

APPENDIX I-2
PHASE I – 53 ADDITIONAL ACRES



Earth Systems

Southwest

**REPORT OF PHASE I
ENVIRONMENTAL SITE ASSESSMENT
OLYMPUS/STONERIDGE PROJECT ANNEX
53 ADDITIONAL ACRES
WORSLEY ROAD NORTH OF
PIERSON BOULEVARD
DESERT HOT SPRINGS, CALIFORNIA**

Consulting Engineers and Geologists

FIRST WEST CAPITAL CORPORATION
17962 COWAN STREET
IRVINE, CALIFORNIA 92614

**REPORT OF PHASE I
ENVIRONMENTAL SITE ASSESSMENT
OLYMPUS/STONERIDGE PROJECT ANNEX
53 ADDITIONAL ACRES
WORSLEY ROAD NORTH OF
PIERSON BOULEVARD
DESERT HOT SPRINGS, CALIFORNIA**

May 20, 2004

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File No.: 09366-04
04-05-744



May 20, 2004

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04-05-744

First West Capital Corporation
17962 Cowan Street
Irvine, California 92614

Attention: Mr. Bob Gilroy

Subject: **Report of Phase I Environmental Site Assessment**

Project: **Olympus/Stoneridge Project Annex**
53 Additional Acres
Worsley Road North of Pierson Boulevard
Desert Hot Springs, California

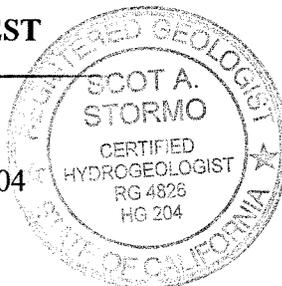
Dear Mr. Gilroy:

As you requested, Earth Systems Southwest has completed this Phase I Environmental Site Assessment (ESA) of the site referenced above. Note that this report was prepared for your exclusive use. It was prepared to stand as a whole and no part should be excerpted or used in exclusion of any other part. This project was conducted in accordance with our proposal dated April 15, 2004 and authorized on April 26, 2004. This report completes the scope of services outlined in our proposal.

Thank you for this opportunity to be of service. If you have any questions regarding this report, or the information contained herein, please contact this office at your convenience.

Respectfully Submitted,
EARTH SYSTEMS SOUTHWEST


Scot A. Stormo, RG 4826, CHG 204
Vice President



ESA Report/sas/dac

Distribution: 6/Mr. Bob Gilroy
1/Field File
2/BD File
1/RC File

REPORT OF PHASE I
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DESERT HOT SPRINGS, CALIFORNIA

May 20, 2004

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1.0 INTRODUCTION

1.1 Project Information

This report presents the findings of the Phase I Environmental Site Assessment (ESA) conducted by Earth Systems Southwest (ESSW) for the Olympus/Stoneridge Project Annex located generally along Worsley Road north of Pierson Boulevard, Desert Hot Springs, Riverside County, California. Figures depicting the site location and layout are presented in Appendix A. This project was conducted for First West Capital Corporation in accordance with our proposal dated April 15, 2004 and authorized on April 26, 2004.

1.2 Purpose and Scope of Work

The purpose of an ESA is to evaluate the potential for the presence of soil or groundwater contamination that may be present because of the past use, handling, storage, or disposal of hazardous materials or petroleum products on or near the property. The scope of work for this evaluation is based on ASTM Standard E-1527-00, *Standard Practice for Environmental Site Assessments*, and consisted of the tasks listed below.

Site Reconnaissance: This involved: (A) a visual reconnaissance of the site, noting physical evidence of potential contamination or possible sources of contamination; (B) interviews with persons familiar with the site (if possible) regarding present and past site usage; and (C) observation of adjacent properties to identify visual evidence of possible impacts to the subject site. Significant on-site conditions were photographed to document current conditions. Selected site photographs are presented in Appendix B.

Site History Investigation: The history of the site was investigated regarding past land use at and near the site, specifically as it relates to the storage, production, use, or disposal of hazardous materials. The sources of information for this evaluation are listed in the references section of this report, and included the following categories of information:

- Aerial photographs
- Topographic maps
- Munger Oil maps
- Personnel interviews

Due to the lack of prior development, building department records were not reviewed.

Regulatory Agency Record Review: Many regulatory agencies compile information concerning sites that generate, store, use, and/or release hazardous materials. This information can be accessed by reviewing lists published by the regulatory agencies. A report listing known sites that generate, store, use, and/or have released hazardous materials was obtained from Track Info Services LLC, a firm that specializes in maintaining a database of this type of information. A copy of the Track Info Services LLC Environmental FirstSearch report is presented in Appendix C, and is discussed in Section 4. The search radius for this review was in accordance with ASTM standard E-1527-00 as measured from the property boundary. In addition, selected government

agencies were contacted for information they may have regarding environmental conditions at or near the site.

Report Preparation: This report was prepared to present our findings, conclusions, and recommendations. A qualifications statement regarding the personnel who performed this evaluation is presented in Appendix D.

Exclusions: Testing the air, groundwater, soil, or building materials for the presence of hazardous constituents was beyond the scope of this evaluation. As stated in the proposal, land title information would only be reviewed if furnished by the Client. Land title information was not provided to ESSW, and therefore was not reviewed.

1.3 Limitations

This report has been prepared for the exclusive use of First West Capital Corporation. The conclusions and recommendations rendered in this report are opinions based on readily available information obtained to date within the scope of the work authorized by the client. The scope of work for this project was developed to address the needs of the client as part of a property transaction (buy, sell, refinance, etc.) and may not meet the needs of other users. Other parties participating in the transaction for which this project was conducted may also use the information presented in this report, provided said parties agree that ESSW shall have no additional liability arising from such use than described in the contract under which this project was conducted (a copy of that contract will be provided upon request). Any other use of or reliance on the information and opinions contained in this report without the written authorization of ESSW is at the sole risk of the user.

It should be noted that any level of assessment cannot ascertain that a property is completely free of chemical or toxic substances. We believe the scope of work has been appropriate to allow the client to make an informed business decision.

The results contained in this report are based upon the information acquired during the assessment, including information obtained from third parties. ESSW makes no claim as to the accuracy of the information obtained from others. In addition, it is possible that variations exist beyond or between points explored during the course of the investigation, and that changes in conditions can occur in the future due to the works of man, contaminant migration, variations in rainfall, temperature, and/or other factors not apparent at the time of the field investigation. It should also be noted that in active blow-sand areas, sand can accumulate quickly behind windbreaks. Consequently, materials can be buried out of view by natural wind-blown sand in a relatively short period of time under favorable conditions.

The services performed by ESSW have been conducted in a manner consistent with the level of care and skill ordinarily exercised by members of our profession currently practicing under similar conditions in the site vicinity. No warranty is expressed or implied.

2.0 SITE INFORMATION

2.1 Site Location and Development

The site consists of approximately 53 acres of undeveloped land comprising the eastern portion of the southeastern quarter of Section 29, Township 2 South, Range 4 East, San Bernardino baseline and meridian (see Figure 1 in Appendix A). The subject property is located generally along Worsley Road north of Pierson Boulevard, Desert Hot Springs, Riverside County, California. The site consists of undeveloped, native desert.

The site boundary is defined by Pierson Boulevard to the south. The western and northern boundaries are not demarcated and were estimated from local landmarks. A power-line road was used as a guideline for the eastern boundary (See Figure 2). The elevation of the site ranges from approximately 1,500 feet above Mean Sea Level in the northwest corner to approximately 1,420 feet above Mean Sea Level in the southeast corner. Surface water generally drains to the southeast.

2.2 Current Site Condition

ESSW personnel visited the site on May 4, 2004, to observe current site conditions and adjacent land use. A summary of our findings is presented below.

- The site was observed to consist of undeveloped, native desert (Photo 1). The site sloped gradually to the southeast and drainage channels were visible running in a southeasterly direction across the site (Figure 2). Mature native shrubs and smaller vegetation covered the entire site. Some of the vegetation appeared to have been burned in a fire. The remainder of the vegetation did not show unusual signs of stress.
- A dirt power-line road ran along the eastern border of the site, and Worsley Road ran through the northwestern portion of the site. Two to three foot high berms paralleled Worsley Road where it crossed the site. Small accumulations of debris consisting of clothing, rags, aluminum ducting, carpet, an appliance, wooden debris, cotton stuffing, and metal food containers were noted primarily along the power-line road and along Worsley Road (Photos 2 and 3). The debris appears to be the result of illegal dumping because the debris was primarily located along accessible roads. Remnants of a wood and wire fence were noted in the northeast corner of the site.
- Vehicle tracks and boreholes associated with an ESSW geotechnical survey were noted primarily on the eastern half of the site (Photo 4). Very few other tracks were observed crossing the site.
- A diamond-shaped graded area had been observed in historical aerial photographs of the northwestern portion of the site, prior to the site visit. ESSW personnel attempted to locate this feature onsite, but no evidence of the graded area was observed during the site visit.

2.3 Site Vicinity

The site vicinity consisted of a mix of undeveloped and residential properties. Undeveloped native desert was to the north, east, southeast, and west of the site. A residential property was located directly south of the site beyond Pierson Boulevard and additional residential properties were located southwest of the site beyond Pierson Boulevard. A system of gravel roads was also noted south of the site beyond Pierson Boulevard. Aside from the small accumulations of debris on the site, evidence was not observed that the site was adversely affected by activities on properties in the site vicinity.

2.4 Geology and Hydrogeology

The site is located in the Coachella Valley of Southern California. The Coachella Valley is part of the tectonically active Salton Trough, which is a closed, internally draining basin bound by the San Jacinto and Santa Rosa Mountains to the southwest, the San Bernardino Mountains to the northwest, and the Little San Bernardino and Orocopia Mountains to the northeast and east. These mountain ranges, and the basement rock underlying the Coachella Valley, are primarily composed of granitic and metamorphic rock. Within the Coachella Valley, the basement complex is overlain by a series of unconsolidated and semi-consolidated continental clastic sediments eroded from the surrounding mountain ranges, lacustrine deposits of ancient Lake Cahuilla, and wind-blown sand deposited in the active blow-sand area of Riverside County (DWR, 1964). The site is located on continental clastic sediments eroded from the mountains west of the site.

The northwest trending San Andreas fault zone is the major geologic feature of the Coachella Valley. The Banning, Mission Creek, and Garnet Hill faults, which are part of the San Andreas fault system, divide the Coachella Valley into four distinct hydrogeologic subbasins. Most subbasins are further divided into subareas, based on either the type of water-bearing formation, water quality, areas of confined groundwater, forebay areas, groundwater divides, or surface water divides. The site is located within the Mission Creek subbasin. This subbasin is bound by the Banning fault to the south, the Mission Creek fault to the north and east, the Indio Hills to the southeast, and the San Bernardino Mountains to the west. The Indio Hills and the San Bernardino Mountains are both considered to not be water-bearing. The Mission Creek fault and Banning fault are both barriers to groundwater flow, so that significant differences in groundwater levels are present on opposite sides of these faults. The alluvial materials within the Mission Creek subbasin are primarily heterogeneous alluvial fan deposits exhibiting little sorting. Groundwater within this subarea generally flows in a southerly direction along a relatively flat gradient. The depth to groundwater in this subbasin ranges from flowing wells to 425 feet (DWR, 1964).

The depth to groundwater at the site was evaluated by contacting the Mission Springs Water District (MSWD). Mr. Gary Brockman of the MSWD indicated the depth to groundwater in a well located at the spreading basin approximately one mile north of the site was 530 feet when measured in the summer of 2003.

3.0 HISTORICAL INFORMATION

Information regarding the history of the site was obtained from historical aerial photographs, topographic maps, Munger Oil maps, and persons familiar with the site. The results of this research are summarized below.

3.1 Aerial Photographs

ESSW aerial photo archives were reviewed to evaluate the history of the site and vicinity, with particular attention to indications of the potential use, storage, or disposal of hazardous materials. Seven sets of photographs for the years 1970, 1974, 1980, 1984, 1990, 1995, and 2000 were reviewed (see references). Our interpretations of these photographs are presented below:

- In 1970, the site was undeveloped, native desert. Drainage channels crossed the site in a southeasterly direction. A dirt power-line road was visible along the eastern border of the site, and Worsley Road and Pierson Boulevard were paved, two lane roads.

In the vicinity, the properties to the north, east, southeast, and west were also undeveloped, native desert. The property to the south had been graded and dirt roads were visible. Highway 62 was visible to the west, ¼ mile beyond Worsley Road.

- In 1974, the site and vicinity appeared unchanged.
- In 1980, the site was still undeveloped. In the vicinity, six trailers were visible on the property to the south beyond Pierson Boulevard. Two additional structures were visible on properties to the southwest beyond Pierson Boulevard.
- In 1984, a diamond shaped area in the northeastern portion of the property had been graded and fenced. Three small items were visible in this area, possibly trailers, but the items were too small to positively identify. The remainder of the site appeared unchanged.

In the vicinity, additional structures were visible on the properties to the south beyond Pierson Boulevard. The remainder of the vicinity appeared unchanged.

- In 1990, the site and vicinity appeared unchanged. The diamond-shaped area was still in use.
- By 1995, the diamond-shaped area in the northeastern portion of the site appeared to no longer be in use; it was not as visible and the small items noted in the 1984 photograph had been removed from the site.

In the vicinity, the trailers on the property to the south beyond Pierson Boulevard had been moved to the eastern half of that property. The remainder of the vicinity appeared unchanged.

- In 2000, the diamond shaped area was less distinct. The remainder of the site and vicinity appeared unchanged.

3.2 Topographic Maps

Topographic maps produced by the U.S.G.S. were reviewed for information concerning the development history of the site. The 7.5-minute *Desert Hot Springs, California* Quadrangle, dated 1955 and photo-revised in 1972, was reviewed. This map depicts the site and vicinity as undeveloped land, with one structure and a system of graded roads located southwest and south of the site beyond Pierson Boulevard.

3.3 Munger Oil Maps

The Munger Oil map book was reviewed for information regarding historic oil-well drilling activities near the site. The map book did not depict oil wells having been drilled within 1 mile of the site. Approximately two miles south of the site is Western Development Co. Well 27-975, which is depicted as "uncompleted abandoned."

3.4 Interviews

Information regarding the prior owners of the site was not provided. Other interviews were not conducted.

4.0 AGENCY INFORMATION

4.1 Agency Database Search Report

A report summarizing the information available from regulatory agencies regarding sites that generate, store, use, and/or have released hazardous materials was obtained from Track Info Services LLC (aka Environmental FirstSearch or FirstSearch), a firm that specializes in maintaining a database of this type of information. The publications referenced by FirstSearch are listed in the FirstSearch report, which is presented in Appendix C. The search radii used for each list were in accordance with ASTM guidelines as measured from the property boundary. The information obtained during this review is summarized below.

- The site is not listed in the FirstSearch report, and no sites were reported within the search radii.
- FirstSearch lists 29 sites as unmapped, due to vague address listings or the inability of the automated search system to identify the location of the release site. A review of these listings identified two of them to be within the search radii. Both sites were for Emergency Response System Notification (ERNS) incidents on Pierson Boulevard east of Highway 62 (Search I.D. 16 and 17). One listing was for a jet fuel spill (Search I.D. 17) and the other listing was for a 10-gallon PCP spill (Search I.D. 16). Caltrans conducted the cleanup of the jet fuel and the Department of Health and the Roadway Bureau of Land Management responded to the PCP spill. Details regarding the media affected were not available. Both spills occurred in August 1994. Due to the age of the incidents, these listings are not considered to be a threat to the subject site.

4.2 Agency Interviews

Ms. Linda Shurlow with the Riverside County Department of Environmental Health was contacted regarding known problems at the site or in the site vicinity. Ms. Shurlow indicated that she was not aware of any problems at the site or in the site vicinity.

Mr. Oscar Hendrix of Caltrans was contacted concerning the fuel spill discussed in Section 4.1. Mr. Hendrix stated that the volume of fuel involved was 6,700 gallons, not 67,000 gallons as indicated by the database review. The bulk of the fuel remained in the tanker and less than 500 gallons spilled from the tanker and ran off the road to the east. A "stinger" operation was used to drill a hole in the tanker, transfer the fuel to another tanker, and remove the fuel from the site. A Fire Department Crew was present for this operation. Riverside County Department of Environmental Health (RCDEH) oversight of the clean-up operation was also present. The clean-up activities were conducted by a subcontractor to the trucking company. Approximately 100 yards (three truckloads) of soil were removed off-site. RCDEH signed off and declared the clean-up complete.

5.0 SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This report presents the findings of the Phase I Environmental Site Assessment (ESA) conducted by Earth Systems Southwest (ESSW) for the Olympus / Stoneridge Project Annex along Worsley Road north of Pierson Boulevard, Desert Hot Springs, Riverside County, California. The purpose of this assessment was to evaluate the potential for the presence of soil or groundwater contamination because of past use, handling, storage, or disposal of hazardous materials or petroleum products on or near the subject property. The scope of work for this evaluation included a reconnaissance of the site and vicinity, a review of the history of the site, and a review of information obtained from regulatory agencies regarding the use, storage, generation, or release of hazardous materials on the site or in the site vicinity. Based on this review, ESSW presents the following summary and conclusions:

1. The site was observed to consist of undeveloped, native desert. Mature native shrubs and smaller vegetation covered the entire site, some of which appeared to have been burned in a fire. The remainder of the vegetation did not show unusual signs of stress. A dirt power-line road ran along the eastern border of the site and Worsley Road crossed the northern portion of the site. Small accumulations of debris consisting of clothing, rags, aluminum ducting, carpet, an appliance, wooden debris, cotton stuffing, and metal food containers were noted primarily along the power-line road and along Worsley Road. The debris does not appear to contain hazardous materials. Further investigations regarding these materials do not appear warranted.
2. A diamond shaped graded area was noted in the historical aerial photographs in 1984 and 1990, but was abandoned by 1995. The area was not observed during the site visit. Evidence was not observed that the site was adversely affected by the area or its contents.
3. The site vicinity consists of undeveloped and residential properties. Evidence was not observed that the site was adversely affected by activities in the site vicinity.

4. The site was not identified in the agency database review. The statuses of the two sites identified in the agency database review are "cleaned up," therefore; these sites do not appear to pose a risk to the subject site.
5. Further investigations do not appear warranted.

-o0o-

REFERENCES

Brockman, Gary, Mission Springs Water District, phone interview, January 15, 2004.

California Department of Water Resources (DWR), 1964, *Bulletin Number 108 – Coachella Valley Investigation*, July 1964

ESSW, aerial photograph archives, as listed below:

Date	Source/Flight	Frame	Approximate Scale
03-14-70	RCFCD	21 & 22	1" = 3,000'
05-24-74	RCFCD	122 & 123	1" = 2,000'
01-23-80	RCFCD	123 & 124	1" = 2,100'
02-23-84	RCFCD	1673 & 1674	1" = 1,600'
01-28-90	RCFCD	3-64 & 3-65	1" = 1,700'
02-06-95	RCFCD	3-60 & 3-61	1" = 1,700'
01-29-00	RCFCD	3-63 & 3-64	1" = 1,600'

ESSW, Report of Phase I Environmental Site Assessment Olympus Project, File No.: 09366-02, Document No.: 04-01-780, Dated January 27, 2004.

Munger Map Book, 1997, *California - Alaska Oil and Gas Fields*.

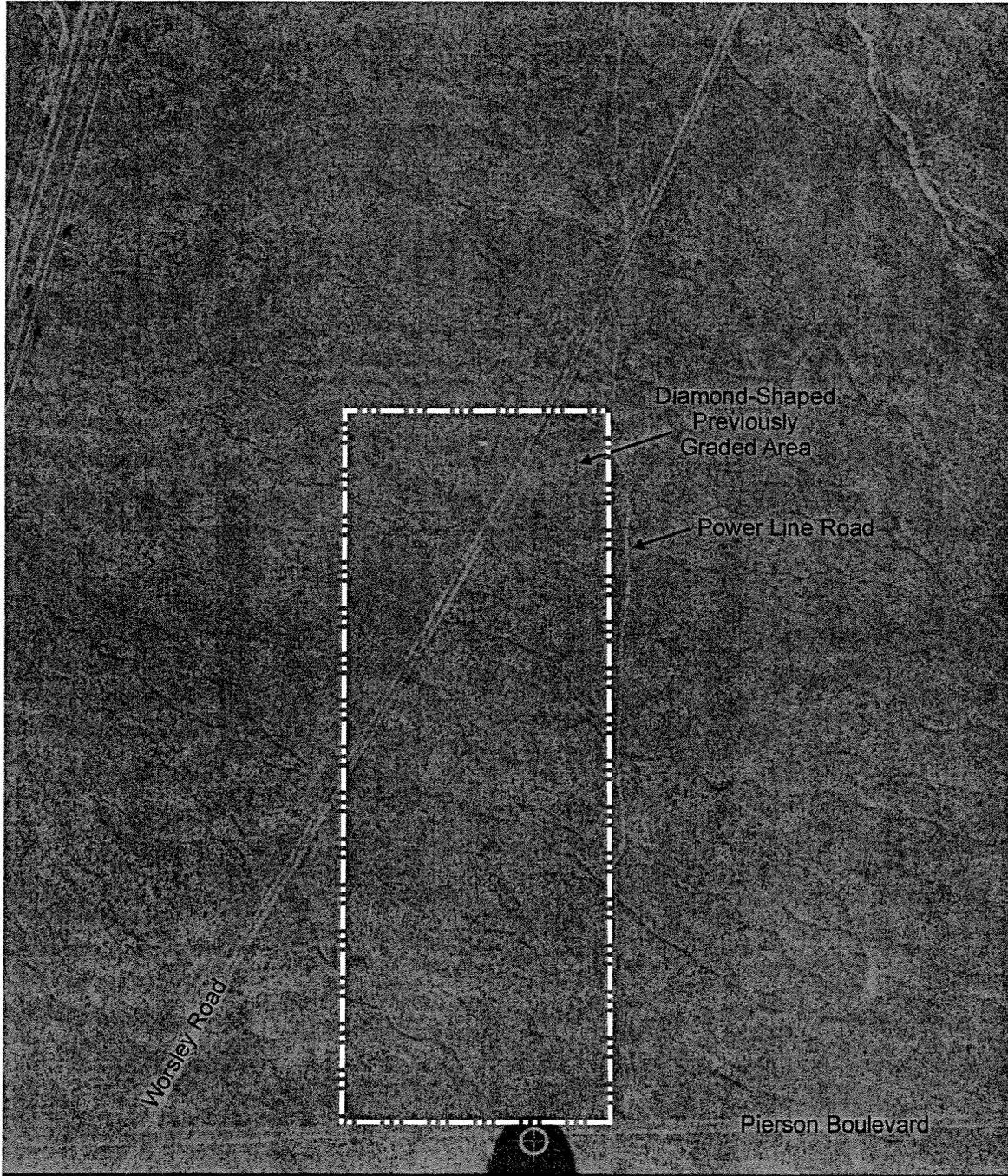
Shurlow, Linda, Riverside County Department of Environmental Health, phone interview, May 7, 2004.

Track Info Services LLC, *Environmental FirstSearch Report*, dated May 3, 2004.

United States Geologic Survey, 7.5 minute *Desert Hot Springs, California* Quadrangle, 1955, photo-revised 1972.

APPENDIX A

FIGURES

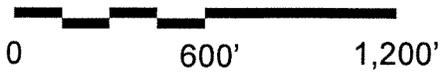


Reference: CVWD Aerial Photograph, dated 1-29-00

LEGEND

----- Site Boundary

Approximate Scale: 1" = 600'



**Figure 2
Site Layout**

Olympus / Stoneridge Project Annex
Desert Hot Springs, Riverside County, California



**Earth Systems
Southwest**

05/20/04

09366-04

APPENDIX B
PHOTOGRAPHS

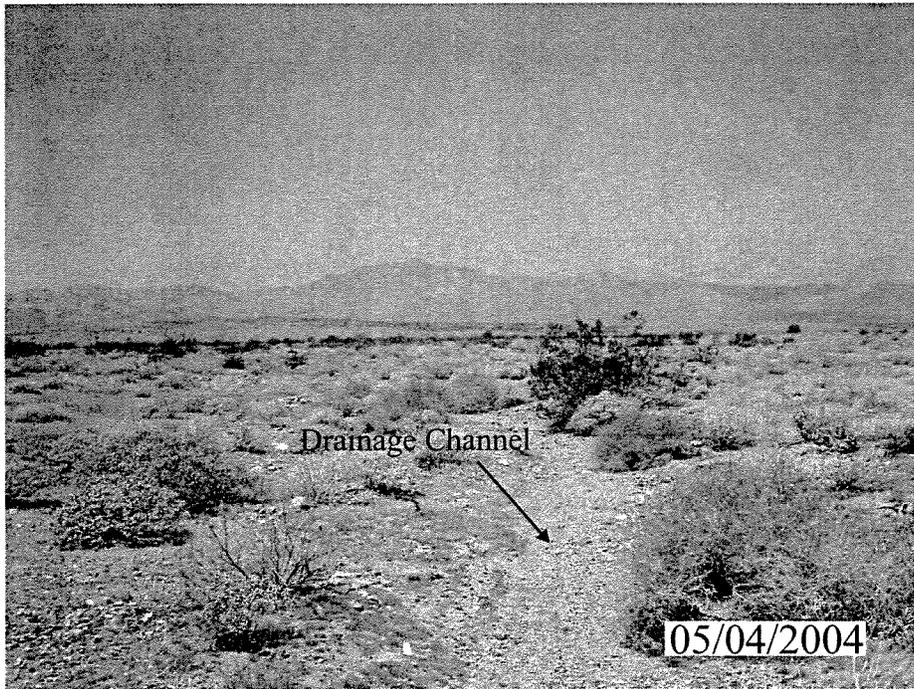


Photo 1. Typical view of the site, facing northwest. Note the drainage channel located in the foreground.



Photo 2. Clothing and aluminum debris located along the power line road along the eastern border of the site.





Photo 3. Wood, carpet and appliance debris located along Worsley Road.



Photo 4. Vehicle tracks and boreholes associated with an ESSW geotechnical study.



APPENDIX C
AGENCY DATABASE SEARCH REPORT

TRACK ► INFO SERVICES, LLC

Environmental FirstSearch™ Report

TARGET PROPERTY:

EAST OF WORSLEY ROAD

DESERT HOT SPRINGS CA 92241

Job Number: 09366-04

PREPARED FOR:

Earth Systems

79-811 B Country Club Drive

Bermuda Dunes, CA 92201

05-03-04



Tel: (323) 664-9981

Fax: (323) 664-9982

**Environmental FirstSearch
Search Summary Report**

**Target Site: EAST OF WORSLEY ROAD
DESERT HOT SPRINGS CA 92241**

FirstSearch Summary

Database	Sel	Updated	Radius	Site	1/8	1/4	1/2	1/2>	ZIP	TOTALS
NPL	Y	04-08-04	1.00	0	0	0	0	0	0	0
CERCLIS	Y	02-09-04	0.50	0	0	0	0	-	0	0
NFRAP	Y	02-09-04	0.12	0	0	-	-	-	0	0
RCRA TSD	Y	02-09-04	0.50	0	0	0	0	-	0	0
RCRA COR	Y	02-09-04	1.00	0	0	0	0	0	0	0
RCRA GEN	Y	02-09-04	0.25	0	0	0	-	-	4	4
RCRA NLR	Y	02-09-04	0.12	0	0	-	-	-	1	1
ERNS	Y	12-31-03	0.12	0	0	-	-	-	12	12
State Sites	Y	03-02-04	1.00	0	0	0	0	0	0	0
Spills-1990	Y	07-01-03	0.12	0	0	-	-	-	0	0
SWL	Y	03-08-04	0.50	0	0	0	0	-	2	2
Permits	Y	02-11-04	0.12	0	0	-	-	-	0	0
Other	Y	03-02-04	0.12	0	0	-	-	-	0	0
REG UST/AST	Y	03-17-04	0.25	0	0	0	-	-	9	9
Leaking UST	Y	03-08-04	0.50	0	0	0	0	-	1	1
- TOTALS -				0	0	0	0	0	29	29

Notice of Disclaimer

Due to the limitations, constraints, inaccuracies and incompleteness of government information and computer mapping data currently available to TRACK Info Services, certain conventions have been utilized in preparing the locations of all federal, state and local agency sites residing in TRACK Info Services's databases. All EPA NPL and state landfill sites are depicted by a rectangle approximating their location and size. The boundaries of the rectangles represent the eastern and western most longitudes; the northern and southern most latitudes. As such, the mapped areas may exceed the actual areas and do not represent the actual boundaries of these properties. All other sites are depicted by a point representing their approximate address location and make no attempt to represent the actual areas of the associated property. Actual boundaries and locations of individual properties can be found in the files residing at the agency responsible for such information.

Waiver of Liability

Although TRACK Info Services uses its best efforts to research the actual location of each site, TRACK Info Services does not and can not warrant the accuracy of these sites with regard to exact location and size. All authorized users of TRACK Info Services's services proceeding are signifying an understanding of TRACK Info Services's searching and mapping conventions, and agree to waive any and all liability claims associated with search and map results showing incomplete and or inaccurate site locations.

**Environmental FirstSearch
Site Information Report**

Request Date: 05-03-04
Requestor Name: Katie Jones
Standard: ASTM

Search Type: AREA
Job Number: 09366-04

TARGET ADDRESS: EAST OF WORSLEY ROAD
 DESERT HOT SPRINGS CA 92241

Demographics

Sites: 29	Non-Geocoded: 29	Population: NA
Radon: NA		

Site Location

	<u>Degrees (Decimal)</u>	<u>Degrees (Min/Sec)</u>	<u>UTMs</u>
Longitude:	-116.581744	-116:34:54	Easting: 538641.859
Latitude:	33.965022	33:57:54	Northing: 3758162.158
			Zone: 11

Comment

Comment:

Additional Requests/Services

Adjacent ZIP Codes: 1 Mile(s)					Services:	
ZIP Code	City Name	ST	Dist/Dir	Sel	Requested?	Date
92240	ESERT HOT SPRINGS	CA	0.00 --	Y	Sanborns	No
92282	WHITE WATER	CA	0.22 NW	Y	Aerial Photographs	No
					Topographical Maps	No
					City Directories	No
					Title Search	No
					Municipal Reports	No
					Online Topos	No

***Environmental FirstSearch
Selected Sites Summary Report***

TARGET SITE: EAST OF WORSLEY ROAD
DESERT HOT SPRINGS CA 92241

JOB: 09366-04

TOTAL: 29 **GEOCODED:** 0 **NON GEOCODED:** 29 **SELECTED:** 2

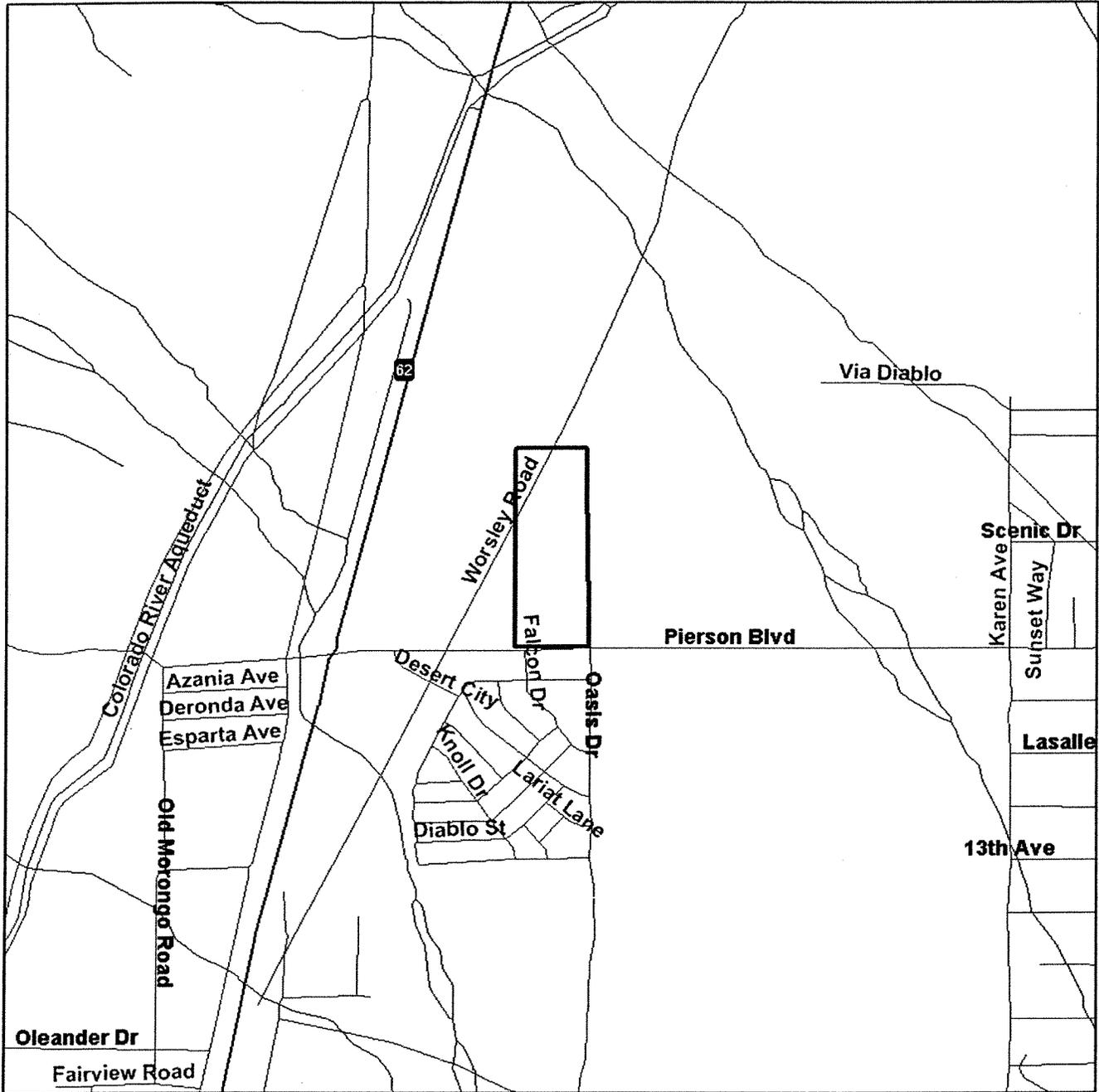
ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	Map ID
17	ERNS	401085/HIGHWAY RELATED	EASTBOUND HWY 62, EAST OF PIER DESERT HOT SPR CA 92240	NON GC	
16	ERNS	UNKNOWN 397542/OFFSHORE - SPILL OFF	PIERSON ACROSS OF HWY 62 DESERT HOT SPR CA 92240	NON GC	



Environmental FirstSearch
 1 Mile Radius from Area
 ASTM Map: NPL, RCRACOR, STATE Sites



EAST OF WORSLEY ROAD , DESERT HOT SPRINGS CA 92241



Source: 1999 U.S. Census TIGER Files

- Area Polygon
 - Identified Site, Multiple Sites, Receptor   
 - NPL, Solid Waste Landfill (SWL) or Hazardous Waste 
 - Railroads
- Black Rings Represent 1/4 Mile Radii; Red Ring Represents 500 ft. Radius



Environmental FirstSearch

.5 Mile Radius from Area
ASTM Map: CERCLIS, RCRATSD, LUST, SWL



EAST OF WORSLEY ROAD , DESERT HOT SPRINGS CA 92241



Source: 1999 U.S. Census TIGER Files

- Area Polygon 
- Identified Site, Multiple Sites, Receptor   
- NPL, Solid Waste Landfill (SWL) or Hazardous Waste 
- Railroads 

Black Rings Represent 1/4 Mile Radii; Red Ring Represents 500 ft. Radius

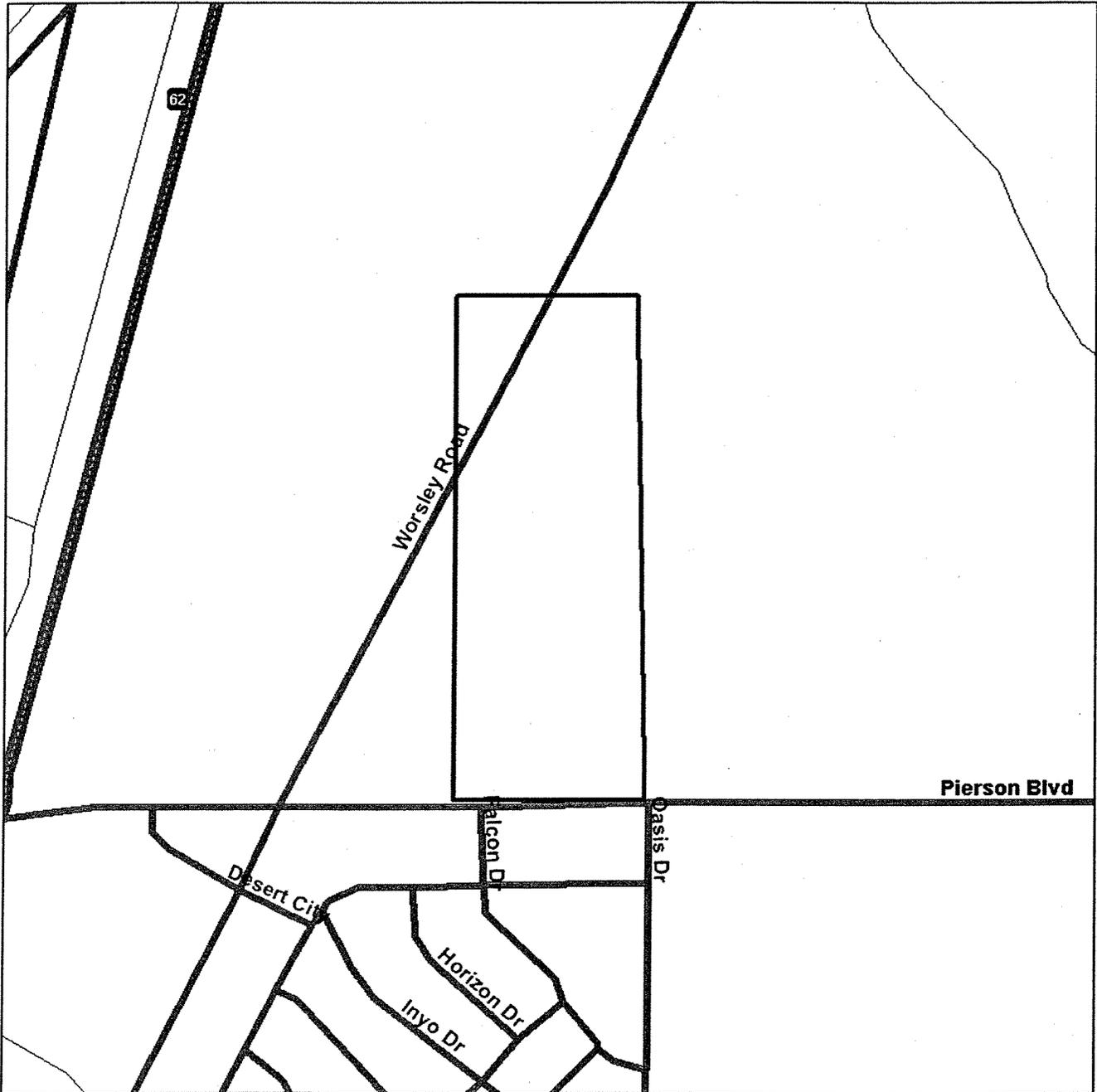


Environmental FirstSearch

.25 Mile Radius from Area
ASTM Map: RCRA GEN, ERNS, UST



EAST OF WORSLEY ROAD , DESERT HOT SPRINGS CA 92241



Source: 1999 U.S. Census TIGER Files

- Area Polygon
- Identified Site, Multiple Sites, Receptor
- NPL, Solid Waste Landfill (SWL) or Hazardous Waste
- Railroads

Black Rings Represent 1/4 Mile Radii; Red Ring Represents 500 ft. Radius

**Environmental FirstSearch
Federal Databases and Sources**

ASTM Databases:

CERCLIS: *Comprehensive Environmental Response Compensation and Liability Information System.* The EPA's database of current and potential Superfund sites currently or previously under investigation. Source: Environmental Protection Agency.

Updated quarterly.

CERCLIS-NFRAP (Archive): *Comprehensive Environmental Response Compensation and Liability Information System Archived Sites.* The Archive designation means 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). 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.

Updated quarterly.

ERNS: *Emergency Response Notification System.* The EPA's database of emergency response actions. Source: Environmental Protection Agency. Data since January, 2001, has been received from the National Response Center as the EPA no longer maintains this data.

Updated quarterly.

FINDS: *The Facility Index System.* The EPA's Index of identification numbers associated with a property or facility which the EPA has investigated or has been made aware of in conjunction with various regulatory programs. Each record indicates the EPA office that may have files on the site or facility. Source: Environmental Protection Agency.

Updated semi-annually.

NPL: *National Priority List.* The EPA's list of confirmed or proposed Superfund sites. Source: Environmental Protection Agency.

Updated quarterly.

RCRIS: *Resource Conservation and Recovery Information System.* The EPA's database of registered hazardous waste generators and treatment, storage and disposal facilities. Included are RAATS (RCRA Administrative Action Tracking System) and CMEL (Compliance Monitoring & Enforcement List). Source: Environmental Protection Agency.

RCRA TSD: *Resource Conservation and Recovery Information System Treatment, Storage, and Disposal Facilities.* The EPA's database of RCRIS sites which treat, store, dispose, or incinerate hazardous waste. This information is also reported in the standard RCRIS detailed data.

ASTM Databases (continued):

RCRA COR: *Resource Conservation and Recovery Information System Corrective Action Sites.* The EPA's database of RCRIS sites with reported corrective action. This information is also reported in the standard RCRIS detailed data.

RCRA GEN: *Resource Conservation and Recovery Information System Large and Small Quantity Generators.* The EPA's database of RCRIS sites that create more than 100kg of hazardous waste per month or meet other RCRA requirements. Included are RAATS (RCRA Administrative Action Tracking System) and CMEL (Compliance Monitoring & Enforcement List).

RCRA NLR: *Resource Conservation and Recovery Information System sites No Longer Regulated.* The EPA's database of RCRIS sites that create less than 100kg of hazardous waste per month or do not meet other RCRA requirements.

All RCRA databases are Updated quarterly

Environmental FirstSearch Federal Databases and Sources

Non-ASTM Databases:

HMIRS: Hazardous Materials Incident Response System. This database contains information from the US Department of Transportation regarding materials, packaging, and a description of events for tracked incidents.

Updated quarterly.

NCDB: National Compliance Database. The National Compliance Data Base System (NCDB) tracks regional compliance and enforcement activity and manages the Pesticides and Toxic Substances Compliance and Enforcement program at a national level. The system tracks all compliance monitoring and enforcement activities from the time an inspector conducts and inspection until the time the inspector closes or the case settles the enforcement action. NCDB is the national repository of the 10 regional and Headquarters FIFRA/TSCA Tracking System (FTTS). Data collected in the regional FTTS is transferred to NCDB to support the need for monitoring national performance of regional programs.

Updated quarterly

NPDES: National Pollution Discharge Elimination System. The EPA's database of all permitted facilities receiving and discharging effluents. Source: Environmental Protection Agency.

Updated semi-annually.

NRDB: National Radon Database. The NRDB was created by the EPA to distribute information regarding the EPA/State Residential Radon Surveys and the National Residential Radon Survey. The data is presented by zipcode in Environmental FirstSearch Reports. Source: National Technical Information Service (NTIS)

Updated Periodically

Nuclear: The Nuclear Regulatory Commission's (NRC) list of permitted nuclear facilities.

Updated Periodically

PADS: PCB Activity Database System

The EPA's database PCB handlers (generators, transporters, storers and/or disposers) that are required to notify the EPA, the rules being similar to RCRA. This database indicates the type of handler and registration number. Also included is the PCB Transformer Registration Database.

Updated semi-annually.

Receptors: 1995 TIGER census listing of schools and hospitals that may house individuals deemed sensitive to environmental discharges due to their fragile immune systems.

Updated Periodically

Non-ASTM Databases (continued):

RELEASES: *Air and Surface Water Releases.* A subset of the EPA's ERNS database which have impacted only air or surface water.

Updated semi-annually.

Soils: This database includes the State Soil Geographic (STATSGO) data for the conterminous United States. It contains information regarding soil characteristics such as water capacity, percent clay, organic material, permeability, thickness of layers, hydrological characteristics, quality of drainage, surface, slope, liquid limit, and the annual frequency of flooding. Source: United States Geographical Survey (USGS).

Updated quarterly

TRIS: *Toxic Release Inventory System.* The EPA's database of all facilities that have had or may be prone to toxic material releases. Source: Environmental Protection Agency.

Updated semi-annually.

**ENVIRONMENTAL FIRST SEARCH
CALIFORNIA DATABASES (DB) AND SOURCES**

CAL SITES: DB TYPE = ST (STATE SITES)

Source: The CAL EPA, Depart. Of Toxic Substances Control
Phone: (916) 323-3400

The CAL EPA Department of Toxic Substances Control (DTSC) maintains a database of information on properties (or sites) in California where hazardous substances have been released, or where the potential for such release exists. The types of properties in the CALSITES database are categorized as: Annual Work Plan, Backlogged Properties, Certified / De-listed Sites, No Further Action, Preliminary Endangerment Assessment in Progress, Preliminary Endangerment Assessment Required, Removal Action Required, Expedited Remedial Action Program, Voluntary Cleanup Program, Deed Restricted Properties, and Referred Properties. For more information on individual sites call the number listed above.

CORTESE: DB TYPE = ST (STATE SITES)

Source: The CAL EPA, Department of Toxic Substances Control
Phone: (916) 445-6532

Pursuant to Government Code Section 65962.5, the Hazardous Waste and Substances Sites List has been compiled by Cal/EPA, Hazardous Materials Data Management Program. The CAL EPA Dept. of Toxic Substances Control compiles information from subsets of the following databases to make up the CORTESE list:

1. The Dept. of Toxic Substances Control; contaminated or potentially contaminated hazardous waste sites listed in the CAL Sites database. Formerly known as ASPIS are included (CALSITES formerly known as ASPIS).
2. The California State Water Resources Control Board; listing of Leaking Underground Storage Tanks are included (LTANK)
3. The California Integrated Waste Management Board; Sanitary Landfills which have evidence of groundwater contamination or known migration of hazardous materials (formerly WB-LF, now AB 3750).

Note: Track Info Services collects each of the above data sets individually and lists them separately in the following First Search categories in order to provide more current and comprehensive information: CALSITES: SPL, LTANK: LUST, WB-LF: SWL

SWIS SOLID WASTE INFORMATION SYSTEM: DB TYPE = SW

(SOLID WASTE RELATED SITES)

Source: The Integrated Waste Management Board
Phone: (916) 255-2331

The California Integrated Waste Management Board maintains a database on solid waste facilities, operations, and disposal sites throughout the state of California. The types of facilities found in this database include landfills, transfer stations, material recovery facilities, composting sites, transformation facilities, waste tire sites, and closed disposal sites. For more information on individual sites call the number listed above.

Note: This database contains poor site location information for many sites in the First Search reports; therefore, it may not be possible to locate or plot some sites in First Search reports.

WMUDS: DB TYPE = SW (SOLID WASTE RELATED SITES)

Source: The State Water Resources Control Board
Phone: (916) 227-4365

The State Water Resources Control Board maintained the Waste Management Unit Database System (WMUDS). It is no longer updated. It tracked management units for several regulatory programs related to waste management and its potential impact on groundwater. Two of these programs (SWAT & TPCA) are no longer on-going regulatory programs as described below. Chapter 15 (SC15) is still an on-going regulatory program and information is updated periodically but not to the WMUDS database. The WMUDS System contains information from the following agency databases: Facility, Waste Management Unit (WMU), Waste Discharger System (WDS), SWAT, Chapter 15, TPCA, RCRA, Inspections, Violations, and Enforcement's.

Note: This database contains poor site location information for many sites in the First Search reports; therefore, it may not be possible to locate or plot some sites in First Search reports.

ORANGE COUNTY LANDFILLS: DB TYPE = SW (SOLID WASTE RELATED SITES)

Source: Orange County Health Dept.
Phone: (714) 834-3536

LUSTIS: DB TYPE = LU (LEAKING UNDERGROUND STORAGE TANKS)

Source: The State Water Resources Control Board
Phone: (916) 227-4416

The State Water Resources Control Board maintains a database of sites with confirmed or unconfirmed leaking underground storage tanks. Information for this database is collected from the states regional boards quarterly and integrated with this database.

SAN DIEGO COUNTY LEAKING TANKS: DB TYPE = LU

(LEAKING UNDERGROUND STORAGE TANKS)

Source: San Diego County Dept. of Environmental Health
Phone: (619) 338-2242

Maintains a database of sites with confirmed or unconfirmed leaking underground storage tanks within its HE17/58 database. For more information on a specific file call the HazMat Duty Specialist at phone number listed above.

SLIC REGIONS 1 - 9: DB TYPE = SP (SPILLS-90)

Source: The CAL EPA Regional Water Quality Control Boards 1 - 9

The California Regional Water Quality Control Boards maintain report of sites that have records of spills, leaks, investigation, and cleanups. For phone number listings of departments within each region visit their web sites at: <http://www.swrcb.ca.gov/regions.html>

SAN DIEGO COUNTY HE17 PERMITS: DB TYPE = PE (PERMITS)

Source: The San Diego County Depart. Of Environmental Health
Phone: (619) 338-2211

The HE17/58 database tracks establishments issued permits and the status of their permits in relation to compliance with federal, state, and local regulations that the County oversees. It tracks if a site is a hazardous waste generator, TSD, gas station, has underground tanks, violations, or unauthorized releases. For more information on a specific file call the HazMat Duty Specialist at the phone number listed above.

**SAN BERNARDINO COUNTY HAZARDOUS MATERIALS PERMITS: DB TYPE = PE
(PERMITS)**

Source: San Bernardino County Fire Dept.
Phone: (909) 387-3080

Handlers and Generators Permit Information Maintained by the Hazardous Materials Div.

**LA COUNTY SITE MITIGATION COMPLAINT CONTROL LOG: DB TYPE = OT
(OTHER UNIQUE DATABASES)**

Source: The Los Angeles County Hazardous Materials Division
Phone: (323) 890-7806

The County of Los Angeles Public Health Investigation Compliant Control Log

**ORANGE COUNTY INDUSTRIAL SITE CLEANUPS: DB TYPE = OT
(OTHER UNIQUE DATABASES)**

Source: Orange County Environmental Health Agency
Phone: (714) 834-3536

AST ABOVEGROUND STORAGE TANKS: DB TYPE = US (UNDERGROUND STORAGE TANKS)

Source: The State Water Resources Control Board
Phone: (916) 227-4364

The Above Ground Petroleum Storage Act became State Law effective January 1, 1990. In general, the law requires owners or operators of AST's with petroleum products to file a storage statement and pay a fee by July 1, 1990 and every two years thereafter, take specific action to prevent spills, and in certain instances implement a groundwater monitoring program. This law does not apply to that portion of a tank facility associated with the production oil and regulated by the State Division of Oil and Gas of the Dept. of Conservation.

SWEEPS / FIDS STATE REGISTERED UNDERGROUND STORAGE TANKS: DB TYPE = US

Source: CAL EPA Dept of Toxic Substances Control
Phone: (916) 227-4404

Until 1994 the State Water Resources Control Board maintained a database of registered underground storage tanks statewide referred to as the SWEEPS System. The SWEEPS UST information was integrated with the CAL EPA's Facility Index System database (FIDS) which is a master index of information from numerous California agency environmental databases. That was last updated in 1994. Track Info Services included the UST information from the FIDS database in its First Search reports for historical purposes to help its clients identify where tanks may possibly have existed. For more information on specific sites from individual paper files archived at the State Water Resources Control Board call the number listed above.

CUPA DATABASES & SOURCES
(DB TYPE = US (UNDERGROUND STORAGE TANKS))

DEFINITION OF A CUPA: A Certified Unified Program Agency (CUPA) is a local agency that has been certified by the CAL EPA to implement six state environmental programs within the local agency's jurisdiction. These can be a county, city, or JPA (Joint Powers Authority). This program was established under the amendments to the California Health and Safety Code made by SB 1082 in 1994.

A Participating Agency (PA) is a local agency that has been designated by the local CUPA to administer one or more Unified Programs within their jurisdiction on behalf of the CUPA. A Designated Agency (DA) is an agency that has not been certified by the CUPA but is the responsible local agency that would implement the six unified programs until they are certified.

Please Note: Track Info Services, LLC collects and maintains information regarding Underground Storage Tanks from majority of the CUPAS and Participating Agencies in the State of California. These agencies typically do not maintain nor release such information on a uniform or consistent schedule; therefore, currency of the data may vary. Please look at the details on a specific site with a UST record in the First Search Report to determine the actual currency date of the record as provided by the relevant agency. Numerous efforts are made on a regular basis to obtain updated records.

ALAMEDA COUNTY CUPA'S

- * County of Alameda Department of Environmental Health
- * Cities of Berkeley, Fremont, Hayward, Livermore / Pleasanton, Newark, Oakland, San Leandro, Union

ALPINE COUNTY CUPA

- * Health Department (Only updated by agency annually)

AMADOR COUNTY CUPA

- * County of Amador Environmental Health Department

BUTTE COUNTY CUPA

- * County of Butte Environmental Health Division (Only updated by agency biannually)

CALAVERAS COUNTY CUPA

- * County of Calaveras Environmental Health Department

COLUSA COUNTY CUPA

- * Environmental Health Dept.

CONTRA COSTA COUNTY CUPA

- * Hazardous Materials Program

DEL NORTE COUNTY CUPA (US)

- * Department of Health and Social Services

EL DORADO COUNTY CUPA'S

- * County of El Dorado Environmental Health - Solid Waste Div (Only updated by agency annually)
- * County of El Dorado EMD Tahoe Division (Only updated by agency annually)

FRESNO COUNTY CUPA

- * Haz. Mat and Solid Waste Programs

GLENN COUNTY CUPA

- * Air Pollution Control District

HUMBOLDT COUNTY CUPA (US)

- * Environmental Health Division

IMPERIAL COUNTY CUPA (US)

- * Department of Planning and Building

INYO COUNTY CUPA (US)

- * Environmental Health Department

KERN COUNTY CUPA (US)

- * County of Kern Environmental Health Department
- * City of Bakersfield Fire Department

KINGS COUNTY CUPA (US)

- * Environmental Health Services

LAKE COUNTY CUPA (US)

- * Division of Environmental Health

LASSEN COUNTY CUPA (US)

- * Department of Agriculture

LOS ANGELES COUNTY CUPA'S (US)

- * County of Los Angeles Fire Department
- * County of Los Angeles Environmental Programs Division
- * Cities of Burbank, El Segundo, Glendale, Long Beach/Signal Hill, Los Angeles, Pasadena, Santa Fe Springs, Santa Monica, Torrance, Vernon

MADERA COUNTY CUPA (US)

- * Environmental Health Department

MARIN COUNTY CUPA (US)

- * County of Marin Office of Waste Management
- * City of San Rafael Fire Department

MARIPOSA COUNTY CUPA (US)

- * Health Department

MENDOCINO COUNTY CUPA (US)

- * Environmental Health Department

MERCED COUNTY CUPA (US)

- * Division of Environmental Health

MODOC COUNTY CUPA (US)

- * Department of Agriculture

MONO COUNTY CUPA (US)

- * Health Department

MONTEREY COUNTY CUPA (US)

- * Environmental Health Division

NAPA COUNTY CUPA (US)

- * Hazardous Materials Section

NEVADA COUNTY CUPA (UST)

- * Environmental Health Department

ORANGE COUNTY CUPA'S (US)

- * County of Orange Environmental Health Department
- * Cities of Anaheim, Fullerton, Orange, Santa Ana
- * County of Orange Environmental Health Department

PLACER COUNTY CUPA (US)

- * County of Placer Division of Environmental Health Field Office
- * Tahoe City
- * City of Roseville Roseville Fire Department

PLUMAS COUNTY CUPA (UST)

- * Environmental Health Department

RIVERSIDE COUNTY CUPA (US)

- * Environmental Health Department

SACRAMENTO COUNTY (US)

- * County Environmental Mgmt Dept, Haz. Mat. Div.

SAN BENITO COUNTY CUPA (US)

- * City of Hollister Environmental Service Department

SAN BERNARDINO COUNTY CUPA'S (US)

- * County of San Bernardino Fire Department, Haz. Mat. Div.
- * City of Hesperia Hesperia Fire Prevention Department
- * City of Victorville Victorville Fire Department

SAN DIEGO COUNTY CUPA (US)

- * The San Diego County Dept. of Environmental Health HE 17/58

SAN FRANCISCO COUNTY CUPA (US)

- * Department of Public Health

SAN JOAQUIN COUNTY CUPA (US)

- * Environmental Health Division

SAN LUIS OBISPO COUNTY CUPA'S (US)

- * County of San Luis Obispo Environmental Health Division
- * City of San Luis Obispo City Fire Department

SAN MATEO COUNTY CUPA (US)

- * Environmental Health Department

SANTA BARBARA COUNTY CUPA (US)

- * Co Fire Dept Protective Services Div

SANTA CLARA COUNTY CUPA'S (US)

- * County of Santa Clara Hazardous Materials Compliance Division
- * Santa Clara Co Central Fire Prot. Dist. (Covers Campbell, Cupertino, Los Gatos, & Morgan Hill)
- * Cities of Gilroy, Milpitas, Mountain View, Palo Alto, San Jose Fire, Santa Clara, Sunnyvale

SANTA CRUZ COUNTY CUPA (US)

- * Environmental Health Department

SHASTA COUNTY CUPA (US)

- * Environmental Health Department

SIERRA COUNTY CUPA (US)

- * Health Department

SISKIYOU COUNTY CUPA (US)

- * Environmental Health Department

SONOMA COUNTY CUPA'S (US)

- * County of Sonoma Department Of Environmental Health
- * Cities of Healdsburg / Sebastopol, Petaluma, Santa Rosa

STANISLAUS COUNTY CUPA (US)

- * Dept. of Env. Rsrcs. Haz. Mat. Div.

SUTTER COUNTY CUPA (US)

- * Department of Agriculture

TEHAMA COUNTY CUPA (US)

- * Department of Environmental Health

TRINITY COUNTY CUPA (US)

- * Department of Health

TULARE COUNTY CUPA (US)

- * Environmental Health Department

TUOLUMNE COUNTY CUPA (US)

- * Environmental Health

VENTURA COUNTY CUPA'S (BWT UST'S & CERTIFIED UST'S)

- * County of Ventura Environmental Health Division
- * Cities of Oxnard, Ventura

YOLO COUNTY CUPA (US)

- * Environmental Health Department

YUBA COUNTY CUPA (US)

- * Yuba County of Emergency Services

Environmental FirstSearch
Street Name Report for Streets within .25 Mile(s) of Target Property

TARGET SITE: EAST OF WORSLEY ROAD
DESERT HOT SPRINGS CA 92241

JOB: 09366-04

Street Name	Dist/Dir	Street Name	Dist/Dir
Bandera St	0.19 S-		
Crest St	0.24 S-		
Desert-City	0.17 SW		
Falcon Dr	0.01 S-		
Gateway Blvd	0.08 S-		
Horizon Dr	0.09 SW		
Inyo Dr	0.16 SW		
Jasmine Dr	0.24 SW		
Oasis Dr	0.01 SE		
Pierson Blvd	0.00 --		
Worsley Rd	0.00 --		

APPENDIX D
QUALIFICATIONS STATEMENT

**EARTH SYSTEMS SOUTHWEST
QUALIFICATIONS STATEMENT FOR ENVIRONMENTAL WORK**

The principals of the Earth Systems companies have been consulting for an average of over 20 years, and the combined staff numbers nearly 100. Earth Systems' multidisciplinary professional staff has extensive experience with and education in chemistry, geology, geophysics, hydrogeology, mechanical engineering, civil engineering, mapping, soil science, drafting, and surveying. Our senior project and staff professionals include Certified Engineering Geologists, Registered Geologists, Registered Environmental Assessors and Professional Engineers. These professionals are highly qualified, holding an average of two registrations and/or certifications in their area of expertise. To continue to meet our commitment to technical expertise, Earth Systems considers it essential to train our personnel in the latest scientific advancements in assessment and mitigation techniques. This involves continuing education in the form of training seminars, literature reviews, and pertinent conferences to remain abreast of recent developments in this complex and rapidly changing field.

The attached résumés describe the credentials of the professionals who performed field, research, and/or report preparation work on the project.

Scot A. Stormo, RG, CHG, REA II

Vice President, Associate Geologist/Hydrogeologist

Years of Experience: 18

QUALIFICATIONS

Registered Geologist, State of California, 1990 (No. 4826)
Certified Hydrogeologist, State of California, 1995 (No. 204)
California Registered Environmental Assessor (REA II), 2001 (No. 20166)
California Registered Environmental Assessor (REA I), 1990 to 1995 (No. 2356)
EMS-I Training Course, Groundwater Flow and Transport Modeling with GMS, September 2002
OSHA 40-Hour HAZWOPER Course, Hazardous Materials and Site Investigations
(OSHA 29 CFR 1910.120[e]), 1987, 8-hour refresher courses taken annually
Association for Environmental Health and Sciences, March 2002
Short Course: Introduction to Environmental Forensics: Techniques and Applications
National Ground Water Association, 2000
Short Course: Geophysics for Environmental and Groundwater Applications
Princeton Groundwater, 1994
Short Course: Groundwater Pollution and Hydrology
MS, Geology, State University of New York at Stony Brook, 1984
BS, Geology, California Lutheran College, Thousand Oaks, California, 1981

PROFESSIONAL EXPERIENCE

1997 to present	Vice President Earth Systems Southwest, Bermuda Dunes
1991 to 1997	Senior Geologist Dames & Moore, Spokane, Washington and Ontario, California
1989 to 1991	Senior Project Geologist Exceltech, Inc., Irvine, California
1986 to 1989	Staff Geologist Leighton & Associates, Riverside, California
1985 to 1986	Consulting Geologist Epoch Well Logging, Ventura, California

Employed with Earth Systems' Bermuda Dunes office since 1997, Mr. Stormo is manager of our environmental services department. In this capacity, he directs all aspects of our environmental operations including performing water resource evaluations, and conducting investigations into the presence, source, and extent of hazardous materials and contaminants in soil and groundwater. Mr. Stormo has been providing geologic and hydrogeologic consulting services to a wide variety of clients since 1985. His involvement with contaminated sites has included performing numerous investigations related to landfills, leaking underground storage tanks, and properties of industrial, commercial, educational, residential, and agricultural usage. He has also been active in water supply and groundwater protection evaluations, providing advice to water supply organizations, Indian tribes, and governmental agencies. As a registered hydrogeologist, his expertise includes groundwater modeling and groundwater plume evaluations.

Scot A. Stormo, RG, CHG, REA II

Vice President, Associate Geologist/Hydrogeologist

HIGHLIGHTS OF RESPONSIBILITIES AND EXPERIENCE

- Conducts groundwater and surface water supply evaluations involving assessment of both quantity and quality.
- Develops watershed management, monitoring and protection strategies.
- Performs water quality monitoring of both surface water and groundwater resources.
- Conducts preliminary site assessments (Phase I) entailing site reconnaissance, historical research, regulatory agency records and database searches, aerial photograph review, and final report preparation.
- Performs site characterizations (Phase II) entailing subsurface exploration, sampling of soil and groundwater, chemical analyses of samples, evaluation of laboratory data, preparation of final report including recommendations for remediation.
- Conducts Preliminary Endangerment Assessments (PEAs) of proposed school sites, including planning and performing the field investigation, evaluating the laboratory data, and preparing the PEA report for DTSC review and approval.
- Designs and implements remediation programs such as groundwater monitoring and sampling; delineation of contaminant plumes; monitoring well installation and developments; in situ and above ground bioremediation systems; vapor extraction and soil venting systems; thermal/catalytic oxidation; and groundwater extraction, air stripping, activated carbon filtration, bioreactors.
- Conducts investigations of surficial contaminants such as lead, cadmium, chromium, zinc, copper and pesticides.
- Directs landfill investigations which include cover analysis and risk assessment.
- Performs risk evaluations and feasibility studies involving calculating mobility and potential impact of subsurface contaminants.
- Evaluates release scenarios using computer modeling and fate and transport simulations.
- Assesses and evaluates potential geologic hazards such as faults, liquefaction, and landslides.
- Provides expert witness and consultation services.

SELECT PROJECT EXPERIENCE

Water Resources Projects

Remote Mountain Community. Mr. Stormo evaluated the long-term use and availability of groundwater for a remote mountain community. Included a review of historic water levels and recharge rates, and identification of preferred drilling locations based on the geology of the site.

Proposed Residential Subdivision. Mr. Stormo provided hydrogeologic expertise on a water availability study for a proposed residential subdivision that will rely on groundwater.

Scot A. Stormo, RG, CHG, REA II

Vice President, Associate Geologist/Hydrogeologist

SELECT PROJECT EXPERIENCE (continued)

FDA Spring Certifications. Mr. Stormo has provided hydrogeologic expertise for spring certification reports on several properties throughout California in preparation for developing these sites as spring water sources.

Proposed "Spring" Site. Mr. Stormo performed an in-depth evaluation of a reported spring site to identify the nature of the "spring." The physical setting, geochemistry, and soil stratigraphy were evaluated, including the use of geophysical techniques to probe the subsurface. Concluded that the "spring" was not a natural feature.

Watershed Evaluation and Management Projects for Indian Tribe. Mr. Stormo has been the senior consultant and project manager for the development and implementation of two watershed evaluation and management programs. These activities have included: 1) identifying and quantifying wastewater sources in the watershed; 2) gaging stream flows and water quality in the major drainage of the watershed; 3) design of surface water sampling programs and development of Quality Assurance Project Plans; 4) design and installation of monitoring wells to evaluate water quality in the three water-bearing aquifers; and 5) data evaluation and report preparation.

Salt Water Intrusion Study. Mr. Stormo managed the installation of five wells to evaluate the potential for salt water intrusion into the upper aquifer adjacent to the Salton Sea.

Water Source Studies. Mr. Stormo evaluated the chemistry of waters at several sites to identify the source(s) of surface and groundwaters. The evaluations included comparisons of major and trace element geochemistries in on-site and potential off-site water sources. These projects were conducted in support of legal proceedings.

Hazardous Materials Projects

Industrial Park Environmental Assessment. Mr. Stormo was project manager for this assessment which involved research of current and past uses and practices, collection and analysis of soil and groundwater samples, and removal of underground storage tanks. Additionally, the project involved asbestos assessment and abatement, development of an asbestos management plan, and assessment of metallic dust residues.

Proposed School Site PEAs. Mr. Stormo was project manager and lead consultant for several proposed school sites required to go through the PEA process. At each site, he identified the issues warranting further evaluation, selected the investigative methods, negotiated the scope of work with the Department of Toxic Substance Control (DTSC), prepared a work plan, oversaw field sampling activities, reviewed the laboratory data, prepared a PEA report meeting the requirements of the DTSC.

Former Above-Ground Storage Tank and Pipeline Facility. Mr. Stormo managed the environmental investigation of this facility. He evaluated whether the facility contributed contaminants to a regionally extensive groundwater plume emanating from a nearby refinery. This involved differentiating between gasoline and diesel fuel in soil samples, estimating the extent of weathering of the hydrocarbons, and evaluating whether BTEX compounds were migrating upward through the soil as vapors.

Scot A. Stormo, RG, CHG, REA II

Vice President, Associate Geologist/Hydrogeologist

SELECT PROJECT EXPERIENCE (continued)

Law Suit Involving Pre-Existing Contamination. Mr. Stormo was project manager, principal geologist and expert witness in a law suit involving pre-existing contamination on a former service station property with numerous prior owners, operators and adjacent spills. He evaluated prior remedial activities for appropriateness; evaluated likelihood of upgradient sources; used computer modeling, and fate and transport simulations to evaluate the likelihood of various release scenarios; and, developed cost estimates for clean-up.

Groundwater Contamination at Two Landfills. Mr. Stormo was field manager and chief author of an investigation of the extent of groundwater contamination at two landfills. The project included well installation, aquifer testing, groundwater modeling, risk assessment, and remedial alternatives evaluation.

Phase I and II Investigations and Leaking UST's. Mr. Stormo was involved in numerous investigations related to leaking underground storage tanks and hundreds of environmental site assessments (Phase I Investigations) of industrial, commercial, residential, agricultural, and vacant properties, with follow-up (Phase II Investigations) of the sites identified as potentially contaminated.

Bunker C. Fuel Oil Spill. Mr. Stormo authored the Vacuum Extraction Pilot Test and the Soil Column Bioventing and Surfactant Flushing Treatability Study pertaining to this site. He performed data analyses and provided geochemical consulting services.

Groundwater Contamination Plume Geochemical Evaluation. Mr. Stormo evaluated the chemistry of a groundwater contamination plume involving solvents. He used an analysis of the relative concentrations of the two primary contaminants to identify three separate plumes with distinctive chemical signatures. He then delineated plume boundaries, mixing zones, and probable source areas.

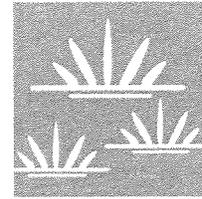
Metal Working Facility Airborne Contaminant Investigation. Airborne metallic dusts such as lead, cadmium, and chromium were the primary concern at this site. As project manager and principal investigator, Mr. Stormo performed ambient air sampling and surficial dust sampling and analysis, and used the isotopic concentrations of the lead and the ratios of the various metals in the different media, to identify the source of the airborne materials.

PROFESSIONAL AFFILIATIONS

- National Ground Water Association
- Association of Ground Water Scientists and Engineers
- Association for Environmental Health and Sciences

GLENN LUKOS ASSOCIATES

Regulatory Services



March 4 2004
Revised August 11, 2004

J. Robert Gilroy
First West Capital Corporation
17962 Cowan
Irvine, California 92614

SUBJECT: Stoneridge, a 570-Acre Property Located in Desert Hot Springs, Riverside County, California.

Dear Mr. Gilroy:

This letter report summarizes our delineation of U.S. Army Corps of Engineers (Corps) and California Department of Fish and Game (CDFG) jurisdiction for the above-referenced property.¹ The Stoneridge site is located in Desert Hot Springs, Riverside County [Exhibit 1 – Regional Map], comprises approximately 570 acres and contains one blue-line drainage (as depicted on the U.S. Geological Survey (USGS) topographic map Desert Hot Springs, California [dated 1955, photo-revised in 1972, and photo-inspected in 1978]) [Exhibit 2]. On February 16, 2004, and on July 2, 2004, regulatory specialists of Glenn Lukos Associates, Inc. (GLA) examined the project site to determine the limits of Corps jurisdiction pursuant to Section 404 of the Clean Water Act. Photographs to document the topography, vegetative communities, and general widths of each of the waters are provided as Exhibit 3. Exhibit 4 is an aerial photograph of the area surrounding the project site, on which an overlay has been applied, showing both the proposed project layout and the blue line drainage (from the USGS topographic map), floodplains (from FEMA flood maps), and other identifying features.

It was the determination of GLA staff, based on field visits and a review of existing information, that no Corps jurisdictional waters occur at the subject site. Although the USGS map shows an intermittent blue-line drainage passing through the site and ending approximately 2,000 feet north of the Whitewater River, our field inspection showed that this drainage dissipates well before reaching a water of the United States (south of Dillon Road the evidence of any surface flow disappears). According to hydraulic modeling described in the *Flood Hazard Analysis for Proposed Stoneridge Development* (prepared by Exponent on April 2, 2004), the peak 100-year flow entering the Stoneridge proposed development site is 1,024 cfs (most other flows along this alluvial plain enter Mission Creek which passes north and east, but not through, the project site).

¹ This report presents our best effort at estimating the subject jurisdictional boundaries using the most up-to-date regulations and written policy and guidance from the regulatory agencies. Only the regulatory agencies can make a final determination of jurisdictional boundaries. If a final jurisdictional determination is required, GLA can assist in getting written confirmation of jurisdictional boundaries from the agencies.

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This flow enters the site approximately 5.3 miles north and uphill of Interstate 10 Highway. After passing through the southern boundary of the site this flow continues to traverse soils belonging to Hydrologic Soil Group A of the Carsitas Series, which have a high infiltration rate. The channel changes from where it is defined north of the project site to one lacking any OHWM before any sign of surface flow disappear.

On June 1st, 2004, Robert Smith of the U.S. Army Corps of Engineers (Corps) visited the site with staff from GLA. Based on his field inspection, he determined that the blue – line drainage connects to the Whitewater River and is thus subject to Corps jurisdiction pursuant to Section 404 of the Clean Water Act.. Based on his assessment, Mark Durham (Chief, South Coast Section Regulatory Branch of the Corps) wrote a letter to Royce International Investment Company stating that “we found physical evidence of surface flow, Ordinary High Water Marks, and hydrologic connectivity to the Whitewater River.” The letter asserted that the proposed Stoneridge project does discharge dredged or fill material into a water of the United States. It is thus subject to Corps jurisdiction under Section 404 of the Clean Water Act and requires a 404 permit from the Corps.

Based on this assessment of jurisdiction, Glenn Lukos staff subsequently reviewed impacts to the blue line drainage, including the areas where proposed road crossings had been staked out. Based on delineation measurements taken in the field, areas were calculated where this blue-line drainage will be impacted by the construction of two new road crossings and the modification to two existing road crossings at the proposed project site.

Corps jurisdiction at the site totals approximately 3.93 acres of ephemeral waters of which none consists of jurisdictional wetlands. The project, as currently proposed, would cause the loss of approximately 0.22 acre of Corps jurisdiction, none of which consists of jurisdictional wetlands, and temporarily impact 0.79 acres of waters.

There are 6,312 lineal feet of ephemeral drainage at the project site, of which 335 lineal feet of ephemeral drainage will be impacted by the proposed project.

CDFG jurisdiction at the site totals approximately 1.80 acres, none of which consists of vegetated riparian habitat. The project, as currently proposed, would permanently impact approximately 0.11 acre of CDFG jurisdiction, none of which consists of vegetated riparian habitat. These figures are based on the region that was identified as jurisdictional by Kim Nicol of the CDFG during a site visit on April 7th, 2004. During this visit Kim walked the streambed from the northern end of the proposed property to the point identified as being the limits of CDFG jurisdiction, approximately 1,000 feet south of the proposed northern (Spine Road) crossing on the property. This region was also staked. The widths of the identified jurisdictional portion of the ephemeral streambed were later measured during a delineation by GLA staff.

I. METHODOLOGY

Prior to beginning the field delineation a 200-scale color aerial photograph, a 200-scale topographic base map of the property, and the previously cited USGS topographic map were examined to determine the locations of potential areas of Corps jurisdiction. Suspected jurisdictional areas were field checked for the presence of definable channels and/or wetland vegetation, soils and hydrology. Suspected wetland habitats on the site were evaluated using the methodology set forth in the U.S. Army Corps of Engineers 1987 Wetland Delineation Manual² (Wetland Manual). While in the field the jurisdictional area was recorded onto a 200-scale color aerial photograph using visible landmarks. Other data were recorded onto wetland data sheets.

The Soil Conservation Service (SCS)³ has mapped the following soil types as occurring in the general vicinity of the project site:

Carsitas Gravelly Sand, 0 to 9 Percent Slopes (CdC)

The Carsitas series consists of excessively drained soils, but includes soils that have altered drainage where seepage from irrigation has caused a water table at a depth of 2 to 4 feet. These soils formed in predominantly coarse textured granitic alluvium. Carsitas soils are rapidly permeable and moderately alkaline (pH 8.4) with disseminated lime. Carsitas gravelly sand was formed on alluvial fans along the east, north, and west edges of the Coachella Valley. The profile is representative of the Carsitas series. The upper 10 inches of these soils is typically light olive gray (5Y 6/2) calcareous gravelly sand. Below this to a depth of more than 60 inches is light olive gray (5Y 6/2) gravelly coarse sand. Runoff is slow. The erosion hazard is moderate. The hazard of soil blowing is slight. Carsitas gravelly sand is found throughout the project site and the surrounding area.

Carsitas Cobbly Sand, 2 to 9 Percent Slopes (Chic)

These soils were formed on alluvial fans, valley fill, and remnants of dissected alluvial fans along the east, north, and west edges of the Coachella Valley. The soil has a profile similar to the one described as representative of the series (Carsitas Gravelly Sand - CdC), but cobbles and some stones are on the surface (1 to 3 percent coverage) and in the profile. Runoff is rapid. The erosion hazard is moderate. The hazard of soil blowing is slight. Carsitas cobbly sand is found throughout the project site and the surrounding area.

² Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1, U.S. Army Engineer Waterways Experimental Station, Vicksburg, Mississippi.

³ SCS is now known as the National Resource Conservation Service or NRCS.

Carsitas Fine Sand, 0 to 5 Percent Slopes (Cob)

These soils were formed on alluvial fans and valley fill. The soil has a profile similar to the one described as representative of the series (Carsitas Gravelly Sand – CdC), but has a fine sand surface layer that is less than 15 percent coarse fragments. In some places the texture is sand at a depth of about 8 to 18 inches. Runoff is slow. The erosion hazard is slight. The hazard of soil blowing is high. Carsitas fine sand is found throughout the project site and the surrounding area.

Myoma Fine Sand, 0 to 5 Percent Slopes

The Myoma series consists mainly of somewhat excessively drained soils, but includes soils that have altered drainage where seepage from irrigation has caused a water table at a depth of 1.5 to 5 feet. Myoma soils were formed in recent alluvium. The profile of Myoma fine sand is representative of the Myoma series. The upper 18 inches of these soils is typically light olive gray (5Y 6/2) fine sand. Below this to a depth of 60 inches or more is light olive gray (5Y 6/2) very fine sand and fine sand. The soil is moderately to strongly alkaline and slightly to violently effervescent. The soil is rapidly permeable. Runoff is very slow. The erosion hazard is slight. The hazard of soil blowing is high. Myoma fine sand is found in the far southeast corner of the project site and to the east-southeast of the site.

None of these soil units are identified as hydric in the SCS's publication, Hydric Soils of the United States⁴.

II. JURISDICTION

A. Army Corps of Engineers

Pursuant to Section 404 of the Clean Water Act, the Corps regulates the discharge of dredged and/or fill material into waters of the United States. The term "waters of the United States" is defined in Corps regulations at 33 CFR Part 328.3(a) as:

- (1) *All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;*
- (2) *All interstate waters including interstate wetlands;*

⁴ United States Department of Agriculture, Soil Conservation Service. 1991. Hydric Soils of the United States, 3rd Edition, Miscellaneous Publication Number 1491. (In cooperation with the National Technical Committee for Hydric Soils.)

- (3) *All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect foreign commerce including any such waters:*
- (i) *Which are or could be used by interstate or foreign travelers for recreational or other purposes; or*
 - (ii) *From which fish or shell fish are or could be taken and sold in interstate or foreign commerce; or*
 - (iii) *Which are used or could be used for industrial purpose by industries in interstate commerce...*
- (4) *All impoundments of waters otherwise defined as waters of the United States under the definition;*
- (5) *Tributaries of waters identified in paragraphs (a) (1)-(4) of this section;*
- (6) *The territorial seas;*
- (7) *Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) (1)-(6) of this section.*

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 123.11(m) which also meet the criteria of this definition) are not waters of the United States.

- (8) *Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with the EPA.*

In the absence of wetlands, the limits of Corps jurisdiction in non-tidal waters, such as intermittent streams, extend to the OHWM which is defined at 33 CFR 328.3(e) as:

...that line on the shore established by the fluctuation of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

Pursuant to Article I, Section 8 of the U.S. Constitution, federal regulatory authority extends only to activities that affect interstate commerce. In the early 1980s the Corps interpreted the interstate commerce requirement in a manner that restricted Corps jurisdiction on isolated (intrastate) waters. On September 12, 1985, EPA asserted that Corps jurisdiction extended to isolated waters that are used or could be used by migratory birds or endangered species, and the definition of "waters of the United States" in Corps regulations was modified as quoted above from 33 CFR 328.3(a).

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On January 9, 2001, the Supreme Court of the United States issued a ruling on *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers, et al.* (SWANCC). In this case the Court was asked whether use of an isolated, intrastate pond by migratory birds is a sufficient interstate commerce connection to bring the pond into federal jurisdiction of Section 404 of the Clean Water Act.

The written opinion notes that the court's previous support of the Corps' expansion of jurisdiction beyond navigable waters (*United States v. Riverside Bayview Homes, Inc.*) was for a wetland that abutted a navigable water and that the court did not express any opinion on the question of the authority of the Corps to regulate wetlands that are not adjacent to bodies of open water. The current opinion goes on to state:

In order to rule for the respondents here, we would have to hold that the jurisdiction of the Corps extends to ponds that are not adjacent to open water. We conclude that the text of the statute will not allow this.

Therefore, we believe that the court's opinion goes beyond the migratory bird issue and says that no isolated, intrastate water is subject to the provisions of Section 404(a) of the Clean Water Act (regardless of any interstate commerce connection). However, the Corps and EPA have issued a joint memorandum, which states that they are interpreting the ruling to address only the migratory bird issue and leaving the other interstate commerce clause nexuses intact.

The term "wetlands" (a subset of "waters of the United States") is defined at 33 CFR 328.3(b) as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support...a prevalence of vegetation typically adapted for life in saturated soil conditions." In 1987 the Corps published a manual to guide its field personnel in determining jurisdictional wetland boundaries. In 1989 the Federal Interagency Committee for Wetland Delineation developed an updated methodology which was adopted by the Corps, U.S. Fish and Wildlife Service (USFWS), U.S. Environmental Protection Agency (EPA), and SCS which replaced the 1987 Wetland Delineation Manual.⁵ The use of this 1989 manual was perceived by many to excessively increase the jurisdictional limits of wetlands. After several congressional hearings, EPA, Corps, SCS, and USFWS published proposed 1991 revisions to the 1989 manual.⁶ A few days afterwards, the President signed the Energy and Water Development Appropriations Act of 1992 which, in effect, prohibits the use of the 1989 manual. Because the 1991 proposed revisions to the 1989 manual have not yet been adopted, the only remaining valid

⁵ Federal Interagency Committee for Wetland Delineation. 1989. Federal Manual for Identifying and Delineating Jurisdictional Wetlands. U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, and USDA Soil Conservation Service, Washington, DC Cooperative technical publication.

⁶ Government Printing Office. 1991. Federal Register, "1989 Federal Manual for Identifying Jurisdictional Wetlands; Proposed Revisions." August 14, 1991, Vol. 56, No. 157, pp 40446-40480.

methodology is the 1987 Wetland Delineation Manual.⁷ The methodology set forth in the 1987 Wetland Delineation Manual generally requires that, in order to be considered a wetland, the vegetation, soils, and hydrology of an area exhibit at least minimal hydric characteristics. While the manual provides great detail in methodology and allows for varying special conditions, a wetland should normally meet each of the following three criteria:

- more than 50 percent of the dominant plant species at the site must be typical of wetlands (i.e., rated as facultative or wetter in the National List of Plant Species that Occur in Wetlands⁸);
- soils must exhibit physical and/or chemical characteristics indicative of permanent or periodic saturation (e.g., a gleyed color, or mottles with a matrix of low chroma indicating a relatively consistent fluctuation between aerobic and anaerobic conditions); and
- hydrologic characteristics must indicate that the ground is saturated to within 12 inches of the surface for at least five percent of the growing season during a normal rainfall year⁹.

B. Regional Water Quality Control Board

Subsequent to the SWANCC decision, the Chief Counsel for the State Water Resources Control Board issued a memorandum that addressed the effects of the SWANCC decision on the Section 401 Water Quality Certification Program.¹⁰ The memorandum states:

California's right and duty to evaluate certification requests under section 401 is pendant to (or dependent upon) a valid application for a section 404 permit from the Corps, or another application for a federal license or permit. Thus if the Corps determines that the water body in question is not subject to regulation under the COE's 404 program, for instance, no application for 401 certification will be required...

The SWANCC decision does not affect the Porter Cologne authorities to regulate discharges to isolated, non-navigable waters of the states....

⁷ This delineation was performed using, where appropriate, the 1987 Wetland Manual. It is unlikely that any actions will be taken on a revised wetland manual in the near future. If a new manual is adopted, it may be necessary to review our delineation to determine its compliance with any changes set forth.

⁸ Reed, P.B., Jr. 1988. National List of Plant Species that Occur in Wetlands. U.S. Fish and Wildlife Service Biological Report 88(26.10).

⁹ For most of low-lying southern California, five percent of the growing season is equivalent to 18 days.

¹⁰ Wilson, Craig M. January 25, 2001. Memorandum addressed to State Board Members and Regional Board Executive Officers.

Water Code section 13260 requires "any person discharging waste, or proposing to discharge waste, within any region that could affect the waters of the state to file a report of discharge (an application for waste discharge requirements)." (Water Code § 13260(a)(1) (emphasis added).) The term "waters of the state" is defined as "any surface water or groundwater, including saline waters, within the boundaries of the state." (Water Code § 13050(e).) The U.S. Supreme Court's ruling in SWANCC has no bearing on the Porter-Cologne definition. While all waters of the United States that are within the borders of California are also waters of the state, the converse is not true—waters of the United States is a subset of waters of the state. Thus, since Porter-Cologne was enacted California always had and retains authority to regulate discharges of waste into any waters of the state, regardless of whether the COE has concurrent jurisdiction under section 404. The fact that often Regional Boards opted to regulate discharges to, e.g., vernal pools, through the 401 program in lieu of or in addition to issuing waste discharge requirements (or waivers thereof) does not preclude the regions from issuing WDRs (or waivers of WDRs) in the absence of a request for 401 certification....

In this memorandum the SWRCB's Chief Counsel has made the clear assumption that fill material to be discharged into isolated waters of the United States is to be considered equivalent to "waste" and therefore subject to the authority of the Porter Cologne Water Quality Act. However, while providing a recounting of the Act's definition of waters of the United States, this memorandum fails to also reference the Act's own definition of waste:

"Waste" includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal.

The lack of inclusion of a reference to "fill material," "dirt," "earth" or other similar terms in the Act's definition of "waste," or elsewhere in the Act, suggests that no such association was intended. Thus, the Chief Counsel's memorandum signals that the SWRCB is attempting to retain jurisdiction over discharge of fill material into isolated waters of the United States by administratively expanding the definition of "waste" to include "fill material" without actually seeking amendment of the Act's definition of waste (an amendment would require action by the state legislature). Consequently, discharge of fill material into waters of the State not subject to the jurisdiction of the Corps pursuant to Section 404 of the Clean Water Act may require authorization pursuant to the Porter Cologne Act through application for waste discharge requirements (WDRs) or through waiver of WDRs, despite the lack of a clear regulatory imperative.

C. California Department of Fish and Game

Pursuant to Division 2, Chapter 6, Sections 1600-1603 of the California Fish and Game Code, the CDFG regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake that supports fish or wildlife.

CDFG defines a "stream" (including creeks and rivers) as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation." CDFG's definition of "lake" includes "natural lakes or man-made reservoirs."

CDFG jurisdiction within altered or artificial waterways is based upon the value of those waterways to fish and wildlife. CDFG Legal Advisor has prepared the following opinion:

- Natural waterways that have been subsequently modified and which have the potential to contain fish, aquatic insects and riparian vegetation will be treated like natural waterways...
- Artificial waterways that have acquired the physical attributes of natural stream courses and which have been viewed by the community as natural stream courses, should be treated by [CDFG] as natural waterways...
- Artificial waterways without the attributes of natural waterways should generally not be subject to Fish and Game Code provisions...

Thus, CDFG jurisdictional limits closely mirror those of the Corps. Exceptions are CDFG's exclusion of isolated wetlands (those not associated with a river, stream, or lake), the addition of artificial stock ponds and irrigation ditches constructed on uplands, and the addition of riparian habitat supported by a river, stream, or lake regardless of the riparian area's federal wetland status.

III. RESULTS

A. Corps Jurisdiction

The USGS topographic map entitled Desert Hot Springs, California [dated 1955, photo-revised in 1972, and photo-inspected in 1978] (Exhibit 2) depicts the single blue-line drainage that passes through the site as beginning in the foothills of the San Bernardino Mountains, approximately 12,000 feet northwest of the site. According to the USGS topographic map, the unnamed blue-line drainage continues through the site ending just after crossing the I-10 Freeway intersection with Indian Avenue, but about 2,500 feet short of the Whitewater River.

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Another linear feature, barren of vegetation, runs parallel and northeast of the blue-line drainage. This feature is a power line access road that parallels a power line that runs through the property (Exhibit 3, Photographs 1 and 2).

The blue-line drainage enters the property near the northwest corner of the site (Exhibit 3, Photographs 3 and 4). A short distance downstream of crossing Worsley Road and entering the site, the blue-line drainage is a broad, shallow wash with a clear OHWM defined by destruction of terrestrial vegetation, debris racks, and shelving (Exhibit 3, Photograph 15). The blue-line stream exits the property near the southeast corner of the site (Exhibit 3, Photographs 5 and 6). Here, at the southeast corner of the site, the drainage is narrower, the apparent extent of flow is reduced, and the signs of an OHWM, although still present, are less distinct.

The blue-line drainage within the site exhibits clear signs of an ordinary high water mark, including debris racks, destruction of terrestrial vegetation, and shelving of the banks. During both our February 16, June 1st and July 1st site visits we examined the blue-line drainage at several points along its downstream course. The signs of an OHWM became weaker as we followed the drainage downstream down to its crossings of Karen Avenue (Exhibit 3, Photographs 11 and 12) and of 14th Avenue (Exhibit 3, Photographs 13, 14, and 16). Further downstream, where the USGS map shows the drainage crossing Dillon Road, Indian Avenue, 18th Avenue, 19th Avenue, 20th Avenue, and the I-10 Freeway, we were unable to find any trace of a channel or an OHWM.

An examination of a 200-scale color aerial photograph indicates that somewhere between 14th Avenue and Dillon Road, all signs of surface flows are lost and the surface becomes a homogeneous texture with no clear signs of channels or destruction of vegetation.

An examination of the Flood Insurance Rate Maps (FIRM) of the area indicates that none of the site falls within a 100-year flood event.

All of the drainages at the subject site are intrastate waters, i.e., waters that do not cross state or federal boundaries or flow into waters that cross such boundaries. These waters are commonly referred to as being isolated waters.

In 2001 the Supreme Court ruled that the Corps had no jurisdiction under the Clean Water Act to regulate isolated intrastate waters. The Corps and EPA have issued a joint memorandum, which states that they are interpreting the ruling to address only the migratory bird issue and leaving the other interstate commerce clause nexuses intact. In this case, there are no other conceivable federal nexuses that would trigger the interstate commerce clause.

However, based on the Corps' analysis and field assessment of June 1st, 2004, the Corps determined that the drainage is not isolated; therefore, according to the Corps, this blue line drainage is considered jurisdictional and was therefore delineated at the proposed development site. This blue-line drainage is ephemeral and generally varies in width from between 15 to 25

feet. At two locations the drainage briefly splits into other flow channels before reconnecting to the main channel. At these locations the combined width of the separate channels was added to produce a total resultant width for the channel.

Two other drainages were identified entering the property near the northwest corner of the site, neither of which is identified on the USGS topographic map. Drainage B appears to form as runoff from Worsley Road, forming a roadside ditch (Exhibit 3, Photograph 8) before turning and running through the property (Exhibit 3, Photograph 7).

Drainage C enters the property between the blue-line drainage and the power line access road (Exhibit 3, Photographs 9 and 10).

Unlike the blue-line drainage, these two other drainages do not maintain a characteristic OHWM as they proceed south. Based on this observation and on the field assessment performed by the Corps staff member on June 1, 2004, these drainages are therefore considered isolated and, pursuant to a 2001 Supreme Court ruling known as SWANCC, not considered subject to Corps jurisdiction.

The proposed work would cause the loss of 0.22 acre of waters of the United States, none of which is considered wetland. These impacts are caused by the construction of two new road crossings (Northern Spine Road and Southern Spine Road) across the blue – line drainage and the expansion / rehabilitation of two existing road crossings (Worsley Road and Pierson Boulevard). (Crossings shown in Exhibit 4).

B. Regional Water Quality Control Board Jurisdiction

Regional Water Quality Control Board jurisdiction, pursuant to Section 401 of the Clean Water Act, is identical to that of the Corps. The discussion in the above section [A] identifies and briefly describes the drainages within the project site that are subject to RWQCB jurisdiction. These are also shown on the map [Exhibit 4].

C. California Department of Fish and Game

The CDFG jurisdictional limits are based on what was identified as jurisdictional during a site visit by Kim Nicol of the CDFG on April 7, 2004. CDFG only identified the upper portion of the blue-line drainage as being jurisdictional (to a point approximately 1,000 feet south of the blue-Northern Spine Road crossing). CDFG jurisdiction at the Stoneridge property totals approximately 1.8 acres, none of which is vegetated riparian habitat. The proposed work would result in permanent impacts to 0.11 acre of waters. These impacts are caused by the construction of one new road crossings (Northern Spine Road) across the blue – line drainage and the expansion / rehabilitation of one existing road crossing (Worsley Road). [Crossings shown in Exhibit 4].

IV. DISCUSSION

A. Impact Analysis

Grading plans for four on-site crossings of the blue-line drainage, in combination with field delineation measurements, were used to calculate total on-site acreage that will be impacted by the project. These impacts areas are shown below.

Table 1: Permanent Impacts to Waters of The United States

Crossing / Region	Corps Drainage Width (feet)	Lineal Feet Impacted by Crossing (feet)	Total Area Impacted (square feet)	Total Area of Permanent Impacts (acres)	Total Area of Temporary Impacts (acres)
Worsley Road	16	50	800	0.02	0.00
Northern Spine Road	26.5	110	2,915	0.07	0.00
Southern Spine Road	40	125	5,000	0.11	0.64
Pierson Boulevard	17	50	850	0.02	0.16
TOTAL	NA	335	9,565	0.22	0.79

Table 2: Permanent Impacts to CDFG Jurisdictional Waters

Crossing / Region	CDFG Drainage Width (feet)	Lineal Feet Impacted by Crossing (feet)	Total Area Impacted (Lineal Feet x Length) (square feet)	Total Area of Permanent Impacts (acres)	Total Area of Temporary Impacts (acres)
Worsley Road	16	50	800	0.02	0.00
Northern Spine Road	36	110	3960	0.09	0.00
TOTAL	52	160	9,565	0.11	0.00

The construction of these four planned crossings will cause the loss of 0.22 acre of jurisdictional waters and temporarily impact 0.79 acre of Corps jurisdictional waters, none of which consists of wetland. . Construction will permanently impact 0.11 acre of CDFG jurisdictional waters, none of which consists of riparian habitat.

B. Corps Regulations and Procedures

The discharge of dredged or fill material (temporarily or permanently) into waters of the United States requires prior authorization from the Corps pursuant to Section 404 of the Clean Water Act. Activities that usually involve a regulated discharge of dredged or fill materials include (but are not limited to) grading, placing of riprap for erosion control, pouring concrete, laying sod, preparing soil for planting (e.g., turning soil over, adding soil amendments¹¹), stockpiling excavated material, mechanized removal of vegetation, and driving of piles for certain types of structures. Activities that do not involve a regulated discharge (if performed in a manner to avoid discharges) include excavation, placing a structure, driving pilings (for transportation structures), clearing of vegetation using hand held equipment and working above the ground surface, pumping water, and walking or driving vehicles.

Federal law recognizes wetlands and other waters of the United States as valuable natural resources. Therefore, federal agencies, principally the Corps, USFWS, and EPA strongly discourage activities within federal jurisdiction that alter aquatic habitats. In addition, Corps policy, derived from the National Environmental Policy Act, prohibits "piece-mealing," the submission of separate permit applications for discharges which are reasonably related to the same project

On January 15, 2002, the Corps published, in the *Federal Register*, an Issuance of Nationwide Permits (NWP). With this notice (and effective March 18, 2002) the Corps has 43 NWPs that preauthorize specific minor discharges. Use of some NWPs does not require review by the Corps. Formulation of a project design in which all proposed discharges into waters of the United States are authorized under NWPs could significantly reduce federal permit processing time. The revised NWPs are much more complicated than the previous NWPs and a number of new conditions have been added to the NWP program. The following is only a summary of NWPs that may be applicable to the subject site or the work proposed at the subject site. You should not use any of the NWPs unless you have read and understood the entire text of the NWP and all of the conditions (national and regional) of the NWP program.

¹¹ Similar planting activities associated with on-going farming operations may be exempt from regulation by Section 404 of the Clean Water Act.

NWP number 14 authorizes activities for the construction, expansion, modification, or improvement of linear transportation crossings¹² within waters of the United States. This nationwide permit differentiates between crossings occurring within non-tidal waters or tidal waters.

- For linear transportation projects in non-tidal waters, this NWP authorizes discharges that cause the permanent loss not more than 1/2 acre of waters of the United States.
- For linear transportation projects in tidal waters, this NWP authorizes discharges that cause the permanent loss of not more than 1/3 acre of waters of the United States and not more than 200 linear feet of waters of the United States.

Use of NWP number 14 requires a case-by-case approval by the Corps through the pre-construction notification process if (1) the discharge causes the loss of more than 1/10 acre of waters of the United States or (2) the discharge would occur within a special aquatic site (wetlands). The notification must include a compensatory mitigation proposal to offset permanent losses of waters of the United States and a statement describing how temporary losses of waters of the United States will be minimized. For discharges into wetlands, the notification must include a wetland delineation. The width of the fill must be limited to the minimum necessary for the actual crossing. The crossing must be a single and complete project. Note that some road fills may be eligible for an exemption from the need for a Section 404 permit altogether. These include some roads used for silviculture, farming, and mining.

a) Pre-construction Notification Process

Some NWPs require that the Corps approve each use of the NWP on a case-by-case basis. The process of obtaining this approval is called a pre-construction notification. Obtaining authorization through the pre-construction notification process is not automatic.

Notification to the Corps must include (1) the permittee's name, address, and telephone number; (2) location of the project; (3) description of the project, its purpose, its impacts (direct and indirect), (4) information about other Corps authorizations needed,¹³ and (5) a delineation of special aquatic sites (if required by the NWP). Certain NWPs require specific additional information as outlined in condition number 13. The Corps has 30 days from receipt of the notification to determine whether or not the notification is complete. The Corps may request additional information only once; if the requested information is properly submitted, the Corps cannot make a request for yet more information. If the permittee has not received notice from the

¹² The term "linear transportation crossings" is defined to include highways, railways, trails, and airport runways and taxiways.

¹³ Many Corps districts (including the Los Angeles District) have issued written policy clarifying that their intent is to receive a small version of an environmental assessment with each notification.

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Corps within 45 days of the Corps' receipt of a complete application, the permittee may assume that authorization has been approved.¹⁴ For pre-construction notifications for projects that would cause the loss of more than 1/2 acre of waters of the United States, the Corps must solicit input from USFWS, EPA, CDFG, State Historic Preservation Officer (SHPO), and National Marine Fisheries Service (NMFS).

b) Conditional Use of Nationwide Permits

All of the NWPs are conditioned by a set of general conditions published at 33 CFR 330 Appendix A, Section C. Special attention should be paid to ensure compliance with six of these conditions.

Endangered Species. Condition number 11 states that no activity is authorized under any NWP if that activity is likely to jeopardize the continued existence of a federally listed threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act or which is likely to destroy or adversely modify the critical habitat of such species. If the activity may adversely affect a listed species, the Corps must initiate and complete a Section 7 consultation pursuant to the Endangered Species Act. The district engineer may, at his option, complete the consultation and allow the activity to be authorized by NWP, or he may at any time take discretionary authority (i.e., require that an individual permit be obtained for the proposed activity). If any federally-listed (or proposed for listing) endangered or threatened species or critical habitat might be affected by the proposed project, or is in the vicinity of the project, the permittee must not commence work and must notify the Corps.

Cultural Resources. Condition number 12 states that no activity which may affect historic properties listed, or eligible for listing, in the National Register of Historic Places is authorized until the Corps has complied with 33 CFR 325, Appendix C. The permittee must notify the district engineer if the proposed activity may adversely affect historic properties which the National Park Service has listed, or determined eligible for listing, on the National Register of Historic Places.

Water Quality Certification. Condition number 9 states that an individual 401 water quality certification must be obtained or waived for the proposed activity if the State Water Quality Control Board has not already certified the NWP. On March 12, 2002 the State Water Resources Control Board conditionally certified NWP numbers 1, 4, 5, 6, 9, 10, 11, 20, 22, 24, 28, 29, 30, 32, 34, 36, and 38. Use of this "conditional certification" requires prior notification to the State Board and the appropriate Regional Board. If the applicant is not notified by the Regional Board within 30 days of the postmarked date of the notification, the applicant may assume that the project meets the conditions of the certification. Certification for all other NWPs must be

¹⁴ If the notification, as originally submitted, is deemed complete, the 45-day clock starts from the date of the Corps' receipt of the notification, not after the 30-day review period has ended.

obtained by application to the Regional Board on a case-by-case basis. For NWP numbers 12, 14, 17, 18, 32, 39, 40, 42, 43, and 44 a water quality management plan must be submitted to the Corps.

Mitigation. Condition number 19 (a new condition to the NWPs) requires mitigation where necessary to ensure that the adverse effects to the aquatic environment are minimal. Compensatory mitigation will be required at a minimum 1:1 ratio for all wetland impacts requiring a pre-construction notification; preservation will be allowed only in exceptional circumstances. Vegetated buffers will be required adjacent to streams and other open waters¹⁵ located on the property. The buffers will normally be 25 to 50 feet wide on each side of the waterbody, but wider buffers may be required. The wetland buffers (upland or wetland) may be counted as 1/3 of the total mitigation requirement beyond the initial 1:1 wetland replacement requirement. Consolidated mitigation approaches (such as mitigation banking) are the Corps' preferred method of providing compensatory mitigation.

Designated Critical Resource Waters. Condition number 25 prohibits the use of NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, and 44 for any activity within or directly affecting critical resource waters, including wetlands adjacent to such waters. Critical resource waters include NOAA-designated marine sanctuaries, National Estuarine Research Reserves, National Wild and Scenic Rivers, critical habitat for federally listed threatened and endangered species¹⁶, coral reefs, state natural heritage sites, and outstanding national resource waters, or other waters officially designated by a state as having particular environmental or ecological significance and identified by the Corps.

Fills within 100-Year Floodplains. Condition number 26 has three parts:

- Use of NWPs 29, 39, 40, 42, 43, and 44 to create permanent, above-grade fills within the 100-year floodplain below the headwaters (the point on a stream where the average annual flow is greater than five cubic feet per second) is prohibited. Use of NWPs 12 and 14 in similar situations requires case-by-case approval from the Corps through the pre-construction notification process.
- Above the headwaters, use of NWPs 12, 14, 29, 39, 40, 42, 43, and 44 to create permanent, above-grade fills within the flood fringe¹⁷ of the 100-year floodplain requires case-by-case approval from the Corps through the pre-construction notification process.

¹⁵ For the purposes of the NWPs, the term "open waters" does not include ephemeral drainages, but does include any other water of the United States that exhibits an ordinary high water mark, including intermittent drainages.

¹⁶ Use of these NWPs within critical habitat may be allowed if the activity complies with condition number 11 and USFWS or NMFS has concurred in a determination of compliance with this condition (i.e., a Section 7 Consultation has been completed pursuant to the Endangered Species Act).

¹⁷ The term "flood fringe" is defined as that portion of the 100-year floodplain outside of the floodway (often referred to as "floodway fringe").

- Above the headwaters, use of NWP's 29, 39, 40, 42, 43, and 44 to create permanent, above-grade fills within the floodway¹⁸ of the 100-year floodplain is prohibited. Use of NWP's 12 and 14 in similar situations requires case-by-case approval from the Corps through the pre-construction notification process.

Regional Conditions. Each district office of the Corps is encouraged to develop regional conditions for use of NWP's within the district. The regional conditions may only further restrict the published NWP's and may not authorize additional activities. On February 15, 2002 the Los Angeles District issued a public notice announcing regional conditions within the District. None of the regional conditions would affect the authorization of the proposed project under a NWP.

c) Expiration of Nationwide Permits

Nationwide permits are issued for a period of 5 years. The new NWP's issued on January 15, 2002 (and which became effective on March 18, 2002) will expire on March 18, 2007. Corps regulations at 33 CFR 330.6(b) state that work that has started in reliance upon a NWP may continue for an additional year after expiration of the NWP.¹⁹

A letter of verification from the Corps, stating that the proposed work is authorized by a nationwide permit may be obtained for any nationwide permit, but must be obtained for those nationwide permits for which "notification" is required by condition number 13. For activities that have not been verified by the Corps, the project must commence or be under contract to commence by the expiration date of the NWP and the work must be completed within 12 months after such date. For activities that have been verified, the work must commence or be under contract to commence within the verification period and the work must be completed by the date determined by the Corps in the letter of verification. This completion date may extend beyond the date that the NWP's, themselves, expire. For projects that have been verified by the Corps, an extension of a Corps approved completion date may be requested.

Based on the size and nature of impacts for the proposed Stoneridge project (impacts to 0.15 acre of Corps and CDFG jurisdiction), GLA recommends applying for a NWP 14 permit to satisfy the requirements of the Corps Section 404 of the Clean Water Act.

B. Regional Water Quality Control Board Procedures

As the main body of the blue line drainage at the proposed project site was not eliminated from Corps jurisdiction as being isolated, intrastate waters, all of the Corps' jurisdiction is considered

¹⁸ The term "floodway" is defined as the area regulated by federal, state, or local requirements to provide for the discharge of the base flood so the cumulative increase in water surface elevation is no more than a designated amount (not to exceed one foot as set by the National Flood Insurance Program) within the 100-year floodplain.

¹⁹ The Corps has determined that being under contract prior to expiration of the NWP's to have work commence is equivalent to having started the work prior to expiration of the NWP's.

to be within the Regional Board's jurisdiction pursuant to Section 401 of the Clean Water Act. Thus, before the Corps can finalize issuance of authorization pursuant to Section 404 of the Clean Water Act, the applicant must obtain 401 water quality certification from the Regional Board. A 401 application will not be accepted by the Regional Board until after a California Environmental Quality Act document has been certified by the local or lead agency. The Regional Board generally requires that any impacts to jurisdictional areas or to water quality be fully mitigated. Corps regulations allow 60 days for the Regional Board to process the 401 application; however, the Corps will rarely issue its permit if the Regional Board has not taken action, even if the allotted 60 days has passed.

D. CDFG Regulations and Procedures

Unlike the Corps, CDFG regulates not only the discharge of dredged or fill material, but all activities that alter streams and lakes and their associated habitat. CDFG has no abbreviated permitting process comparable to the Corps nationwide permits. A CDFG 1602 Agreement is required for all activities resulting in impacts to streambeds and their associated riparian habitats.

A 1602 notification (application) will not be accepted by the CDFG until after a CEQA document has been certified by the local or lead agency. CDFG generally requires that any impacts to streambeds and adjacent riparian habitats be fully mitigated. To ensure rapid and favorable action on a 1602 notification, a mitigation plan should be submitted with the notification package. It normally takes 30 days for the CDFG to process a 1602 notification.

E. Potential Mitigation

If the division engineer takes discretionary authority and requires an individual permit, or if authorization is sought under a NWP requiring case-by-case approval by the Corps through the pre-construction notification process, or if the proposed work does not qualify for authorization by NWP, then the Corps (and the state and federal resource agencies) will likely require mitigation for the impacted wetland/riparian habitat.

Unlike the Corps, the CDFG will likely require mitigation for all impacts to streambeds and their associated riparian habitats resulting from any aspect of the proposed project, regardless of Corps requirements or extent of impacts.

Mitigation can take several forms. It can consist of (1) avoidance of impacts, (2) reduction of impacts, or (3) compensation for impacts.²⁰ The first two types of mitigation (avoidance or

²⁰ The November 15, 1989 Memorandum of Agreement (MOA) between the Corps and EPA directed the Corps to require that impacts to waters of the United States be avoided to the maximum extent practicable. Although the MOA was intended to apply to individual permits only, recent experience with Corps permit managers has indicated that they are requiring prospective nationwide permittees to document that discharges into waters of the United States cannot be avoided and that there are no available upland alternatives.

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reduction of impacts) are much preferred by the agencies and should be investigated to the maximum extent possible. In cases where impacts cannot be avoided or significantly reduced, compensation must be considered.

Compensation is the creation of habitat to replace similar habitat unavoidably eliminated at a different location. In order to be accepted, the concerned agencies must be convinced that the proposed compensation will totally mitigate for the lost habitat. Because the creation of habitat requires time (usually several years) there is a temporal loss of habitat unless the mitigation is performed several years in advance of the removal of the existing habitat. As a result, the agencies often require compensation at a ratio of greater than one-to-one. Our experience with NWP's is that habitat replacement is usually required at a ratio of between 1.5:1 and 2:1; however, a ratio of 3:1 or more is not unheard of for the loss of high quality wetlands.

If performed on the project site or immediately adjacent to the project site, the mitigation is said to be "on site." If no mitigation opportunities are available at or adjacent to the project site, "off site" mitigation may be considered. Generally, as the distance between the project and mitigation sites increases, the value of the mitigation (as determined by the agencies) decreases. In addition, if the mitigation is too far off site, disputes may arise between local governing bodies in which one local government refuses to allow mitigation within its boundaries for a project outside its boundaries. Compensation does not have to take place on property owned by the developer (although it is imperative that the developer obtain written permission prior to formal application).

The Corps has recently taken the position that mitigation banking and other forms of consolidated mitigation are the preferred method of providing compensatory mitigation because this method involves larger blocks of protected aquatic environment, are more likely to meet the mitigation goals, and are more easily checked for compliance.

Mitigation for the proposed project could consist of excavation of the existing blue line drainage channel both on site and downstream of the site, widening the existing wash. Unlike placing fill in the drainage, excavating is not considered an impact to jurisdictional waters and can be used as an accepted mitigation measure.

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If you have any questions about this letter report, please contact Glenn Lukos at (949) 837-0404.

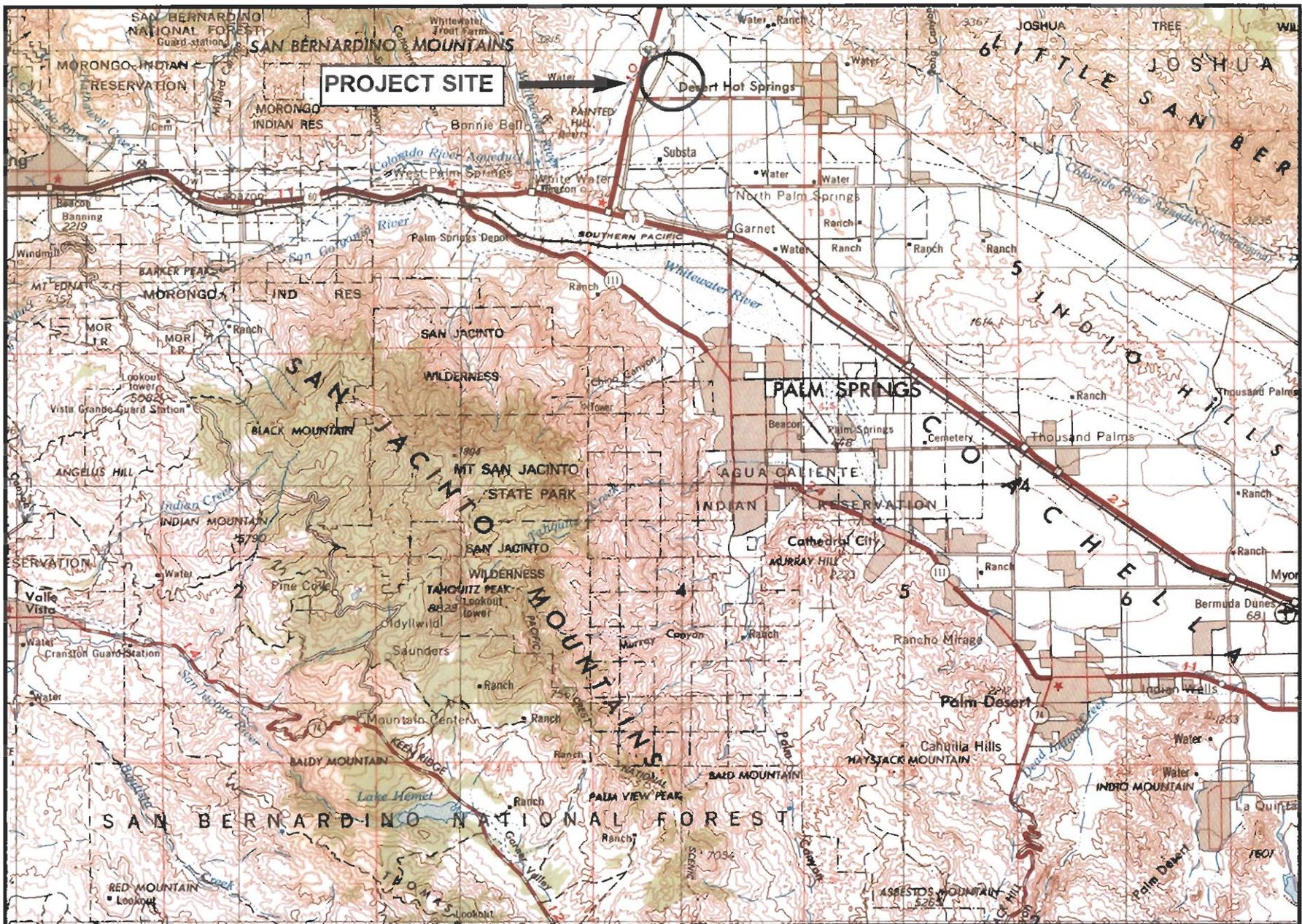
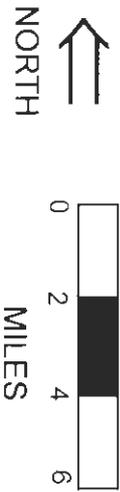
Sincerely,

GLENN LUKOS ASSOCIATES, INC.



Glenn C. Lukos
President
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Adapted from USGS Santa Ana quadrangle

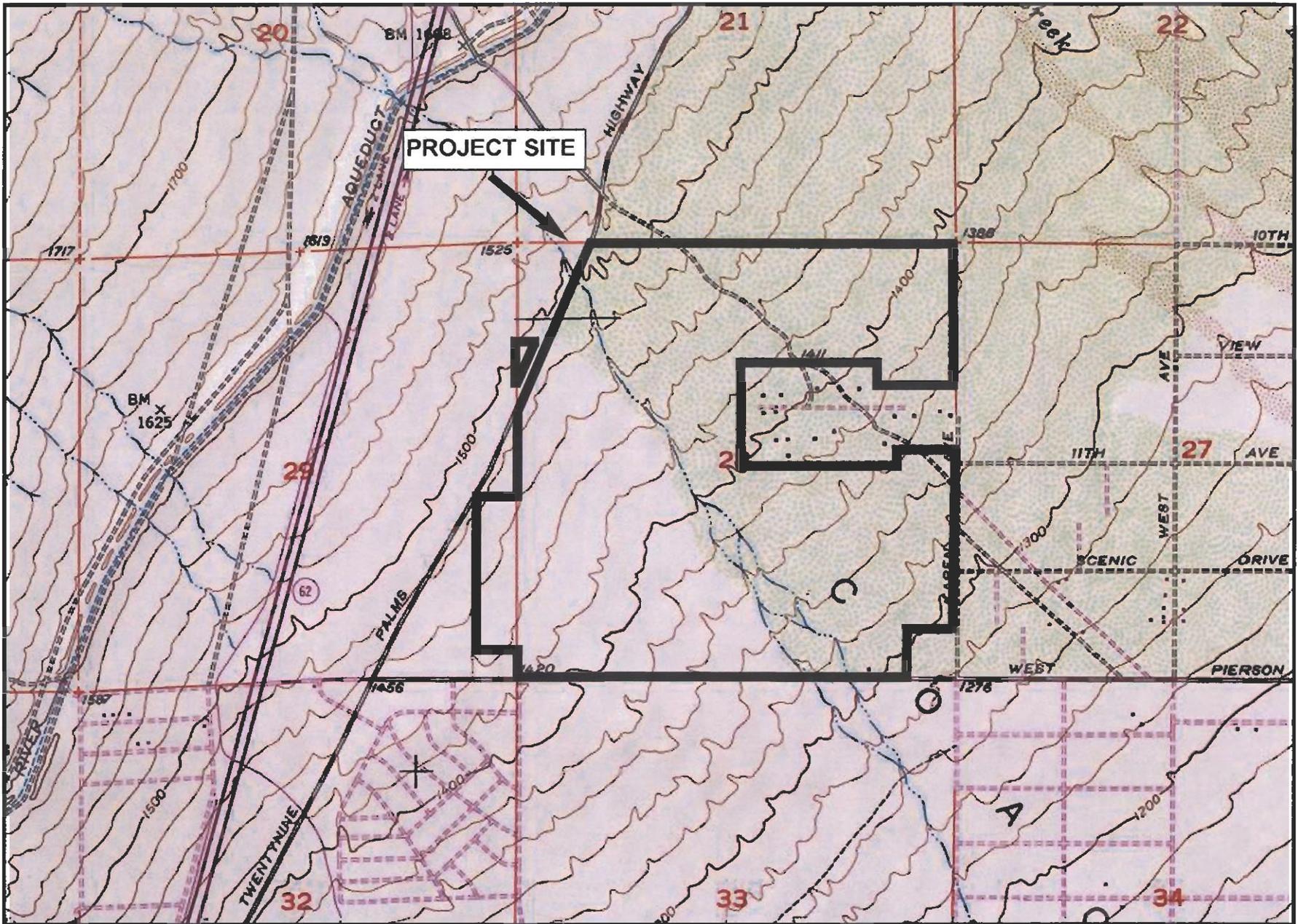
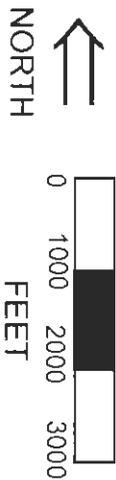


STONERIDGE
DESERT HOT SPRINGS, CA
Regional Map

GLENN LUKOS ASSOCIATES
EXHIBIT 1



Adapted from USGS Santa Ana quadrangle



**STONERIDGE
DESERT HOT SPRINGS, CA**
Vicinity Map

GLENN LUKOS ASSOCIATES
EXHIBIT 2





GLENN LUKOS ASSOCIATES

EXHIBIT 3



Photograph 1. Power line access road looking southeast from Worsley Road, onto the northwestern corner of the Stoneridge site.



Photograph 2. Power line access road looking northwest from Karen Avenue, onto the eastern boundary of the Stoneridge site.

**STONERIDGE
DESERT HOT SPRINGS, CA**
Site Photographs



GLENN LUKOS ASSOCIATES

EXHIBIT 3



Photograph 3. Upstream end of the blue-line drainage looking northwest (across Worsley Road) off the Stoneridge site.



Photograph 4. Upstream end of the blue-line drainage looking southeast (across Worsley Road) onto the Stoneridge site.

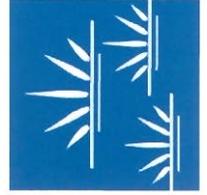
**STONERIDGE
DESERT HOT SPRINGS, CA**
Site Photographs



Photograph 5. Downstream end of the blue-line drainage looking southeast (across Pierson Blvd.) off the Stoneridge site.



Photograph 6. Downstream end of the blue-line drainage looking northwest (across Pierson Blvd.) onto the Stonebridge site.



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EXHIBIT 3

**STONERIDGE
DESERT HOT SPRINGS, CA**

Site Photographs



Photograph 7. Upstream end of Drainage B looking southeast (across Worsley Road) onto the Stoneridge site.



Photograph 8. The road-side ditch, origin of Drainage B looking northeast along Worsley Road.

**STONERIDGE
DESERT HOT SPRINGS, CA**

Site Photographs

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EXHIBIT 3





Photograph 9. Upstream end of Drainage C, looking upstream (northwest) across Worsley Road, off the Stonebridge site.



Photograph 10. Upstream end of Drainage C, looking downstream (south-east) across Worsley Road, onto the Stoneridge site.



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EXHIBIT 3

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DESERT HOT SPRINGS, CA**
Site Photographs



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EXHIBIT 3



Photograph 11. On Karen Avenue at crossing of blue-line drainage, looking upstream (northwest) towards Stoneridge site in distance.



Photograph 12. On Karen Avenue at crossing of blue-line drainage, looking downstream (southeast) towards I-10 in distance.

**STONERIDGE
DESERT HOT SPRINGS, CA**

Site Photographs



Photograph 13. On 14th Avenue at crossing of blue-line drainage, looking upstream (northwest) towards Stoneridge site in distance.



Photograph 14. On 14th Avenue at crossing of blue-line drainage, looking downstream (southeast) towards I-10 in distance.



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Site Photographs



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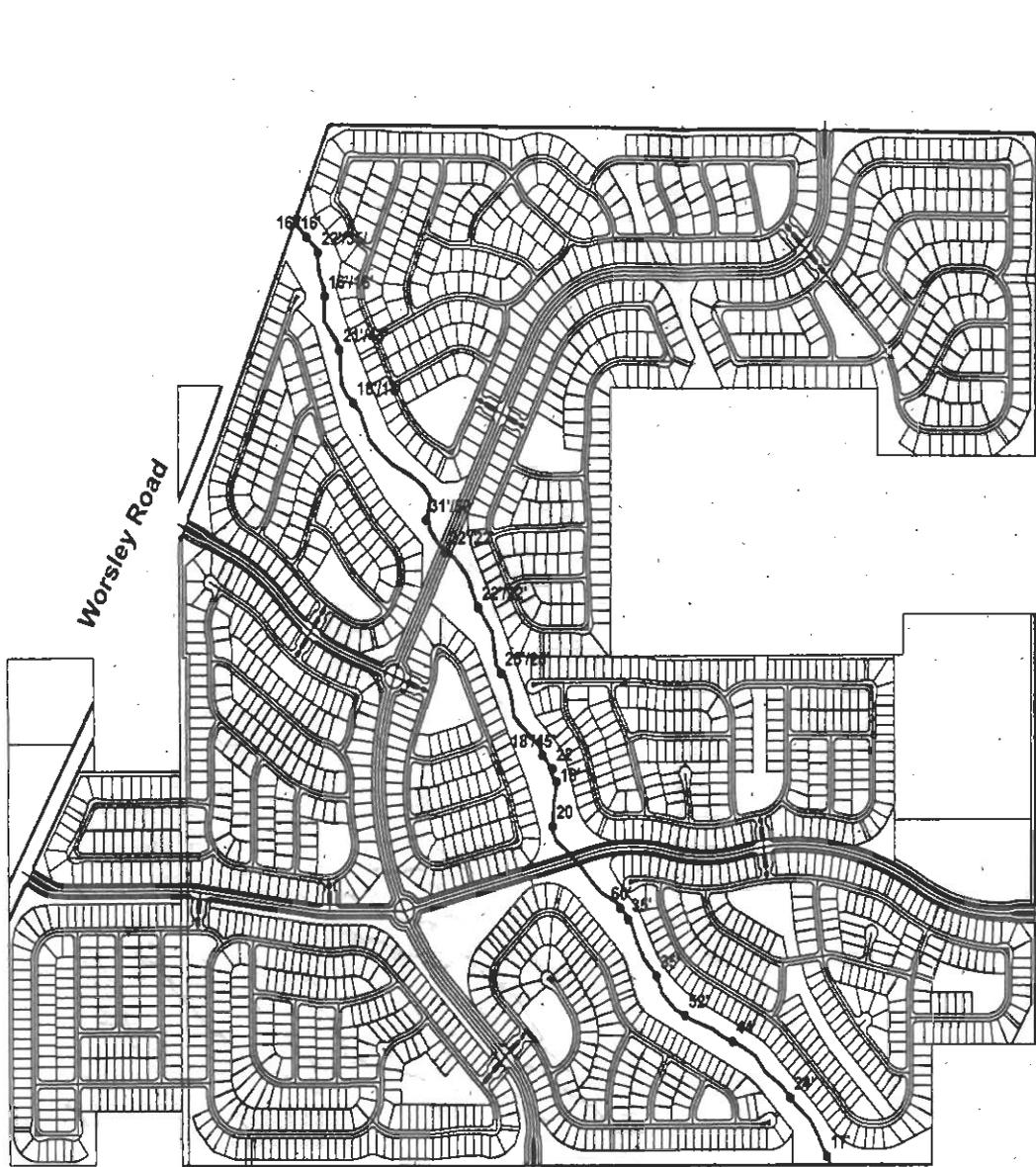
**STONERIDGE
DESERT HOT SPRINGS, CA**
Site Photographs



Photograph 15. Blue-line drainage only a few hundred feet after it enters the north-west corner of the Stoneridge site. The evidence of an OHWL is very strong, including the carpeting in the foreground that has been washed to its current position and has been partially buried by sediment deposition.



Photograph 16. Blue-line drainage just downstream of 14th Avenue (past the dump area).



Legend

- Corps Width / CDFG Width
- ==== Permanent Impact Area
- Corps Jurisdictional Feature
- - - CDFG Jurisdictional Feature

Karen Avenue

West Pierson Blvd.

STONERIDGE DEVELOPMENT
Jurisdictional Delineation Map

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Exhibit 4

