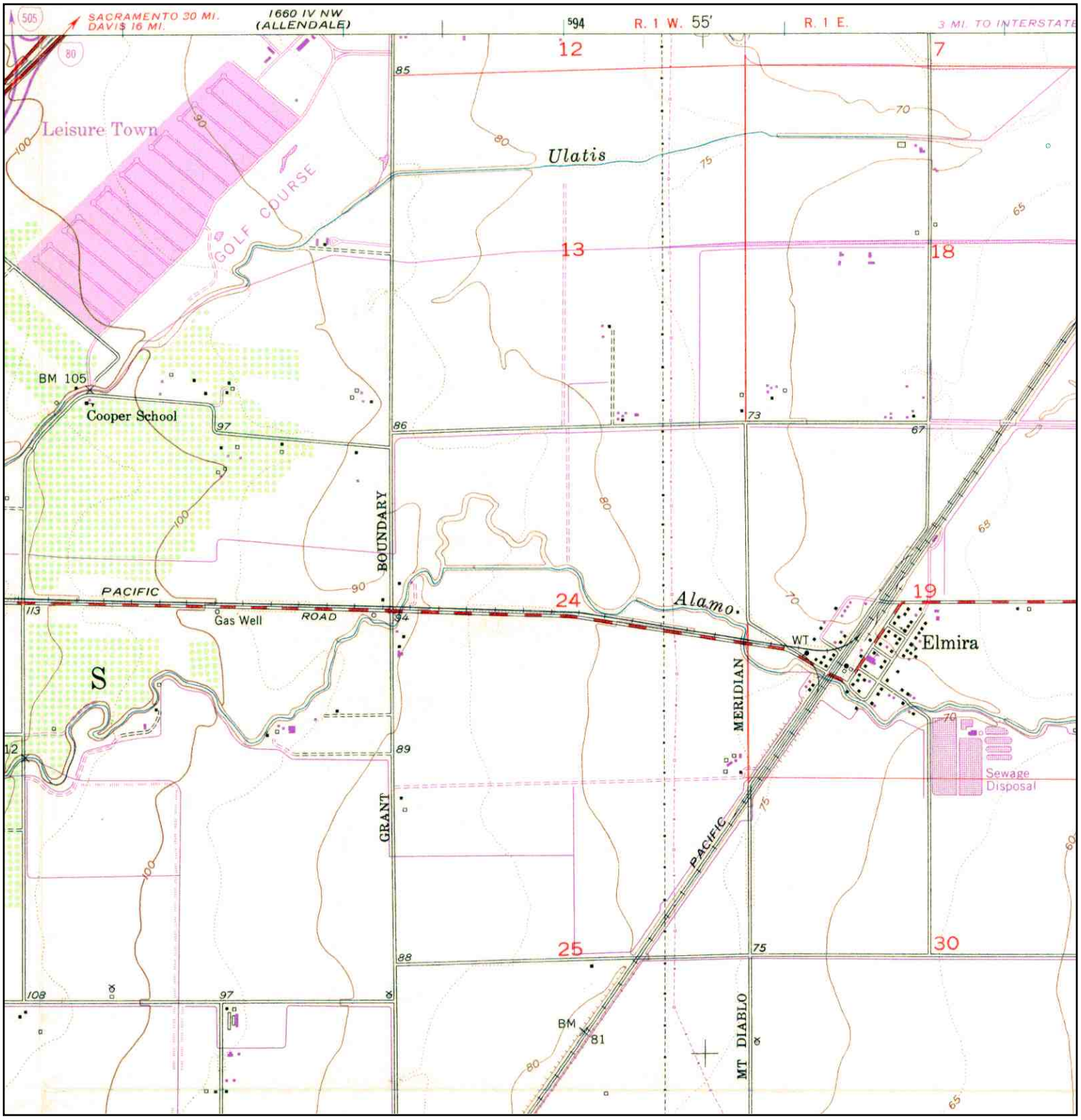
Historical Topographic Map



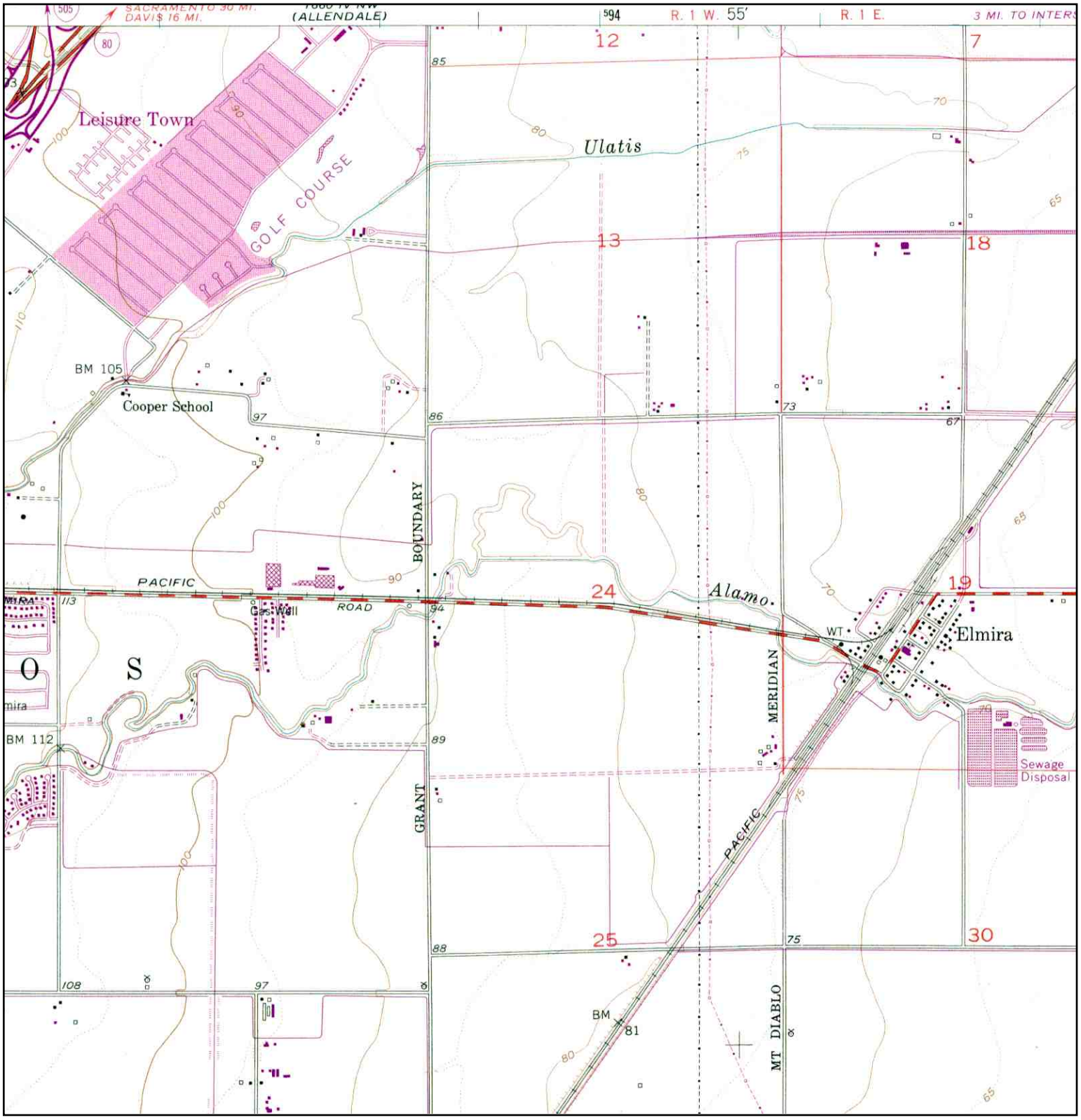
N	TARGET QUAD NAME: VACAVILLE MAP YEAR: 1953 SERIES: 15 SCALE: 1:62500	SITE NAME: Hartford Land Management ADDRESS: Leisure Town Rd and Elmira Lane Vacaville, CA 95687 LAT/LONG: 38.3538 / 121.9249	CLIENT: Harris & Lee Env. Sciences CONTACT: Bob Harris INQUIRY#: 1841949.4 RESEARCH DATE: 01/24/2007

Historical Topographic Map



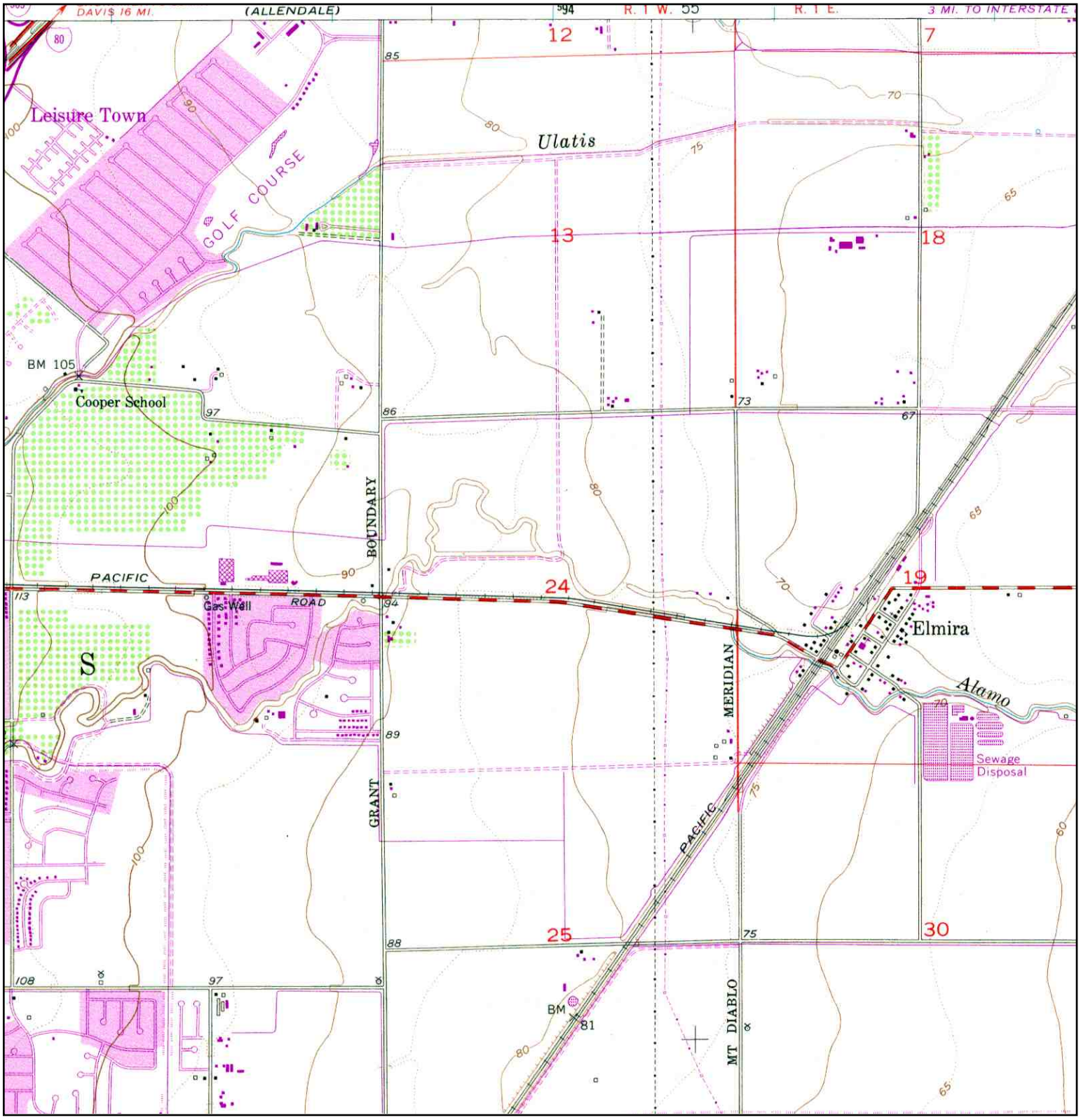
N			
	TARGET QUAD NAME: ELMIRA MAP YEAR: 1968 PHOTOREVISED FROM:1953 SERIES: 7.5 SCALE: 1:24000	SITE NAME: Hartford Land Management ADDRESS: Leisure Town Rd and Elmira Lane Vacaville, CA 95687 LAT/LONG: 38.3538 / 121.9249	CLIENT: Harris & Lee Env. Sciences CONTACT: Bob Harris INQUIRY#: 1841949.4 RESEARCH DATE: 01/24/2007

Historical Topographic Map



N	TARGET QUAD NAME: ELMIRA MAP YEAR: 1973 PHOTOREVISED FROM:1953 SERIES: 7.5 SCALE: 1:24000	SITE NAME: Hartford Land Management ADDRESS: Leisure Town Rd and Elmira Lane Vacaville, CA 95687 LAT/LONG: 38.3538 / 121.9249	CLIENT: Harris & Lee Env. Sciences CONTACT: Bob Harris INQUIRY#: 1841949.4 RESEARCH DATE: 01/24/2007

Historical Topographic Map



N			
	TARGET QUAD NAME: ELMIRA MAP YEAR: 1980 PHOTOREVISED FROM:1953 SERIES: 7.5 SCALE: 1:24000	SITE NAME: Hartford Land Management ADDRESS: Leisure Town Rd and Elmira Lane Vacaville, CA 95687 LAT/LONG: 38.3538 / 121.9249	CLIENT: Harris & Lee Env. Sciences CONTACT: Bob Harris INQUIRY#: 1841949.4 RESEARCH DATE: 01/24/2007

The EDR Radius Map
with GeoCheck®

Hartford Land Management
Leisure Town Rd and Elmira Lane
Vacaville, CA 95687

Inquiry Number: 1841949.2s

January 24, 2007

The Standard in Environmental Risk Management Information

440 Wheelers Farms Road
Milford, Connecticut 06461

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

TABLE OF CONTENTS

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. **NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OF DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT.** Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

LEISURE TOWN RD AND ELMIRA LANE
VACAVILLE, CA 95687

COORDINATES

Latitude (North):	38.353800 - 38° 21' 13.7''
Longitude (West):	121.924900 - 121° 55' 29.6''
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	593939.2
UTM Y (Meters):	4245411.5
Elevation:	84 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	38121-C8 ELMIRA, CA
Most Recent Revision:	1980

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

FEDERAL RECORDS

NPL	National Priority List
Proposed NPL	Proposed National Priority List Sites
Delisted NPL	National Priority List Deletions
NPL RECOVERY	Federal Superfund Liens
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CERC-NFRAP	CERCLIS No Further Remedial Action Planned
CORRACTS	Corrective Action Report
RCRA-TSDF	Resource Conservation and Recovery Act Information
RCRA-LQG	Resource Conservation and Recovery Act Information

EXECUTIVE SUMMARY

RCRA-SQG Resource Conservation and Recovery Act Information
ERNS Emergency Response Notification System
HMIRS Hazardous Materials Information Reporting System
US ENG CONTROLS Engineering Controls Sites List
US INST CONTROL Sites with Institutional Controls
DOD Department of Defense Sites
FUDS Formerly Used Defense Sites
US BROWNFIELDS A Listing of Brownfields Sites
CONSENT Superfund (CERCLA) Consent Decrees
ROD Records Of Decision
UMTRA Uranium Mill Tailings Sites
ODI Open Dump Inventory
TRIS Toxic Chemical Release Inventory System
TSCA Toxic Substances Control Act
FTTS FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
SSTS Section 7 Tracking Systems
ICIS Integrated Compliance Information System
CDL Clandestine Drug Labs
LUCIS Land Use Control Information System
RADINFO Radiation Information Database
PADS PCB Activity Database System
MLTS Material Licensing Tracking System
MINES Mines Master Index File
FINDS Facility Index System/Facility Registry System
RAATS RCRA Administrative Action Tracking System

STATE AND LOCAL RECORDS

HIST Cal-Sites Historical Calsites Database
CA BOND EXP. PLAN Bond Expenditure Plan
SCH School Property Evaluation Program
Toxic Pits Toxic Pits Cleanup Act Sites
SWF/LF Solid Waste Information System
CA WDS Waste Discharge System
WMUDS/SWAT Waste Management Unit Database
Cortese "Cortese" Hazardous Waste & Substances Sites List
SWRCY Recycler Database
LUST Geotracker's Leaking Underground Fuel Tank Report
CA FID UST Facility Inventory Database
SLIC Statewide SLIC Cases
UST Active UST Facilities
HIST UST Hazardous Substance Storage Container Database
AST Aboveground Petroleum Storage Tank Facilities
SWEEPS UST SWEEPS UST Listing
CHMIRS California Hazardous Material Incident Report System
Notify 65 Proposition 65 Records
DEED Deed Restriction Listing
VCP Voluntary Cleanup Program Properties
CLEANERS Cleaner Facilities
WIP Well Investigation Program Case List
CDL Clandestine Drug Labs
RESPONSE State Response Sites
HAZNET Facility and Manifest Data
EMI Emissions Inventory Data

EXECUTIVE SUMMARY

TRIBAL RECORDS

INDIAN RESERV Indian Reservations
INDIAN LUST Leaking Underground Storage Tanks on Indian Land
INDIAN UST Underground Storage Tanks on Indian Land

EDR PROPRIETARY RECORDS

Manufactured Gas Plants EDR Proprietary Manufactured Gas Plants
EDR Historical Auto Stations EDR Proprietary Historic Gas Stations
EDR Historical Cleaners EDR Proprietary Historic Dry Cleaners

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STATE AND LOCAL RECORDS

ENVIROSTOR: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the ENVIROSTOR list, as provided by EDR, and dated 11/28/2006 has revealed that there is 1 ENVIROSTOR site within approximately 1 mile of the target property.

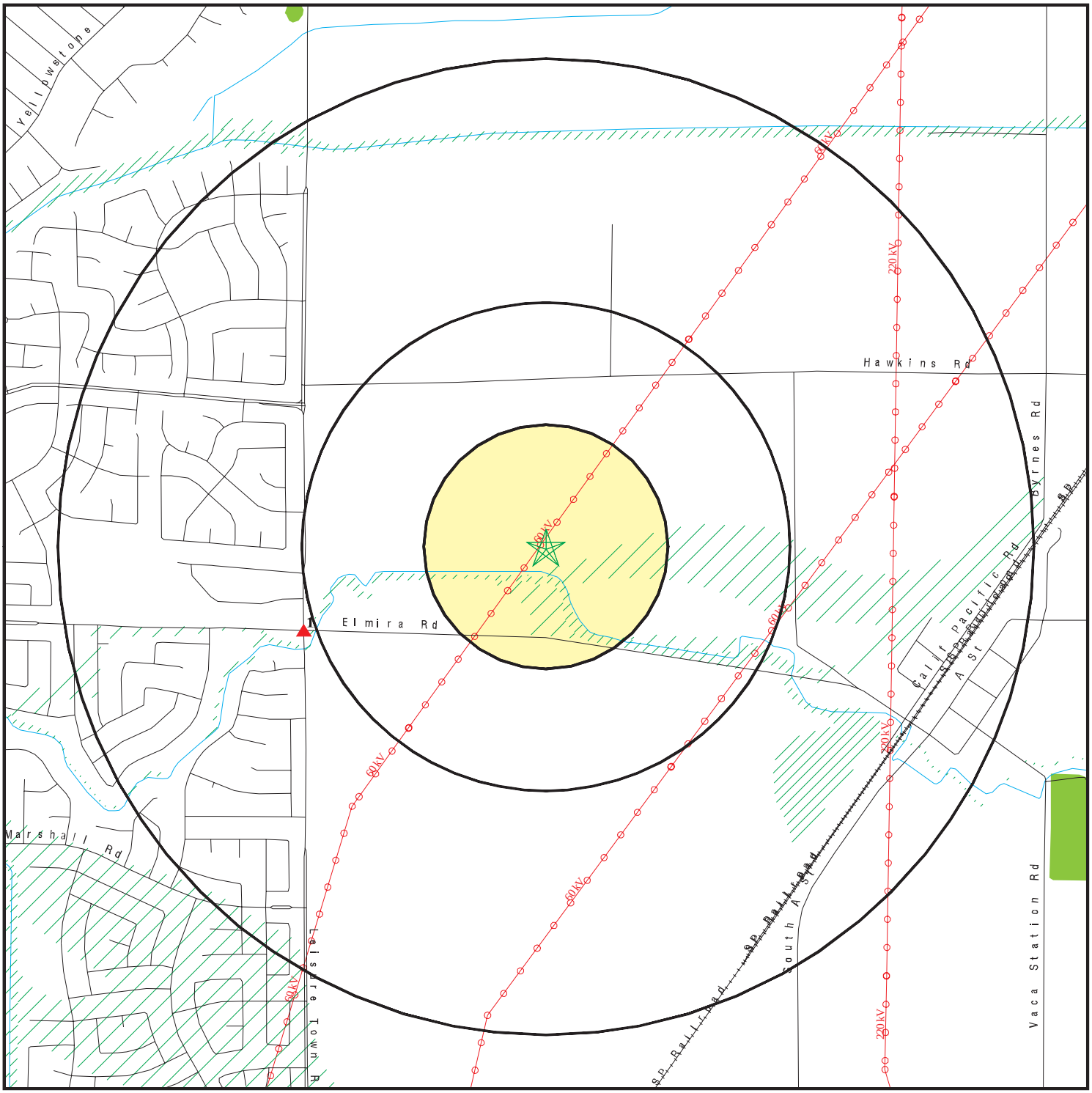
Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
HIGH SCHOOL B	***LEISURE TOWN ROAD/EL MI***	***1/2 - 1 WSW***	***1***	***6***
Facility Status: No Further Action				

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped:

Site Name	Database(s)
ACE CLEANERS	CLEANERS
MAPLEWOOD SUBDIVISION	LUST
KMEP ELMIRA BOOSTER STATION	LUST, SLIC
QUIK STOP MARKET #166	UST

OVERVIEW MAP - 1841949.2s



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Landfill Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Hartford Land Management ADDRESS: Leisure Town Rd and Elmira Lane Vacaville CA 95687 LAT/LONG: 38.3538 / 121.9249	CLIENT: Harris & Lee Env. Sciences CONTACT: Bob Harris INQUIRY #: 1841949.2s DATE: January 24, 2007 9:17 am

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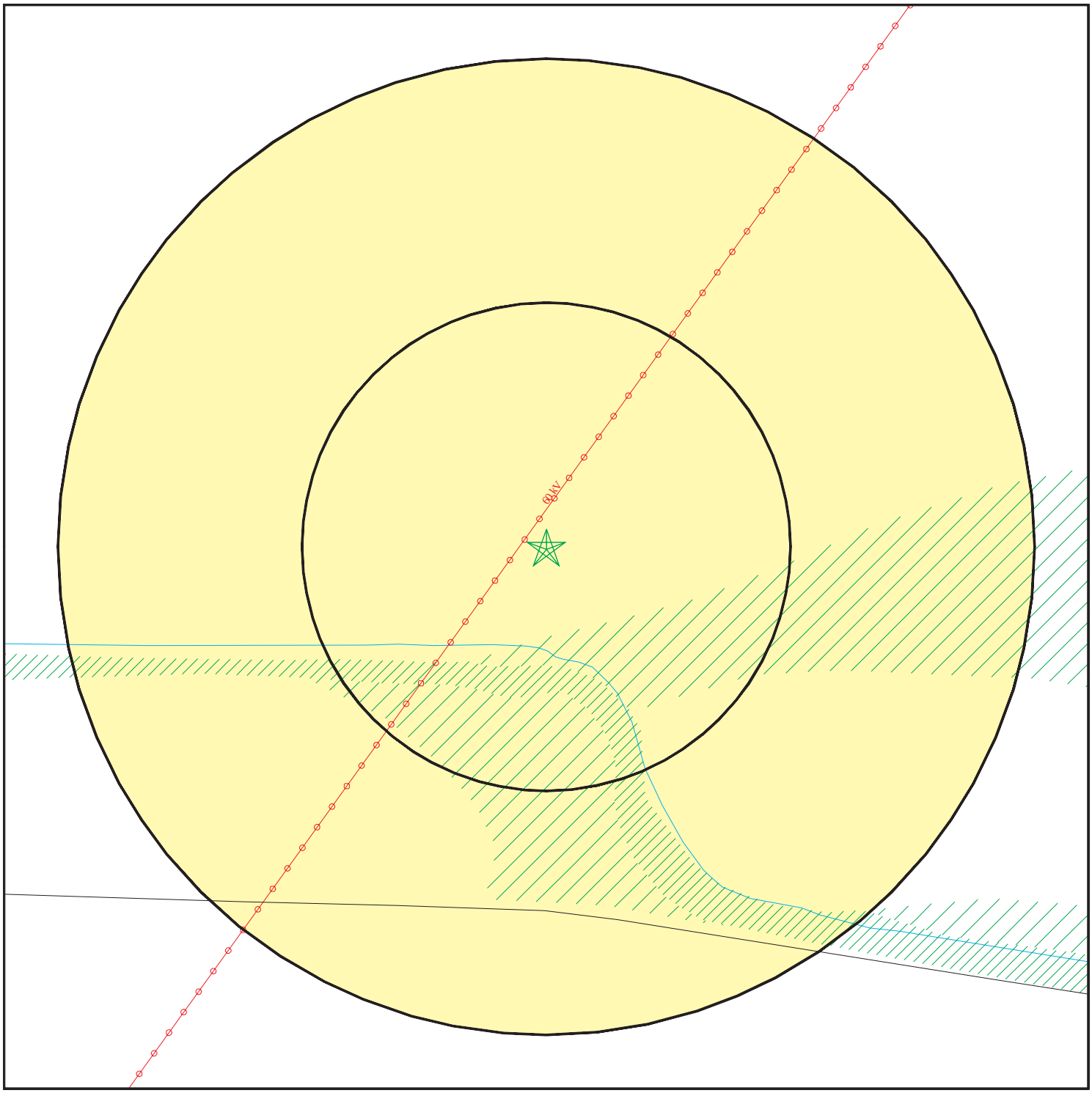
DETAIL MAP - 1841949.2s



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Landfill Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Hartford Land Management	CLIENT:	Harris & Lee Env. Sciences
ADDRESS:	Leisure Town Rd and Elmira Lane Vacaville CA 95687	CONTACT:	Bob Harris
		INQUIRY #:	1841949.2s
LAT/LONG:	38.3538 / 121.9249	DATE:	January 24, 2007 9:17 am

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MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FEDERAL RECORDS								
NPL		1.000	0	0	0	0	NR	0
Proposed NPL		1.000	0	0	0	0	NR	0
Delisted NPL		1.000	0	0	0	0	NR	0
NPL RECOVERY		TP	NR	NR	NR	NR	NR	0
CERCLIS		0.500	0	0	0	NR	NR	0
CERC-NFRAP		0.500	0	0	0	NR	NR	0
CORRACTS		1.000	0	0	0	0	NR	0
RCRA TSD		0.500	0	0	0	NR	NR	0
RCRA Lg. Quan. Gen.		0.250	0	0	NR	NR	NR	0
RCRA Sm. Quan. Gen.		0.250	0	0	NR	NR	NR	0
ERNS		TP	NR	NR	NR	NR	NR	0
HMIRS		TP	NR	NR	NR	NR	NR	0
US ENG CONTROLS		0.500	0	0	0	NR	NR	0
US INST CONTROL		0.500	0	0	0	NR	NR	0
DOD		1.000	0	0	0	0	NR	0
FUDS		1.000	0	0	0	0	NR	0
US BROWNFIELDS		0.500	0	0	0	NR	NR	0
CONSENT		1.000	0	0	0	0	NR	0
ROD		1.000	0	0	0	0	NR	0
UMTRA		0.500	0	0	0	NR	NR	0
ODI		0.500	0	0	0	NR	NR	0
TRIS		TP	NR	NR	NR	NR	NR	0
TSCA		TP	NR	NR	NR	NR	NR	0
FTTS		TP	NR	NR	NR	NR	NR	0
SSTS		TP	NR	NR	NR	NR	NR	0
ICIS		TP	NR	NR	NR	NR	NR	0
CDL		TP	NR	NR	NR	NR	NR	0
LUCIS		0.500	0	0	0	NR	NR	0
RADINFO		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
MLTS		TP	NR	NR	NR	NR	NR	0
MINES		0.250	0	0	NR	NR	NR	0
FINDS		TP	NR	NR	NR	NR	NR	0
RAATS		TP	NR	NR	NR	NR	NR	0
STATE AND LOCAL RECORDS								
Hist Cal-Sites		1.000	0	0	0	0	NR	0
CA Bond Exp. Plan		1.000	0	0	0	0	NR	0
SCH		0.250	0	0	NR	NR	NR	0
Toxic Pits		1.000	0	0	0	0	NR	0
State Landfill		0.500	0	0	0	NR	NR	0
CA WDS		TP	NR	NR	NR	NR	NR	0
WMUDS/SWAT		0.500	0	0	0	NR	NR	0
Cortese		0.500	0	0	0	NR	NR	0
SWRCY		0.500	0	0	0	NR	NR	0
LUST		0.500	0	0	0	NR	NR	0
CA FID UST		0.250	0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
SLIC		0.500	0	0	0	NR	NR	0
UST		0.250	0	0	NR	NR	NR	0
HIST UST		0.250	0	0	NR	NR	NR	0
AST		0.250	0	0	NR	NR	NR	0
SWEEPS UST		0.250	0	0	NR	NR	NR	0
CHMIRS		TP	NR	NR	NR	NR	NR	0
Notify 65		1.000	0	0	0	0	NR	0
DEED		0.500	0	0	0	NR	NR	0
VCP		0.500	0	0	0	NR	NR	0
DRYCLEANERS		0.250	0	0	NR	NR	NR	0
WIP		0.250	0	0	NR	NR	NR	0
CDL		TP	NR	NR	NR	NR	NR	0
RESPONSE		1.000	0	0	0	0	NR	0
HAZNET		TP	NR	NR	NR	NR	NR	0
EMI		TP	NR	NR	NR	NR	NR	0
ENVIROSTOR		1.000	0	0	0	1	NR	1
TRIBAL RECORDS								
INDIAN RESERV		1.000	0	0	0	0	NR	0
INDIAN LUST		0.500	0	0	0	NR	NR	0
INDIAN UST		0.250	0	0	NR	NR	NR	0
EDR PROPRIETARY RECORDS								
Manufactured Gas Plants		1.000	0	0	0	0	NR	0
EDR Historical Auto Stations		0.250	0	0	NR	NR	NR	0
EDR Historical Cleaners		0.250	0	0	NR	NR	NR	0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

1
WSW
1/2-1
2770 ft.

HIGH SCHOOL B **SCH** **S106568149**
LEISURE TOWN ROAD/EL MIRA ROAD **ENVIROSTOR** **N/A**
VACAVILLE, CA 95687

Relative:
Higher

Actual:
93 ft.

SCH:

Facility ID:	48010004
Site Type:	School Investigation
Site Type Detail:	School
Acres:	82.5
National Priorities List:	NO
Cleanup Oversight Agencies:	SMBRP
Lead Agency:	SMBRP
Lead Agency Description:	Not reported
Project Manager:	MARK MALINOWSKI
Supervisor:	SHARON FAIR
Division Branch:	School Evaluation - Glendale / Sacramento
Site Code:	104426-11
Assembly:	08
Senate:	05
Special Program Status:	Not reported
Status:	No Further Action
Status Date:	2005-08-26 00:00:00
Restricted Use:	NO
Funding:	School District
Latitude:	38.3506975903613
Longitude:	-121.9335
Alias Name:	104426-11
	48010004
	VACAVILLE USD-PROPOSED HIGH SCL B SITE
Alias Type:	Project Code (Site Code)
	Calsites ID Number
	Alternate Name
APN:	NONE SPECIFIED
APN Description:	Not reported
Comments:	Issued approval for PEA w/ no further action determination.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Preliminary Endangerment Assessment Report
Completed Date:	2005-07-27 00:00:00
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Environmental Oversight Agreement
Completed Date:	2004-08-03 00:00:00
Confirmed:	NONE SPECIFIED
Confirmed Description:	Not reported
Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported
Future Due Date:	Not reported
Media Affected:	SOIL
Media Affected Desc:	Soil
Management Required:	NONE SPECIFIED
Management Required Desc:	Not reported
Potential:	30001, 30006, 30007, 30008
Potenital Description:	Arsenic
Potenital Description:	DDD
Potenital Description:	DDE
Potenital Description:	DDT

HIGH SCHOOL B (Continued) **S106568149**

Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported
PastUse:	AGRICULTURAL - ROW CROPS

ENVIROSTOR:

Site Type:	School Investigation
Site Type Detailed:	School
Acres:	82.5
NPL:	NO
Regulatory Agencies:	SMBRP
Lead Agency:	SMBRP
Program Manager:	MARK MALINOWSKI
Supervisor:	SHARON FAIR
Division Branch:	School Evaluation - Glendale / Sacramento
Facility ID:	48010004
Site Code:	104426-11
Assembly:	08
Senate:	05
Special Program:	Not reported
Status:	**No Further Action**
Status Date:	2005-08-26 00:00:00
Restricted Use:	NO
Funding:	School District
Latitude:	38.3506975903613
Longitude:	-121.9335
Alias Name:	104426-11
	48010004
	VACAVILLE USD-PROPOSED HIGH SCL B SITE
Alias Type:	Project Code (Site Code)
	Calsites ID Number
	Alternate Name
APN:	NONE SPECIFIED
APN Description:	Not reported
Comments:	Issued approval for PEA w/ no further action determination.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Preliminary Endangerment Assessment Report
Completed Date:	2005-07-27 00:00:00
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Environmental Oversight Agreement
Completed Date:	2004-08-03 00:00:00
Confirmed:	NONE SPECIFIED
Confirmed Description:	Not reported
Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported
Future Due Date:	Not reported
Media Affected:	SOIL
Media Affected Desc:	Soil
Management Required:	NONE SPECIFIED
Management Required Desc:	Not reported
Potential:	30001, 30006, 30007, 30008
Potenital Description:	Arsenic

HIGH SCHOOL B (Continued) **S106568149**

Potenital Description:	DDD
Potenital Description:	DDE
Potenital Description:	DDT
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported
PastUse:	AGRICULTURAL - ROW CROPS

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
VACAVILLE	S106167285	ACE CLEANERS	500 ELMIRA RD SUIT G	95687	CLEANERS
VACAVILLE	U004044573	QUIK STOP MARKET #166	1091 LEISURE TOWN RD	95687	UST
VACAVILLE	S107261691	MAPLEWOOD SUBDIVISION	LEISURE TOWN RD	95687	LUST
VACAVILLE	S106487404	KMEP ELMIRA BOOSTER STATION	LEISURE TOWN ROAD		LUST, SLIC

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

FEDERAL RECORDS

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 09/27/2006
Date Data Arrived at EDR: 11/01/2006
Date Made Active in Reports: 11/22/2006
Number of Days to Update: 21

Source: EPA
Telephone: N/A
Last EDR Contact: 11/01/2006
Next Scheduled EDR Contact: 01/29/2007
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 3
Telephone 215-814-5418

EPA Region 4
Telephone 404-562-8033

EPA Region 5
Telephone 312-886-6686

EPA Region 10
Telephone 206-553-8665

EPA Region 6
Telephone: 214-655-6659

EPA Region 7
Telephone: 913-551-7247

EPA Region 8
Telephone: 303-312-6774

EPA Region 9
Telephone: 415-947-4246

Proposed NPL: Proposed National Priority List Sites

Date of Government Version: 09/27/2006
Date Data Arrived at EDR: 11/01/2006
Date Made Active in Reports: 11/22/2006
Number of Days to Update: 21

Source: EPA
Telephone: N/A
Last EDR Contact: 11/01/2006
Next Scheduled EDR Contact: 01/29/2007
Data Release Frequency: Quarterly

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 09/27/2006
Date Data Arrived at EDR: 11/01/2006
Date Made Active in Reports: 11/22/2006
Number of Days to Update: 21

Source: EPA
Telephone: N/A
Last EDR Contact: 11/01/2006
Next Scheduled EDR Contact: 01/29/2007
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

NPL RECOVERY: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 11/17/2006
Next Scheduled EDR Contact: 02/19/2007
Data Release Frequency: No Update Planned

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 08/09/2006
Date Data Arrived at EDR: 09/21/2006
Date Made Active in Reports: 11/22/2006
Number of Days to Update: 62

Source: EPA
Telephone: 703-603-8960
Last EDR Contact: 12/19/2006
Next Scheduled EDR Contact: 03/19/2007
Data Release Frequency: Quarterly

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 10/10/2006
Date Data Arrived at EDR: 10/25/2006
Date Made Active in Reports: 11/22/2006
Number of Days to Update: 28

Source: EPA
Telephone: 703-603-8960
Last EDR Contact: 12/18/2006
Next Scheduled EDR Contact: 03/19/2007
Data Release Frequency: Quarterly

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 09/27/2006
Date Data Arrived at EDR: 10/11/2006
Date Made Active in Reports: 12/13/2006
Number of Days to Update: 63

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 12/04/2006
Next Scheduled EDR Contact: 03/05/2007
Data Release Frequency: Quarterly

RCRA: Resource Conservation and Recovery Act Information

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRAInfo replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS). The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month. Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month. Transporters are individuals or entities that move hazardous waste from the generator off-site to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 06/13/2006
Date Data Arrived at EDR: 06/28/2006
Date Made Active in Reports: 08/23/2006
Number of Days to Update: 56

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 01/10/2007
Next Scheduled EDR Contact: 02/19/2007
Data Release Frequency: Quarterly

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 01/12/2006
Date Made Active in Reports: 02/21/2006
Number of Days to Update: 40

Source: National Response Center, United States Coast Guard
Telephone: 202-260-2342
Last EDR Contact: 10/24/2006
Next Scheduled EDR Contact: 01/22/2007
Data Release Frequency: Annually

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 08/01/2006
Date Data Arrived at EDR: 10/18/2006
Date Made Active in Reports: 11/22/2006
Number of Days to Update: 35

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 01/17/2007
Next Scheduled EDR Contact: 04/16/2007
Data Release Frequency: Annually

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 10/18/2006
Date Data Arrived at EDR: 12/14/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 28

Source: Environmental Protection Agency
Telephone: 703-603-8905
Last EDR Contact: 01/02/2007
Next Scheduled EDR Contact: 04/02/2007
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 10/18/2006
Date Data Arrived at EDR: 12/14/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 28

Source: Environmental Protection Agency
Telephone: 703-603-8905
Last EDR Contact: 01/02/2007
Next Scheduled EDR Contact: 04/02/2007
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 703-692-8801
Last EDR Contact: 11/10/2006
Next Scheduled EDR Contact: 02/05/2007
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 11/10/2006
Next Scheduled EDR Contact: 02/05/2007
Data Release Frequency: N/A

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 09/20/2006
Date Made Active in Reports: 11/22/2006
Number of Days to Update: 63

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 01/02/2007
Next Scheduled EDR Contact: 04/02/2007
Data Release Frequency: Varies

US BROWNFIELDS: A Listing of Brownfields Sites

Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become Brownfields Cleanup Revolving Loan Fund (BCRLF) cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: 10/17/2006
Date Data Arrived at EDR: 10/20/2006
Date Made Active in Reports: 12/13/2006
Number of Days to Update: 54

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 12/11/2006
Next Scheduled EDR Contact: 03/12/2007
Data Release Frequency: Semi-Annually

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/14/2004
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 04/25/2005
Number of Days to Update: 69

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 01/08/2007
Next Scheduled EDR Contact: 01/22/2007
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 10/07/2006
Date Data Arrived at EDR: 10/13/2006
Date Made Active in Reports: 12/13/2006
Number of Days to Update: 61

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 01/22/2007
Next Scheduled EDR Contact: 04/02/2007
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 11/04/2005
Date Data Arrived at EDR: 11/28/2005
Date Made Active in Reports: 01/30/2006
Number of Days to Update: 63

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 12/18/2006
Next Scheduled EDR Contact: 03/19/2007
Data Release Frequency: Varies

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2004
Date Data Arrived at EDR: 06/22/2006
Date Made Active in Reports: 08/23/2006
Number of Days to Update: 62

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 12/19/2006
Next Scheduled EDR Contact: 03/19/2007
Data Release Frequency: Annually

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2002
Date Data Arrived at EDR: 04/14/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 46

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 01/15/2007
Next Scheduled EDR Contact: 04/16/2007
Data Release Frequency: Every 4 Years

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 10/27/2006
Date Made Active in Reports: 11/22/2006
Number of Days to Update: 26

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 12/18/2006
Next Scheduled EDR Contact: 03/19/2007
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 10/27/2006
Date Made Active in Reports: 11/22/2006
Number of Days to Update: 26

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 12/18/2006
Next Scheduled EDR Contact: 03/19/2007
Data Release Frequency: Quarterly

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2004
Date Data Arrived at EDR: 05/11/2006
Date Made Active in Reports: 05/22/2006
Number of Days to Update: 11

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 01/15/2007
Next Scheduled EDR Contact: 04/16/2007
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 02/13/2006
Date Data Arrived at EDR: 04/21/2006
Date Made Active in Reports: 05/11/2006
Number of Days to Update: 20

Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 01/15/2007
Next Scheduled EDR Contact: 04/16/2007
Data Release Frequency: Quarterly

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 12/09/2005
Date Data Arrived at EDR: 12/11/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 31

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 12/11/2006
Next Scheduled EDR Contact: 03/12/2007
Data Release Frequency: Varies

CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 12/01/2006
Date Data Arrived at EDR: 01/08/2007
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 3

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 01/08/2007
Next Scheduled EDR Contact: 03/26/2007
Data Release Frequency: Quarterly

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 11/03/2006
Date Data Arrived at EDR: 11/03/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 69

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 10/24/2006
Next Scheduled EDR Contact: 01/29/2007
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 10/17/2006
Date Data Arrived at EDR: 11/29/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 43

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 11/29/2006
Next Scheduled EDR Contact: 02/05/2007
Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 10/31/2006
Date Made Active in Reports: 12/13/2006
Number of Days to Update: 43

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 01/02/2007
Next Scheduled EDR Contact: 04/02/2007
Data Release Frequency: Quarterly

MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 08/09/2006
Date Data Arrived at EDR: 09/27/2006
Date Made Active in Reports: 11/27/2006
Number of Days to Update: 61

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 12/28/2006
Next Scheduled EDR Contact: 03/26/2007
Data Release Frequency: Semi-Annually

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 10/11/2006
Date Data Arrived at EDR: 10/18/2006
Date Made Active in Reports: 12/13/2006
Number of Days to Update: 56

Source: EPA
Telephone: N/A
Last EDR Contact: 01/02/2007
Next Scheduled EDR Contact: 04/02/2007
Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 12/04/2006
Next Scheduled EDR Contact: 03/05/2007
Data Release Frequency: No Update Planned

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2003
Date Data Arrived at EDR: 06/17/2005
Date Made Active in Reports: 08/04/2005
Number of Days to Update: 48

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 01/19/2007
Next Scheduled EDR Contact: 03/12/2007
Data Release Frequency: Biennially

STATE AND LOCAL RECORDS

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 11/27/2006
Next Scheduled EDR Contact: 02/26/2007
Data Release Frequency: No Update Planned

CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6

Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 11/28/2006
Date Data Arrived at EDR: 11/29/2006
Date Made Active in Reports: 01/03/2007
Number of Days to Update: 35

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 11/29/2006
Next Scheduled EDR Contact: 02/26/2007
Data Release Frequency: Quarterly

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 10/30/2006
Next Scheduled EDR Contact: 01/29/2007
Data Release Frequency: No Update Planned

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 09/13/2006
Date Data Arrived at EDR: 09/13/2006
Date Made Active in Reports: 10/05/2006
Number of Days to Update: 22

Source: Integrated Waste Management Board
Telephone: 916-341-6320
Last EDR Contact: 12/13/2006
Next Scheduled EDR Contact: 03/12/2007
Data Release Frequency: Quarterly

CA WDS: Waste Discharge System

Sites which have been issued waste discharge requirements.

Date of Government Version: 09/20/2006
Date Data Arrived at EDR: 09/21/2006
Date Made Active in Reports: 10/25/2006
Number of Days to Update: 34

Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 12/19/2006
Next Scheduled EDR Contact: 03/19/2007
Data Release Frequency: Quarterly

WMUDS/SWAT: Waste Management Unit Database

Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 12/07/2006
Next Scheduled EDR Contact: 03/05/2007
Data Release Frequency: Quarterly

CORTESE: "Cortese" Hazardous Waste & Substances Sites List

The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites). This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 05/29/2001
Date Made Active in Reports: 07/26/2001
Number of Days to Update: 58

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 01/22/2007
Next Scheduled EDR Contact: 04/23/2007
Data Release Frequency: No Update Planned

SWRCY: Recycler Database

A listing of recycling facilities in California.

Date of Government Version: 10/10/2006
Date Data Arrived at EDR: 10/12/2006
Date Made Active in Reports: 10/25/2006
Number of Days to Update: 13

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 01/09/2007
Next Scheduled EDR Contact: 04/09/2007
Data Release Frequency: Quarterly

LUST: Geotracker's Leaking Underground Fuel Tank Report

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 10/11/2006
Date Data Arrived at EDR: 10/12/2006
Date Made Active in Reports: 10/25/2006
Number of Days to Update: 13

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 01/09/2007
Next Scheduled EDR Contact: 04/09/2007
Data Release Frequency: Quarterly

LUST REG 5: Leaking Underground Storage Tank Database

Date of Government Version: 09/30/2006
Date Data Arrived at EDR: 10/25/2006
Date Made Active in Reports: 11/28/2006
Number of Days to Update: 34

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 01/23/2007
Next Scheduled EDR Contact: 04/02/2007
Data Release Frequency: Quarterly

LUST REG 6V: Leaking Underground Storage Tank Case Listing

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-346-7491
Last EDR Contact: 01/02/2007
Next Scheduled EDR Contact: 04/02/2007
Data Release Frequency: No Update Planned

LUST REG 8: Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-4130
Last EDR Contact: 11/07/2006
Next Scheduled EDR Contact: 02/05/2007
Data Release Frequency: Varies

LUST REG 9: Leaking Underground Storage Tank Report

Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 01/15/2007
Next Scheduled EDR Contact: 04/16/2007
Data Release Frequency: No Update Planned

LUST REG 7: Leaking Underground Storage Tank Case Listing

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-346-7491
Last EDR Contact: 11/16/2006
Next Scheduled EDR Contact: 02/19/2007
Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing

For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 916-542-5424
Last EDR Contact: 12/04/2006
Next Scheduled EDR Contact: 03/05/2007
Data Release Frequency: No Update Planned

LUST REG 4: Underground Storage Tank Leak List

Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 12/27/2006
Next Scheduled EDR Contact: 03/26/2007
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

LUST REG 1: Active Toxic Site Investigation

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-576-2220
Last EDR Contact: 11/16/2006
Next Scheduled EDR Contact: 02/19/2007
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 01/08/2007
Next Scheduled EDR Contact: 04/09/2007
Data Release Frequency: Quarterly

LUST REG 3: Leaking Underground Storage Tank Database

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 11/13/2006
Next Scheduled EDR Contact: 02/12/2007
Data Release Frequency: No Update Planned

CA FID UST: Facility Inventory Database

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SLIC: Statewide SLIC Cases

The Spills, Leaks, Investigations, and Cleanups (SLIC) listings includes unauthorized discharges from spills and leaks, other than from underground storage tanks or other regulated sites.

Date of Government Version: 10/11/2006
Date Data Arrived at EDR: 10/12/2006
Date Made Active in Reports: 10/25/2006
Number of Days to Update: 13

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 01/09/2007
Next Scheduled EDR Contact: 04/09/2007
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 11/16/2006
Next Scheduled EDR Contact: 02/19/2007
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

Any contaminated site that impacts groundwater or has the potential to impact groundwater.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 01/08/2007
Next Scheduled EDR Contact: 04/09/2007
Data Release Frequency: Quarterly

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
Any contaminated site that impacts groundwater or has the potential to impact groundwater.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 11/13/2006
Next Scheduled EDR Contact: 02/12/2007
Data Release Frequency: Semi-Annually

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
Any contaminated site that impacts groundwater or has the potential to impact groundwater.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 01/22/2007
Next Scheduled EDR Contact: 04/23/2007
Data Release Frequency: Varies

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
Unregulated sites that impact groundwater or have the potential to impact groundwater.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 01/03/2007
Next Scheduled EDR Contact: 04/02/2007
Data Release Frequency: Semi-Annually

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 01/02/2007
Next Scheduled EDR Contact: 04/02/2007
Data Release Frequency: Semi-Annually

SLIC REG 6L: SLIC Sites

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 12/04/2006
Next Scheduled EDR Contact: 03/05/2007
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 11/16/2006
Next Scheduled EDR Contact: 02/19/2007
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

Date of Government Version: 04/06/2006
Date Data Arrived at EDR: 04/06/2006
Date Made Active in Reports: 05/11/2006
Number of Days to Update: 35

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 01/02/2007
Next Scheduled EDR Contact: 04/02/2007
Data Release Frequency: Semi-Annually

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

Date of Government Version: 11/27/2006
Date Data Arrived at EDR: 11/27/2006
Date Made Active in Reports: 01/03/2007
Number of Days to Update: 37

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 11/27/2006
Next Scheduled EDR Contact: 02/26/2007
Data Release Frequency: Annually

UST: Active UST Facilities

Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 01/09/2007
Date Data Arrived at EDR: 01/09/2007
Date Made Active in Reports: 01/23/2007
Number of Days to Update: 14

Source: SWRCB
Telephone: 916-480-1028
Last EDR Contact: 01/09/2007
Next Scheduled EDR Contact: 04/09/2007
Data Release Frequency: Semi-Annually

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

AST: Aboveground Petroleum Storage Tank Facilities

Registered Aboveground Storage Tanks.

Date of Government Version: 11/02/2006
Date Data Arrived at EDR: 11/03/2006
Date Made Active in Reports: 12/08/2006
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: 916-341-5712
Last EDR Contact: 10/30/2006
Next Scheduled EDR Contact: 01/29/2007
Data Release Frequency: Quarterly

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1980's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 12/31/2004
Date Data Arrived at EDR: 11/30/2005
Date Made Active in Reports: 01/19/2006
Number of Days to Update: 50

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 11/20/2006
Next Scheduled EDR Contact: 02/19/2007
Data Release Frequency: Varies

NOTIFY 65: Proposition 65 Records

Proposition 65 Notification Records. NOTIFY 65 contains facility notifications about any release which could impact drinking water and thereby expose the public to a potential health risk.

Date of Government Version: 10/21/1993
Date Data Arrived at EDR: 11/01/1993
Date Made Active in Reports: 11/19/1993
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 01/15/2007
Next Scheduled EDR Contact: 04/16/2007
Data Release Frequency: No Update Planned

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 10/04/2006
Date Data Arrived at EDR: 10/05/2006
Date Made Active in Reports: 10/25/2006
Number of Days to Update: 20

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/16/2007
Next Scheduled EDR Contact: 04/02/2007
Data Release Frequency: Semi-Annually

VCP: Voluntary Cleanup Program Properties

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 11/28/2006
Date Data Arrived at EDR: 11/29/2006
Date Made Active in Reports: 01/03/2007
Number of Days to Update: 35

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 11/29/2006
Next Scheduled EDR Contact: 02/26/2007
Data Release Frequency: Quarterly

DRYCLEANERS: Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 04/18/2005
Date Data Arrived at EDR: 04/18/2005
Date Made Active in Reports: 05/06/2005
Number of Days to Update: 18

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 01/22/2007
Next Scheduled EDR Contact: 04/02/2007
Data Release Frequency: Annually

WIP: Well Investigation Program Case List

Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 10/25/2006
Date Data Arrived at EDR: 10/31/2006
Date Made Active in Reports: 11/28/2006
Number of Days to Update: 28

Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 01/22/2007
Next Scheduled EDR Contact: 04/23/2007
Data Release Frequency: Varies

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 05/17/2006
Date Data Arrived at EDR: 05/17/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 29

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 01/22/2007
Next Scheduled EDR Contact: 04/23/2007
Data Release Frequency: Varies

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 11/28/2006
Date Data Arrived at EDR: 11/29/2006
Date Made Active in Reports: 01/03/2007
Number of Days to Update: 35

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 11/29/2006
Next Scheduled EDR Contact: 02/26/2007
Data Release Frequency: Quarterly

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/20/2006
Date Made Active in Reports: 01/03/2007
Number of Days to Update: 44

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 11/20/2006
Next Scheduled EDR Contact: 02/05/2007
Data Release Frequency: Annually

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2004
Date Data Arrived at EDR: 04/14/2006
Date Made Active in Reports: 05/11/2006
Number of Days to Update: 27

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 01/19/2007
Next Scheduled EDR Contact: 04/16/2007
Data Release Frequency: Varies

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 11/28/2006
Date Data Arrived at EDR: 11/29/2006
Date Made Active in Reports: 01/03/2007
Number of Days to Update: 35

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 11/29/2006
Next Scheduled EDR Contact: 02/26/2007
Data Release Frequency: Quarterly

TRIBAL RECORDS

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 11/10/2006
Next Scheduled EDR Contact: 02/05/2007
Data Release Frequency: Semi-Annually

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 09/07/2006
Date Data Arrived at EDR: 09/08/2006
Date Made Active in Reports: 11/08/2006
Number of Days to Update: 61

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 11/17/2006
Next Scheduled EDR Contact: 02/19/2007
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 01/04/2005
Date Data Arrived at EDR: 01/21/2005
Date Made Active in Reports: 02/28/2005
Number of Days to Update: 38

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 11/17/2006
Next Scheduled EDR Contact: 02/19/2007
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 09/11/2006
Date Data Arrived at EDR: 09/11/2006
Date Made Active in Reports: 11/08/2006
Number of Days to Update: 58

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 11/17/2006
Next Scheduled EDR Contact: 02/19/2007
Data Release Frequency: Quarterly

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 09/06/2006
Date Data Arrived at EDR: 10/04/2006
Date Made Active in Reports: 11/08/2006
Number of Days to Update: 35

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 11/17/2006
Next Scheduled EDR Contact: 02/19/2007
Data Release Frequency: Quarterly

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 08/30/2006
Date Data Arrived at EDR: 09/06/2006
Date Made Active in Reports: 11/08/2006
Number of Days to Update: 63

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 11/17/2006
Next Scheduled EDR Contact: 02/19/2007
Data Release Frequency: Quarterly

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 09/06/2006
Date Data Arrived at EDR: 10/04/2006
Date Made Active in Reports: 11/08/2006
Number of Days to Update: 35

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 11/17/2006
Next Scheduled EDR Contact: 02/19/2007
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Minnesota, Mississippi and North Carolina.

Date of Government Version: 08/24/2006
Date Data Arrived at EDR: 09/11/2006
Date Made Active in Reports: 11/08/2006
Number of Days to Update: 58

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 11/17/2006
Next Scheduled EDR Contact: 02/19/2007
Data Release Frequency: Semi-Annually

INDIAN UST R4: Underground Storage Tanks on Indian Land

Date of Government Version: 08/24/2006
Date Data Arrived at EDR: 09/11/2006
Date Made Active in Reports: 11/08/2006
Number of Days to Update: 58

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 11/17/2006
Next Scheduled EDR Contact: 02/19/2007
Data Release Frequency: Semi-Annually

INDIAN UST R6: Underground Storage Tanks on Indian Land

Date of Government Version: 08/28/2006
Date Data Arrived at EDR: 08/29/2006
Date Made Active in Reports: 11/08/2006
Number of Days to Update: 71

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 11/17/2006
Next Scheduled EDR Contact: 02/19/2007
Data Release Frequency: Semi-Annually

INDIAN UST R7: Underground Storage Tanks on Indian Land

Date of Government Version: 09/06/2006
Date Data Arrived at EDR: 10/04/2006
Date Made Active in Reports: 11/08/2006
Number of Days to Update: 35

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 11/17/2006
Next Scheduled EDR Contact: 02/19/2007
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

Date of Government Version: 09/06/2006
Date Data Arrived at EDR: 10/04/2006
Date Made Active in Reports: 11/08/2006
Number of Days to Update: 35

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 11/17/2006
Next Scheduled EDR Contact: 02/19/2007
Data Release Frequency: Quarterly

INDIAN UST R8: Underground Storage Tanks on Indian Land

Date of Government Version: 08/30/2006
Date Data Arrived at EDR: 09/06/2006
Date Made Active in Reports: 11/08/2006
Number of Days to Update: 63

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 11/17/2006
Next Scheduled EDR Contact: 02/19/2007
Data Release Frequency: Quarterly

INDIAN UST R5: Underground Storage Tanks on Indian Land

Date of Government Version: 12/02/2004
Date Data Arrived at EDR: 12/29/2004
Date Made Active in Reports: 02/04/2005
Number of Days to Update: 37

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 11/17/2006
Next Scheduled EDR Contact: 02/19/2007
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

Date of Government Version: 09/11/2006
Date Data Arrived at EDR: 09/11/2006
Date Made Active in Reports: 11/08/2006
Number of Days to Update: 58

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 11/17/2006
Next Scheduled EDR Contact: 02/19/2007
Data Release Frequency: Quarterly

INDIAN UST R1: Underground Storage Tanks on Indian Land
A listing of underground storage tank locations on Indian Land.

Date of Government Version: 09/07/2006
Date Data Arrived at EDR: 09/08/2006
Date Made Active in Reports: 11/08/2006
Number of Days to Update: 61

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 11/17/2006
Next Scheduled EDR Contact: 02/19/2007
Data Release Frequency: Varies

EDR PROPRIETARY RECORDS

Manufactured Gas Plants: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Historical Auto Stations: EDR Proprietary Historic Gas Stations
EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Historical Cleaners: EDR Proprietary Historic Dry Cleaners
EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

FEDERAL RECORDS

WETLANDS: National Wetlands Inventory
For regulatory purposes under the Clean Water Act, the term wetlands means "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas." This data is available for select counties across the country.

Date of Government Version: 01/01/2004
Date Data Arrived at EDR: 07/20/2004
Date Made Active in Reports: 03/17/2006
Number of Days to Update: 605

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 01/15/2007
Next Scheduled EDR Contact: 04/16/2007
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

COUNTY RECORDS

ALAMEDA COUNTY:

Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 10/26/2006
Date Data Arrived at EDR: 10/27/2006
Date Made Active in Reports: 11/28/2006
Number of Days to Update: 32

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 01/22/2007
Next Scheduled EDR Contact: 04/23/2007
Data Release Frequency: Semi-Annually

Underground Tanks

Date of Government Version: 10/26/2006
Date Data Arrived at EDR: 10/27/2006
Date Made Active in Reports: 11/13/2006
Number of Days to Update: 17

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 01/22/2007
Next Scheduled EDR Contact: 04/23/2007
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

Site List

List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 11/28/2006
Date Data Arrived at EDR: 11/29/2006
Date Made Active in Reports: 01/03/2007
Number of Days to Update: 35

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 11/27/2006
Next Scheduled EDR Contact: 02/26/2007
Data Release Frequency: Semi-Annually

FRESNO COUNTY:

CUPA Resources List

Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 11/22/2006
Date Data Arrived at EDR: 11/27/2006
Date Made Active in Reports: 01/03/2007
Number of Days to Update: 37

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 01/16/2007
Next Scheduled EDR Contact: 05/07/2007
Data Release Frequency: Semi-Annually

KERN COUNTY:

Underground Storage Tank Sites & Tank Listing

Kern County Sites and Tanks Listing.

Date of Government Version: 12/06/2006
Date Data Arrived at EDR: 12/07/2006
Date Made Active in Reports: 01/04/2007
Number of Days to Update: 28

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 12/04/2006
Next Scheduled EDR Contact: 03/05/2007
Data Release Frequency: Quarterly

LOS ANGELES COUNTY:

San Gabriel Valley Areas of Concern

San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 07/07/1999
Date Made Active in Reports: N/A
Number of Days to Update: 0

Source: EPA Region 9
Telephone: 415-972-3178
Last EDR Contact: 05/16/2006
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

HMS: Street Number List

Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 07/31/2006
Date Data Arrived at EDR: 10/30/2006
Date Made Active in Reports: 11/28/2006
Number of Days to Update: 29

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 11/13/2006
Next Scheduled EDR Contact: 02/12/2007
Data Release Frequency: Semi-Annually

List of Solid Waste Facilities

Date of Government Version: 11/13/2006
Date Data Arrived at EDR: 11/28/2006
Date Made Active in Reports: 01/03/2007
Number of Days to Update: 36

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 11/15/2006
Next Scheduled EDR Contact: 02/12/2007
Data Release Frequency: Varies

City of Los Angeles Landfills

Date of Government Version: 03/01/2006
Date Data Arrived at EDR: 04/06/2006
Date Made Active in Reports: 05/11/2006
Number of Days to Update: 35

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 12/11/2006
Next Scheduled EDR Contact: 03/12/2007
Data Release Frequency: Varies

Site Mitigation List

Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 01/05/2006
Date Data Arrived at EDR: 02/16/2006
Date Made Active in Reports: 03/13/2006
Number of Days to Update: 25

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 11/13/2006
Next Scheduled EDR Contact: 02/12/2007
Data Release Frequency: Annually

City of El Segundo Underground Storage Tank

Date of Government Version: 12/14/2006
Date Data Arrived at EDR: 12/15/2006
Date Made Active in Reports: 01/23/2007
Number of Days to Update: 39

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 12/14/2006
Next Scheduled EDR Contact: 02/12/2007
Data Release Frequency: Semi-Annually

City of Long Beach Underground Storage Tank

Date of Government Version: 03/28/2003
Date Data Arrived at EDR: 10/23/2003
Date Made Active in Reports: 11/26/2003
Number of Days to Update: 34

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 11/21/2006
Next Scheduled EDR Contact: 02/19/2007
Data Release Frequency: Annually

City of Torrance Underground Storage Tank

Date of Government Version: 11/13/2006
Date Data Arrived at EDR: 11/13/2006
Date Made Active in Reports: 12/12/2006
Number of Days to Update: 29

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 11/13/2006
Next Scheduled EDR Contact: 02/12/2007
Data Release Frequency: Semi-Annually

MARIN COUNTY:

Underground Storage Tank Sites

Currently permitted USTs in Marin County.

Date of Government Version: 11/06/2006
Date Data Arrived at EDR: 11/28/2006
Date Made Active in Reports: 01/04/2007
Number of Days to Update: 37

Source: Public Works Department Waste Management
Telephone: 415-499-6647
Last EDR Contact: 10/30/2006
Next Scheduled EDR Contact: 01/29/2007
Data Release Frequency: Semi-Annually

NAPA COUNTY:

Sites With Reported Contamination

Date of Government Version: 10/09/2006
Date Data Arrived at EDR: 10/09/2006
Date Made Active in Reports: 10/25/2006
Number of Days to Update: 16

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 01/08/2007
Next Scheduled EDR Contact: 03/26/2007
Data Release Frequency: Semi-Annually

Closed and Operating Underground Storage Tank Sites

Date of Government Version: 01/09/2007
Date Data Arrived at EDR: 01/10/2007
Date Made Active in Reports: 01/23/2007
Number of Days to Update: 13

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 01/08/2007
Next Scheduled EDR Contact: 03/26/2007
Data Release Frequency: Annually

ORANGE COUNTY:

List of Industrial Site Cleanups

Petroleum and non-petroleum spills.

Date of Government Version: 09/01/2006
Date Data Arrived at EDR: 09/18/2006
Date Made Active in Reports: 10/25/2006
Number of Days to Update: 37

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 12/06/2006
Next Scheduled EDR Contact: 03/05/2007
Data Release Frequency: Annually

List of Underground Storage Tank Cleanups

Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 09/01/2006
Date Data Arrived at EDR: 09/20/2006
Date Made Active in Reports: 10/25/2006
Number of Days to Update: 35

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 12/06/2006
Next Scheduled EDR Contact: 03/05/2007
Data Release Frequency: Quarterly

List of Underground Storage Tank Facilities

Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 12/01/2006
Date Data Arrived at EDR: 01/04/2007
Date Made Active in Reports: 01/23/2007
Number of Days to Update: 19

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 12/06/2006
Next Scheduled EDR Contact: 03/05/2007
Data Release Frequency: Quarterly

PLACER COUNTY:

Master List of Facilities

List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 08/30/2006
Date Data Arrived at EDR: 08/31/2006
Date Made Active in Reports: 10/05/2006
Number of Days to Update: 35

Source: Placer County Health and Human Services
Telephone: 530-889-7312
Last EDR Contact: 12/29/2006
Next Scheduled EDR Contact: 03/19/2007
Data Release Frequency: Semi-Annually

RIVERSIDE COUNTY:

Listing of Underground Tank Cleanup Sites

Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 11/09/2006
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 11/28/2006
Number of Days to Update: 18

Source: Department of Public Health
Telephone: 951-358-5055
Last EDR Contact: 01/15/2007
Next Scheduled EDR Contact: 04/16/2007
Data Release Frequency: Quarterly

Underground Storage Tank Tank List

Date of Government Version: 11/09/2006
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 12/21/2006
Number of Days to Update: 41

Source: Health Services Agency
Telephone: 951-358-5055
Last EDR Contact: 01/15/2007
Next Scheduled EDR Contact: 04/16/2007
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

Contaminated Sites

Date of Government Version: 11/21/2006
Date Data Arrived at EDR: 11/29/2006
Date Made Active in Reports: 01/03/2007
Number of Days to Update: 35

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 11/17/2006
Next Scheduled EDR Contact: 01/29/2007
Data Release Frequency: Quarterly

ML - Regulatory Compliance Master List

Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 11/21/2006
Date Data Arrived at EDR: 12/01/2006
Date Made Active in Reports: 01/03/2007
Number of Days to Update: 33

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 11/17/2006
Next Scheduled EDR Contact: 01/29/2007
Data Release Frequency: Quarterly

SAN BERNARDINO COUNTY:

Hazardous Material Permits

This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 09/26/2006
Date Data Arrived at EDR: 10/17/2006
Date Made Active in Reports: 10/25/2006
Number of Days to Update: 8

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 12/04/2006
Next Scheduled EDR Contact: 03/05/2007
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 05/16/2005
Date Data Arrived at EDR: 05/18/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 29

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 01/03/2007
Next Scheduled EDR Contact: 04/02/2007
Data Release Frequency: Quarterly

Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 11/01/2005
Date Data Arrived at EDR: 12/29/2005
Date Made Active in Reports: 01/19/2006
Number of Days to Update: 21

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 11/20/2006
Next Scheduled EDR Contact: 02/19/2007
Data Release Frequency: Varies

SAN FRANCISCO COUNTY:

Local Oversite Facilities

Date of Government Version: 09/18/2006
Date Data Arrived at EDR: 09/20/2006
Date Made Active in Reports: 10/25/2006
Number of Days to Update: 35

Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 12/18/2006
Next Scheduled EDR Contact: 03/05/2007
Data Release Frequency: Quarterly

Underground Storage Tank Information

Date of Government Version: 12/21/2006
Date Data Arrived at EDR: 12/22/2006
Date Made Active in Reports: 01/23/2007
Number of Days to Update: 32

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 12/18/2006
Next Scheduled EDR Contact: 03/05/2007
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 10/16/2006
Date Data Arrived at EDR: 12/13/2006
Date Made Active in Reports: 01/23/2007
Number of Days to Update: 41

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 01/15/2007
Next Scheduled EDR Contact: 04/16/2007
Data Release Frequency: Semi-Annually

SAN MATEO COUNTY:

Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 11/28/2006
Date Data Arrived at EDR: 11/29/2006
Date Made Active in Reports: 01/03/2007
Number of Days to Update: 35

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 01/08/2007
Next Scheduled EDR Contact: 04/09/2007
Data Release Frequency: Annually

Fuel Leak List

Date of Government Version: 10/10/2006
Date Data Arrived at EDR: 10/11/2006
Date Made Active in Reports: 10/25/2006
Number of Days to Update: 14

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 01/08/2007
Next Scheduled EDR Contact: 04/09/2007
Data Release Frequency: Semi-Annually

SANTA CLARA COUNTY:

HIST LUST - Fuel Leak Site Activity Report
A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 12/27/2006
Next Scheduled EDR Contact: 03/26/2007
Data Release Frequency: No Update Planned

LOP Listing
A listing of open leaking underground storage tanks.

Date of Government Version: 09/29/2006
Date Data Arrived at EDR: 10/02/2006
Date Made Active in Reports: 10/25/2006
Number of Days to Update: 23

Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 12/27/2006
Next Scheduled EDR Contact: 03/26/2007
Data Release Frequency: Varies

Hazardous Material Facilities

Date of Government Version: 12/07/2006
Date Data Arrived at EDR: 12/07/2006
Date Made Active in Reports: 01/03/2007
Number of Days to Update: 27

Source: City of San Jose Fire Department
Telephone: 408-277-4659
Last EDR Contact: 12/04/2006
Next Scheduled EDR Contact: 03/05/2007
Data Release Frequency: Annually

SOLANO COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Leaking Underground Storage Tanks

Date of Government Version: 11/01/2006
Date Data Arrived at EDR: 11/13/2006
Date Made Active in Reports: 12/20/2006
Number of Days to Update: 37

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 12/27/2006
Next Scheduled EDR Contact: 03/26/2007
Data Release Frequency: Quarterly

Underground Storage Tanks

Date of Government Version: 01/02/2007
Date Data Arrived at EDR: 01/16/2007
Date Made Active in Reports: 01/23/2007
Number of Days to Update: 7

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 12/27/2006
Next Scheduled EDR Contact: 03/26/2007
Data Release Frequency: Quarterly

SONOMA COUNTY:

Leaking Underground Storage Tank Sites

Date of Government Version: 10/23/2006
Date Data Arrived at EDR: 10/24/2006
Date Made Active in Reports: 11/28/2006
Number of Days to Update: 35

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 01/22/2007
Next Scheduled EDR Contact: 04/23/2007
Data Release Frequency: Quarterly

SUTTER COUNTY:

Underground Storage Tanks

Date of Government Version: 12/31/0005
Date Data Arrived at EDR: 01/05/2006
Date Made Active in Reports: 01/31/2006
Number of Days to Update: 26

Source: Sutter County Department of Agriculture
Telephone: 530-822-7500
Last EDR Contact: 01/15/2007
Next Scheduled EDR Contact: 04/02/2007
Data Release Frequency: Semi-Annually

VENTURA COUNTY:

Business Plan, Hazardous Waste Producers, and Operating Underground Tanks

The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 08/28/2006
Date Data Arrived at EDR: 09/26/2006
Date Made Active in Reports: 10/25/2006
Number of Days to Update: 29

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 12/13/2006
Next Scheduled EDR Contact: 03/12/2007
Data Release Frequency: Quarterly

Inventory of Illegal Abandoned and Inactive Sites

Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 08/01/2006
Date Data Arrived at EDR: 09/05/2006
Date Made Active in Reports: 10/05/2006
Number of Days to Update: 30

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 11/16/2006
Next Scheduled EDR Contact: 02/19/2007
Data Release Frequency: Annually

Listing of Underground Tank Cleanup Sites

Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 08/28/2006
Date Data Arrived at EDR: 09/22/2006
Date Made Active in Reports: 10/25/2006
Number of Days to Update: 33

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 12/13/2006
Next Scheduled EDR Contact: 03/12/2007
Data Release Frequency: Quarterly

Underground Tank Closed Sites List

Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 09/27/2006
Date Data Arrived at EDR: 11/01/2006
Date Made Active in Reports: 12/12/2006
Number of Days to Update: 41

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 01/10/2007
Next Scheduled EDR Contact: 04/09/2007
Data Release Frequency: Quarterly

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report

Date of Government Version: 11/13/2006
Date Data Arrived at EDR: 11/28/2006
Date Made Active in Reports: 01/04/2007
Number of Days to Update: 37

Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 01/15/2007
Next Scheduled EDR Contact: 04/16/2007
Data Release Frequency: Annually

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 12/31/2004
Date Data Arrived at EDR: 02/17/2006
Date Made Active in Reports: 04/07/2006
Number of Days to Update: 49

Source: Department of Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 12/11/2006
Next Scheduled EDR Contact: 03/12/2007
Data Release Frequency: Annually

NJ MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 11/01/2006
Date Data Arrived at EDR: 11/13/2006
Date Made Active in Reports: 12/13/2006
Number of Days to Update: 30

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 01/04/2007
Next Scheduled EDR Contact: 04/02/2007
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 10/26/2006
Date Data Arrived at EDR: 11/29/2006
Date Made Active in Reports: 01/05/2007
Number of Days to Update: 37

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 11/29/2006
Next Scheduled EDR Contact: 02/26/2007
Data Release Frequency: Annually

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 03/17/2006
Date Made Active in Reports: 06/06/2006
Number of Days to Update: 81

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 12/11/2006
Next Scheduled EDR Contact: 03/12/2007
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 04/11/2006
Date Data Arrived at EDR: 10/31/2006
Date Made Active in Reports: 12/18/2006
Number of Days to Update: 48

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 12/18/2006
Next Scheduled EDR Contact: 03/19/2007
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 03/17/2006
Date Made Active in Reports: 05/02/2006
Number of Days to Update: 46

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 01/08/2007
Next Scheduled EDR Contact: 04/09/2007
Data Release Frequency: Annually

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data
Source: PennWell Corporation
Telephone: (800) 823-6277
This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

HARTFORD LAND MANAGEMENT
LEISURE TOWN RD AND ELMIRA LANE
VACAVILLE, CA 95687

TARGET PROPERTY COORDINATES

Latitude (North):	38.35380 - 38° 21' 13.7''
Longitude (West):	121.9249 - 121° 55' 29.6''
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	593939.2
UTM Y (Meters):	4245411.5
Elevation:	84 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	38121-C8 ELMIRA, CA
Most Recent Revision:	1980

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

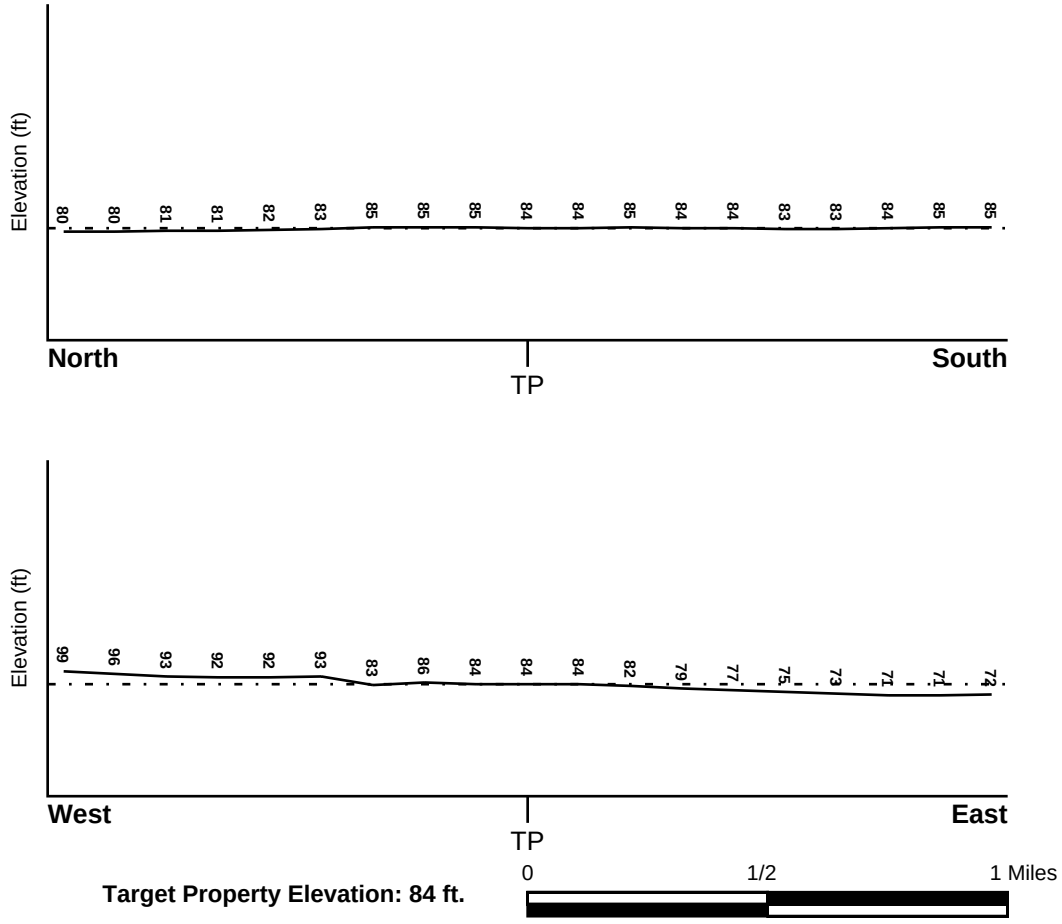
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General ESE

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
SOLANO, CA	YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property: 0606310256B

Additional Panels in search area: 0603730005B
0606310257B
0606310252B
0603730008B
0603730009B
0606310258B

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
ELMIRA	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Location Relative to TP:	1/2 - 1 Mile ESE
Site Name:	Wickes Forest Industries
Site EPA ID Number:	CAD000627109
Surficial Aquifer Flow Dir.:	East
Measured Depth to Water:	5 feet to 7 feet.
Hydraulic Connection:	Information is not available about the hydraulic connection between aquifer(s) underlying the site.
Sole Source Aquifer:	No information about a sole source aquifer is available
Data Quality:	Information based on site-specific subsurface investigations is documented in the CERCLIS investigation report(s)

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site--specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

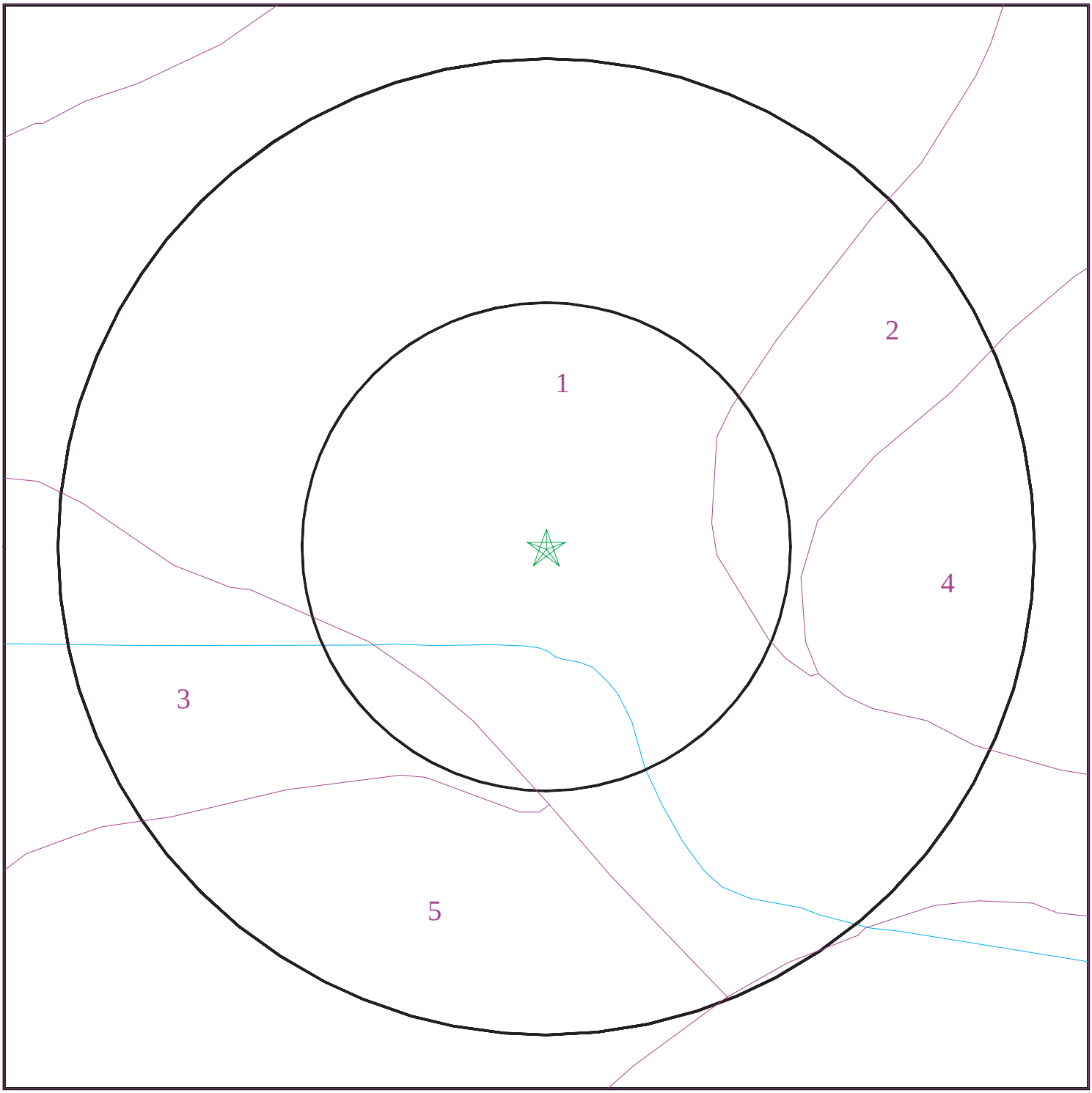
Era:	Cenozoic
System:	Quaternary
Series:	Quaternary
Code:	Q *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratifed Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 1841949.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	Hartford Land Management	CLIENT:	Harris & Lee Env. Sciences
ADDRESS:	Leisure Town Rd and Elmira Lane Vacaville CA 95687	CONTACT:	Bob Harris
LAT/LONG:	38.3538 / 121.9249	INQUIRY #:	1841949.2s
		DATE:	January 24, 2007 9:17 am

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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: YOLO

Soil Surface Texture: loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained. Soils have intermediate water holding capacity. Depth to water table is more than 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: LOW

Depth to Bedrock Min: > 0 inches

Depth to Bedrock Max: > 0 inches

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	28 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 2.00 Min: 0.60	Max: 7.30 Min: 6.10
2	28 inches	60 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 2.00 Min: 0.60	Max: 8.40 Min: 6.60

Soil Map ID: 2

Soil Component Name: YOLO

Soil Surface Texture: loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained. Soils have intermediate water holding capacity. Depth to water table is more than 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: HIGH

Depth to Bedrock Min: > 0 inches

Depth to Bedrock Max: > 0 inches

Soil Layer Information

	Boundary			Classification			
Layer	**Upper**	**Lower**	**Soil Texture Class**	**AASHTO Group**	**Unified Soil**	**Permeability Rate (in/hr)**	**Soil Reaction (pH)**
1	0 inches	28 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 2.00 Min: 0.60	Max: 7.30 Min: 6.10
2	28 inches	45 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 2.00 Min: 0.60	Max: 8.40 Min: 6.60
3	45 inches	60 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 0.20 Min: 0.06	Max: 8.40 Min: 6.60

Soil Map ID: 3

Soil Component Name: BRENTWOOD

Soil Surface Texture: clay loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained. Soils have intermediate water holding capacity. Depth to water table is more than 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: HIGH

Depth to Bedrock Min: > 0 inches

Depth to Bedrock Max: > 0 inches

Soil Layer Information

	Boundary			Classification			
Layer	**Upper**	**Lower**	**Soil Texture Class**	**AASHTO Group**	**Unified Soil**	**Permeability Rate (in/hr)**	**Soil Reaction (pH)**
1	0 inches	7 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 2.00 Min: 0.60	Max: 6.50 Min: 4.50
1	0 inches	6 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 0.60 Min: 0.20	Max: 7.80 Min: 6.10
2	7 inches	31 inches	sandy clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 2.00 Min: 0.60	Max: 6.50 Min: 4.50
2	6 inches	34 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 0.60 Min: 0.20	Max: 8.40 Min: 6.10

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
3	34 inches	60 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 0.60 Min: 0.20	Max: 8.40 Min: 6.60

Soil Map ID: 4

Soil Component Name: CAPAY

Soil Surface Texture: silty clay loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Moderately well drained. Soils have a layer of low hydraulic conductivity, wet state high in the profile. Depth to water table is 3 to 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: HIGH

Depth to Bedrock Min: > 0 inches

Depth to Bedrock Max: > 0 inches

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	21 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 0.20 Min: 0.06	Max: 8.40 Min: 6.10
2	21 inches	50 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 0.20 Min: 0.06	Max: 8.40 Min: 7.40

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
3	50 inches	80 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 0.20 Min: 0.06	Max: 8.40 Min: 7.40

Soil Map ID: 5

Soil Component Name: RINCON

Soil Surface Texture: clay loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained. Soils have intermediate water holding capacity. Depth to water table is more than 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: HIGH

Depth to Bedrock Min: > 0 inches

Depth to Bedrock Max: > 0 inches

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	13 inches	muck	Not reported	Highly organic soils, Peat.	Max: 6.00 Min: 0.20	Max: 5.50 Min: 3.50
1	0 inches	22 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 0.60 Min: 0.20	Max: 7.30 Min: 6.10
2	13 inches	18 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 0.60 Min: 0.20	Max: 5.50 Min: 3.50

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
2	22 inches	44 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 0.20 Min: 0.06	Max: 7.30 Min: 6.10
3	18 inches	42 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 0.60 Min: 0.20	Max: 7.80 Min: 3.50
3	44 inches	60 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 0.60 Min: 0.20	Max: 7.80 Min: 6.10
4	42 inches	72 inches	variable	Not reported	Not reported	Max: 0.00 Min: 0.00	Max: 7.80 Min: 3.50

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	USGS3226834	1/4 - 1/2 Mile NNE
2	USGS3226822	1/4 - 1/2 Mile West
4	USGS3226828	1/2 - 1 Mile WNW

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
6	USGS3226804	1/2 - 1 Mile ESE
7	USGS3226808	1/2 - 1 Mile ESE

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
9	CA4800586	1/2 - 1 Mile ESE

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
3	6497	1/2 - 1 Mile WSW
5	6487	1/2 - 1 Mile East
8	6485	1/2 - 1 Mile ENE

PHYSICAL SETTING SOURCE MAP - 1841949.2s

- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Airports
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location
- Closest Hydrogeological Data
- Oil, gas or related wells

SITE NAME:	Hartford Land Management	CLIENT:	Harris & Lee Env. Sciences
ADDRESS:	Leisure Town Rd and Elmira Lane Vacaville CA 95687	CONTACT:	Bob Harris
		INQUIRY #:	1841949.2s
LAT/LONG:	38.3538 / 121.9249	DATE:	January 24, 2007 9:17 am

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

1
NNE
1/4 - 1/2 Mile
Lower

FED USGS **USGS3226834**

Agency cd:	USGS	Site no:	382133121551601
Site name:	006N001W13R001M		
Latitude:	382133		
Longitude:	1215516	Dec lat:	38.35907727
Dec lon:	-121.92218664	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	06
State:	06	County:	095
Country:	US	Land net:	Not Reported
Location map:	ELMIRA	Map scale:	24000
Altitude:	78.00	Altitude method:	M
Altitude accuracy:	5.0	Altitude datum:	NGVD29
Hydrologic:	Lower Sacramento. California. Area = 1720 sq.mi.		
Topographic:	Valley flat		
Site type:	Ground-water other than Spring	Date construction:	19610624
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	294	Hole depth:	294
Source of depth data:	Not Reported		
Project number:	8479423711		
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	0000-00-00
Water quality data end date:	0000-00-00	Water quality data count:	0
Ground water data begin date:	1980-03-12	Ground water data end date:	1980-03-12
Ground water data count:	1		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1980-03-12	2.8	

2
West
1/4 - 1/2 Mile
Higher

FED USGS **USGS3226822**

Agency cd:	USGS	Site no:	382114121555801
Site name:	006N001W24E002M		
Latitude:	382114		
Longitude:	1215558	Dec lat:	38.35379961
Dec lon:	-121.93385362	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	06
State:	06	County:	095
Country:	US	Land net:	Not Reported
Location map:	ELMIRA	Map scale:	24000

Altitude:	90.00	Altitude method:	M
Altitude accuracy:	5.0	Altitude datum:	NGVD29
Hydrologic:	Lower Sacramento. California. Area = 1720 sq.mi.		
Topographic:	Valley flat		
Site type:	Ground-water other than Spring	Date construction:	19780316
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	ALLUVIAL FAN DEPOSITS		
Well depth:	600	Hole depth:	615
Source of depth data:	Not Reported		
Project number:	8479423711		
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	1980-09-03
Water quality data end date:	1980-09-03	Water quality data count:	1
Ground water data begin date:	0000-00-00	Ground water data end date:	0000-00-00
Ground water data count:	0		

Ground-water levels, Number of Measurements: 0

3
WSW **CA WELLS** **6497**
1/2 - 1 Mile
Higher

Water System Information:

Prime Station Code:	06N/01W-23J02 M	User ID:	ENG
FRDS Number:	4810008009	County:	Solano
District Number:	04	Station Type:	WELL/AMBNT/MUN/INTAKE
Water Type:	Well/Groundwater	Well Status:	Active Raw
Source Lat/Long:	382105.0 1215600.0	Precision:	1,000 Feet (10 Seconds)
Source Name:	WELL 08		
System Number:	4810008		
System Name:	CITY OF VACAVILLE		
Organization That Operates System:	650 MERCHANT STREET VACAVILLE, CA 95688		
Pop Served:	80000	Connections:	19772
Area Served:	VACAVILLE		

Sample Collected:	04/29/1999 00:00:00	Findings:	.8 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	04/29/1999 00:00:00	Findings:	7.2 PCI/L
Chemical:	GROSS BETA		
Sample Collected:	04/29/1999 00:00:00	Findings:	1.4 PCI/L
Chemical:	GROSS BETA COUNTING ERROR		
Sample Collected:	10/28/1999 00:00:00	Findings:	550 US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	10/28/1999 00:00:00	Findings:	7.5
Chemical:	PH, LABORATORY		

Sample Collected:	10/28/1999 00:00:00	Findings:	222 MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	10/28/1999 00:00:00	Findings:	271 MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	10/28/1999 00:00:00	Findings:	.557 MG/L
Chemical:	CARBONATE ALKALINITY		
Sample Collected:	10/28/1999 00:00:00	Findings:	176 MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	10/28/1999 00:00:00	Findings:	41.3 MG/L
Chemical:	CALCIUM		
Sample Collected:	10/28/1999 00:00:00	Findings:	17.7 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	10/28/1999 00:00:00	Findings:	49.5 MG/L
Chemical:	SODIUM		
Sample Collected:	10/28/1999 00:00:00	Findings:	4.9 MG/L
Chemical:	POTASSIUM		
Sample Collected:	10/28/1999 00:00:00	Findings:	12.1 MG/L
Chemical:	CHLORIDE		
Sample Collected:	10/28/1999 00:00:00	Findings:	1.11 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	10/28/1999 00:00:00	Findings:	4.2 UG/L
Chemical:	ARSENIC		
Sample Collected:	10/28/1999 00:00:00	Findings:	30 UG/L
Chemical:	CHROMIUM (TOTAL)		
Sample Collected:	10/28/1999 00:00:00	Findings:	3.3 PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	10/28/1999 00:00:00	Findings:	1.7 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	10/28/1999 00:00:00	Findings:	5.4 PCI/L
Chemical:	GROSS BETA		
Sample Collected:	10/28/1999 00:00:00	Findings:	3 PCI/L
Chemical:	GROSS BETA COUNTING ERROR		
Sample Collected:	10/28/1999 00:00:00	Findings:	340 MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	10/28/1999 00:00:00	Findings:	.1
Chemical:	LANGELIER INDEX @ 60 C		
Sample Collected:	10/28/1999 00:00:00	Findings:	.005 MG/L
Chemical:	HYDROXIDE ALKALINITY		
Sample Collected:	10/28/1999 00:00:00	Findings:	5.104 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	10/28/1999 00:00:00	Findings:	17.1 UG/L
Chemical:	CARBON DIOXIDE		
Sample Collected:	05/17/2001 00:00:00	Findings:	6.4 UG/L
Chemical:	CHROMIUM, HEXAVALENT		

Sample Collected:	03/14/2002 00:00:00	Findings:	5 UNITS
Chemical:	COLOR		
Sample Collected:	03/14/2002 00:00:00	Findings:	2 TON
Chemical:	ODOR THRESHOLD @ 60 C		
Sample Collected:	03/14/2002 00:00:00	Findings:	504 US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	03/14/2002 00:00:00	Findings:	7.7
Chemical:	PH, LABORATORY		
Sample Collected:	03/14/2002 00:00:00	Findings:	222 MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	03/14/2002 00:00:00	Findings:	270 MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	03/14/2002 00:00:00	Findings:	.879 MG/L
Chemical:	CARBONATE ALKALINITY		
Sample Collected:	03/14/2002 00:00:00	Findings:	176 MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	03/14/2002 00:00:00	Findings:	43 MG/L
Chemical:	CALCIUM		
Sample Collected:	03/14/2002 00:00:00	Findings:	18 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	03/14/2002 00:00:00	Findings:	52 MG/L
Chemical:	SODIUM		
Sample Collected:	03/14/2002 00:00:00	Findings:	5.7 MG/L
Chemical:	POTASSIUM		
Sample Collected:	03/14/2002 00:00:00	Findings:	11 MG/L
Chemical:	CHLORIDE		
Sample Collected:	03/14/2002 00:00:00	Findings:	5.4 UG/L
Chemical:	ARSENIC		
Sample Collected:	03/14/2002 00:00:00	Findings:	160 UG/L
Chemical:	BORON		
Sample Collected:	03/14/2002 00:00:00	Findings:	12.8 UG/L
Chemical:	CHROMIUM, HEXAVALENT		
Sample Collected:	03/14/2002 00:00:00	Findings:	17 UG/L
Chemical:	CHROMIUM (TOTAL)		
Sample Collected:	03/14/2002 00:00:00	Findings:	15 UG/L
Chemical:	VANADIUM		
Sample Collected:	03/14/2002 00:00:00	Findings:	170 UG/L
Chemical:	ALUMINUM		
Sample Collected:	03/14/2002 00:00:00	Findings:	350 MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	03/14/2002 00:00:00	Findings:	.32
Chemical:	LANGELIER INDEX @ 60 C		
Sample Collected:	03/14/2002 00:00:00	Findings:	.009 MG/L
Chemical:	HYDROXIDE ALKALINITY		

Sample Collected:	03/14/2002 00:00:00	Findings:	4.4 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	03/14/2002 00:00:00	Findings:	10800 UG/L
Chemical:	CARBON DIOXIDE		
Sample Collected:	03/14/2002 00:00:00	Findings:	.7 NTU
Chemical:	TURBIDITY, LABORATORY		
Sample Collected:	03/14/2002 00:00:00	Findings:	17 UG/L
Chemical:	CHROMIUM (TOTAL CR-CRVI SCREEN)		
Sample Collected:	05/27/2002 00:00:00	Findings:	.18 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	01/07/2003 00:00:00	Findings:	1 PCI/L
Chemical:	RADIUM 226 COUNTING ERROR		
Sample Collected:	01/07/2003 00:00:00	Findings:	.389 PCI/L
Chemical:	URANIUM COUNTING ERROR		
Sample Collected:	01/07/2003 00:00:00	Findings:	.92 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	01/07/2003 00:00:00	Findings:	.77 PCI/L
Chemical:	GROSS BETA COUNTING ERROR		
Sample Collected:	08/26/2003 00:00:00	Findings:	1 PCI/L
Chemical:	RADIUM 226 COUNTING ERROR		
Sample Collected:	08/26/2003 00:00:00	Findings:	8.181 PCI/L
Chemical:	URANIUM (PCI/L)		
Sample Collected:	08/26/2003 00:00:00	Findings:	2.392 PCI/L
Chemical:	URANIUM COUNTING ERROR		
Sample Collected:	08/26/2003 00:00:00	Findings:	5.2 PCI/L
Chemical:	GROSS BETA		
Sample Collected:	08/26/2003 00:00:00	Findings:	2 PCI/L
Chemical:	GROSS BETA COUNTING ERROR		
Sample Collected:	10/23/2003 00:00:00	Findings:	1.7 PCI/L
Chemical:	GROSS BETA COUNTING ERROR		
Sample Collected:	10/23/2003 00:00:00	Findings:	3.784 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	01/04/2004 00:00:00	Findings:	3.8 PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	01/04/2004 00:00:00	Findings:	2.1 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	01/04/2004 00:00:00	Findings:	1.9 PCI/L
Chemical:	GROSS BETA COUNTING ERROR		
Sample Collected:	01/14/2004 00:00:00	Findings:	4.136 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	05/04/2004 00:00:00	Findings:	3.9 PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	05/04/2004 00:00:00	Findings:	2 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		

Sample Collected:	05/04/2004 00:00:00	Findings:	4.1 PCI/L
Chemical:	GROSS BETA		
Sample Collected:	05/04/2004 00:00:00	Findings:	1.2 PCI/L
Chemical:	GROSS BETA COUNTING ERROR		
Sample Collected:	03/16/2005 00:00:00	Findings:	.125 NTU
Chemical:	TURBIDITY, LABORATORY		
Sample Collected:	03/16/2005 00:00:00	Findings:	451 US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	03/16/2005 00:00:00	Findings:	7.7
Chemical:	PH, LABORATORY		
Sample Collected:	03/16/2005 00:00:00	Findings:	215 MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	03/16/2005 00:00:00	Findings:	262 MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	03/16/2005 00:00:00	Findings:	.853 MG/L
Chemical:	CARBONATE ALKALINITY		
Sample Collected:	03/16/2005 00:00:00	Findings:	177 MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	03/16/2005 00:00:00	Findings:	41 MG/L
Chemical:	CALCIUM		
Sample Collected:	03/16/2005 00:00:00	Findings:	18 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	03/16/2005 00:00:00	Findings:	49 MG/L
Chemical:	SODIUM		
Sample Collected:	03/16/2005 00:00:00	Findings:	5.5 MG/L
Chemical:	POTASSIUM		
Sample Collected:	03/16/2005 00:00:00	Findings:	10 MG/L
Chemical:	CHLORIDE		
Sample Collected:	03/16/2005 00:00:00	Findings:	.2 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	03/16/2005 00:00:00	Findings:	3.8 UG/L
Chemical:	ARSENIC		
Sample Collected:	03/16/2005 00:00:00	Findings:	13 UG/L
Chemical:	CHROMIUM (TOTAL)		
Sample Collected:	03/16/2005 00:00:00	Findings:	360 MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	03/16/2005 00:00:00	Findings:	.29
Chemical:	LANGELIER INDEX @ 60 C		
Sample Collected:	03/16/2005 00:00:00	Findings:	.009 MG/L
Chemical:	HYDROXIDE ALKALINITY		
Sample Collected:	03/16/2005 00:00:00	Findings:	4 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	03/16/2005 00:00:00	Findings:	10500 UG/L
Chemical:	CARBON DIOXIDE		

Sample Collected:	03/16/2005 00:00:00	Findings:	910 UG/L
Chemical:	NITRATE + NITRITE (AS N)		
Sample Collected:	11/10/2005 00:00:00	Findings:	.45 PCI/L
Chemical:	RADIUM 228 COUNTING ERROR		
Sample Collected:	01/25/2006 00:00:00	Findings:	8.8 MG/L
Chemical:	NITRATE (AS NO3)		

4
WNW **FED USGS** **USGS3226828**
1/2 - 1 Mile
Higher

Agency cd:	USGS	Site no:	382128121561601
Site name:	006N001W23B003M		
Latitude:	382128		
Longitude:	1215616	Dec lat:	38.3576884
Dec lon:	-121.93885385	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	06
State:	06	County:	095
Country:	US	Land net:	Not Reported
Location map:	ELMIRA	Map scale:	24000
Altitude:	95.00	Altitude method:	M
Altitude accuracy:	5.	Altitude datum:	NGVD29
Hydrologic:	Lower Sacramento. California. Area = 1720 sq.mi.		
Topographic:	Valley flat		
Site type:	Ground-water other than Spring	Date construction:	19760317
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	80.0	Hole depth:	80.0
Source of depth data:	Not Reported		
Project number:	8479423711		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

5
East **CA WELLS** **6487**
1/2 - 1 Mile
Lower

Water System Information:

Prime Station Code:	06N/01E-19L01 M	User ID:	ENG
FRDS Number:	4800586001	County:	Solano
District Number:	04	Station Type:	WELL/AMBNT/MUN/INTAKE
Water Type:	Well/Groundwater	Well Status:	Active Raw
Source Lat/Long:	382120.0 1215430.0	Precision:	1,000 Feet (10 Seconds)
Source Name:	WELL 01		

System Number: 4800586
System Name: ELMIRA WATER COOPERATIVE
Organization That Operates System:
Not Reported
Pop Served: 50 Connections: Unknown, Small System
Area Served: Not Reported

6
ESE **FED USGS** **USGS3226804**
1/2 - 1 Mile
Lower

Agency cd:	USGS	Site no:	382057121543301
Site name:	006N001E19L002M		
Latitude:	382057		
Longitude:	1215433	Dec lat:	38.34907753
Dec lon:	-121.91024164	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	06
State:	06	County:	095
Country:	US	Land net:	Not Reported
Location map:	ELMIRA	Map scale:	24000
Altitude:	73.00	Altitude method:	M
Altitude accuracy:	2	Altitude datum:	NGVD29
Hydrologic:	Lower Sacramento. California. Area = 1720 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19590513
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	137	Hole depth:	294
Source of depth data:	Not Reported		
Project number:	0479435800		
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	1960-09-28
Water quality data end date:	1976-06-08	Water quality data count:	13
Ground water data begin date:	0000-00-00	Ground water data end date:	0000-00-00
Ground water data count:	0		

Ground-water levels, Number of Measurements: 0

7
ESE **FED USGS** **USGS3226808**
1/2 - 1 Mile
Lower

Agency cd:	USGS	Site no:	382102121542901
Site name:	006N001E19L009M		
Latitude:	382102		
Longitude:	1215429	Dec lat:	38.35046639
Dec lon:	-121.90913051	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	06
State:	06	County:	095
Country:	US	Land net:	NWNESWS19T006NR001EM
Location map:	ELMIRA	Map scale:	24000
Altitude:	70.00	Altitude method:	M
Altitude accuracy:	2.5	Altitude datum:	NGVD29
Hydrologic:	Lower Sacramento. California. Area = 1720 sq.mi.		
Topographic:	Valley flat		
Site type:	Ground-water other than Spring	Date construction:	19720315
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	141	Hole depth:	141
Source of depth data:	Not Reported		
Project number:	8479423711		
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	0000-00-00
Water quality data end date:	0000-00-00	Water quality data count:	0
Ground water data begin date:	1980-02-06	Ground water data end date:	1980-02-06
Ground water data count:	1		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1980-02-06	1.6	

8
ENE **CA WELLS** **6485**
1/2 - 1 Mile
Lower

Water System Information:

Prime Station Code:	06N/01E-19E01 M	User ID:	ENG
FRDS Number:	4810011001	County:	Solano
District Number:	04	Station Type:	WELL/AMBNT/MUN/INTAKE
Water Type:	Well/Groundwater	Well Status:	Active Raw
Source Lat/Long:	382130.0 1215430.0	Precision:	1 Mile (One Minute)
Source Name:	SID DEEP WELL 46		
System Number:	4810011		
System Name:	ELMIRA-SID		
Organization That Operates System:			
	508 ELMIRA RD VACAVILLE, CA 95687		
Pop Served:	150	Connections:	40
Area Served:	BLUE RIDGE OAKS		

Sample Collected:	05/22/2001 00:00:00	Findings:	2.8 UG/L
Chemical:	CHROMIUM, HEXAVALENT		
Sample Collected:	08/15/2001 00:00:00	Findings:	3 UNITS
Chemical:	COLOR		
Sample Collected:	08/15/2001 00:00:00	Findings:	2 TON
Chemical:	ODOR THRESHOLD @ 60 C		
Sample Collected:	08/15/2001 00:00:00	Findings:	667 US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	08/15/2001 00:00:00	Findings:	7.5
Chemical:	PH, LABORATORY		
Sample Collected:	08/15/2001 00:00:00	Findings:	259 MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	08/15/2001 00:00:00	Findings:	316 MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	08/15/2001 00:00:00	Findings:	.649 MG/L
Chemical:	CARBONATE ALKALINITY		
Sample Collected:	08/15/2001 00:00:00	Findings:	260 MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	08/15/2001 00:00:00	Findings:	68 MG/L
Chemical:	CALCIUM		
Sample Collected:	08/15/2001 00:00:00	Findings:	22 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	08/15/2001 00:00:00	Findings:	66 MG/L
Chemical:	SODIUM		
Sample Collected:	08/15/2001 00:00:00	Findings:	1.78
Chemical:	SODIUM ABSORPTION RATIO		
Sample Collected:	08/15/2001 00:00:00	Findings:	25 MG/L
Chemical:	CHLORIDE		
Sample Collected:	08/15/2001 00:00:00	Findings:	.19 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	08/15/2001 00:00:00	Findings:	200 UG/L
Chemical:	BORON		
Sample Collected:	08/15/2001 00:00:00	Findings:	4.6 UG/L
Chemical:	VANADIUM		
Sample Collected:	08/15/2001 00:00:00	Findings:	460 MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	08/15/2001 00:00:00	Findings:	.39
Chemical:	LANGELIER INDEX @ 60 C		
Sample Collected:	08/15/2001 00:00:00	Findings:	.005 MG/L
Chemical:	HYDROXIDE ALKALINITY		
Sample Collected:	08/15/2001 00:00:00	Findings:	9.812 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	08/15/2001 00:00:00	Findings:	20000 UG/L
Chemical:	CARBON DIOXIDE		

Sample Collected:	08/15/2001 00:00:00	Findings:	.3 NTU
Chemical:	TURBIDITY, LABORATORY		
Sample Collected:	08/15/2001 00:00:00	Findings:	12.29
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)		
Sample Collected:	08/15/2001 00:00:00	Findings:	2.9 UG/L
Chemical:	CHROMIUM (TOTAL CR-CRVI SCREEN)		
Sample Collected:	11/01/2001 00:00:00	Findings:	1.2 UG/L
Chemical:	CHROMIUM, HEXAVALENT		
Sample Collected:	11/01/2001 00:00:00	Findings:	1.7 UG/L
Chemical:	CHROMIUM (TOTAL CR-CRVI SCREEN)		
Sample Collected:	01/18/2002 00:00:00	Findings:	190 UG/L
Chemical:	BORON		
Sample Collected:	03/19/2002 00:00:00	Findings:	3.81 PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	03/19/2002 00:00:00	Findings:	1.85 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	06/12/2002 00:00:00	Findings:	3.18 PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	06/12/2002 00:00:00	Findings:	1.38 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	06/20/2002 00:00:00	Findings:	3 UNITS
Chemical:	COLOR		
Sample Collected:	06/20/2002 00:00:00	Findings:	817 US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	06/20/2002 00:00:00	Findings:	7.3
Chemical:	PH, LABORATORY		
Sample Collected:	06/20/2002 00:00:00	Findings:	267 MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	06/20/2002 00:00:00	Findings:	326 MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	06/20/2002 00:00:00	Findings:	.423 MG/L
Chemical:	CARBONATE ALKALINITY		
Sample Collected:	06/20/2002 00:00:00	Findings:	319 MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	06/20/2002 00:00:00	Findings:	80 MG/L
Chemical:	CALCIUM		
Sample Collected:	06/20/2002 00:00:00	Findings:	29 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	06/20/2002 00:00:00	Findings:	69 MG/L
Chemical:	SODIUM		
Sample Collected:	06/20/2002 00:00:00	Findings:	38 MG/L
Chemical:	CHLORIDE		
Sample Collected:	06/20/2002 00:00:00	Findings:	.24 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		

Sample Collected:	06/20/2002 00:00:00	Findings:	200 UG/L
Chemical:	BORON		
Sample Collected:	06/20/2002 00:00:00	Findings:	4.3 UG/L
Chemical:	VANADIUM		
Sample Collected:	06/20/2002 00:00:00	Findings:	530 MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	06/20/2002 00:00:00	Findings:	.27
Chemical:	LANGELIER INDEX @ 60 C		
Sample Collected:	06/20/2002 00:00:00	Findings:	.003 MG/L
Chemical:	HYDROXIDE ALKALINITY		
Sample Collected:	06/20/2002 00:00:00	Findings:	15.84 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	06/20/2002 00:00:00	Findings:	32700 UG/L
Chemical:	CARBON DIOXIDE		
Sample Collected:	06/20/2002 00:00:00	Findings:	.1 NTU
Chemical:	TURBIDITY, LABORATORY		
Sample Collected:	06/20/2002 00:00:00	Findings:	12.17
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)		
Sample Collected:	06/20/2002 00:00:00	Findings:	2.3 UG/L
Chemical:	CHROMIUM (TOTAL CR-CRVI SCREEN)		
Sample Collected:	09/04/2002 00:00:00	Findings:	5.37 PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	09/04/2002 00:00:00	Findings:	2.31 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	12/04/2002 00:00:00	Findings:	4.24 PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	12/04/2002 00:00:00	Findings:	1.36 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	05/28/2003 00:00:00	Findings:	713 US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	05/28/2003 00:00:00	Findings:	7.5
Chemical:	PH, LABORATORY		
Sample Collected:	05/28/2003 00:00:00	Findings:	246 MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	05/28/2003 00:00:00	Findings:	300 MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	05/28/2003 00:00:00	Findings:	.617 MG/L
Chemical:	CARBONATE ALKALINITY		
Sample Collected:	05/28/2003 00:00:00	Findings:	186 MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	05/28/2003 00:00:00	Findings:	50 MG/L
Chemical:	CALCIUM		
Sample Collected:	05/28/2003 00:00:00	Findings:	15 MG/L
Chemical:	MAGNESIUM		

Sample Collected:	05/28/2003 00:00:00	Findings:	63 MG/L
Chemical:	SODIUM		
Sample Collected:	05/28/2003 00:00:00	Findings:	1.1 MG/L
Chemical:	POTASSIUM		
Sample Collected:	05/28/2003 00:00:00	Findings:	27 MG/L
Chemical:	CHLORIDE		
Sample Collected:	05/28/2003 00:00:00	Findings:	.16 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	05/28/2003 00:00:00	Findings:	200 UG/L
Chemical:	BORON		
Sample Collected:	05/28/2003 00:00:00	Findings:	4.9 UG/L
Chemical:	VANADIUM		
Sample Collected:	05/28/2003 00:00:00	Findings:	430 MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	05/28/2003 00:00:00	Findings:	.23
Chemical:	LANGELIER INDEX @ 60 C		
Sample Collected:	05/28/2003 00:00:00	Findings:	.005 MG/L
Chemical:	HYDROXIDE ALKALINITY		
Sample Collected:	05/28/2003 00:00:00	Findings:	10.12 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	05/28/2003 00:00:00	Findings:	19000 UG/L
Chemical:	CARBON DIOXIDE		
Sample Collected:	05/28/2003 00:00:00	Findings:	12.13
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)		
Sample Collected:	05/28/2003 00:00:00	Findings:	2300 UG/L
Chemical:	NITRATE + NITRITE (AS N)		
Sample Collected:	05/28/2003 00:00:00	Findings:	3 UNITS
Chemical:	COLOR		
Sample Collected:	05/28/2003 00:00:00	Findings:	2 TON
Chemical:	ODOR THRESHOLD @ 60 C		
Sample Collected:	05/28/2003 00:00:00	Findings:	.15 NTU
Chemical:	TURBIDITY, LABORATORY		
Sample Collected:	06/02/2004 00:00:00	Findings:	621 US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	06/02/2004 00:00:00	Findings:	7.6
Chemical:	PH, LABORATORY		
Sample Collected:	06/02/2004 00:00:00	Findings:	226 MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	06/02/2004 00:00:00	Findings:	275 MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	06/02/2004 00:00:00	Findings:	.711 MG/L
Chemical:	CARBONATE ALKALINITY		
Sample Collected:	06/02/2004 00:00:00	Findings:	194 MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		

Sample Collected:	06/02/2004 00:00:00	Findings:	53 MG/L
Chemical:	CALCIUM		
Sample Collected:	06/02/2004 00:00:00	Findings:	15 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	06/02/2004 00:00:00	Findings:	63 MG/L
Chemical:	SODIUM		
Sample Collected:	06/02/2004 00:00:00	Findings:	1.1 MG/L
Chemical:	POTASSIUM		
Sample Collected:	06/02/2004 00:00:00	Findings:	16 MG/L
Chemical:	CHLORIDE		
Sample Collected:	06/02/2004 00:00:00	Findings:	.13 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	06/02/2004 00:00:00	Findings:	190 UG/L
Chemical:	BORON		
Sample Collected:	06/02/2004 00:00:00	Findings:	390 MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	06/02/2004 00:00:00	Findings:	.32
Chemical:	LANGELIER INDEX @ 60 C		
Sample Collected:	06/02/2004 00:00:00	Findings:	.007 MG/L
Chemical:	HYDROXIDE ALKALINITY		
Sample Collected:	06/02/2004 00:00:00	Findings:	7 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	06/02/2004 00:00:00	Findings:	13800 UG/L
Chemical:	CARBON DIOXIDE		
Sample Collected:	06/02/2004 00:00:00	Findings:	.35 NTU
Chemical:	TURBIDITY, LABORATORY		
Sample Collected:	06/02/2004 00:00:00	Findings:	12.22
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)		
Sample Collected:	06/02/2004 00:00:00	Findings:	1600 UG/L
Chemical:	NITRATE + NITRITE (AS N)		
Sample Collected:	06/02/2004 00:00:00	Findings:	1.5 UG/L
Chemical:	CHROMIUM (TOTAL CR-CRVI SCREEN)		
Sample Collected:	06/08/2005 00:00:00	Findings:	773 US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	06/08/2005 00:00:00	Findings:	7.5
Chemical:	PH, LABORATORY		
Sample Collected:	06/08/2005 00:00:00	Findings:	249 MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	06/08/2005 00:00:00	Findings:	304 MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	06/08/2005 00:00:00	Findings:	.625 MG/L
Chemical:	CARBONATE ALKALINITY		
Sample Collected:	06/08/2005 00:00:00	Findings:	223 MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		

Sample Collected:	06/08/2005 00:00:00	Findings:	58 MG/L
Chemical:	CALCIUM		
Sample Collected:	06/08/2005 00:00:00	Findings:	19 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	06/08/2005 00:00:00	Findings:	70 MG/L
Chemical:	SODIUM		
Sample Collected:	06/08/2005 00:00:00	Findings:	1.4 MG/L
Chemical:	POTASSIUM		
Sample Collected:	06/08/2005 00:00:00	Findings:	37 MG/L
Chemical:	CHLORIDE		
Sample Collected:	06/08/2005 00:00:00	Findings:	.24 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	06/08/2005 00:00:00	Findings:	190 UG/L
Chemical:	BORON		
Sample Collected:	06/08/2005 00:00:00	Findings:	9.2 UG/L
Chemical:	SELENIUM		
Sample Collected:	06/08/2005 00:00:00	Findings:	520 MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	06/08/2005 00:00:00	Findings:	.3
Chemical:	LANGELIER INDEX @ 60 C		
Sample Collected:	06/08/2005 00:00:00	Findings:	.005 MG/L
Chemical:	HYDROXIDE ALKALINITY		
Sample Collected:	06/08/2005 00:00:00	Findings:	15 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	06/08/2005 00:00:00	Findings:	19200 UG/L
Chemical:	CARBON DIOXIDE		
Sample Collected:	06/08/2005 00:00:00	Findings:	12.2
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)		
Sample Collected:	06/08/2005 00:00:00	Findings:	3400 UG/L
Chemical:	NITRATE + NITRITE (AS N)		
Sample Collected:	06/08/2005 00:00:00	Findings:	.2 NTU
Chemical:	TURBIDITY, LABORATORY		
Sample Collected:	08/19/1999 00:00:00	Findings:	560 US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	08/19/1999 00:00:00	Findings:	7.6
Chemical:	PH, LABORATORY		
Sample Collected:	08/19/1999 00:00:00	Findings:	250 MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	08/19/1999 00:00:00	Findings:	305 MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	08/19/1999 00:00:00	Findings:	.79 MG/L
Chemical:	CARBONATE ALKALINITY		
Sample Collected:	08/19/1999 00:00:00	Findings:	177 MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		

Sample Collected:	08/19/1999 00:00:00	Findings:	49 MG/L
Chemical:	CALCIUM		
Sample Collected:	08/19/1999 00:00:00	Findings:	13 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	08/19/1999 00:00:00	Findings:	63 MG/L
Chemical:	SODIUM		
Sample Collected:	08/19/1999 00:00:00	Findings:	1 MG/L
Chemical:	POTASSIUM		
Sample Collected:	08/19/1999 00:00:00	Findings:	18 MG/L
Chemical:	CHLORIDE		
Sample Collected:	08/19/1999 00:00:00	Findings:	.15 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	08/19/1999 00:00:00	Findings:	150 UG/L
Chemical:	BORON		
Sample Collected:	08/19/1999 00:00:00	Findings:	15 UG/L
Chemical:	CHROMIUM (TOTAL)		
Sample Collected:	08/19/1999 00:00:00	Findings:	340 MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	08/19/1999 00:00:00	Findings:	.3
Chemical:	LANGELIER INDEX @ 60 C		
Sample Collected:	08/19/1999 00:00:00	Findings:	.007 MG/L
Chemical:	HYDROXIDE ALKALINITY		
Sample Collected:	08/19/1999 00:00:00	Findings:	6.95 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	08/19/1999 00:00:00	Findings:	15 UG/L
Chemical:	CARBON DIOXIDE		
Sample Collected:	08/19/1999 00:00:00	Findings:	12.2
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)		
Sample Collected:	08/19/1999 00:00:00	Findings:	1580 UG/L
Chemical:	NITRATE + NITRITE (AS N)		
Sample Collected:	11/11/1999 00:00:00	Findings:	7.48 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	08/09/2000 00:00:00	Findings:	3 UNITS
Chemical:	COLOR		
Sample Collected:	08/09/2000 00:00:00	Findings:	2 TON
Chemical:	ODOR THRESHOLD @ 60 C		
Sample Collected:	08/09/2000 00:00:00	Findings:	660 US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	08/09/2000 00:00:00	Findings:	7
Chemical:	PH, LABORATORY		
Sample Collected:	08/09/2000 00:00:00	Findings:	250 MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	08/09/2000 00:00:00	Findings:	305 MG/L
Chemical:	BICARBONATE ALKALINITY		

Sample Collected:	08/09/2000 00:00:00	Findings:	226 MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	08/09/2000 00:00:00	Findings:	61 MG/L
Chemical:	CALCIUM		
Sample Collected:	08/09/2000 00:00:00	Findings:	18 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	08/09/2000 00:00:00	Findings:	66 MG/L
Chemical:	SODIUM		
Sample Collected:	08/09/2000 00:00:00	Findings:	1 MG/L
Chemical:	POTASSIUM		
Sample Collected:	08/09/2000 00:00:00	Findings:	22 MG/L
Chemical:	CHLORIDE		
Sample Collected:	08/09/2000 00:00:00	Findings:	430 MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	08/09/2000 00:00:00	Findings:	8 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	08/09/2000 00:00:00	Findings:	24 UG/L
Chemical:	CARBON DIOXIDE		
Sample Collected:	08/09/2000 00:00:00	Findings:	12
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)		

9
ESE **FRDS PWS** **CA4800586**
1/2 - 1 Mile
Lower

PWS ID:	CA4800586	PWS Status:	Active
Date Initiated:	9307	Date Deactivated:	Not Reported
PWS Name:	ELMIRA WATER COOPERATIVE MARGE SHOLES AU HAZEN ST ELMIRA, CA 95625		
Addressee / Facility:	System Owner/Responsible Party MARGE SHOLES P O BOX 1 ELMIRA, CA 95625		
Facility Latitude:	38 20 53	Facility Longitude:	121 54 32
City Served:	Not Reported		
Treatment Class:	Untreated	Population:	00000050

PWS currently has or had major violation(s) or enforcement: Yes

Violations information not reported.

ENFORCEMENT INFORMATION:

System Name:	ELMIRA WATER COOPERATIVE		
Violation Type:	Initial Tap Sampling for Pb and Cu		
Contaminant:	LEAD & COPPER RULE		
Compliance Period:	1993-07-01 - 2015-12-31		
Violation ID:	95V0001		
Enforcement Date:	Not Reported	Enf. Action:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zip	Total Sites	> 4 Pci/L	Pct. > 4 Pci/L
95687	15	2	13.33

Federal EPA Radon Zone for SOLANO County: 3

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 95687

Number of sites tested: 7

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	2.529 pCi/L	71%	29%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

California Drinking Water Quality Database
Source: Department of Health Services
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

OTHER STATE DATABASE INFORMATION

California Oil and Gas Well Locations
Source: Department of Conservation
Telephone: 916-323-1779

RADON

State Database: CA Radon
Source: Department of Health Services
Telephone: 916-324-2208
Radon Database for California

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

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