APPENDICES TO
DRAFT ENVIRONMENTAL IMPACT REPORT
FOR THE PAVILION AT OCEANSIDE
P-6-06, D-5-06, C-(19-23)-06
SCH No. 2006111033

VOLUME 2 OF 3

Compiled For:

The City of Oceanside
300 North Coast Highway
Oceanside CA 92054

By:

Affinis
Shadow Valley Center
847 Jamacha Road
El Cajon, CA 92019
(619)441-0144

April 10, 2008

E. Geotechnical Report

W.O. 81-02048-0031
May 7, 2007
Issued from: Placentia Office

Thomas Enterprises
2385 Shelter Island Drive, Suite 202
San Diego, California 92106

Attention: Mr. Mel Kuhnel

Subject: Geotechnical Update
The Pavilion at Oceanside
North of Expressway 76 and Mission Avenue
Oceanside, California
APN 160-270-79

References: Response to Geotechnical Report Review, City of Oceanside, The Pavilion at Oceanside, North of Expressway 76 and Mission Avenue, Oceanside, California", dated May 2, 2007, prepared by Eberhart / United Consultants.

"Response to Geotechnical Report Review, City of Oceanside, The Pavilion at Oceanside, North of Expressway 76 and Mission Avenue, Oceanside, California", dated August 3, 2006, prepared by Eberhart / United Consultants.

"Preliminary Geotechnical Feasibility Study, The Pavilion at Oceanside", dated May 24, 2006, prepared by Eberhart / United Consultants.

Tentative Map, The Pavilion at Oceanside, Oceanside, California, dated July 2006, prepared by O'Day Consultants.

Dear Mr. Kuhnel:

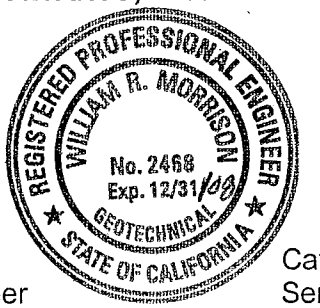
In accordance with your request, Eberhart / United Consultants (EUC) has prepared this geotechnical update letter for the subject project. The purpose for the geotechnical update letter is to discuss the geotechnical recommendations as they pertain to the referenced Tentative Map prepared by O'Day Consultants.

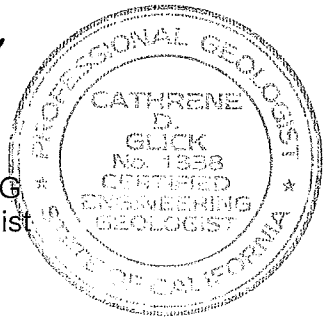
Our review of the referenced Tentative Map indicates that the design grade shown thereon are similar in elevation to those anticipated in our previous geotechnical report. As a result, it is our opinion that the findings, conclusions and recommendations presented in our referenced report and its associated addenda remain applicable to the proposed development and are included by reference herein.

Building-specific geotechnical studies/recommendations are pending final site selection and building-specific plan/loading configurations.

We appreciate this opportunity to be of continued service. If you have any questions, feel free to contact the undersigned at (714) 632-5555.

Respectfully submitted,
EBERHART / UNITED CONSULTANTS, INC.





William R. Morrison, PE, GE
Principal Geotechnical Engineer

Cathrene D. Glick, PG, CEG
Senior Engineering Geologist

Attachments: Plate 1 – Boring/CPT Location Map

Distribution: 2 to Addressee
3 to Ann Gunter, The Lightfoot Planning Group, 5750 Fleet Street, Suite 250, Carlsbad, California 92008 (760/692-1924, Fax 1935)
1 to John Strohminger, O'Day Consultant

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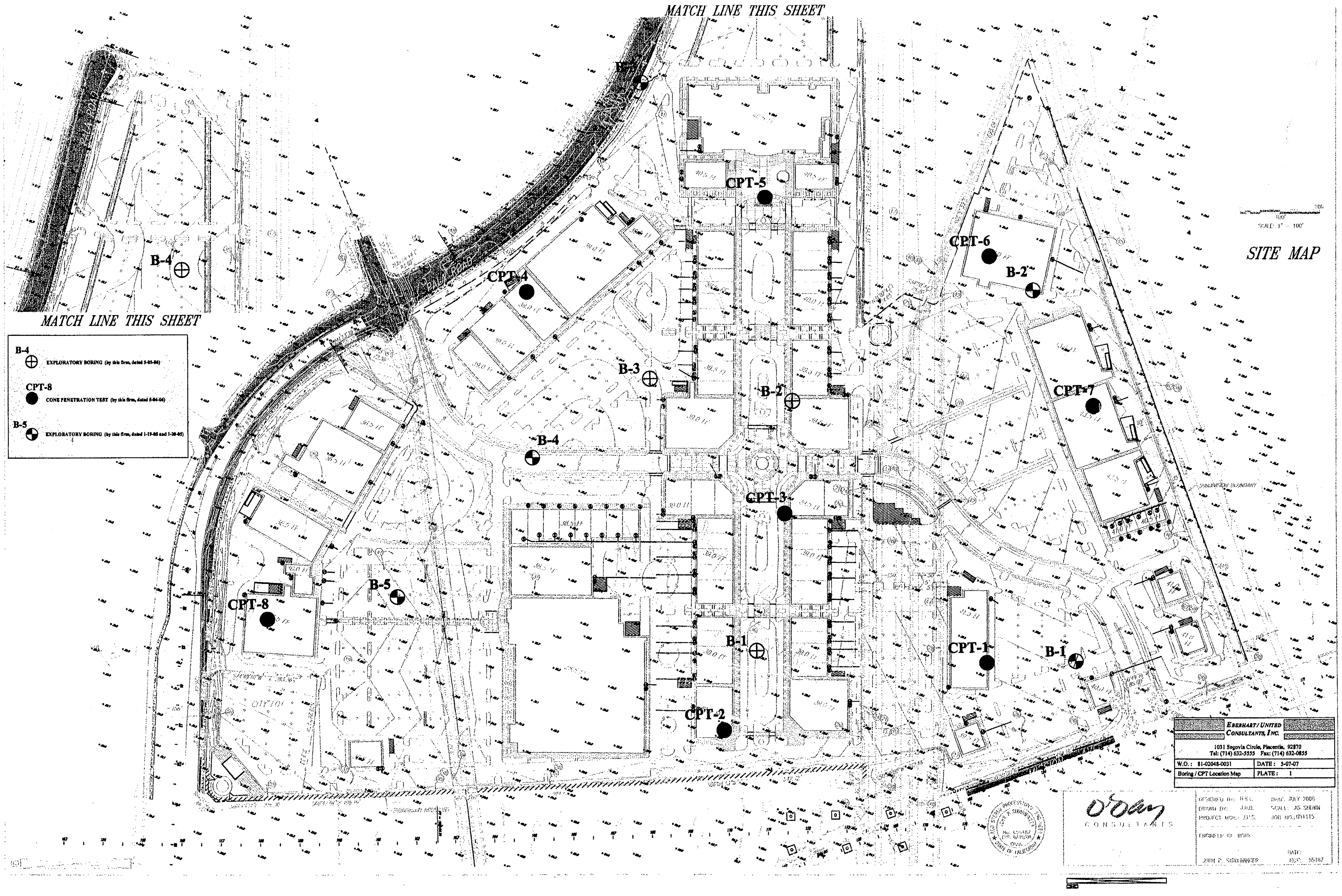


MATCH LINE THIS SHEET
SITE MAP
B-4
CPT-4
B-3
CPT-5
CPT-6
B-2
B-2
CPT-7
B-4
CPT-3
B-5
CPT-8
B-1
CPT-1
B-1
CPT-2
MATCH LINE THIS SHEET
B-4
EXPLORATORY BORING (by this firm, dated 5-05-06)
CPT-8
CONE PENETRATION TEST (by this firm, dated 5-04-06)
B-5
EXPLORATORY BORING (by this firm, dated 1-19-05 and 1-20-05)
EBERHART / UNITED CONSULTANTS, INC.
1031 Segovia Circle, Placentia, 92870
Tel: (714) 632-5555 Fax: (714) 632-0855
W.O.: 81-02048-0031
DATE: 5-07-07
Boring / CPT Location Map
PLATE: 1

W.O. 81-02048-0031
May 2, 2007
Issued from: Placentia Office

City of Oceanside
Public Works Department
300 North Coast Highway
Oceanside, California 92054

Attention: Mr. Jerry Hittleman, Project Planner

Subject: **Response to Geotechnical Report Review, City of Oceanside**
The Pavilion at Oceanside
North of Expressway 76 and Mission Avenue
Oceanside, California
APN 160-270-79

References: "Review Comments for The Pavilion @ Oceanside", dated August 31, 2006, prepared by Chris E. Lillback, Geotechnical Consultant.

"Response to Geotechnical Report Review, City of Oceanside, The Pavilion at Oceanside, North of Expressway 76 and Mission Avenue, Oceanside, California", dated August 3, 2006, prepared by Eberhart / United Consultants

"Review Comments for The Pavilion @ Oceanside", dated June 15, 2006, prepared by James F. Knowlton, RCE/CEG, Consultant.

"Preliminary Geotechnical Feasibility Study, The Pavilion at Oceanside", dated May 24, 2006, prepared by Eberhart / United Consultants.

Dear Mr. Hittleman:

In response to the referenced review comments prepared by the City of Oceanside's consultant, Eberhart / United Consultants (EUC) has prepared the following response letter. The numbering of responses corresponds to the numbering of the Items Requiring Response / Further Evaluation (1-9), as outlined in the City's review letter.

1. A report titled "Phase 1 Environment Site Assessment, Siegal Property, North of Highway 76, (Former Oceanside Drive-In Theater), Oceanside, San Diego, California," was prepared for the site by GeoSoils, Inc. (dated February 24, 2005). Geosoils' report, which addresses the site's toxicity, concludes that the potential for hazardous concentrations of materials/waste and/or hydrocarbon contamination is low to moderate. However, the Geosoils report identifies the following potential concerns:

- In the past, the site was utilized for agricultural purposes. As such, Geosoils recommends that an agricultural chemical residue survey be performed to evaluate whether residue of pesticides or other agricultural chemical exist at the site. If pesticides or other potentially hazardous materials are detected, Geosoils recommends that these materials be handled in accordance with the Regional Water Qualty Control Board requirements.
- Geosoils indicates that a leaking underground storage tank (LUST) may have existed at the site. Geosoils states that this LUST was listed as being associated with the Ocean Place Cinemas on Mission Avenue; however, they note that no specific address for the Ocean Place Cinemas was indicated.
- Geosoils' report indicates that the existing structures at the site may contain asbestos or lead-based paint, due to their age. As a result, Geosoils recommends that an asbestos and lead survey be conducted on the existing structures prior to their demolition, removal and disposal.
- Geosoils report recommends that all trash, debris and waste materials be properly disposed of in accordance with the requirements of the local governing jurisdiction. Further, Geosoils recommends that materials containing petroleum residue during improvement of the site should be evaluated prior to their removal and disposal in accordance with proper procedures. In addition, Geosoils recommends that buried trash or debris that is encountered during development of the site should be evaluated by a qualified environmental consultant prior to their removal from the site.

EUC proposed to perform an agricultural chemical residue survey including a grid sample boring plan with a statistical-based composit testing plan for the surface to 2.5 foot samples and the 2.5- to 5-foot samples to evaluate the potential for residual organophosphate or organochlorine compounds to exist within the soil. However, we understand that GeoSoils has been retained to perform these services and resolve this outstanding issue.

Our subsequent review of San Diego County Depart of Environmental Health (DEH) records indicates that the address of the Ocean Place Cinemas is 401 Mission Avenue in Oceanside. As a result, it appears that the LUST site reported by Geosoils is situated approximately 2½ miles west of the subject site. Consequently, review of the Geosoils report and additional DEH information indicates that known LUST sites are either situated too far from the subject site to significantly impact the site, or cases involving LUSTs at nearby sites have been reported as "closed" by the DEH. As such, EUC concludes that further evaluation of this matter is not required.

Any asbestos and/or lead investigations which may be required for permit conditions by the contractor should be performed immediately prior to demolition and as such, EUC concludes that further evaluation of this matter is not required at this time.

2. As recommended in Section 4.3.3 of our referenced geotechnical report, "Imported Select Fill should be non-expansive, having a Plasticity Index of 12 or less, an R-Value greater than 40, and enough fines so the soil can bind together." The non-expansive imported soils recommended in our report should possess an expansion index of 20 or less in keeping with the City's definition of non-expansive soil. We note that our report recommends that the proposed fill materials be approved by the geotechnical consultant prior to their delivery to the site. Once building pads are brought to finish grade, expansion testing should be

completed by the geotechnical engineer to check that the finish grade soils are non-expansive.

At least 6 inches of Caltrans Class 2 aggregate base should be placed beneath curb and gutter in those areas possessing an expansion index of more than 20. The aggregate base, along with the underlying subgrade should be compacted to at least 95 percent of the maximum dry density (as determined by ASTM D1557). Our review of the City of Oceanside's guidelines regarding aggregate base indicates that if expansion index testing of the soils exposed at subgrade indicates an expansion index of 20 or less (considered to be non-expansive per City of Oceanside guidelines), the aggregate base can be eliminated from beneath curbs and gutters.

3. As noted in our referenced report, the site grades will be raised approximately 3 to 4 feet above those that currently exist at the site. Our report also notes that the raising of the grades at the site will require the placement of approximately 650,000 cubic yards of imported soil. Our referenced report, along with our above response to review comment No. 2, recommends that imported soils be non-expansive (i.e., possess an expansion index of 20 or less), have a Plasticity index of 12 or less, an R-Value greater than 40 and sufficient fines to bind the soil together. Because the report recommends that the import soils should be non-expansive, recommendations for expansive soil do not appear to be warranted at this time. However, as discussed above, expansion index testing should be performed on those soils exposed at finish grade at the completion of grading. At that time, supplemental recommendations to mitigate expansive soils can be provided, if warranted.

   Chemical testing of the proposed import fill materials should also be performed to assess whether the proposed import materials are potentially corrosive to concrete or buried metallic elements. Such corrosion testing should include soluble sulfate, chloride, pH and minimum resistivity testing. Based on the results of this testing, appropriate recommendations to mitigate the effects of potentially corrosive soils will be provided as warranted. Testing of these chemical tests, along with the engineering properties described above should be performed by the geotechnical consultant. While this testing should be performed at the completion of grading, it may also be prudent to perform this testing prior to delivery of the proposed import materials to the site.

   Those soils proposed for use as import fill should be evaluated for toxicity by the project environmental consultant. Those proposed import fill soils that contain contaminant levels deemed to be excessive by the environmental consultant should not be used as fill at the site.

4. See our responses to comments No. 2 and 3 above.

5. The liquefaction analyses presented in our referenced report were conducted using Excel spreadsheets based on the most recent publications of the NCEER Workshop and SP117 Implementation. The cyclic resistance ratios utilized in our previous calculations were calculated using Robertson and Campanella (1983) conversion to $N_{1(60)}$ values and Seed's Method (1986). Fines corrections were made based on Robertson and Wride (1997). Resultant settlements of liquefied soils were based on Tokimatsu and Seed's (1987) volumetric strain criteria.

EUC has completed additional liquefaction analyses since the time of our last project submittal. Our analyses were based on the geotechnical data indicated on our exploratory Borings B-1 through B-5 (drilled January 19-20, 2005) and CPT soundings CPT-1 through CPT-8 (obtained May 4, 2006). These additional soil liquefaction analyses (attached) were calculated using the CivilTech LiquefyPro Version 5.3c computer program. The analysis of the borings incorporated Idriss and Seed (1997) fines corrections, and Tokimatsu and Seed's (1987) settlement criteria. The analysis of the CPT data included use of Modified Robertson and Wride (1997) methods and Tokimatsu and Seed's (1987) settlement methods.

Review of the probabilistic seismic ground motion evaluation of the site, which is presented in our referenced report, indicates that a peak ground acceleration of approximately 0.30g can be expected for an event having a 475-year return period (10 percent probability of exceedance in 50 years). This estimated peak ground acceleration was calculated using the FRISKSP software (Blake, 2000) and incorporates attenuation relations proposed by Boore, et al. (1997). When scaling this ground acceleration with respect to a magnitude 7.5 earthquake (the magnitude to which liquefaction susceptibility analyses are applicable), the FRISKSP software (Blake, 2000) yields a peak ground acceleration of 0.27g, which is the value utilized in our attached evaluations.

The results of our calculations (attached) indicate that during a design level earthquake along a nearby fault, several of the sand and silt layers within the alluvium that underlies the site in the vicinity of our exploratory borings and CPT soundings appear to be susceptible to liquefaction.

Seismically induced settlement can occur due to reorientation of soil particles during strong shaking of unsaturated sands, as well as in response to liquefaction of saturated loose granular soils. The potential seismically induced settlement within the alluvial deposits was estimated using the Tokimatsu and Seed procedure (1987), which addresses both liquefaction-induced settlements and settlement of dry sands. Like the liquefaction analyses, our evaluation was based on the ground motion generated by a seismic event having a 10 percent probability of exceedance in 50 years. Our calculations (Appendix) indicate a maximum seismic-induced settlement of approximately 2.7 inches in the vicinity of our exploratory borings and CPT soundings. Differential settlements that are induced by seismic shaking can be expected to be approximately one-half of the total settlement.

6. The City's geotechnical consultant has indicated that our previous response to their comment is sufficient. No further response appears to be warranted.

7. The City's geotechnical consultant has indicated that our previous response to their comment is sufficient. No further response appears to be warranted.

8. The City's geotechnical consultant has indicated that our previous response to their comment is sufficient. No further response appears to be warranted.

9. As requested by the City's geotechnical consultant, we are providing herewith additional pavement design recommendations for the proposed project. The recommended pavement sections have been are calculated based on the design standards presented in the California Department of Transportation "Highway Design Manual", fifth edition.

Since a considerable amount of import materials are anticipated to raise the grades at the site, R-value testing of the on site materials was not performed during our referenced geotechnical evaluation of the site. Because the nature of the import fill materials is not known at this time, we have assumed an R-value of 5 at the request of the City's geotechnical, consultant. We recommend that R-value testing be performed on those materials that will be exposed at subgrade at the completion of grading. At that time, finalized pavement design recommendations may be warranted.
Our calculations utilize an assumed traffic index of 5.0 for automobile parking areas and drive aisles, and an assumed traffic index of 6.0 for paved areas subject to truck/bus lanes and other heavy traffic. These assumed traffic indices should be verified by the project civil engineer or traffic engineer prior to construction.

PRELIMINARY PAVEMENT SECTIONS

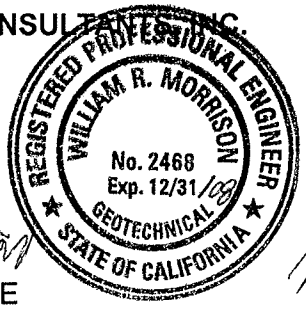
Pavement Area	Assumed Traffic Index	Assumed R-Value	Recommended Pavement Section (inches)
Automobile Parking Area and Drive Aisles	5.0	5	3 AC / 10.0 AB
Truck/Bus Lanes and Heavy Traffic Areas	6.0	5	4 AC / 11.5 AB

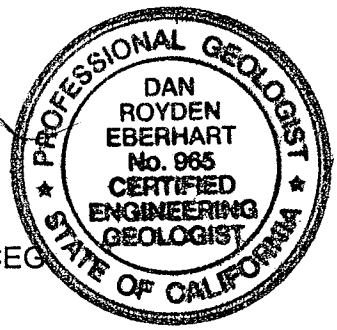
AC is asphalt concrete conforming to Section 39 of Caltrans Standard Specifications.
AB is aggregate base conforming to the requirements of Caltrans 'Class II Aggregate Base' (Section 26 of Caltrans Standard Specifications).

Recommendations regarding rigid pavement sections, along with the preparation and compaction of subgrade and aggregate base are presented in our referenced report and are included by reference herein.

We hope this provides the necessary information at this time. If you have any questions, feel free to contact the undersigned at (714) 632-5555.

Respectfully submitted,
EBERHART / UNITED CONSULTANTS, INC.





William R. Morrison, PE, GE
Principal Geotechnical Engineer

Dan R. Eberhart, PG, CEG
Principal Geologist

Attachments: Review Comments for The Pavilion @ Oceanside
Revised Liquefaction Analysis

Distribution: 2 to Addressee
2 to Mel Kuhnel, Thomas Enterprises, 2385 Shelter Island Drive, Suite 202, San Diego, California 92106-9607
1 to Ann Gunter, The Lightfoot Planning Group, 5750 Fleet Street, Suite 250, Carlsbad, California 92008 (760/692-1924, Fax 1935)
1 to John Strohminger, O'Day Consultant

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LIQUEFACTION ANALYSIS

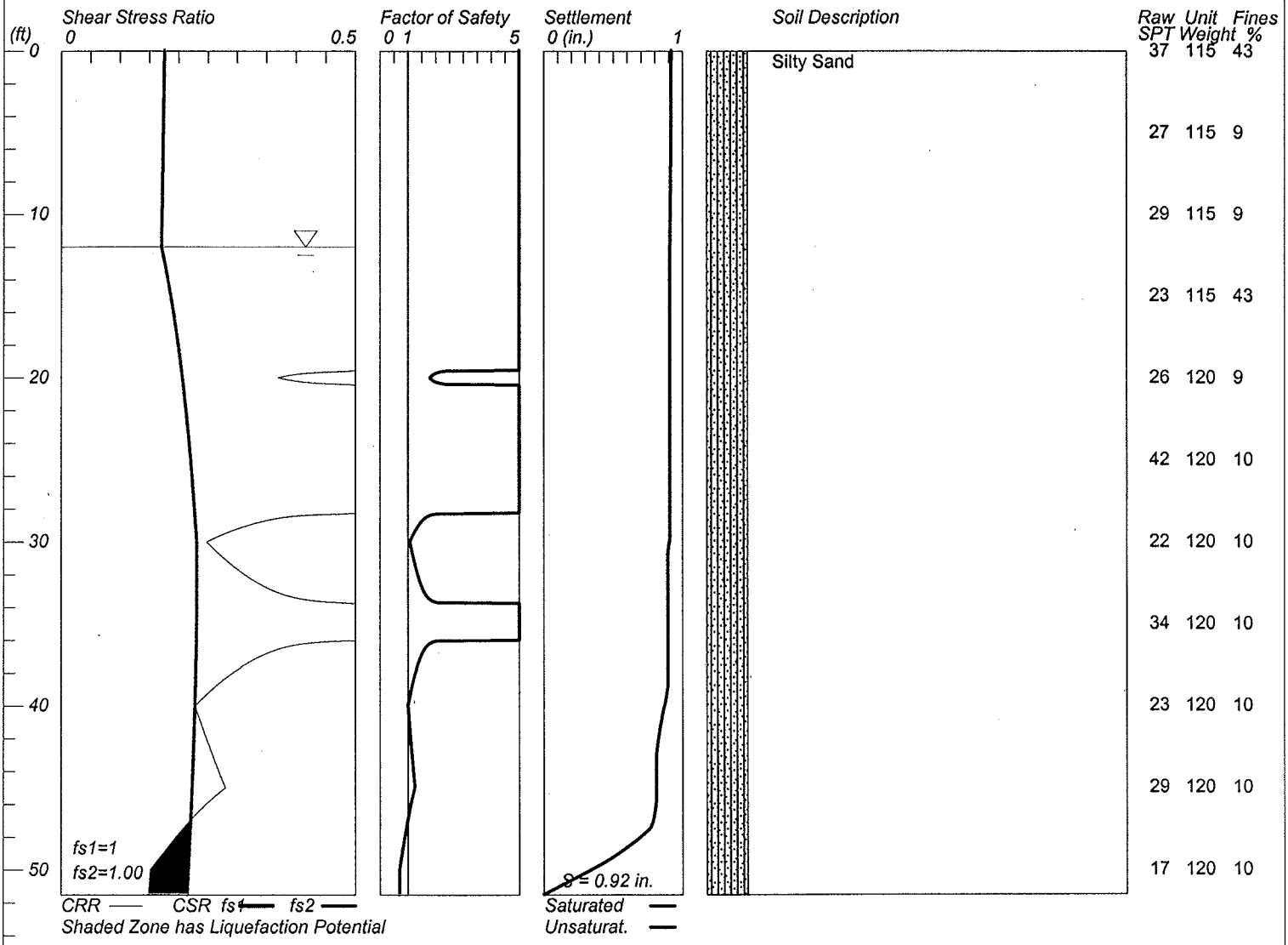
The Pavillion at Oceanside

Hole No.=B-1 Water Depth=12 ft Surface Elev.=37

Magnitude=7.5

Ground Improvement of Fill=2.5 ft

Acceleration=0.27g



NOTE: **LIQUEFACTION ANALYSIS CALCULATION SHEETS ARE BOUND IN A SEPARATE TECHNICAL APPENDIX ON-FILE AT THE CITY OF OCEANSIDE'S PLANNING DEPARTMENT AND CAN BE REVIEWED AT THAT LOCATION.**

GEOPACIFICA

MEMORANDUM

To: Mr. Jerry Hittleman, Project Planner, City of Oceanside

From: Chris E. Lillback, Geotechnical Consultant

Date: August 31, 2006

Subject: Review Comments for The Pavilion @ Oceanside
87.47 acre NE of Foussat and Mission Avenue/ 3480 Mission Avenue
P-7-06/D-6-06/C-19-06/C-20-06/C-21-06/C-22-06/C-23-06

We have reviewed the following:

1) Response to Geotechnical Report Review, prepared by Eberhart/United Consultants, WO 81-02048-0031, dated August 3, 2006

Previously reviewed on /August 9, 2006

1) Tentative Parcel Map for The Pavilion at Oceanside; by O'Day Consultants, 10 sheets, dated July 24, 2006.
2) Preliminary Geotechnical Feasibility Study, The Pavilion at Oceanside, Expressway 76 and Mission Avenue, Oceanside, California; by Eberhart/United Consultants, dated May 24, 2006, no. 81-02048-0031.
3) The City of Oceanside Engineers Design and Processing Manual.
4) Landscape Conceptual Plan, The Pavilion at Oceanside, Job # 1029.01.2, prepared by The Lightfoot Planning Group, dated July 24, 2006
5) Conceptual Master Plan, The Pavilion at Oceanside, 27 sheets, prepared by Perkowitz + Ruth, Project # 05-217, dated July 17, 2006
6) Phase I Environmental Site assessment, Siegel Property, North of Highway 76, Oceanside, California, W.O. E4704-SC, prepared by GeoSoils Inc., dated February 24, 2006

The purpose of this review is to see if the submitted soil/geologic data/information meet the requirements of the City of Oceanside and the current standard of practice and care for the geotechncial profession within the local geographic area. Clarification of the items that follow need to be received and approved: Although this review is addressed to City staff, the review comments are to be addressed to and by the geotechnical consultant. The review items have been discussed with Mr. James Knowlton (CEG/RCE) prior to issue of this review.

The document 1 does not provide sufficient soil/geologic data/information to meet the requirements of the City of Oceanside and **is not accepted or approved**. The following

items will require professional clarification and/or supplemental data/information and submittal for additional review. For simplicity the comments regarding the document 1 are provided as they were listed in the response.

1. The response does not provide what was requested, the geotechnical consultant must address site toxicity in conformance with document 3 (Chapter II, Section 9.1.H, page 132) "All Geotechnical Reports shall address site toxicity in accordance with: 1. the requirements of the City of Oceanside, and/or other agencies. 2. The requirements of the County of San Diego Health Department. If A statement summarizing the results shall be presented by the Geotechnical consultant who is responsible to address the on-site soil conditions.

2. We agree that not providing extensive expansion testing of on-site soils based upon the anticipated imported soil volumes and depths below finish grade of the existing soils is at a depth sufficient not to adversely affect the proposed site improvements. The City of Oceanside guidelines regarding aggregate base should be followed. The statement regarding sand equivalent testing is ambiguous based once again on the anticipated imported soil volumes. The Sand equivalent results should be used as an aid in the analysis if the engineering properties of the in-situ and imported soils.

3. We concur. The Geotechnical consultant shall provide the guidelines which specifically address the responsible parties and testing for testing of the toxicity and engineering properties (corrosive, SE, shear strength, expansiveness etc.) which are acceptable for use at the subject site. The consultant shall provide specific recommendations. Since the imported soils may be expansive please provide expansive soil recommendations.

4. see above

5. From the charts provided it appears that an analysis was performed. The consultant must present a description of the analysis method used including which software (if any) and version used along with a summary of the method employed. A statement regarding why the method is applicable shall also be provided. The design parameters and specifications shall be presented along with the recommendations and procedures for ground modification. As recommended additional site exploration, analysis and review by the consultant is required.

6. The response is sufficient.

7. The response is sufficient.

8. The response is sufficient.

9. The response does not answer the comment. The recommendations shall be provided. The consultant shall provide pavement recommendations as per the City of Oceanside design manual. An assumed "R" value of 5 shall be used when actual testing has not been performed. The minimum base section under all pavement shall not be less than six (6") inches.

Grading Plan Review level Comments

1. An "as-built report prepared by the consultant must be submitted to the City for review. The report must include the results of all compaction tests as well as a map depicting the limits of overexcavation, observed geologic conditions, locations of all density tests, locations and all removal bottoms, and location and elevation of all retaining wall backdrains and outlets.

2. Print the name, address, and phone number of the Project Geotechnical consultant and list all applicable geotechnical reports on the building/grading plans.

3. The foundation plans and foundation details shall clearly depict the embedment material and minimum depth of embedment for the foundations.

4. The following note must appear on all the foundation plans: *"All foundation excavations must be observed and approved by the Project Geotechnical Consultant prior to placement of reinforcing steel."*

5. The final grading, drainage, and foundation plans should be reviewed, signed and wet stamped by the project geotechnical consultants.

The following comments concern the Phase I environmental report and shall be addressed by the appropriate party:
The Environmental report is approved with the following conditions and as recommended in the report:

1. A preliminary evaluation and chemical residue survey shall be performed for the subject property. Based upon the results a detailed agricultural chemical residue survey may be required.

2. Department of Environmental Health (DEH) case number H21760-001 for Ocean Place Cinemas shall be performed for evaluation.

3. An asbestos and/or lead-based paint survey shall be performed on the onsite construction materials by a licensed asbestos/lead contractor prior to demolition, removal, and disposal.

4. The site needs to be cleared by the San Diego County Department of Environmental Health.

The document 1 and previously reviewed document 2 do not provide adequate soil/geologic data/information to meet the requirements of the City of Oceanside and are **not accepted or approved.**

It should be noted that the above comments are as complete as possible based upon the information provided to us at this time. Additional comments may be necessary as more complete and adequate information regarding this project are made available

END

[redacted] *EBERHART / UNITED* [redacted]
CONSULTANTS

Preliminary Geotechnical Feasibility Study
The Pavilion at Oceanside
Expressway 76 and Mission Avenue
Oceanside, California
W.O. 81-02048-0031 May 24, 2006

Prepared for:
Thomas Enterprises
2385 Shelter Island Drive, Suite 202
San Diego, California 92106-9607

1031 Segovia Circle ❖ Placentia, CA 92870 ❖ Tel. (714) 632-5555 ❖ FAX (714) 632-0855

[redacted] *EBERHART / UNITED* [redacted]
[redacted] *CONSULTANTS* [redacted]

May 24, 2006
W.O. 81-02048-0031

Thomas Enterprises
2385 Shelter Island Drive, Suite 202
San Diego, California 92106-9607

Attention: Mel Kuhnel

Subject: **Preliminary Geotechnical Feasibility Study**
The Pavilion at Oceanside (Approximately 90 Acres)
North of Expressway 76 and Mission Avenue
Oceanside, California

Dear Mr. Kuhnel:

In accordance with your authorization, Eberhart / United Consultants (EUC) has completed a preliminary geotechnical feasibility study for the subject development in Oceanside, California. Transmitted herewith are the results of our findings, conclusions, and preliminary recommendations for site development. In general, the proposed development at the site is considered to be geotechnically feasible provided the recommendations of this report are implemented in the design of the project.

Should you or members of the design team have questions or need additional information, please contact the undersigned at (714) 632-5555. The opportunity to be of service and to be involved in the design of this project is appreciated.

Sincerely,

EBERHART / UNITED CONSULTANTS, INC.

REGISTERED PROFESSIONAL ENGINEER
MICHAEL M. SORGENFREI
No. C065657
Exp. 10/07
CIVIL
STATE OF CALIFORNIA

Michael Sorgenfrei, PE
Associate Engineer

PROFESSIONAL GEOLOGIST
DAN ROYDEN EBERHART
No. 965
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

Dan R. Eberhart, PG, CEG
Principal Geologist

Copies: (1) to Addressee
(1) Kevin Case – Thomas Enterprises
(1) John Strohminger – O'Day Consultants
(8) Ann Gunter – The Lightfoot Planning Group

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PRELIMINARY GEOTECHNICAL FEASIBILTY STUDY

Project: **The Pavilion at Oceanside**
Oceanside, California

Client: **Thomas Enterprises**
San Diego, California

1.0 INTRODUCTION

1.1 Purpose and Scope

The purposes of this study were to research and analyze geologic and geotechnical site information and evaluate project feasibility from a geotechnical perspective. EUC previously prepared a Preliminary Geotechnical Engineering Study for the site dated March 1, 2005. The March 2005 report was prepared prior to the preparation of site layout and grading plans. Boring logs and laboratory test results from the March 2005 report are included within this report in the Appendices. This study provides information on site geology, subsurface conditions, seismicity, geologic and geotechnical constraints, conclusions regarding project feasibility, and general recommendations relative to future site development. Additional subsurface explorations, laboratory testing and geotechnical engineering will be warranted prior to earthwork and building design. Some tenants (national chains such as Target Corporation) are expected to have their own requirements for geotechnical investigations and design. This study was performed in accordance with the scope of work outlined in our proposal dated March 29, 2006.

The scope of this study included the review of pertinent published and unpublished documents related to the site, the drilling of 4 soil borings, 8 cone penetration tests, laboratory testing of selected samples retrieved from the borings, engineering analysis of the accumulated data, and preparation of this report. The conclusions presented in this report are based on the data acquired and analyzed during this study, and on prudent engineering judgment and experience. This study did not include an assessment of potentially toxic or hazardous materials that may be present on or beneath the site, nor a comprehensive evaluation of the corrosion potential of the site soils.

1.2 Site Description

The Pavilion at Oceanside site is located north of the intersection of Expressway 76 and Mission Avenue in Oceanside, California, as shown on Plate 1, Site Location Map. The irregularly shaped approximately 87.5-acre site is bounded by the San Luis Rey River levee to the northwest, residential development to the east, Expressway 76 and Mission Avenue to the south, and Foussat Road and the Oceanside Municipal Airport to the west. An approximate 20-foot high rip rap armored

levee is adjacent to the site boundary, and was built in the early 1990s adjacent to the river to mitigate for flooding of the site.

The majority of the site has not previously been developed. The likely presence of artificial fill is anticipated to be minimal. An old drive-in movie theater is located in the west central portion of the property. This portion of the property has four large drive-in movie screens with anticipated deep foundations. Asphalt concrete pavement covers the movie theater area and there are a few storage units at the site. Overhead electric transmission lines are located within the site, as well as underground gas and water lines, and four City of Carlsbad water wells. The majority of the site is covered with grasses and some small bushes. The site is situated at approximately 33.222° north latitude, -117.341° west longitude at elevations of about 30 to 40 feet above mean sea level.

1.3 Proposed Development

It is EUC's understanding that all existing structures at the site will be demolished. The site will be improved with approximately 13 major retail store pads including a Target retail store, a cinema, a health club, about 29 minor retail store pads, and 11 restaurant pads. The majority of the building pads are anticipated to be one and two stories, between 3,000 and 132,000 square feet. Total square footage of about 880,000 sf of buildings is planned. The buildings are anticipated to have shallow foundations and slab-on-grade construction. Geotechnical recommendations for the potential future, multi-story hotel is not within the scope of this report.

Approximately 650,000 cubic yards of import soil is expected to raise site grades above flood level. According to the grading plan, the site grades will be raised an average of 3 to 4 feet. Column dead plus live loads are anticipated to range from 20 to 200 kips. Perimeter load bearing wall loads are anticipated to range from 2 to 4 kips per lineal foot. Slab loads from forklifts and storage racks are anticipated to be about 300 psf. A new road is proposed to connect New Foussat Road and Mission Avenue. Old Foussat Road will be demolished and abandoned as part of the proposed development. A future extension of Pala Road may be constructed within the property, along the base of the San Luis Rey River levee. Other improvements may include paved parking and driveways, truck loading docks, decorative concrete paver areas, light poles, trash enclosures, utility trenches, landscaping, and other appurtenant structures. If the proposed development differs significantly from that described above, EUC should be notified to determine if additional recommendations are required.

1.4 Validity of Report

This report is valid for three years after publication. If construction begins after this time period, EUC should be contacted to confirm that the site conditions have not changed significantly. If the

proposed development differs considerably from that described above, EUC should be notified to determine if additional recommendations are required. Additionally, if EUC is not involved during the geotechnical aspects of construction, this report may become wholly or in part invalid; EUC's geotechnical personnel verifies that the subsurface conditions anticipated in this report are similar to the subsurface conditions revealed during construction. EUC's involvement should include grading, and drainage plan review; monitoring site clearing, mass grading and building pad construction.

2.0 PROCEDURES AND RESULTS

2.1 Literature Review

Pertinent geologic and geotechnical literature pertaining to the site area was reviewed. These included various USGS, DMG and other agency publications, photographs and maps.

2.2 Site Exploration

A subsurface exploration program was undertaken at the site to evaluate the subsurface soil conditions. A County of San Diego Well Drilling Permit was obtained prior to advancing the explorations. Eight cone penetration tests were made on May 4, 2006, and 4 soil borings were advanced on May 5, 2006. Five exploratory borings were previously drilled on January 19 and 20, 2005. The boring logs from the 2005 and 2006 borings are contained in the appendices. A full presentation of cone penetration test data, including field equipment, procedures, test data and interpretation, is included in the appendices.

A CME-85 truck-mounted drill rig, equipped with six-inch diameter hollow stem augers, was used to drill the borings. The soils encountered were logged during drilling and visually classified in accordance with the Unified Soil Classification System (U.S.C.S.). Relatively undisturbed soil samples were recovered from the borings at selected intervals using a modified California sampler with a 3.5-inch outside diameter containing 14 one-inch long, 2.5-inch diameter brass rings. Standard penetration tests (SPT) were performed at selected intervals using a standard split spoon with a 2-inch outside diameter. The samplers were driven with a 140-pound automatic trip hammer with a 30-inch drop. Resistance to penetration was recorded as the number of blows required to advance the sampler the last foot of a 16 or 18-inch drive. The penetration resistance for each sample is presented on the boring logs. The samples collected from the borings were sealed after recovery to preserve their natural moisture content and transported to our laboratory for testing. A composite bulk sample was also collected from the upper few feet of each boring. Descriptions of the materials encountered during drilling, and some of the results of laboratory test results, are presented on the Boring Logs in the Appendices. The approximate locations of the exploratory borings and cones are presented on Plate 3, Boring/CPT Location Map.

2.3 Laboratory Testing

Laboratory tests were performed on selected samples to determine some of the physical and engineering properties of the subsurface soils. Some of the results of the laboratory testing are presented on the boring logs and are included in the appendices (including laboratory testing performed for the 2005 study). The following soil tests were performed for this study:

Dry Density and Moisture Content (ASTM D2216 and ASTM 2937) – In-situ density and moisture tests were conducted to determine the in-place dry density and moisture content of the subsurface materials. These properties provide information for evaluating the physical characteristics of the subsurface soils.

Direct Shear (modified ASTM D3080) - Direct shear testing is performed on samples to determine the angle of internal friction and cohesion of soil or rock materials. This data can be utilized in determining allowable bearing capacity, retaining wall design parameters, and strength characteristics of the materials. Direct shear specimens were saturated under a 100-psf surcharge for a period of 24 hours prior to testing. Direct Shear testing was performed on both undisturbed samples and samples remolded to resemble compacted engineered fill.

Particle Size Analysis (Wet and Dry Sieve) and Hydrometer (ASTM D422, D1140, and CT202) – Particle size analysis testing is conducted on selected samples to determine the soil particle size distribution. This information is useful for the evaluation of liquefaction potential and characterizing the soil type according to the USCS.

Consolidation Test (ASTM D2434, D2435, and D4546) – One dimensional consolidation testing of relatively undisturbed samples provide information on the settlement characteristics of the soil tested.

Maximum Dry Density/Optimum Moisture (ASTM D1557) – Determining the maximum dry density and optimum moisture content of a particular soil, in combination with in-place dry density and moisture content, provides relative compaction information.

Sand Equivalent (Cal Test 217) – Sand Equivalent testing provides a measure of the relative proportions of detrimental fine dust or clay-like material in soil or fine aggregates.

Corrosion – Corrosion testing is performed to assess the potential of site soils to corrode buried steel and concrete, and includes determination of pH, minimum resistivity, and conductivity, and analytical measurement for concentration of water soluble chlorides and sulfates.

3.0 FINDINGS

3.1 Regional Geologic Setting

The subject site is located within the Peninsular Ranges Geomorphic Province of southern California. This province is characterized by northwesterly trending, steep, elongated ranges and valleys. More specifically, the site is situated in the southwest portion of the Santa Ana Block, within the San Luis Rey River valley. The Santa Ana Block is an uplifted, eroded mass of Cretaceous and older crystalline and metamorphic rock, mantled with sedimentary, and alluvial deposits. The Santa Ana Block is bounded by the Elsinore Fault Zone to the northeast, the Newport Inglewood – Rose Canyon Fault Zone to the southwest, and the Los Angeles Basin to the northwest.

The site lies within the alluviated valley of the San Luis Rey River about 3 miles inland from the Pacific Ocean. Bedrock of the Santiago formation underlies the site at depth and outcrops on the hills to the north and south.

3.2 Regional Faults and Seismicity

The southern California area is seismically active. Because of the proximity of the site to several nearby active faults, strong ground shaking could occur at the site as a result of an earthquake on any one of them. According to referenced maps, the site does not lie within an Earthquake Fault Zone, as defined by the Alquist-Priolo Act of 1972. No known fault traces cross the site, and no evidence of surface ground rupture was noted during our site reconnaissance. Therefore, it is our opinion that the likelihood of surface fault rupture at the site is low.

The coordinates of the site are 33.2202° north latitude and -117.3444° west longitude. The fault systems capable of producing the strongest ground shaking at the site are the Type B Newport-Inglewood (Offshore segment) located approximately 6.8 miles (11 km) southwest of the site, and the Type B Rose Canyon Fault located approximately 7.8 miles (12.5 km) southwest of the site. A plate showing the site in relation to the active faults in the region and epicenters of previous earthquakes is presented in the Appendices.

This firm has evaluated the seismicity of the site from historical, deterministic, and probabilistic viewpoints. This has been accomplished with the aid of specialized software and recent attenuation relationships. The software used in our analysis was developed by Tom Blake (1988 through 2004). Both the median and median plus one standard deviation peak site accelerations have been computed for the site. Attenuation relationships developed by Campbell & Bozorgnia (1997) for sites characterized by alluvium were used for historical and deterministic evaluations (EQSEARCH and EQFAULT). Attenuation relationships developed by: Abrahamson & Silva (1997) for soil conditions; Boore et al. (1997) for soil 310 conditions; Campbell and Bozorgnia (1997) for alluvium

conditions; and Sadigh et al. (1997) for deep soil conditions were used for probabilistic evaluations (FRISKSP).

To date, 44 earthquakes (Richter Magnitudes 5.0 and greater) have occurred within 62 miles (100± kilometers) of the site since the year 1800. In addition, 22 active faults have been identified within 62 miles of the site. Historically, the maximum site acceleration during this period has been estimated to be approximately 0.134g (median) and 0.211g, (median plus 1 standard deviation) with a corresponding earthquake magnitude of 6.5. This seismic event occurred on November 22, 1800, and is estimated to have occurred (epicenter) approximately 15 miles from the site. Historical seismic parameters for the seismic events within a 100-km radius of the subject site are presented in the data print out from EQSEARCH in the appendices.

A deterministic estimation of ground response during a seismic event may be estimated for a particular site on the basis of previous ground motion studies, data from previous earthquakes, and activity and geometry of the faults influencing the site. A deterministic study reveals that the site is situated within close proximity to a system of faults that have a history of seismic events associated with them. These faults provide the mechanism for the seismic events found in the region. The closest known active faults to the site are the Newport-Inglewood (Offshore segment), approximately 6.8 miles (11.0km) to the southwest, the Rose Canyon, approximately 8.4 miles (13.5 km) to the southwest, and the Elsinore (Temecula segment), approximately 21.1 miles (34.0 km) to the northeast. From a deterministic perspective, possible earthquake accelerations at the site have been analyzed, and it has been determined that the most significant seismic event would be a magnitude 7.1 earthquake on the Newport-Inglewood fault (Offshore segment). The accelerations produced at the site by such an event would exceed those of events on any other known faults. A magnitude 7.1 earthquake on the Newport-Inglewood (Offshore segment), could produce peak ground accelerations of 0.383g (median) and 0.565g (median plus 1 standard deviation) at the site. Deterministic seismic parameters for active faults within a 100-km radius of the site are presented in the data print out for EQFAULT in the appendices.

A probabilistic estimation of peak acceleration at the site during a 50-year period has been performed using the four methods of attenuation relationships identified above. The results of these four evaluations were averaged and indicate that the site has a 10% probability of exceeding a peak horizontal ground acceleration of 0.237g over a 50-year period. Graphs for probability of exceedance versus acceleration for periods of 50 years and 100 years are presented in the print out for FRISKSP in the appendices.

3.3 Historic Land Use and Aerial Photograph Review

A study of sequential stereo-pair air photographs from 1953 through 2002 was performed to identify the previous land uses and man-made improvements at the site.

In 1953, land use and man–made improvements at the site consisted of: an earthen flood control berm in the San Luis Rey River; Mission Avenue (paved); Foussat Road (dirt); and farmed row crops north of Mission Avenue, east of Foussat Road, and south of the San Luis Rey River. West of the site was the Oceanside Municipal Airport.

In 1964, land use and man–made improvements at the site consisted of: an earthen flood control berm in the San Luis Rey River; Mission Avenue (paved); Foussat Road (dirt); and farmed row crops north of Mission Avenue, east and west of Foussat Road, and south of the San Luis Rey River. West of the site was the Oceanside Municipal Airport and a north-south trending flood control channel near the western property boundary. Residential subdivisions exist east and south of the site.

In 1979, land use and man–made improvements at the site consisted of: an earthen flood control berm in the San Luis Rey River; Mission Avenue (paved); Foussat Road (paved); Foussat Road extended across the San Luis River (dirt); and no farmed row crops. West of the site was the Oceanside Municipal Airport and a north-south trending flood control channel near the western property boundary. Residential subdivisions exist east and south of the site. A four screen drive-in theater exists in the central portion of the property, east of Foussat Road. It was reported to EUC by a previous theater manager that the projectors had to be adjusted each year to account for what was believed to be ¼ inch per year of screen settlement. It is EUC's understanding that these movie screens are founded on 45 foot deep pier foundations.

In 1988, land use and man–made improvements at the site consisted of: an earthen flood control berm in the San Luis Rey River; Mission Avenue (paved); Foussat Road (paved); Foussat Road bridge extended over the San Luis River; and farmed row crops east and west of the drive-in theater. West of the site was the Oceanside Municipal Airport, industrial buildings, and a north-south trending flood control channel near the western property boundary. Residential subdivisions exist east and south of the site. A four screen drive-in theater exists in the central portion of the property, east of Foussat Road.

In 1998, land use and man–made improvements at the site consisted of: an armored flood control channel in the San Luis Rey River; Highway 76 expressway (paved); Mission Avenue (paved); Foussat Road (paved); New Foussat Road (paved); Foussat Road bridge extended over the San Luis River; and no farmed row crops. West of the site was the Oceanside Municipal Airport,

industrial buildings, and a north-south trending flood control channel near the western property boundary. Residential subdivisions exist east and south of the site. A four screen drive-in theater exists in the central portion of the property, east of Foussat Road.

In 2002 land use and man-made improvements are the same as 1998.

In addition to the improvements noted on the photographs, other improvements consist of: four wells; many underground pipelines; and overhead electric transmission lines.

3.4 Subsurface Soil Conditions and Testing

Based on our studies, the sub-surface soil at the site generally consists of dry to wet, poorly graded fine and medium grained sand, with varying amounts of silt, to the maximum depth explored of 50 feet. In-situ dry densities of the soils encountered ranged between 82.4 and 108.3 pcf with moisture contents varying between 2.2 and 30.8 percent. Expansion Index testing on a near-surface sample from Boring 3 indicated an Expansion Index of 2. The Sand Equivalent of a near-surface sample collected from Boring 2 was found to be 27. Percent of soil passing the 200 sieve varied from 3 to 53 percent. Near surface direct shear results indicated internal friction angles between 33 and 39 degrees and in-situ cohesion between 163 and 266 psf. Compaction curve testing performed on near surface soil samples indicated maximum dry densities varied between 124 pcf and 113 pcf, with optimum moisture contents varying between 11.5 and 13.0 percent. Consolidation testing of soil samples collected from the upper 15 feet at the site exhibited consolidation between 1 and 5 percent after the addition of a 4,000 psf load. The consolidation samples had minor resultant additional settlement after the loaded samples were saturated with water. Details of materials encountered in the borings are included in the boring logs in the appendices.

3.5 Ground Water

Ground water was initially encountered in the borings during drilling at depths between 7 and 17 feet below ground surface. Ground water levels measured post-drilling were lower than initially measured. A review of well data indicates that the ground water piezometric surface in the area may be at or below sea level, which would be about 30 feet deep. The adjacent river may have a water level of about 25-feet MSL during the winter rainy season. Ground water levels can vary in response to time of year, variations in seasonal rainfall, water flow in the adjacent river, well pumping, irrigation, and alterations to site drainage. A detailed study of ground water levels was outside the scope of this study.

3.6 Liquefaction Induced Phenomena

Soil liquefaction is a phenomenon in which loose, saturated, cohesionless soil experiences a temporary loss of strength during strong cyclic loading such as that produced by earthquakes.

Typically, liquefaction potential increases with increased duration and magnitude of cyclic loading. Soil most susceptible to liquefaction is loose, clean, saturated, uniformly graded, fine-grained sand within about 40 feet of the ground surface. When ground water levels at the site are high, submerged sandy soils at the site may be susceptible to liquefaction.

Lateral spreading is a phenomena where liquefied soil layers tend to move down slope or towards a free face, such as a river or lake embankment slope, causing horizontal distress and ground cracking at the ground surface. A rigorous evaluation of lateral spreading potential was outside the scope of this investigation. A review of the construction plans for the Army Corps of Engineers designed flood control levee would be necessary as part of this analysis. The Army Corps of Engineers was contacted and it is understood that a site visit to the Army Corps-Los Angeles office would be necessary to review the as-built construction plans. However, lateral spreading analyses may not be needed since methods that mitigate for liquefaction potential would also mitigate for lateral spreading.

Sand boils can occur in liquefied soils due to the liquefaction effect of increased pore-water pressure. The increase in pore water pressure causes an upward flow of water to the ground surface, where it emerges in the form of mud spouts or sand boils. Sand boils may be as large as fifty feet in diameter, but are usually much smaller. Sand boils beneath a structure can cause complete loss of foundation bearing. Mitigation for liquefaction would also mitigate the potential for sand boils impacting the structures.

A liquefaction analysis was performed for the site and is contained in the appendices. The analysis was performed for post construction ground elevations. Some areas will be raised about 8-feet, with most of the site raised about 4-feet with import fill. Building loads were not included in the analyses. Liquefaction settlement was calculated with ground water levels at 25-feet, 10-feet, and zero-feet MSL, which corresponds to depths of 15, 30, and 40-feet. A maximum acceleration of 0.24g, moist unit weight of 115 pcf, and wet unit weight of 120 pcf was utilized in the analyses. Several subsurface conditions were analyzed:

1. Average Condition – average of all borings and CPT soundings.
2. Lowest CPT Sounding – C5
3. Highest CPT Sounding – C2
4. Average CPT Condition
5. Cleanest Sand – C8
6. Most Fines – C6

It is our opinion that during high ground water conditions, the general area has a potential of about 1-inch of ground settlement, whereas during normal low ground water conditions, the general area should not liquefy. Differential settlement over a distance of about 100 to 200 feet could be 2-

inches. High ground water conditions would produce differential settlement in a shorter distance than with low ground water levels.

3.7 Dynamic Compaction (Seismically Induced Settlement)

Dynamic compaction is a phenomena where loose, sandy soil located above the water table densifies from vibratory loading, typically from seismic shaking or vibratory equipment. When the ground water levels are low, the site may be susceptible to about 1-inch of settlement of the general area, with potentially 1-inch of differential settlement over a wide area, perhaps from end to end of a large building. Over-excavation and recompaction of the near-surface soils or other ground improvement methods performed to mitigate for liquefaction will also mitigate for dynamic compaction settlement.

3.8 Consolidation Setttlement (Static Settlement)

Consolidation is the densification of soil into a more dense arrangement from additional loading, such as new fills or foundations. Consolidation of clayey soils is usually a long-term process, whereby the water is squeezed out of the soil matrix with time. Sandy soils consolidate relatively rapidly with an introduction of a load. Consolidation of soft and loose soil layers and lenses can cause settlement of the ground surface or buildings. Over-excavation and recompaction of near-surface soils and/or other ground improvement methods can be used to limit this settlement to tolerable limits.

3.9 Expansive Soil

Mitigation for expansive soils will not be required for on-site soils since these soils were field classified as sands and silty sands. Expansion Index test results indicate near-surface soils have a very low expansion potential in accordance with the California Building Code.

3.10 Flooding

It is EUC's understanding the site is not located within a flood zone due to the Army Corps of Engineers designed flood control levee that was constructed north of the site. Determining the flood potential of the site was beyond the scope of this study; appropriate specialists should be contacted if determining the flooding potential of the site is desired.

3.11 Soil Corrosivity Testing

Corrosion testing at the site consisted of performing laboratory testing on selected soil samples. Five samples were selected and submitted by Eberhart / United to an analytical laboratory for testing.

Corrosion test results of soil samples obtained from the site were evaluated based on ASTM A888 methods. Table X2.1, Soil-Test Evaluation, from the ASTM procedure is presented below. If the summed points are equal to 10, the soil should be considered corrosive to cast iron pipe. If sulfides are present and low or negative redox potential results are obtained, three points shall be given for this range.

Soil Characteristics	Points	Soil Characteristics	Points
Resistivity, ohm-cm, based on single probe or water-saturated soil box.		**Redox Potential, mV**	
<700	10	>+100	0
700-1,000,	8	+50 to +100	3.5
1,000-1,200	5	0 to 50	4
1,200-1,500	2	Negative	5
1,500-2,000	1	**Sulfides**	
>2,000	0	Positive	3.5
PH		Trace	2
0-2	5	Negative	0
2-4	3	**Moisture**	
4-6.5	0	Poor drainage, continuously wet	2
6.5-7.5	0	Fair drainage, generally moist	1
7.5-8.5	0	Good drainage, generally dry	0
>8.5	5		

Three bulk samples had minimum resitivities of 13,000, 1,900, and 11,000 ohm-cm, pH between 8.18 and 8.81, and chloride contents between 63 and 82 ppm. The site soils may be corrosive to buried metals. These results are preliminary, and provide information on the specific soils sampled and tested. Other soil at the site may be more or less corrosive. Providing a detailed assessment of the corrosion potential of the site soils is not within our scope of work. Appropriate corrosion specialists should be contacted if a detailed evaluation is required.

Water-soluble sulfate can affect the concrete mix design for concrete in contact with the ground, such as shallow foundations, piles, piers, and concrete slabs. The UBC, CBC, and IBC provides the following evaluation criteria:

Sulfate Exposure	Sulfate Percent by Weight or (mg/kg)	Cement Type	Max. Water Cementitious Ratio by Weight	Min. Unconfined Compressive Strength, psi
Negligible	0.00-0.10 (0-1,000)	NA	NA	NA
Moderate	0.10-0.20 (1,000-2,000)	II, IP (MS), IS (MS)	0.50	4,000

Severe	0.20-2.00 (2,000-20,000)	V	0.45	4,500
Very Severe	Over 2.00 (20,000)	V plus pozzolan	0.45	4,500

The test results for the bulk samples contained 7, 10, and 11 ppm sulfate. Hence, the water-soluble sulfate content in the site soil should have negligible impact on buried concrete at the site. However, it should be pointed out that the water-soluble sulfate concentrations can vary due to the addition of fertilizer, irrigation, and other possible development activities. An appropriate expert should be contacted if a detailed evaluation is required.

3.12 Other Geologic Hazards

The site is not subject to the potential geologic hazards of landsliding, tsunamis, seiches, loss of mineral resources, or loss of unique geologic features because of site location and land use factors. It should be noted that published hazard maps, are, by their very nature, not to be relied upon for site-specific information.

4.0 CONCLUSIONS AND RECOMMENDATIONS

The following conclusions and recommendations are based upon the analysis of the information gathered during the course of this preliminary geotechnical feasibility study and our understanding of the proposed improvements.

The site is considered to be generally suitable for the proposed development, however the following should be considered. The predominant geotechnical and geological issues that will need to be addressed at this site are summarized below.

4.1 Predominate Geotechnical and Geologic Issues

4.1.1 Seismically Induced Settlement

The subsurface soils at the site have a moderate potential to cause ground settlement from liquefaction and dynamic compaction. During the winter months with potentially high groundwater levels, liquefaction induced settlement would predominate. Dynamic compaction induced settlement would be predominant most of the year when the groundwater levels would be deeper than about 30-feet. The following summarizes the anticipated seismically induced settlement that could occur at the site. The total settlement should not impact the development of the site, rather, this settlement would be a regional phenomena.

Groundwater	Liquefaction Induced Ground Settlement	Ground Settlement from Dynamic Compaction	Total Settlement of General Area
High, about 15-feet	1-inch	Imperceptible	1-inch
Normal, below 30-feet	Imperceptible	1-inch	1-inch
Groundwater	**Liquefaction Induced Ground Settlement**	**Ground Settlement from Dynamic Compaction**	**Differential Settlement**
High, about 15-feet	2-inches	Imperceptible	2-inches in less than 200-feet
Normal, below 30-feet	1-inch	Imperceptible	1-inch in more than 100-feet

4.1.2 Static Settlement Considerations

The surficial soil in the upper 1 to 2-feet are loose, and will need to be overexcavated prior to placement of fill or in building pad locations. Additionally, the upper 5 to 10-feet of soil is loose to medium dense, and will need to be overexcavated in deep fill areas. Overexcavation and compaction as engineered fill should mitigate for excessive total and differential settlement.

4.1.3 Ground Improvement and Foundation Alternatives

Two options are presented to mitigate for potential differential settlement of the structures. The first option is to perform conventional grading with reduced foundation bearing capacities. The second option would be to improve the subsurface soil with Deep Dynamic Compaction with higher bearing capacities for the foundations.

4.1.4 Seismic Considerations

The site is located in a seismically active region. As a minimum, the building design should consider the effects of seismic activity in accordance with the latest edition of the UBC, CBC, or IBC.

4.1.5 Recycling Existing Pavement

The existing pavement at the site for the movie theater and roads to be demolished can be recycled and used at the site. The asphalt pavement can be ground to minus 1-inch and mixed with the underlying baserock. This material can be utilized as Subbase material in paved areas or Select Fill.

4.1.6 Buried Structures

Buried structures and foundations from past land uses may be encountered during construction operations and will have to be removed and replaced with compacted, engineered fill. The upper 7-feet or at least 3-feet below the lowest utility in the area for the movie theater screen foundations will need to be removed.

4.1.7 Winter Grading

If grading occurs during the rainy season, unstable subgrade conditions may be encountered. Mitigation measures will have to be provided at that time, which could involve removal and replacement, utilizing a geogrid, or soil treatment.

4.1.8 Ground water Level Impacts

The ground water level can impact mass grading, soil improvement, elevator pit construction, and deep underground utility construction. We recommend that construction activities commence in the beginning of summer, construction during the winter rainy season should be avoided. The ground water levels will rise and fall in response to the water level in the adjacent river. It may be prudent to install several piezometers at the site to monitor ground water levels during a winter cycle. This may reduce the potential impacts from high ground water level contract change orders.

4.2 UBC and CBC Design Parameters

For the purposes of structural design, the subsurface soil at the site may be characterized as Type S_D within Seismic Zone 4 according to the 1997 Uniform Building Code and the 2001 California Building Code (CBC). The nearest Type B fault is the Newport-Inglewood Fault (Offshore Segment),

approximately 6.8 miles (11 km) southwest of the site. We recommend a Near-Source Acceleration Factor *Na* of 1.0 and a Near-Source Velocity Factor *Nv* of 1.0 for the site based upon the site's proximity to the Newport-Inglewood fault.

4.3 Site Grading

4.3.1 Project Compaction Recommendations

The following table provides the recommended compaction requirements for this project. Some of the requirements listed below may not be applicable for this project. Specific grading recommendations will be discussed individually within applicable sections of this report.

PROJECT COMPACTION REQUIREMENTS

Description	Minimum Percent Relative Compaction	Minimum Percent Above Optimum Moisture Content
Building Pads, Scarified Onsite Soil	90	2
Building Pads, Subgrade Soil	90	2
Building Pads, Class 2 Baserock	90	1
Building Pads, Imported Select Fill	90	1
Engineered Fill, Fill greater than 5 feet below Finish Grade	95	1
Engineered Fill, Upper 5 feet	92	2
Pavements, Scarified Onsite Soil	90	2
Pavements, Eng. Fill, Onsite Soil	90	2
Pavements, Subgrade Soil	95	1
Pavements, Class 2 Baserock	95	1
Concrete Hardscape, Scarified Onsite Soil	90	2
Concrete Hardscape, Eng. Fill, Onsite Soil	90	2
Underground Utility and Retaining Wall Backfill, 5-Feet and Deeper	95	1
Underground Utility and Retaining Wall Backfill, Upper 5-Feet	90	2

4.3.2 Site Preparation and Demolition

Site grading should be performed in accordance with these recommendations and the Grading and Earthwork Specifications in the appendices. A pre-construction conference should be held at the jobsite with representatives from the owner, general contractor, grading contractor, and EUC prior to starting the clearing and demolition operations at the site.

Excavations resulting from the removal of vegetation, trees and their root system, abandoned underground utilities, or deleterious materials, should be cleaned down to firm soil, processed as necessary, and backfilled with engineered fill in accordance with the grading sections of this report.

The adequacy of site clearing operations should be verified by the Geotechnical Engineer's representative during construction, prior to placement of engineered fill. The excavation bottoms should then be scarified at least six inches and compacted. Fill can then be moisture conditioned and compacted in the excavations.

The grading contractor should be aware that there is a potential for encountering buried objects at the site from past land use practices. The resulting excavations should be backfilled with properly compacted fill or other material approved by the geotechnical engineer. The surficial soils, organic strippings and demolished structures from the site should be hauled off-site.

Existing underground utilities to be abandoned at the site, if present, should be properly grouted, closed, or removed as needed. If the utilities are removed, the excavations should be backfilled with properly compacted fill or other material approved by the geotechnical engineer. The extent of removal/abandonment depends on the diameter of the pipe, depth of the pipe, and proximity to buildings and pavement. Wells should be abandoned in accordance with state and county guidelines.

4.3.3 General Grading

Site grading is anticipated to consist of raising the site grades up to about 10-feet, with an average increase of about 4 feet. Onsite soil generated from cut areas following clearing and grubbing that is free of excess organic material (three percent or less by weight) or debris may be suitable for use as structural fill at the site.

Imported Select Fill should be non-expansive, having a Plasticity Index of 12 or less, an R-Value greater than 40, and enough fines so the soil can bind together. Imported soil should be free of organic materials and debris, and should not contain rocks or lumps greater than three inches in maximum size. Imported Select Fill should be approved by the geotechnical engineer prior to delivery onsite.

Final grading should be designed to provide positive drainage away from structures. Soil areas within 10 feet of proposed structures should slope a minimum of five percent away from the buildings. Adjacent concrete hardscape should slope a minimum two percent away from the building. Roof leaders and downspouts should discharge onto paved surfaces sloping away from the structure or into a closed pipe system which outfalls to the street gutter pan or directly to the storm drain system.

If grading occurs in the winter rainy season, unstable subgrade conditions may be present. These conditions may require stabilizing the subgrade with admixtures, such as cement. Isolated areas may be stabilized using a geogrid, such as Tensar BX1100 or equal, with one foot of Class 2

baserock over the geogrid. Additional recommendations can be provided, if required, during construction.

4.3.4 Building Pad Grading

Two options are presented: Conventional grading with reduced foundation capacities and Deep Dynamic Compaction with higher bearing capacities. Performing DDC should reduce the total and differential settlement by half.

Option 1 – Conventional Grading: The existing ground in building pad areas should be overexcavated at least one foot, scarified at least 8-inches, and then compacted. Additional overexcvation should be performed fill is utilized to raise the building pads. For every 3-feet of fill placed on the existing ground to raise elevations, the existing ground surface should be overexcavated an additional foot. For example, if the site grades are raised 6-feet in for the building pad, the building pad should be overexcavated a total of 3-feet (1-foot original recommendation plus 2-feet due to 6-feet of fill). The overexcavation should extend at least 10-feet beyond the building perimeter. The excavated soil can be stockpiled for later use as fill. The bottom of the overexcavation should be scarified at least eight-inches and compacted. Onsite soil can then be placed in eight-inch thick loose lifts and compacted to construct the building pad up to subgrade elevation.

Option 2 – Deep Dynamic Compaction: DDC can be performed on the existing ground surface in building pad areas. DDC operations should be designed to densify the upper 25-feet of soil. DDC compaction should extend at least 20-feet beyond the building perimeter. Once DDC operations are completed, the existing ground surface should be overexcavated at least 2-feet. The bottom should be scarified at least 12-inches and compacted.

4.3.5 Grading Pavement Areas

We recommend that pavement areas with vehicular loading be scarified at least 12-inches and compacted. Onsite soil can then be placed in eight-inch thick loose lifts and compacted to achieve subgrade elevation. If more than 3-feet of fill is placed in pavement areas, the ground should be overexcavated at least 1-foot, and then scarified at least 1-foot prior to placement of fill. If DDC is performed, overexcavation would not be required.

4.3.6 Grading Concrete Hardscape Areas

Concrete hardscape areas with only pedestrian traffic should be scarified one-foot and compacted. Onsite soil can then be placed in eight-inch thick loose lifts and compacted to achieve subgrade elevation.

4.4 Underground Utility Construction

Utility trenches may be backfilled with native soil above the utility bedding and shading materials. If rocks or concrete larger than four-inches in maximum size are encountered, they should be removed from the fill material prior to placement in the utility trenches. Backfill in the utility trenches should be compacted. Utility bedding and shading compaction requirements should be in conformance with the requirements of the local agencies having jurisdiction. Water jetting of trench backfill is not recommended.

Pea gravel, clean sand or other similar self-compacting material can be utilized for trench backfill in the building pad. However, the self-compacting material should still be compacted with a whacker and placed in maximum two-foot lifts. The upper foot of backfill in the building pad subgrade should consist of onsite sandy soil or Class 2 baserock. Self-compacting backfill material should not be used in exterior underground trenches due to the potential for water seeping into the trench backfill. Fines may migrate into the voids in the pea gravel or rod mill, which could cause settlement of the ground surface above the trench.

Utility trenches should be sealed with concrete, clayey soil, sand-cement slurry, or controlled density fill (CDF) where the utility enters the building under the perimeter foundation. This would reduce the potential for migration of water beneath the building through the shading material in the utility trench. If water seepage is encountered in the utility trenches, water stops should be placed at manhole or valve locations to prevent water migration through the bedding and shading material.

Utility backfill backfill more than 5-feet deep should be compacted at a higher relative compaction than the upper 5-feet of backfill. This reduces the potential for settlement occurring over the utility trench.

Flexible connections should be considered where underground utilities enter buildings through the foundations. Underground utilities entering buildings should be designed for potential 1-inch of movement in any direction perpendicular to the utility pipe.

4.5 Temporary Excavations

The contractor should utilize proper Cal OSHA or Fed OSHA methods during construction. Excavations in soil more than five-feet deep for utility trenches should have side slopes constructed at 1H:1V (horizontal to vertical). The underground utility contractors should make selection of temporary side slopes based upon the materials encountered during the excavation. Maximum slope ratios provided above are assumed to be uniform from top to toe of the slope. Adequate provisions should be made to prevent water from ponding on top of the slope and from flowing over the slope face. Surcharge loads should not be permitted within 10 feet of the top of the slope.

Desiccation or excessive moisture in the excavation could reduce stability and require shoring or laying backside slopes.

4.6 Foundations

4.6.1 Conventional Shallow Foundations

The proposed structures can be supported on conventional strip and spread footings. It is assumed that the soil beneath the building pads are improved as described in the grading section of the report. Shallow strip perimeter footings should be founded a minimum of 18-inches below lowest adjacent finish grade. It is assumed that the structures are 2-stories or less. The following provides design recommendations.

Design Parameter	Option 1 – Conventional Grading	Option 2 – Deep Dynamic Compaction
Allowable Bearing Capacity, DL plus LL	2,000 psf	3,500 psf
Allowable Coefficient of Friction	0.25	0.25
Allowable Passive Resistance	300 pcf	300 pcf

The allowable bearing capacity can be increased by 1/3 for temporary wind and seismic loads. The top foot of passive resistance at foundations should be neglected unless the ground surface around the footing is covered by concrete or pavement.

Footing excavations should have firm bottoms and be free from excessive slough prior to concrete or reinforcing steel placement. The footing bottoms should be kept moist to prevent the development of shrinkage cracks. If shrinkage cracks develop in the footing bottoms, the soil should be moisture conditioned prior to the placement of concrete. If construction occurs during the winter months, it is suggested that a thin layer of concrete be placed at the bottom of the footings. This will protect the bearing soil and facilitate removal of water and slough if rainwater fills the excavations. Where utility trenches are to be located adjacent to foundations, the bottom of the footing should be located below an imaginary 1:1 (horizontal to vertical) plane projected upward from the nearest bottom edge of the utility trench.

The foundation excavations should be observed by a representative of Eberhart / United Consultants, Inc. prior to placement of reinforcing steel or concrete to evaluate the exposed soil conditions.

4.6.2 Drilled Piers

It is assumed that some piers may be required at the site for light poles, marquees, covered walkways, and other minor structures. Piers should be at least 12-inches in diameter and be at least 8-feet deep. The allowable skin friction for piers resisting vertical downward loads can be considered to be 350 psf. Piers resisting vertical upward (tension) should be designed using an

allowable skin friction of 200 psf. Lateral resistance can be provided by an allowable passive resistance of 300 psf per foot of depth up to a maximum of 2,000 psf. This passive resistance can be considered to act on 1.5 pier diameters.

The piers should be spaced a minimum of three-pier diameters apart. Pier spacing less than three-pier diameters will require a reduction in allowable skin friction. The amount of skin friction resistance will be determined during plan review. Passive resistance for piers spaced less than six-pier diameters will need to be reduced. For piers spaced at three-pier diameters, the passive resistance should be reduced by half. Full passive resistance is allowed for piers spaced on six-pier diameter spacing. The amount of reduction for passive resistance between three-pier diameters to six-pier diameters can be considered to be linear. Passive resistance for less than three-pier diameter spacing will be determined during the plan review process.

The bottom of the piers should be properly cleaned out after drilling. This may involve back spinning the augers or hand tamping the pier bottoms. A representative from EUC should observe the drilling of the piers to confirm final depths and proper cleaning of the pier bottoms. A EUC representative should confirm that slough is not present prior to installing the reinforcing cage and prior to concrete placement. Soil should be prevented from falling into the pier hole after drilling. This can be accomplished by removing excess soil cuttings from around the top of the pier hole and covering the hole. The pier hole cover should also prevent persons or objects from falling into the holes.

Water accumulating in the piers holes will have to be pumped out prior to concrete placement or the tremie method of concrete placement will be required. If minor amount of water is at the bottom of the piers, this water can be pumped out prior to concrete placement. If water fills much of the pier hole, the concrete will have to be placed with a tremie tube. The bottom of the tremie tube should be at least 5-feet below the top of the concrete level during concrete placement. The excess water/much flowing out of the pier hole will have to be collected and disposed of properly. Drilling mud can be utilized upon the acceptance of the geotechnical engineer. Casing will most likely not be cost effective.

4.6.3 Building Settlement

Total and differential static settlement of buildings are anticipated to be about ¾-inch and 1/2-inch, respectively. Much of the static settlement should occur during construction. Settlement from earthquake induced phenomena may induce an additional 1 to 2-inches of differential settlement as discussed in Section 4.1. Performing DDC should reduce the seismically induced settlement by half.

4.7 Concrete Slabs on Grade

4.7.1 Interior Floor Slabs

Non-structural concrete slab-on-grade floors should be a minimum of 5-inches in thickness. The concrete floor slab can be constructed directly on the prepared building pad subgrade. If the floor slab will support high point loads, such as heavy storage racks or forklifts, the floor slab should be underlain by at least 4-inches of Class 2 aggregate baserock. Additionally, the floor slab thickness may need to be increased and minimum compressive strength requirements should be specified by the design engineer. The floor slab should be designed by a structural engineer utilizing 150 pci for the modulus of subgrade reaction.

Floors with moisture sensitive floor coverings should be underlain by a high quality vapor retarder meeting ASTM E1745 Class C requirements, such as Griffolyn Type 65, Moistop Ultra C, or equivalent. The vapor retarder can be placed directly on the prepared subgrade soil. ASTM E1643 should be utilized as a guideline for the installation of the vapor retarder. A capillary rock layer or rock cushion is not required beneath the floor slab and a sand layer is not required over the vapor retarder. If sand on top of the vapor retarder is required by the design engineers, the thickness should be minimized to less than one-inch. If construction occurs in the winter months, water may pond within the sand layer since the vapor retarder may prevent the vertical percolation of rainwater.

4.7.2 Exterior Flatwork

Exterior concrete flat work with pedestrian traffic should be at least 5-inches thick and can be set directly on the prepared subgrade soil. The subgrade beneath the flatwork should be moisture conditioned and compacted as specified in the grading section of this report. The flatwork should be reinforced to reduce potential tripping hazards, welded wire mesh should not be utilized. The flatwork should be doweled into the building foundation adjacent to doorways, other adjacent flatwork, and into curbs to prevent possible tripping hazards.

If possible, the buildings should have a concrete apron around the building to reduce the potential for surface water percolating down through the soil adjacent to the buildings. Landscaping adjacent to the building should be avoided if possible. Typically, landscape areas adjacent to buildings are surrounded by concrete flatwork, which prevents irrigation and rain water from flowing away from the building. The ponded water trapped by the surrounding flatwork could percolate down, or possibly laterally through perimeter foundation construction joints and travel beneath the floor slab. Drainage could be provided in these landscape areas, but the top of the drains should be located below the building pad subgrade elevation.

4.8 Retaining Walls

The anticipated retaining wall pressures for the on-site soil conditions are provided in Plate 5. The active and at rest pressures for soils shown assume the backfill behind the retaining wall is a gravel blanket or wall drain and on-site soil. Foundations for the retaining walls should be designed in accordance with the foundation recommendations section of this report.

If retaining walls are constructed, drainage should be provided behind the retaining walls. The drainage system should consist of a minimum of four-inch diameter perforated pipe placed at the base of the retaining wall and surrounded by 3/4-inch drain rock wrapped in a Mirafi 160N filter fabric, or equivalent approved by the geotechnical engineer. The drain rock wrapped in fabric should be at least 12 inches wide and extend from the base of the wall to within two feet of the ground surface. The upper one to two feet of backfill should consist of compacted onsite soil. The backfill should be compacted. The retaining wall drainage system should be sloped to outfall to the storm drain system or other appropriate facility.

As an alternative to the drain rock and fabric, Miradrain 2000, or approved equivalent, may be used behind the retaining wall. The Miradrain 2000 should extend from the base of the wall to within two feet of the ground surface. A perforated pipe should be placed at the base of the wall in direct contact with the Miradrain 2000. The Miradrain fabric at the base of the Miradrain 2000 panel should be wrapped around the perforated pipe to prevent soil intrusion into the pipe.

An alternative to a piped drainage system would be to construct seepage holes through the retaining wall. The seepage holes should be covered with non-woven filter fabric (Mirafi 160N or equivalent) on the backside of the wall to prevent soil from eroding through the seepage holes.

4.9 Pavement Design

4.9.1 Asphalt Concrete Pavement

Recommendations for the design of asphalt concrete pavement sections were developed in accordance with the procedures outlined in the latest edition of the Caltrans Highway Design Manual. The Caltrans design method uses Traffic Indices (TI) to represent anticipated wheel loads and frequency of usage for a given design life. A design life of 20 years is typically used. Factors such as surface and subsurface drainage have an effect on the overall life of a pavement section.

R-Value testing was not performed as part of this preliminary study. An R-Value of 30 was chosen for preliminary planning and estimating based on field soil classifications and anticipated soil variation across the site. The subgrade underlying pavement areas should be prepared per the recommendations provided in the grading section of this report. A Traffic Index (TI) of 5.0 should be

considered for parking lots and drive aisles, and truck/bus lanes should utilize a minimum TI of 6.0. The following are recommended structural asphalt concrete (AC) pavement sections.

	Untreated Subgrade Soil		
Location (Traffic Index)	**Asphalt Concrete (in)**	**Class 2 AB (in)**	**Total Section (in)**
Car Parking (4.5)	3.0	4	7.0
Car Parking (5.0)	3.0	5	8.0
Heavy Duty (6.0)	4.0	6	10.0
Street (7.0)	4.0	9	13.0
Street (8.0)	5.0	10	15.0
Street (9.0)	6.0	12	18.0
Street (10.0)	6.0	15	21.0
Street (11.0)	7.0	16	23.0
Street (12.0)	8.0	17	25.0

Asphalt concrete should be designed per Caltrans standards. Car parking areas should utilize ½-inch maximum medium AC. A structural base section of ¾-inch mix should be utilized in major streets and areas with heavy truck traffic. The asphalt pavement should be placed in minimum 1-1/2 inch thick compacted lifts and a maximum four-inch thick lifts.

Premature pavement failure could occur where pavements abut landscaping areas due to saturation of the subgrade and baserock from the irrigation water. As an option, not a requirement, to prevent this type of premature pavement failure, a water barrier could be installed between the landscaping areas and the pavements. This could be accomplished by extending curbs at least six inches into the underlying subgrade soil where curbs and sidewalks separate paved areas from landscaped areas. Another option would be to place a vertical cut off wall, such as plastic, rubber, or concrete at least six inches into the subgrade adjacent to landscaping areas. This will reduce the potential for landscape irrigation water migrating into the baserock and subgrade in paved areas.

4.9.2 Vehicular Concrete Pavement

Concrete pavement with heavy vehicular loading (such as trash enclosures and truck loading docks) should be at least six- inches thick, reinforced, and underlain by at least six-inches of Class 2 baserock. The structural engineer should determine the concrete design and reinforcing requirements.

4.10 Further Studies

The recommendations presented in this report are preliminary and based on sparse soil boring placement and a limited study. Additional soil borings should be made and additional analysis should be conducted prior to final design. The recommendations provided in this report are subject to change.

4.11 Plan Review

It is recommended that Eberhart / United Consultants be provided the opportunity to review the final project plans prior to construction. The purpose of this review is to assess the general compliance of the plans with the recommendations provided in this report and the incorporation of these recommendations into the project plans and specifications.

4.12 Observation and Testing During Construction

It is recommended that Eberhart / United Consultants be retained to provide observation and testing services during site preparation, site grading, utility construction, foundation excavation, and to observe final site drainage. This is to observe compliance with the design concepts, specifications and recommendations, and to allow for possible changes in the event that subsurface conditions differ from those anticipated prior to the start of construction.

LIMITATIONS AND UNIFORMITY OF CONDITIONS

The recommendations of this report are based upon the soil and conditions encountered in the borings. If variations or undesirable conditions are encountered during construction, Eberhart United Consultants (EUC) should be contacted so that supplemental recommendations may be provided.

This report is issued with the understanding that it is the responsibility of the owner or his representatives to see that the information and recommendations contained herein are called to the attention of the others members of the design team and incorporated into the plans and specifications, and that the necessary steps are taken to see that the recommendations are implemented during construction.

The findings and recommendations presented in this report are valid as of the present time for the development as currently proposed. However, changes in the conditions of the property or adjacent properties may occur with the passage of time, whether by natural processes or the acts of other persons. In addition, changes in applicable or appropriate standards may occur through legislation or the broadening of knowledge. Accordingly the findings and recommendations presented in this report may be invalidated, wholly or in part, by changes outside our control. Therefore, this report is subject to review by EUC after a period of three (3) years has elapsed from the date of issuance of this report. In addition, if the currently proposed design scheme as noted in this report is altered EUC should be provided the opportunity to review the changed design and provide supplemental recommendations as needed.

Recommendations are presented in this report which specifically request that EUC be provided the opportunity to review the project plans prior to construction and that we be retained to provide observation and testing services during construction. The validity of the recommendations of this report assumes that EUC will be retained to provide these services.

This report was prepared upon your request for our services, and in accordance with currently accepted geotechnical engineering practice. No warranty based on the contents of this report is intended, and none shall be inferred from the statements or opinions expressed herein.

The scope of our services for this report did not include an environmental assessment or investigation for the presence or absence of wetlands or hazardous or toxic materials in the soil, surface water, groundwater or air, on, below or around this site. Any statements within this report or on the attached figures, logs or records regarding odors noted or other items or conditions observed, are for the information of our client only.

REFERENCES

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Source	Date	Flight	Frame
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Previous Report

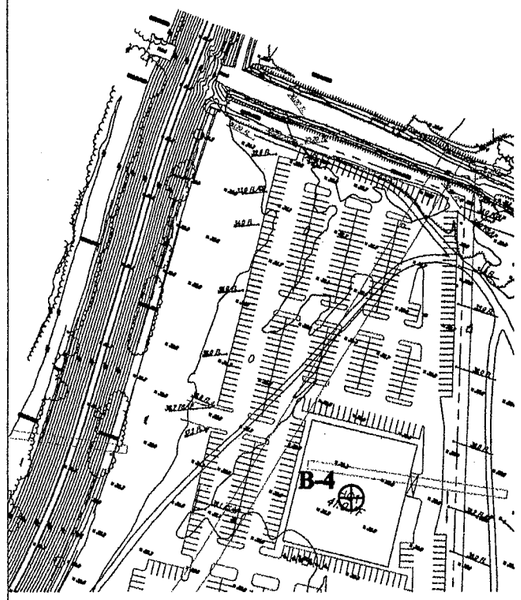
Preliminary Geotechnical Engineering Study, Siegal Property, Expressway 76 and Mission Avenue, Oceanside, California, by Eberhart / United Consultants, dated March 1. 2005.

APPENDIX A

Logs of Borings (May 5, 2006)

THESE LOGS ARE BOUND IN A SEPARATE TECHNICAL APPENDIX ON FILE AT THE CITY OF OCEANSIDE'S PLANNING DEPARTMENT AND MAY BE REVIEWED AT THAT LOCATION.

SITE EXHIBIT
FOR
THE PAVILIONS



BORING / CPT LOCATION MAP

B-4 ⊕ EXPLORATORY BORING (by this firm, dated 5-05-06)

CPT-8 ● CONE PENETRATION TEST (by this firm, dated 5-04-06)

B-5 ⊕ EXPLORATORY BORING (by this firm, dated 1-19-05 and 1-20-05)

0' 25' 100'
50' 200'
SCALE: 1" = 100'

EBERHART / UNITED CONSULTANTS, INC.	
1031 Segovia Circle, Placentia, 92870 Tel: (714) 632-5555 Fax: (714) 632-0855	
W.O.: 81-02048-0031	DATE: 5-24-06
Boring / CPT Location Map	PLATE: 4

O'Day CONSULTANTS
2710 Loker Avenue West, Suite 100, Carlsbad, California 92010
760-931-7700 Fax: 760-931-8680
Civil Engineering
Planning
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F. HAZARDOUS MATERIALS REPORTS
AIRPORT DOCUMENTS

SECOND REVISED REPORT FOR ADDITIONAL TESTING AND PROPOSED LOCATION FOR PLACEMENT OF DIELDRIN/TOXAPHENE AFFECTED SOIL THE PAVILION AT OCEANSIDE, APN'S 160-270-31, -73, -79 AND 169-280-14, 48-51, 53-55, OCEANSIDE SAN DIEGO COUNTY, CALIFORNIA 92054 DEH CASE #H39715

FOR

COUNTY OF SAN DIEGO
DEPARTMENT OF ENVIRONMENTAL HEALTH
LAND AND WATER QUALITY DIVISION
SITE ASSESSMENT AND MITIGATION PROGRAM
P.O. BOX 129261
SAN DIEGO, CALIFORNIA 92112-9261

W.O. E4704.2-SC APRIL 7, 2008

GeoSoils, Inc.

Geotechnical • Geologic • Coastal • Environmental

5741 Palmer Way • Carlsbad, California 92010 • (760) 438-3155 • FAX (760) 931-0915

April 7, 2008

W.O. E4704.2-SC

County of San Diego
Department of Environmental Health
Land and Water Quality Division
Site Assessment and Mitigation Program
P.O. Box 129261
San Diego, California 92112-9261

Attention: Mr. Ewan Moffat

Subject: Second Revised Report for Additional Testing and Proposed Location for Placement of Dieldrin/Toxaphene Affected Soil, The Pavilion at Oceanside, APN's 160-270-31, -73, -79, and 169-280-14, 48-51, 53-55, Oceanside, San Diego County, California 92054, DEH Case #H39715

Dear Mr. Moffat:

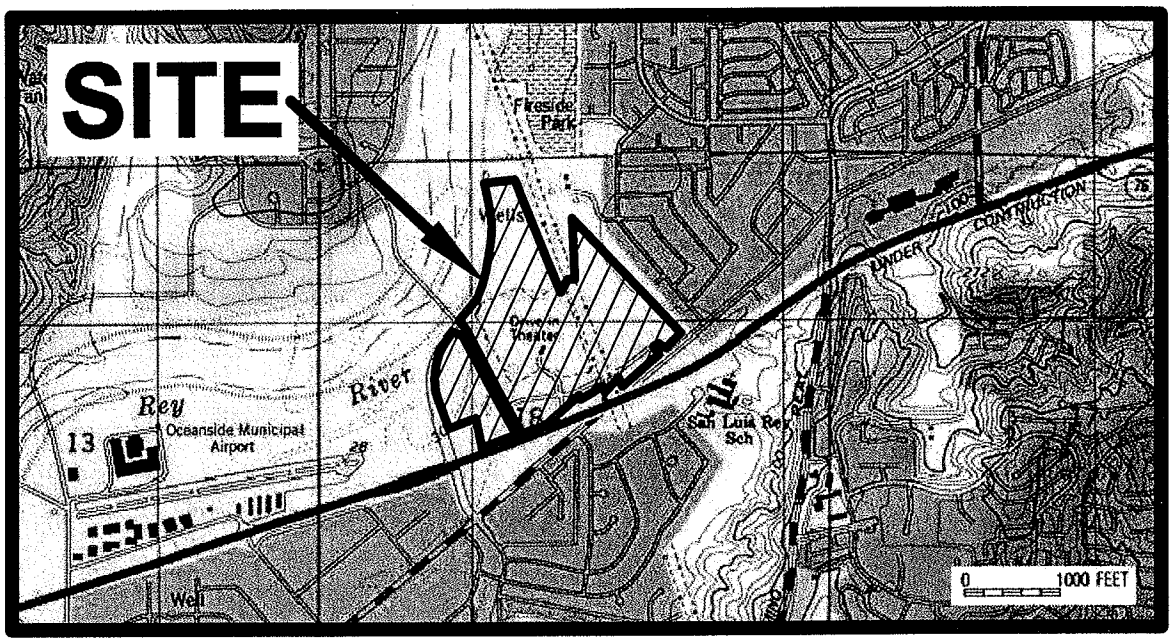
Based upon recent changes in the property boundary restrictions, and comments and additional recommendations recently made by Mr. Ewan Moffat of the County of San Diego Department of Environmental Health (DEH), GeoSoils, Inc. (GSI) has prepared this report for revised mitigative recommendations for the removal and subsequent placement of dieldrin/toxaphene affected soil during grading on the subject property in the City of Oceanside, California. These recommendations are based upon our knowledge of the property (see Appendix A), our previous agricultural residue survey (GSI, 2007c), additional requested soil sampling, and conversations and emails with Mr. Moffat. The purpose of this revised report is to provide revised locations for mitigative recommendations, per Mr. Moffat, during remedial grading for the estimated limits of removal, and for the location of placement of impacted earth materials at locations and depths which will effectively eliminate future human contact, as well as eliminate potential impacts to surface water and groundwater. The site and this area are required to be protected to conform to the California Storm Water Quality Association (CASQUA), Storm Water Best Management Practice Construction Handbook, and State of California, Department of Transportation, Construction Site Best Management Practices (BMP) Manual. There are no creeks that should pose a risk to the mitigation area, and the area is proposed as a parking lot with no proposed utilities within this area; thus, there should be no need for any future excavation in the mitigation area. With the proposed 4-foot cap of compacted fill soil (import materials), and in light of the above, the recommended mitigation should not represent a significant risk to human health.

SITE CONDITIONS AND PROPOSED DEVELOPMENT

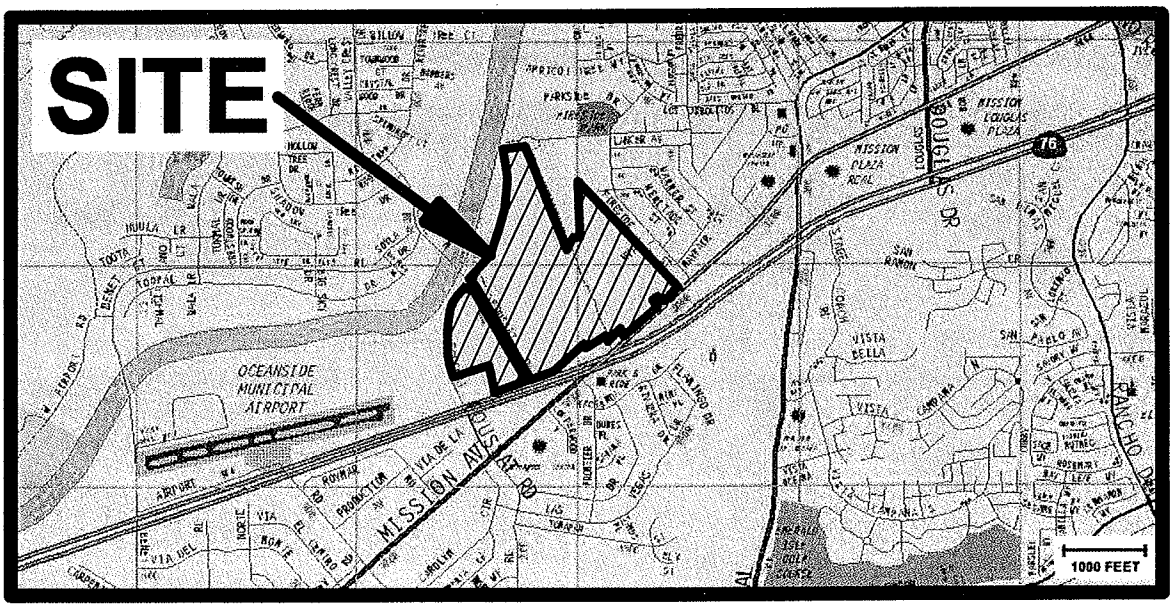
The irregularly-shaped property currently consists of vacant, undeveloped land and the former Oceanside Drive-In Theater. The Assessor's Parcel Numbers for the property are 160-270-31, -73, -79, and 160-280-14, -48 to -51, and -53 to -55. The property is located on the northeast corner of State Route 76 and Foussat Road, in Oceanside, San Diego County, California (see Figure 1, Site Location Map). The former Valley Drive-In Theater (opened in 1967, closed in 1999) still exists on the property and is utilized by the Oceanside Swap Meet on weekends. Site elevations range from about 25 to 38 feet Mean Sea Level (MSL). The site slopes gently to the west/southwest. It is our understanding that the existing drive-in theater will be demolished. Based on our conversations with the Client, GSI understands that currently proposed development of the site will consist of construction of a commercial shopping center with parking and utility improvements. Grading for the project will include import of fill to raise site grades an average of 3 to 4 feet.

BACKGROUND

Based upon our review of our environmental site assessment (GSI, 2005) and additional research, portions of the subject site appear to have been utilized for agriculture from at least 1928 until possibly 2001. The type of agriculture is not known. The Valley Drive-In Theater opened on the site in 1967 and closed in 1999. The theater property has been utilized for the Oceanside Swap Meet on weekends up to the present. The address of the Drive-In is 3480 Mission Avenue. As was discussed in our Phase I Environmental Site Assessment (GSI, 2005), a Leaking Underground Storage Tank site was reported in our agency data base search. The risk site was reported as Mission Auto & Self Storage (Solus Western Portfolio). The search indicated the site address was at 3520 Mission Avenue, with a status of case closed in 1993. Based upon our review of files for SAM Case #H23615-001, recently provided by Mr. Moffat of the DEH, a leaking underground storage tank was removed from the former Mission Auto & Self Storage Center, located adjacent to the proposed Pavilion Center on the southeast side. According to the SAM closure letter dated December 27, 1993, approximately 150 cubic yards of petroleum impacted soil was left in place with concentrations of up to 3,100 milligrams/kilogram Total Recoverable Petroleum Hydrocarbons, between the depths of 9 to 20 feet. Previous geotechnical reports on the proposed Pavilion site indicate the depth to groundwater is approximately 7 to 12 feet below existing ground surface (begs). This risk site is located up groundwater gradient from the subject site. The case was closed based upon requirements at the time of closure. At present, a City of Oceanside structure exists on the former Mission Auto & Self Storage site (see Figure 2). An environmental geologist should be onsite during grading for observation during soil removal in the area onsite adjacent to the risk site. If petroleum affected soils are encountered, grading will be halted until the soil has been tested and properly mitigated.



Base Map: TOPO!® ©2003 National Geographic, U.S.G.S. San Luis Rey Quadrangle, California -- Riverside Co., 7.5 Minute, dated 1997, current 1999.



Base Map: The Thomas Guide, Riverside County, Street Guide and Directory, 2005 Edition, by Thomas Bros. Maps, page 1086.

GeoSoils, Inc.

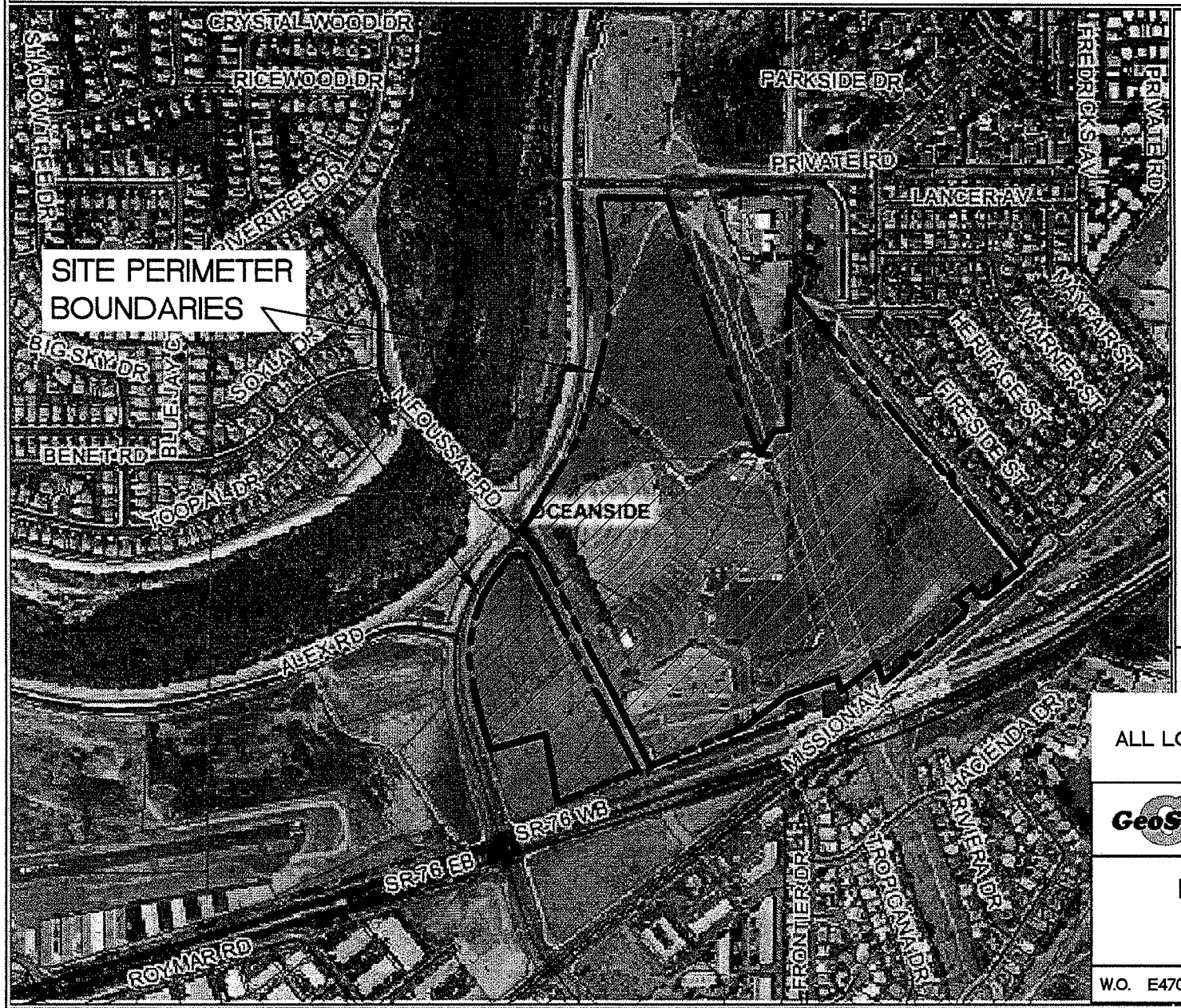
W.O. E4704.2-SC

SITE LOCATION MAP

Figure 1

N

H39715



Legend

- Parcels
- Streets
- Highways
- Freeways
- SAM Environmental Listing
- County Boundary
- Cities
- 2005 Orthophoto South West
- 2005 Orthophoto South East
- 2005 Orthophoto North West
- 2005 Orthophoto North East

DEH

ALL LOCATIONS ARE APPROXIMATE

GeoSoils, Inc.

RIVERSIDE CO.
ORANGE CO.
SAN DIEGO CO.

DEH CASE NO. H39715
LOCATION MAP

Figure 2

W.O. E4704.2-SC	DATE 01/08	SCALE 1:8,287

Scale 1:8,287
San Diego County Department of Environmental Health

Printed: Oct 25, 2007 2:56:31 PM

Based upon our recent limited, detailed, and additional chemical testing of near-surface soils onsite (laboratory results provided in this report and in GSI [2007c]), detectable concentrations of restricted agricultural residues exist within some areas of the subject property. Additional testing provided in this report includes soil samples collected in the lowest elevations/drainages (SP-7 and SP-8), and soil samples collected in a radius of ±40 feet out from previously sampled soil with toxaphene and/or dieldrin concentrations above the Preliminary Remediation Goal (PRG).

To evaluate the potential for restricted agricultural chemical residues, surficial soil samples were collected at depths of 0.5 foot, 1 foot, 2 feet, and 4 feet within the subject property. Based upon input from Mr. Ewan Moffat with the County Voluntary Assistance Program, 43 additional sample locations were chosen which included re-sampling of previous locations (SP-1, SP-2, SP-4, SP-5, and SP-6), in a radius of ±40 feet out, to delineate limits of soil removal. In addition, two additional sample locations were chosen within the one drainage channel (SP-7) and the lowest elevation (SP-8), and four randomly selected sample locations within the drive-in were selected (SP-24, SP-25, SP-26, and SP-27). Overall, a total of 67 soil samples at a total of 48 locations were collected. It should be noted that Soil Samples SP-28 through SP-33 were collected as backup samples for Soil Samples SP-24 and SP-26; however, these samples were not analyzed for Chlorinated Pesticides (EPA test method 8081A) due to the extremely low concentration of DDE, DDD, DDT, dieldrin, and toxaphene, which were well below the PRG limits for samples SP-24 and SP-26 at depths of 0.5 feet, 2.0 feet, and 4 feet. Soil samples collected were analyzed for Chlorinated Pesticides (EPA test method 8081A). Sample locations are shown on Plate 1.

Based upon the previous and additional requested laboratory test results (see Appendix B for previous laboratory test results conducted in May 2007; and see Appendix C for the additional laboratory test results conducted in November and December 2007), concentrations of DDE were detected in 39 of the 67 soil samples collected (at 39 of the 48 sample locations) on the subject property. Concentrations of DDD were detected in 10 of the 67 soil samples collected (at 10 of the 48 sample locations). DDT was detected in 19 of the 67 samples collected (at 19 of the 48 sample locations). Dieldrin was detected in 18 of the 67 soil samples (at 18 of the 48 sample locations). Toxaphene was detected in 2 of the 67 soil samples (at 2 of the 48 sample locations). For comparison purposes, the regulatory action level for hazardous waste criteria (i.e., Total Threshold Limit Concentration or TTLC) for DDE, DDD, and DDT is 1.0 mg/kg, 8.0 mg/kg for dieldrin, and 5.0 mg/kg for toxaphene. The Preliminary Remediation Goal (PRG) for residential soil (Smucker, 2002) for DDE and DDT is 1.7 mg/kg, 2.4 mg/kg for DDD, 0.03 mg/kg for dieldrin, and 0.44 mg/kg for toxaphene. Hazardous concentrations of pesticides were not detected in this survey. All concentrations of pesticides encountered during our surveys are well below the TTLC and PRGs, with the exception of dieldrin and one sample for toxaphene. Samples were collected and the collection area expanded and tested until all DDD, DDE, DDT, dieldrin, and toxaphene concentrations were below the PRG's. The results of the laboratory data are presented in the following table, and in Appendices B and C.

TABLE 1
SUMMARY OF CHEMICAL TEST RESULTS

SAMPLE ID	DATE COLLECTED	DDE mg/kg	DDT mg/kg	PRG DDE/DDT mg/kg	DDD mg/kg	PRG mg/kg	Dieldrin	PRG mg/kg	TOXAPHENE mg/kg	PRG mg/kg	STLC ug/L
S-1 @ 6"	5-16-07	0.058	0.018	1.7	ND	2.4	0.010	0.03	ND	0.44	--
S-2 @ 1'	5-16-07	0.0094	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
S-3 @ 6"	5-16-07	0.230	0.053	1.7	ND	2.4	ND	0.03	ND	0.44	--
S-4 @ 1'	5-16-07	0.069	0.023	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-1 @ 0.5'	11-16-07	0.058	0.025	1.7	ND	2.4	0.120	0.03	ND	0.44	--
SP-1 @ 2'	11-16-07	0.0076	ND	1.7	ND	2.4	0.018	0.03	ND	0.44	--
SP-1 @ 4'	11-16-07	ND	ND	1.7	ND	2.4	0.013	0.03	ND	0.44	--
SP-2 @ 0.5'	11-16-07	0.034	ND	1.7	ND	2.4	0.150	0.03	ND	0.44	ND
SP-2 @ 2'	11-16-07	ND	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-2 @ 4'	11-16-07	ND	ND	1.7	ND	2.4	0.019	0.03	ND	0.44	--
SP-3 @ 0.5'	11-16-07	0.013	ND	1.7	ND	2.4	0.015	0.03	ND	0.44	--
SP-3@ 2'	11-16-07	0.021	ND	1.7	ND	2.4	0.018	0.03	ND	0.44	--
SP-3 @ 4'	11-16-07	ND	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-4 @ 0.5'	11-16-07	0.20	0.01	1.7	ND	2.4	0.110	0.03	ND	0.44	--
SP-4 @ 2'	11-16-07	ND	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-4 @ 4'	11-16-07	ND	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-5 @ 0.5'	11-16-07	0.350	0.076	1.7	0.009	2.4	ND	0.03	0.47	0.44	--
SP-5@ 2'	11-16-07	0.044	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-5 @ 4'	11-16-07	ND	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-6 @ 0.5'	11-16-07	0.320	0.11	1.7	0.026	2.4	ND	0.03	0.40	0.44	--
SP-6 @ 2'	11-16-07	0.0077	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-6 @ 4'	11-16-07	ND	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-7 @ 0.5'	11-16-07	ND	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-7 @ 2'	11-16-07	ND	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-7 @ 4'	11-16-07	ND	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-8 @ 0.5'	11-16-07	0.150	0.0068	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-8 @ 2'	11-16-07	0.0096	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-8 @ 4'	11-16-07	ND	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-9 @ 0.5'	12-13-07	0.028	0.007	1.7	ND	2.4	0.065	0.03	ND	0.44	--
SP-10 @ 0.5'	12-13-07	0.046	0.014	1.7	ND	2.4	0.100	0.03	ND	0.44	--
SP-11 @ 0.5'	12-13-07	0.034	ND	1.7	ND	2.4	0.086	0.03	ND	0.44	--
SP-12 @ 0.5'	12-13-07	0.033	ND	1.7	ND	2.4	0.160	0.03	ND	0.44	ND
SP-13 @ 0.5'	12-13-07	0.034	ND	1.7	ND	2.4	0.140	0.03	ND	0.44	--
SP-14 @ 0.5'	12-13-07	0.040	ND	1.7	ND	2.4	0.100	0.03	ND	0.44	--
SP-15 @ 0.5'	12-13-07	0.061	ND	1.7	ND	2.4	0.0094	0.03	ND	0.44	--
SP-16 @ 0.5'	12-13-07	0.083	ND	1.7	0.007	2.4	0.028	0.03	ND	0.44	--
SP-17 @ 0.5'	12-13-07	ND	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-18 @ 0.5'	12-13-07	0.410	0.070	1.7	0.015	2.4	ND	0.03	ND	0.44	--
SP-19 @ 0.5'	12-13-07	0.220	0.021	1.7	0.007	2.4	ND	0.03	ND	0.44	--

SAMPLE ID	DATE COLLECTED	DDE mg/kg	DDT mg/kg	PRG DDE/DDT mg/kg	DDD mg/kg	PRG mg/kg	Dieldrin	PRG mg/kg	TOXAPHENE mg/kg	PRG mg/kg	STLC ug/L
SP-20 @ 0.5'	12-13-07	0.370	0.099	1.7	0.020	2.4	ND	0.03	ND	0.44	--
SP-21 @ 0.5'	12-13-07	0.230	0.069	1.7	0.019	2.4	ND	0.03	ND	0.44	--
SP-22 @ 0.5'	12-13-07	0.180	0.029	1.7	0.017	2.4	ND	0.03	ND	0.44	--
SP-23 @ 0.5'	12-13-07	0.120	0.015	1.7	0.0099	2.4	ND	0.03	ND	0.44	--
SP-24 @ 0.5'	12-13-07	ND	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-24 @ 2'	12-13-07	ND	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-24 @ 4'	12-13-07	0.009	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-25 @ 0.5'	12-13-07	0.012	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-25 @ 2'	12-13-07	0.021	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-25 @ 4'	12-13-07	ND	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-26 @ 0.5'	12-13-07	0.059	ND	1.7	ND	2.4	0.0064	0.03	ND	0.44	--
SP-26 @ 2'	12-13-07	0.390	0.049	1.7	ND	2.4	0.056	0.03	ND	0.44	--
SP-26 @ 4'	12-13-07	0.0079	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-27 @ 0.5'	12-13-07	0.260	0.049	1.7	ND	2.4	0.200	0.03	ND	0.44	ND
SP-27 @ 2'	12-13-07	ND	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-27 @ 4'	12-13-07	ND	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-34 @ 2'	12-27-07	0.042	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-35 @ 2'	12-27-07	ND	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-36 @ 2'	12-27-07	ND	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-37 @ 0.5'	12-27-07	ND	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-38 @ 0.5'	12-13-07	ND	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-39 @ 0.5'	12-13-07	0.250	0.010	1.7	0.0078	2.4	0.046	0.03	ND	0.44	--
SP-40 @ 0.5'	12-27-07	ND	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-41 @ 0.5'	12-27-07	ND	ND	1.7	ND	2.4	0.021	0.03	ND	0.44	--
SP-42 @ 0.5'	12-27-07	ND	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-43 @ 0.5'	12-27-07	ND	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-44 @ 0.5'	12-27-07	ND	ND	1.7	ND	2.4	0.016	0.03	ND	0.44	--
SP-45 @ 0.5'	12-27-07	0.015	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--

ND indicates not detected at or above the laboratory detection limit.
-- indicates not analyzed.

SURFACE WATER AND GROUNDWATER

The property lies within the Mission Hydrologic Subarea (HSA 903.11) of the Lower San Luis Hydrologic Area (HA 903.10) of the San Luis Rey Hydrologic Unit (HU 903.00) within the San Diego Region (CRWQCB, 1995). Oceanside falls within Region 9 (San Diego) of the California Regional Water Quality Control Board (CRWQCB). Existing beneficial uses of groundwater within this HSA are reported to include municipal and domestic supply, agricultural supply, and industrial service supply.

The relative distance from the subject property to the San Luis Rey River is approximately 350 to 400 feet (approximate distance between the northwest limits of the site to the banks of San Luis Rey River). A levee constructed by the Army Corp of Engineers in the 1990s,

adjacent to the San Luis Rey River and the site boundary, consists of an approximately 20-foot high, rip-rap armored berm. San Luis Rey River flows to the Pacific Ocean, which is located approximately 16,000 feet (3 miles) southwest of the subject property, following the San Luis Rey River route. Reported beneficial uses of the San Luis Rey River in the general area include agricultural supply and industrial service supply; contact and non-contact recreational use; warm freshwater habitant; and wildlife habitat.

Groundwater beneath the site was encountered in January 2005 at depths of 12 to 17 feet below existing ground surface (begs), or approximate elevations of 16 to 21 feet MSL, and in May 2006, groundwater was encountered at depths of 7 to 12 feet begs, or approximate elevations of 22 to 29 feet MSL (Eberhart/United Consultants, 2006). The local shallow groundwater gradient is to the west/southwest following the San Luis Rey River. Surface flow is to the west/southwest.

According to information provided by Mr. John Strohminger of O'Day Consultants, Inc., four wells were formerly located on the property. The wells were owned by the City of Carlsbad (Carlsbad Municipal Water District). The wells were abandoned in the fall of 2006. Abandonment included filling the well casing with slurry and removing the top 10 or 20 feet of casing.

The Flood Insurance Rate Map (FIRM) from the Federal Emergency Management Agency (FEMA), dated January 19, 2001, indicates all of the subject property located within Zone A99. This zone is defined as an "area to be protected from the 100-year flood zone by a Federal Flood Protection System currently under construction." The protection system is a levee that was constructed by the Army Corp of Engineers in the 1990s. The system has not been certified by the Corp due to environmental issues with the maintenance and operation plan. Until the maintenance and operations plan is certified, FEMA will not revise the FIRM map to show the site to be fully protected from the 100-year flood. Based on conversations with Mr. John Strohminger of O'Day Consultants, Inc., GSI has been assured that before completion of the project (i.e., The Pavilion at Oceanside), the levee will be certified and the site will no longer be located in Zone A99.

SOIL PARAMETERS

Cone penetrometer soundings and sieve analysis (ASTM D422-63) performed on soil during a subsurface geotechnical evaluation of the subject property (Eberhart/United Consultants, 2006) indicated site soil in the alluvium in former growing areas may be classified as sand to silty sand based upon the Unified Soil Classification System (USCS). Based upon Eberhart's analyses, the soil type appears to be generally uniform and apparently does not vary significantly in texture and composition. Permeability of this soil type is typically medium.

Three samples with the highest concentrations of dieldrin were analyzed for Soluble Threshold Limit Concentration (STLC) or W.E.T. (Waste Extraction Test) utilizing the

California Department of Toxic Substances Control (DTSC) test method. This is a leachate extraction defined by the California Code of Regulations and used to evaluate whether certain leachable compounds are present in large enough amounts in a given material that the material needs to be dealt with as hazardous waste. The extraction method mimics what will happen in a landfill to a given material over time, as it is exposed to normal climatic conditions. The laboratory reports indicated that STLC was non-detect for the three highest concentrations of dieldrin reported in the 8081A testing. In other words, the dieldrin levels encountered onsite are not leachable and do not need to be dealt with as hazardous waste.

PRELIMINARY CONCLUSIONS AND RECOMMENDATIONS

Summary and Conclusions

Based upon the information obtained during the course of our studies, as well as information provided in the referenced reports (see Appendix A), GSI presents the following summary of findings, conclusions, and recommendations:

- To evaluate the potential for restricted agricultural chemical residues, surficial soil samples were collected at depths of 0.5 feet, 1 foot, 2 feet, and 4 feet within the subject property. Based upon input from Mr. Ewan Moffat with the County Voluntary Assistance Program, 43 additional sample locations were chosen which included re-sampling of previous locations (SP-1, SP-2, SP-4, SP-5, and SP-6) to delineate limits of soil removal. In addition, two additional sample locations were chosen within the one drainage channel (SP-7) and the lowest elevation (SP-8), and four randomly selected sample locations within the drive-in were selected (SP-24, SP-25, SP-26, and SP-27). Overall, a total of 67 soil samples at a total of 48 locations were collected. It should be noted that Soil Samples SP-28 through SP-33 were collected as backup samples for Soil Samples SP-24 and SP-26; however, these samples were not analyzed for Chlorinated Pesticides (EPA test method 8081A) due to the extremely low concentration of DDE, DDD, DDT, dieldrin, and toxaphene, which were well below the PRG limits for samples SP-24 and SP-26 at depths of 0.5 feet, 2.0 feet, and 4 feet. Soil samples collected were analyzed for Chlorinated Pesticides (EPA test method 8081A). Sample locations are shown on Plate 1.

- Except for DDE, DDD, DDT, dieldrin, and toxaphene, no constituents of the Chlorinated Pesticides were reported above the laboratory detection limits (i.e., non-detect). Concentrations of DDE, ranging from 0.0094 mg/kg to 0.410 mg/kg, were detected in 39 of the 67 samples. A concentration of 0.0099 mg/kg to 0.026 mg/kg of DDD was detected in 10 of the 67 samples. Concentrations of 0.0068 to 0.099 mg/kg of DDT were detected in 19 of the 67 samples. Concentrations of 0.0064 mg/kg to 0.860 mg/kg of dieldrin were detected in 18 of

the 67 samples. Concentrations of 0.40 mg/kg to 0.47 mg/kg of toxaphene were detected in 2 of the 67 samples.

- For comparison purposes, regulatory action levels for hazardous waste criteria (i.e., Total Limit Threshold Concentration - TTLC) in soil are 1.0 mg/kg for DDE, DDD, and DDT, 8.0 mg/kg for dieldrin, and 5.0 mg/kg for toxaphene. Detected concentrations of DDE, DDD, DDT, dieldrin, and toxaphene onsite are considerably lower than the TTLC criteria. Thus, hazardous concentrations of pesticides were not detected in this study.

- Preliminary Remedial Goals (PRGs), which combine existing USEPA toxicity values with generally accepted exposure factors to estimate concentrations in residential soil that do not represent a cancer risk to humans greater than one-in-one million (i.e., 1×10^{-6}), are 1.7 mg/kg DDE and DDT, 2.4 mg/kg DDD, 0.03 mg/kg dieldrin, and 0.44 mg/kg toxaphene. Five samples were reported with concentrations of dieldrin above the PRG and one sample was reported with a concentration of toxaphene above the PRG. Samples were collected, the collection area expanded, and tested until all DDD, DDE, DDT, dieldrin, and toxaphene concentrations were below the PRG's.

- Cone penetrometer soundings and sieve analysis (ASTM D422-63) performed on soil during a subsurface geotechnical evaluation of the subject property (Eberhart/United Consultants, 2006) indicated site soil in the alluvium in former growing areas may be classified as sand to silty sand based upon the Unified Soil Classification System (USCS). Based upon Eberhart's analyses, the soil type appears to be generally uniform and apparently does not vary significantly in texture and composition. Permeability of this soil type is typically medium.

- Groundwater beneath the site was encountered in January 2005 at depths of 12 to 17 feet begs, or approximate elevations of 16 to 21 feet MSL, and in May 2006, groundwater was encountered at depths of 7 to 12 feet begs, or approximate elevations of 22 to 29 feet MSL (Eberhart/United Consultants, 2006). The local shallow groundwater gradient is to the west/southwest following the San Luis Rey River. Surface flow is to the west/southwest.

Recommendations

Based upon the scope of work completed, GSI concludes that the concentrations of DDE, DDD, and DDT detected in earth materials on the subject property generally are sufficiently below PRGs so as not to represent a significant risk to human health. The concentrations of dieldrin and toxaphene reported at six locations on the site (SP-1, SP-2, SP-4, SP-5, and SP-27) are slightly elevated above the PRG, and appear to be isolated occurrences, in light of data collected to date. Based upon the information obtained during the course of this assessment, GSI presents the following recommendations:

- All other recommendations contained in GSI (2007c and 2005), pertinent to the subject site, should be implemented.

- If required, the appropriate regulatory agencies should be provided with a copy of this report for their review and comment.

- Pesticide impacted soil with concentrations reported in this study may be selectively utilized onsite as artificial fill. The isolated areas in the vicinity of Soil Samples SP-1, SP-2, SP-4, SP-5, SP-26, and SP-27 located on site (delineated on Plate 1), may be utilized onsite as artificial fill at locations and depths which will effectively eliminate future human contact, as well as eliminate potential impacts to surface water and groundwater, in accordance with the approval of the governing agency, as warranted. Recommendations for this are summarized below:

  Based upon the Tentative Parcel Map For The Pavilion at Oceanside plans prepared by O'Day Consultants, dated December 19, 2007, grading for the project will include import of fill to raise site grades an average of 3 to 4 feet. Based upon these grading plans, GSI recommends placing the dieldrin and toxaphene affected soil located around affected Soil Samples SP-1, SP-2, SP-4, SP-5, and SP-27, delineated on Plate 1, to a depth of 2 foot (approximately 502,600 cubic feet or 18,615 cubic yards), on the site at elevations ranging from about ±34 to ±35 feet MSL. GSI recommends placing the dieldrin affected soil located around affected Soil Sample SP-26, delineated on Plate 1, to a depth of 3 feet (approximately 21,254 cubic feet, or 787 cubic yards), on the site at elevations ranging from about ±34 to ±36 feet MSL. The approximate locations of the proposed removal areas for affected soils are provided on Plate 1. The placement locations for the affected soil are indicated on Plate 2. Based on our calculations (a total of approximately 19,402 cubic yards of affected soil), there appears to be sufficient available volume (calculated at 23,310 cubic yards) to place the affected soil. This location will thus provide a minimum fill cap of approximately 3 feet over the affected soil. The locations are located in the proposed parking lot areas of The Pavilion at Oceanside, and not in close proximity to proposed underground utilities and proposed "bio-swales" (at least 10 feet away). The affected soil will be located a minimum of 7 feet above groundwater (groundwater elevation is about 25 feet MSL), and more than 1,500 feet east of the San Luis Rey Levee after completion of grading. This will effectively eliminate potential impacts to surface water and groundwater.

LIMITATIONS

GSI has performed the services for this project in accordance with the terms of a specific scope in a contract between GSI and Client, and in general accordance with current professional standards for investigations of this type. The conclusions presented in this report are based on the information collected during the study, the present understanding of the site conditions, and professional judgment.

Please note, subsurface and hazardous waste/toxic substance conditions may vary from those provided in historical documents reviewed by GSI. The interpretations and recommendations of GSI are based solely on such information and/or information supplied by Client. Findings of this assessment based on data provided by others carries no warranty, express or implied, as a result of the usage of such data.

It is possible that future assessments may reveal additional data or variations of the current data which may require the current conclusions and recommendations to be reevaluated. As a result, GSI makes no warranty, either express or implied, as to its findings, opinions, recommendations, specifications, or professional advice except that they were promulgated after being prepared in accordance with generally accepted standards of care and diligence normally practiced by recognized consulting firms performing services of a similar nature.

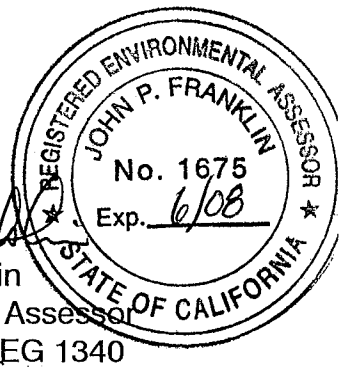
The information in this report is relevant to the date of the site work and should not be relied on to represent conditions at any later date. Facts, conditions, and acceptable risk factors change with time, accordingly, this report should be viewed within this context.

The opportunity to be of services is appreciated. If you should have any questions, please do not hesitate to contact the undersigned at (760) 438-3155.

Respectfully submitted,

GeoSoils, Inc.

Donna Gooley
Director of Environmental Services
REA-1 6400, CEG 2336



John P. Franklin
Environmental Assessor
REA-1 1675, CEG 1340

DG/BEV/JPF/jk

Attachments: Appendix A - References
Appendix B - Laboratory Reports And Chain of Custody Record (May 2007)
Appendix C - Laboratory Reports And Chain of Custody Record (November and December 2007)
Plate 1 - Soil Sample Location Map
Plate 2 - Proposed Dieldrin and Toxaphene Affected Soil and Placement Map
Plate 3 - Cross Sections of Proposed Location of Dieldrin and Toxaphene Affected Soils

Distribution: (2) Addressee (1 unbound)
(2) Thomas Enterprises, Attention: Mr. Garrett Colburn
(1) Affinis Environmental, Attention: Ms. Nicole Wegher

APPENDIX A

REFERENCES

APPENDIX A

REFERENCES

California Regional Water Quality Control Board, 1995, Water quality control plan for the San Diego basin (9), dated September 8.

Eberhart/United Consultants, 2006, Preliminary geotechnical feasibility study, the Pavilion at Oceanside, Expressway 76 and Mission Avenue, Oceanside, California, W.O. 81-02048-0031, dated May 24.

GeoSoils, Inc., 2007a, Work plan for detailed agricultural chemical residues in Siegal property, Former Oceanside Drive-In Theater, APNs 160-270-31, -73, -79, and 169-280-14, 48-51, 53-55, City of Oceanside, County of San Diego, California 92054, W.O. E4704.2-SC, dated July 20.

_____, 2007b, Request for Assistance, Siegal property, Former Oceanside Drive-In Theater, APNs 160-270-31, -73, -79 and 169-280-14, 48-51, 53-55, City of Oceanside, County of San Diego, California 92054, W.O. E4704.2-SC, dated July 23.

_____, 2007c, Revised limited phase II environmental assessment, The Pavilion at Oceanside, Siegal property, North of Highway 76 (Former Oceanside Drive-In Theater), Oceanside, San Diego County, California 92054, Voluntary Assistance Case No. H39715, W.O. E4704.1-SC, revised October 29.

_____, 2005, Phase I environmental site assessment, The Pavilion at Oceanside, Siegal Property, North of Highway 76 (Former Oceanside Drive-In Theater), Oceanside, San Diego County, California 92054, W.O. E4704-SC, dated February 24.

O'Day Consultants, 2007, Tentative parcel map for The Pavilion at Oceanside, dated December 19.

Smucker, Stanford J., 2002, United States Environmental Protection Agency (USEPA), Region IX, Region 9 preliminary remediation goals (PRGs) Table 2002 update, dated November 1.

State of California Environmental Protection Agency, 1992, Supplemental guidance for human health multimedia risk assessments of hazardous waste sites and permitted facilities, Chapter 8, 'DDT in Soil' guidance for the assessment of health risk to humans, dated July.

NOTE: APPENDICES ARE ON FILE IN A SEPARATE TECHNICAL APPENDIX ON FILE WITH THE CITY OF OCEANSIDE'S PLANNING DIVISION AND MAY BE REVIEWED AT THAT LOCATION DURING NORMAL BUSINESS HOURS.

REVISED REPORT FOR ADDITIONAL TESTING AND PROPOSED LOCATION FOR PLACEMENT OF DIELDRIN/TOXAPHENE AFFECTED SOIL THE PAVILION AT OCEANSIDE, APN'S 160-270-31, -73, -79 AND 169-280-14, 48-51, 53-55, OCEANSIDE SAN DIEGO COUNTY, CALIFORNIA 92054

FOR

COUNTY OF SAN DIEGO
DEPARTMENT OF ENVIRONMENTAL HEALTH
LAND AND WATER QUALITY DIVISION
SITE ASSESSMENT AND MITIGATION PROGRAM
P.O. BOX 129261
SAN DIEGO, CALIFORNIA 92112-9261

W.O. E4704.2-SC FEBRUARY 19, 2008

GeoSoils, Inc.

Geotechnical • Geologic • Coastal • Environmental

5741 Palmer Way • Carlsbad, California 92010 • (760) 438-3155 • FAX (760) 931-0915

February 19, 2008

W.O. E4704.2-SC

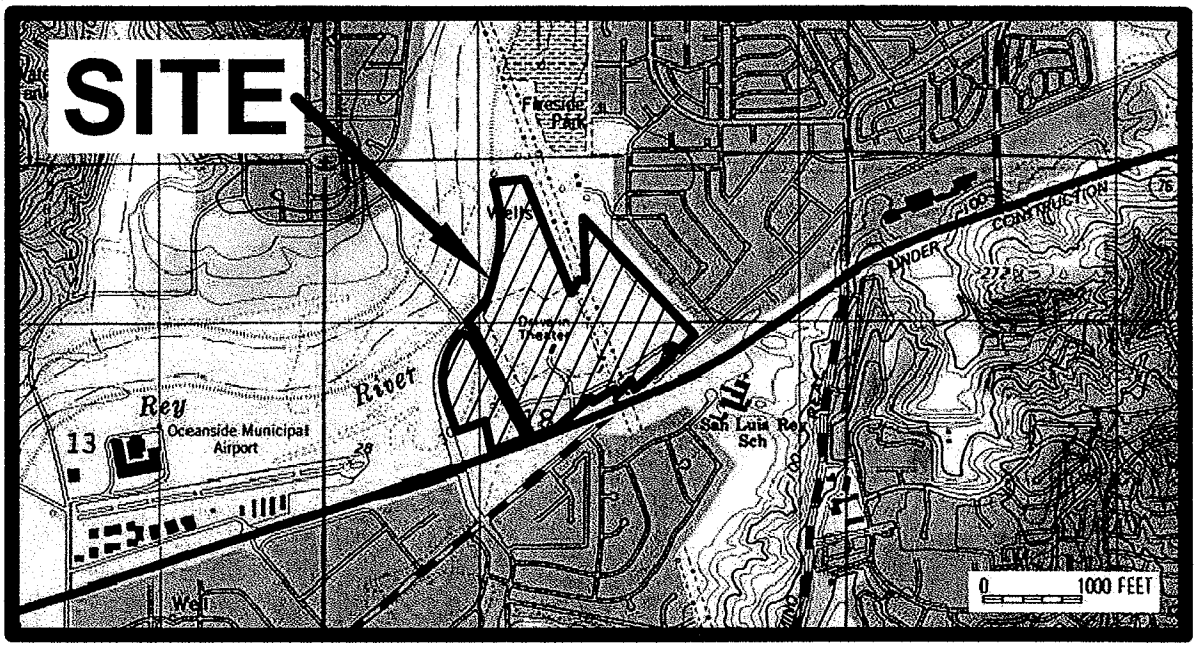
County of San Diego
Department of Environmental Health
Land and Water Quality Division
Site Assessment and Mitigation Program
P.O. Box 129261
San Diego, California 92112-9261

Attention: Mr. Ewan Moffat

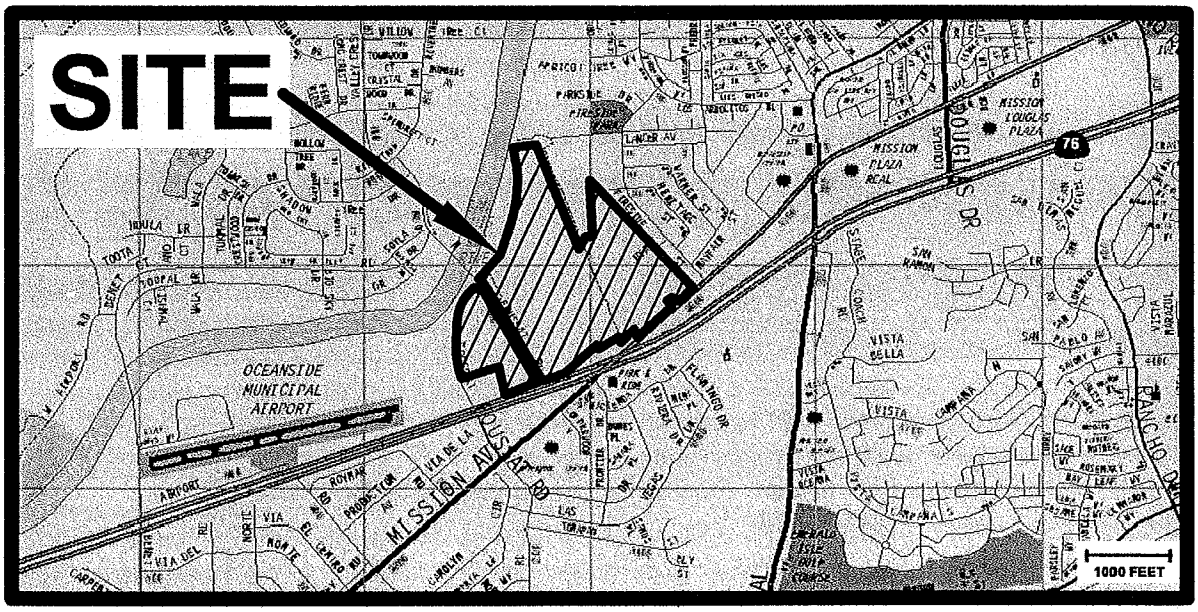
Subject: Revised Report for Additional Testing and Proposed Location for Placement of Dieldrin/Toxaphene Affected Soil, The Pavilion at Oceanside, APN's 160-270-31, -73, -79, and 169-280-14, 48-51, 53-55, Oceanside, San Diego County, California 92054

Dear Mr. Moffat:

Based upon comments and additional recommendations recently made by Mr. Ewan Moffat of the County of San Diego Department of Environmental Health (DEH), GeoSoils, Inc. (GSI), has prepared this report for revised mitigative recommendations for the removal and subsequent placement of dieldrin/toxaphene affected soil during grading on the subject property in the City of Oceanside, California. These recommendations are based upon our knowledge of the property (see Appendix A), our previous agricultural residue survey (GSI, 2007c), additional requested soil sampling, and conversations and emails with Mr. Moffat. The purpose of this revised report is to provide revised mitigative recommendations, per Mr. Moffat, during remedial grading for the estimated limits of removal, and for the location of placement of impacted earth materials at locations and depths which will effectively eliminate future human contact, as well as eliminate potential impacts to surface water and groundwater. The site and this area are required to be protected to conform to the California Storm Water Quality Association (CASQUA), Storm Water Best Management Practice Construction Handbook, and State of California, Department of Transportation, Construction Site Best Management Practices (BMP) Manual. There are no creeks that should pose a risk to the mitigation area, and the area is proposed as a parking lot with no proposed utilities within this area; thus, there should be no need for any future excavation in the mitigation area. With the proposed 4-foot cap of compacted fill soil (import materials), and in light of the above, the recommended mitigation should not represent a significant risk to human health.



Base Map: TOPO!® ©2003 National Geographic, U.S.G.S. San Luis Rey Quadrangle, California -- Riverside Co., 7.5 Minute, dated 1997, current 1999.



Base Map: The Thomas Guide, Riverside County, Street Guide and Directory, 2005 Edition, by Thomas Bros. Maps, page 1086.

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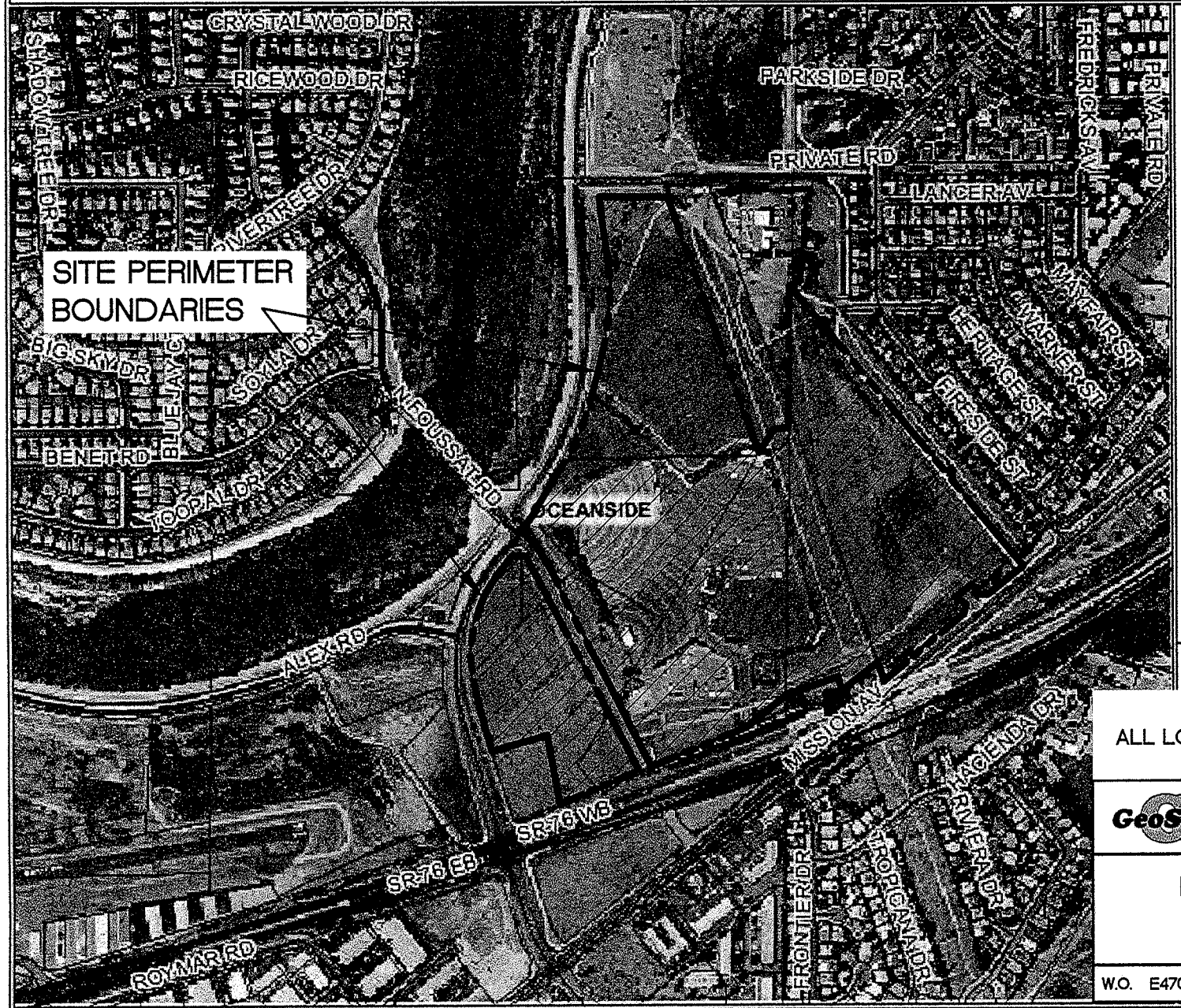
GeoSoils, Inc.

W.O. E4704.2-SC

SITE LOCATION MAP

Figure 1

H39715



Legend

- Parcels
- Streets
- Highways
- Freeways
- SAM Environmental Listing
- County Boundary
- Cities
- 2005 Orthophoto South West
- 2005 Orthophoto South East
- 2005 Orthophoto North West
- 2005 Orthophoto North East

DEH

ALL LOCATIONS ARE APPROXIMATE

GeoSoils, Inc. — RIVERSIDE CO. ORANGE CO. SAN DIEGO CO.

DEH CASE NO. H39715
LOCATION MAP

Figure 2

W.O. E4704.2-SC	DATE 01/08	SCALE 1:8,287

Scale 1:8,287

San Diego County Department of Environmental Health

Printed: Oct 25, 2007 2:56:31 PM

SITE CONDITIONS AND PROPOSED DEVELOPMENT

The irregularly-shaped property currently consists of vacant, undeveloped land and the former Oceanside Drive-In Theater. The Assessor's Parcel Numbers for the property are 160-270-31, -73, -79, and 160-280-14, -48 to -51, and -53 to -55. The property is located on the northeast corner of State Route 76 and Foussat Road, in Oceanside, San Diego County, California (see Figure 1, Site Location Map). The former Valley Drive-In Theater (opened in 1967, closed in 1999) still exists on the property and is utilized by the Oceanside Swap Meet on weekends. Site elevations range from about 25 to 38 feet Mean Sea Level (MSL). The site slopes gently to the west/southwest. It is our understanding that the existing drive-in theater will be demolished. Based on our conversations with the Client, GSI understands that currently proposed development of the site will consist of construction of a commercial shopping center with parking and utility improvements. Grading for the project will include import of fill to raise site grades an average of 3 to 4 feet.

BACKGROUND

Based upon our review of our environmental site assessment (GSI, 2005) and additional research, portions of the subject site appear to have been utilized for agriculture from at least 1928 until possibly 2001. The type of agriculture is not known. The Valley Drive-In Theater opened on the site in 1967 and closed in 1999. The theater property has been utilized for the Oceanside Swap Meet on weekends up to the present. The address of the Drive-In is 3480 Mission Avenue. As was discussed in our Phase I Environmental Site Assessment (GSI, 2005), a Leaking Underground Storage Tank site was reported in our agency data base search. The risk site was reported as Mission Auto & Self Storage (Solus Western Portfolio). The search indicated the site address was at 3520 Mission Avenue, with a status of case closed in 1993. Based upon our review of files for SAM Case #H23615-001, recently provided by Mr. Moffat of the DEH, a leaking underground storage tank was removed from the former Mission Auto & Self Storage Center, located adjacent to the proposed Pavilion Center on the southeast side. According to the SAM closure letter dated December 27, 1993, approximately 150 cubic yards of petroleum impacted soil was left in place with concentrations of up to 3,100 milligrams/kilogram Total Recoverable Petroleum Hydrocarbons, between the depths of 9 to 20 feet. Previous geotechnical reports on the proposed Pavilion site indicate the depth to groundwater is approximately 7 to 12 feet below existing ground surface (begs). This risk site is located up groundwater gradient from the subject site. The case was closed based upon requirements at the time of closure. At present, a City of Oceanside structure exists on the former Mission Auto & Self Storage site (see Figure 2). An environmental geologist should be onsite during grading for observation during soil removal in the area onsite adjacent to the risk site. If petroleum affected soils are encountered, grading will be halted until the soil has been tested and properly mitigated.

Based upon our recent limited, detailed, and additional chemical testing of near-surface soils onsite (laboratory results provided in this report and in GSI, 2007c), detectable concentrations of restricted agricultural residues exist within some areas of the subject property. Additional testing provided in this report includes soil samples collected in the lowest elevations/drainages (S-7 and S-8), and soil samples collected in a radius of ±40 feet out from previously sampled soil with toxaphene and/or dieldrin concentrations above the Preliminary Remediation Goal (PRG).

To evaluate the potential for restricted agricultural chemical residues, surficial soil samples were collected at depths of 0.5 foot, 1 foot, 2 feet, and 4 feet within the subject property. Based upon input from Mr. Ewan Moffat with the County Voluntary Assistance Program, 43 additional sample locations were chosen which included re-sampling of previous locations (SP-1, SP-2, SP-4, SP-5, and SP-6), in a radius of ±40 feet out, to delineate limits of soil removal. In addition, two additional sample locations were chosen within the one drainage channel (SP-7) and the lowest elevation (SP-8), and four randomly selected sample locations within the drive-in were selected (SP-24, SP-25, SP-26, and SP-27). Overall, a total of 67 soil samples at a total of 48 locations were collected. It should be noted that Soil Samples SP-28 through SP-33 were collected as backup samples for Soil Samples SP-24 and SP-26; however, these samples were not analyzed for Chlorinated Pesticides (EPA test method 8081A) due to the extremely low concentration of DDE, DDD, DDT, dieldrin, and toxaphene, which were well below the PRG limits for samples SP-24 and SP-26 at depths of 0.5 feet, 2.0 feet, and 4 feet. Soil samples collected were analyzed for Chlorinated Pesticides (EPA test method 8081A). Sample locations are shown on Plate 1.

Based upon the previous and additional requested laboratory test results (see Appendix B for previous laboratory test results conducted in May 2007; and see Appendix C for the additional laboratory test results conducted in November and December 2007), concentrations of DDE were detected in 39 of the 67 soil samples collected (at 39 of the 48 sample locations) on the subject property. Concentrations of DDD were detected in 10 of the 67 soil samples collected (at 10 of the 48 sample locations). DDT was detected in 19 of the 67 samples collected (at 19 of the 48 sample locations). Dieldrin was detected in 18 of the 67 soil samples (at 18 of the 48 sample locations). Toxaphene was detected in 2 of the 67 soil samples (at 2 of the 48 sample locations). For comparison purposes, the regulatory action level for hazardous waste criteria (i.e., Total Threshold Limit Concentration or TTLC) for DDE, DDD, and DDT is 1.0 mg/kg, 8.0 mg/kg for dieldrin, and 5.0 mg/kg for toxaphene. The Preliminary Remediation Goal (PRG) for residential soil (Smucker, 2002) for DDE and DDT is 1.7 mg/kg, 2.4 mg/kg for DDD, 0.03 mg/kg for dieldrin, and 0.44 mg/kg for toxaphene. Hazardous concentrations of pesticides were not detected in this survey. All concentrations of pesticides encountered during our surveys are well below the TTLC and PRGs, with the exception of dieldrin and one sample for toxaphene. Samples were collected and the collection area expanded and tested until all DDD, DDE, DDT, dieldrin, and toxaphene concentrations were below the PRG's. The results of the laboratory data are presented in the following table, and in Appendices B and C.

TABLE 1
SUMMARY OF CHEMICAL TEST RESULTS

SAMPLE ID	DATE COLLECTED	DDE mg/kg	DDT mg/kg	PRG DDE/DDT mg/kg	DDD mg/kg	PRG mg/kg	Dieldrin	PRG mg/kg	TOXAPHENE mg/kg	PRG mg/kg	STLC ug/L
S-1 @ 6"	5-16-07	0.058	0.018	1.7	ND	2.4	0.010	0.03	ND	0.44	--
S-2 @ 1'	5-16-07	0.0094	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
S-3 @ 6"	5-16-07	0.230	0.053	1.7	ND	2.4	ND	0.03	ND	0.44	--
S-4 @ 1'	5-16-07	0.069	0.023	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-1 @ 0.5'	11-16-07	0.058	0.025	1.7	ND	2.4	0.120	0.03	ND	0.44	--
SP-1 @ 2'	11-16-07	0.0076	ND	1.7	ND	2.4	0.018	0.03	ND	0.44	--
SP-1 @ 4'	11-16-07	ND	ND	1.7	ND	2.4	0.013	0.03	ND	0.44	--
SP-2 @ 0.5'	11-16-07	0.034	ND	1.7	ND	2.4	0.150	0.03	ND	0.44	ND
SP-2 @ 2'	11-16-07	ND	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-2 @ 4'	11-16-07	ND	ND	1.7	ND	2.4	0.019	0.03	ND	0.44	--
SP-3 @ 0.5'	11-16-07	0.013	ND	1.7	ND	2.4	0.015	0.03	ND	0.44	--
SP-3@ 2'	11-16-07	0.021	ND	1.7	ND	2.4	0.018	0.03	ND	0.44	--
SP-3 @ 4'	11-16-07	ND	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-4 @ 0.5'	11-16-07	0.20	0.01	1.7	ND	2.4	0.110	0.03	ND	0.44	--
SP-4 @ 2'	11-16-07	ND	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-4 @ 4'	11-16-07	ND	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-5 @ 0.5'	11-16-07	0.350	0.076	1.7	0.009	2.4	ND	0.03	0.47	0.44	--
SP-5@ 2'	11-16-07	0.044	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-5 @ 4'	11-16-07	ND	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-6 @ 0.5'	11-16-07	0.320	0.11	1.7	0.026	2.4	ND	0.03	0.40	0.44	--
SP-6 @ 2'	11-16-07	0.0077	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-6 @ 4'	11-16-07	ND	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-7 @ 0.5'	11-16-07	ND	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-7 @ 2'	11-16-07	ND	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-7 @ 4'	11-16-07	ND	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-8 @ 0.5'	11-16-07	0.150	0.0068	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-8 @ 2'	11-16-07	0.0096	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-8 @ 4'	11-16-07	ND	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-9 @ 0.5'	12-13-07	0.028	0.007	1.7	ND	2.4	0.065	0.03	ND	0.44	--
SP-10 @ 0.5'	12-13-07	0.046	0.014	1.7	ND	2.4	0.100	0.03	ND	0.44	--
SP-11 @ 0.5'	12-13-07	0.034	ND	1.7	ND	2.4	0.086	0.03	ND	0.44	--
SP-12 @ 0.5'	12-13-07	0.033	ND	1.7	ND	2.4	0.160	0.03	ND	0.44	ND
SP-13 @ 0.5'	12-13-07	0.034	ND	1.7	ND	2.4	0.140	0.03	ND	0.44	--
SP-14 @ 0.5'	12-13-07	0.040	ND	1.7	ND	2.4	0.100	0.03	ND	0.44	--
SP-15 @ 0.5'	12-13-07	0.061	ND	1.7	ND	2.4	0.0094	0.03	ND	0.44	--
SP-16 @ 0.5'	12-13-07	0.083	ND	1.7	0.007	2.4	0.028	0.03	ND	0.44	--
SP-17 @ 0.5'	12-13-07	ND	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-18 @ 0.5'	12-13-07	0.410	0.070	1.7	0.015	2.4	ND	0.03	ND	0.44	--
SP-19 @ 0.5'	12-13-07	0.220	0.021	1.7	0.007	2.4	ND	0.03	ND	0.44	--

SAMPLE ID	DATE COLLECTED	DDE mg/kg	DDT mg/kg	PRG DDE/DDT mg/kg	DDD mg/kg	PRG mg/kg	Dieldrin	PRG mg/kg	TOXAPHENE mg/kg	PRG mg/kg	STLC ug/L
SP-20 @ 0.5'	12-13-07	0.370	0.099	1.7	0.020	2.4	ND	0.03	ND	0.44	--
SP-21 @ 0.5'	12-13-07	0.230	0.069	1.7	0.019	2.4	ND	0.03	ND	0.44	--
SP-22 @ 0.5'	12-13-07	0.180	0.029	1.7	0.017	2.4	ND	0.03	ND	0.44	--
SP-23 @ 0.5'	12-13-07	0.120	0.015	1.7	0.0099	2.4	ND	0.03	ND	0.44	--
SP-24 @ 0.5'	12-13-07	ND	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-24 @ 2'	12-13-07	ND	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-24 @ 4'	12-13-07	0.009	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-25 @ 0.5'	12-13-07	0.012	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-25 @ 2'	12-13-07	0.021	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-25 @ 4'	12-13-07	ND	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-26 @ 0.5'	12-13-07	0.059	ND	1.7	ND	2.4	0.0064	0.03	ND	0.44	--
SP-26 @ 2'	12-13-07	0.390	0.049	1.7	ND	2.4	0.056	0.03	ND	0.44	--
SP-26 @ 4'	12-13-07	0.0079	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-27 @ 0.5'	12-13-07	0.260	0.049	1.7	ND	2.4	0.200	0.03	ND	0.44	ND
SP-27 @ 2'	12-13-07	ND	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-27 @ 4'	12-13-07	ND	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-34 @ 2'	12-27-07	0.042	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-35 @ 2'	12-27-07	ND	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-36 @ 2'	12-27-07	ND	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-37 @ 0.5'	12-27-07	ND	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-38 @ 0.5'	12-13-07	ND	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-39 @ 0.5'	12-13-07	0.250	0.010	1.7	0.0078	2.4	0.046	0.03	ND	0.44	--
SP-40 @ 0.5'	12-27-07	ND	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-41 @ 0.5'	12-27-07	ND	ND	1.7	ND	2.4	0.021	0.03	ND	0.44	--
SP-42 @ 0.5'	12-27-07	ND	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-43 @ 0.5'	12-27-07	ND	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--
SP-44 @ 0.5'	12-27-07	ND	ND	1.7	ND	2.4	0.016	0.03	ND	0.44	--
SP-45 @ 0.5'	12-27-07	0.015	ND	1.7	ND	2.4	ND	0.03	ND	0.44	--

ND indicates not detected at or above the laboratory detection limit.
-- indicates not analyzed.

SURFACE WATER AND GROUNDWATER

The property lies within the Mission Hydrologic Subarea (HSA 903.11) of the Lower San Luis Hydrologic Area (HA 903.10) of the San Luis Rey Hydrologic Unit (HU 903.00) within the San Diego Region (CRWQCB, 1995). Oceanside falls within Region 9 (San Diego) of the California Regional Water Quality Control Board (CRWQCB). Existing beneficial uses of groundwater within this HSA are reported to include municipal and domestic supply, agricultural supply, and industrial service supply.

The relative distance from the subject property to the San Luis Rey River is approximately 350 to 400 feet (approximate distance between the northwest limits of the site to the banks of San Luis Rey River). A levee constructed by the Army Corp of Engineers in the 1990s,

adjacent to the San Luis Rey River and the site boundary, consists of an approximately 20-foot high, rip-rap armored berm. San Luis Rey River flows to the Pacific Ocean, which is located approximately 16,000 feet (3 miles) southwest of the subject property, following the San Luis Rey River route. Reported beneficial uses of the San Luis Rey River in the general area include agricultural supply and industrial service supply; contact and non-contact recreational use; warm freshwater habitant; and wildlife habitat.

Groundwater beneath the site was encountered in January 2005 at depths of 12 to 17 feet below existing ground surface (begs), or approximate elevations of 16 to 21 feet Mean Sea Level (MSL), and in May 2006, groundwater was encountered at depths of 7 to 12 feet begs, or approximate elevations of 22 to 29 feet MSL (Eberhart/United Consultants, 2006). The local shallow groundwater gradient is to the west/southwest following the San Luis Rey River. Surface flow is to the west/southwest.

According to information provided by Mr. John Strohminger of O'Day Consultants, Inc., four wells were formerly located on the property. The wells were owned by the City of Carlsbad (Carlsbad Municipal Water District). The wells were abandoned in the fall of 2006. Abandonment included filling the well casing with slurry and removing the top 10 or 20 feet of casing.

The Flood Insurance Rate Map (FIRM) from the Federal Emergency Management Agency (FEMA), dated January 19, 2001, indicates all of the subject property located within Zone A99. This zone is defined as an "area to be protected from the 100-year flood zone by a Federal Flood Protection System currently under construction." The protection system is a levee that was constructed by the Army Corp of Engineers in the 1990s. The system has not been certified by the Corp due to environmental issues with the maintenance and operation plan. Until the maintenance and operations plan is certified, FEMA will not revise the FIRM map to show the site to be fully protected from the 100-year flood. Based on conversations with Mr. John Strohminger of O'Day Consultants, Inc., GSI has been assured that before completion of the project, i.e., The Pavilion at Oceanside, the levee will be certified and the site will no longer be located in Zone A99.

SOIL PARAMETERS

Cone penetrometer soundings and sieve analysis (ASTM D422-63) performed on soil during a subsurface geotechnical evaluation of the subject property (Eberhart/United Consultants, 2006) indicated site soil in the alluvium in former growing areas may be classified as sand to silty sand based upon the Unified Soil Classification System (USCS). Based upon Eberhart's analyses, the soil type appears to be generally uniform and apparently does not vary significantly in texture and composition. Permeability of this soil type is typically medium.

Three samples with the highest concentrations of dieldrin were analyzed for Soluble Threshold Limit Concentration (STLC) or W.E.T. (Waste Extraction Test) utilizing the

California Department of Toxic Substances Control (DTSC) test method. This is a leachate extraction defined by the California Code of Regulations and used to evaluate whether certain leachable compounds are present in large enough amounts in a given material that the material needs to be dealt with as hazardous waste. The extraction method mimics what will happen in a landfill to a given material over time, as it is exposed to normal climatic conditions. The laboratory reports indicated that STLC was non-detect for the three highest concentrations of dieldrin reported in the 8081A testing. In other words, the dieldrin levels encountered onsite are not leachable and do not need to be dealt with as hazardous waste.

PRELIMINARY CONCLUSIONS AND RECOMMENDATIONS

Summary and Conclusions

Based upon the information obtained during the course of our studies, as well as information provided in the referenced reports (see Appendix A), GSI presents the following summary of findings, conclusions, and recommendations:

- To evaluate the potential for restricted agricultural chemical residues, surficial soil samples were collected at depths of 0.5 feet, 1 foot, 2 feet, and 4 feet within the subject property. Based upon input from Mr. Ewan Moffat with the County Voluntary Assistance Program, 43 additional sample locations were chosen which included re-sampling of previous locations (SP-1, SP-2, SP-4, SP-5, and SP-6) to delineate limits of soil removal. In addition, two additional sample locations were chosen within the one drainage channel (SP-7) and the lowest elevation (SP-8), and four randomly selected sample locations within the drive-in were selected (SP-24, SP-25, SP-26, and SP-27). Overall, a total of 67 soil samples at a total of 48 locations were collected. It should be noted that Soil Samples SP-28 through SP-33 were collected as backup samples for Soil Samples SP-24 and SP-26; however, these samples were not analyzed for Chlorinated Pesticides (EPA test method 8081A) due to the extremely low concentration of DDE, DDD, DDT, dieldrin, and toxaphene, which were well below the PRG limits for samples SP-24 and SP-26 at depths of 0.5 feet, 2.0 feet, and 4 feet. Soil samples collected were analyzed for Chlorinated Pesticides (EPA test method 8081A). Sample locations are shown on Plate 1.

- Except for DDE, DDD, DDT, dieldrin, and toxaphene, no constituents of the Chlorinated Pesticides were reported above the laboratory detection limits (i.e., non-detect). Concentrations of DDE, ranging from 0.0094 mg/kg to 0.410mg/kg, were detected in 39 of the 67 samples. A concentration of 0.0099 mg/kg to 0.026 mg/kg of DDD was detected in 10 of the 67 samples. Concentrations of 0.0068 to 0.099 mg/kg of DDT were detected in 19 of the 67 samples. Concentrations of 0.0064 mg/kg to 0.860 mg/kg of dieldrin were detected in 18 of

the 67 samples. Concentrations of 0.40 mg/kg to 0.47 mg/kg of toxaphene were detected in 2 of the 67 samples.

- For comparison purposes, regulatory action levels for hazardous waste criteria (i.e., Total Limit Threshold Concentration - TTLC) in soil are 1.0 mg/kg for DDE, DDD, and DDT, 8.0 mg/kg for dieldrin, and 5.0 mg/kg for toxaphene. Detected concentrations of DDE, DDD, DDT, dieldrin, and toxaphene onsite are considerably lower than the TTLC criteria. Thus, hazardous concentrations of pesticides were not detected in this study.

- Preliminary Remedial Goals (PRGs), which combine existing USEPA toxicity values with generally accepted exposure factors to estimate concentrations in residential soil that do not represent a cancer risk to humans greater than one-in-one million (i.e., 1×10^{-6}), are 1.7 mg/kg DDE and DDT, 2.4 mg/kg DDD, 0.03 mg/kg dieldrin, and 0.44 mg/kg toxaphene. Five samples were reported with concentrations of dieldrin above the PRG and one sample was reported with a concentration of toxaphene above the PRG. Samples were collected, the collection area expanded, and tested until all DDD, DDE, DDT, dieldrin, and toxaphene concentrations were below the PRG's.

- Cone penetrometer soundings and sieve analysis (ASTM D422-63) performed on soil during a subsurface geotechnical evaluation of the subject property (Eberhart/United Consultants, 2006) indicated site soil in the alluvium in former growing areas may be classified as sand to silty sand based upon the Unified Soil Classification System (USCS). Based upon Eberhart's analyses, the soil type appears to be generally uniform and apparently does not vary significantly in texture and composition. Permeability of this soil type is typically medium.

- Groundwater beneath the site was encountered in January 2005 at depths of 12 to 17 feet begs, or approximate elevations of 16 to 21 feet MSL, and in May 2006, groundwater was encountered at depths of 7 to 12 feet begs, or approximate elevations of 22 to 29 feet MSL (Eberhart/United Consultants, 2006). The local shallow groundwater gradient is to the west/southwest following the San Luis Rey River. Surface flow is to the west/southwest.

Recommendations

Based upon the scope of work completed, GSI concludes that the concentrations of DDE, DDD, and DDT detected in earth materials on the subject property generally are sufficiently below PRGs so as not to represent a significant risk to human health. The concentrations of dieldrin and toxaphene reported at six locations on the site (SP-1, SP-2, SP-4, SP-5, and SP-27) are slightly elevated above the PRG, and appear to be isolated occurrences, in light of data collected to date. Based upon the information obtained during the course of this assessment, GSI presents the following recommendations:

- All other recommendations contained in GSI (2007c and 2005), pertinent to the subject site, should be implemented.

- If required, the appropriate regulatory agencies should be provided with a copy of this report for their review and comment.

- Pesticide impacted soil with concentrations reported in this study may be selectively utilized onsite as artificial fill. The isolated areas in the vicinity of Soil Samples SP-1, SP-2, SP-4, SP-5, SP-26, and SP-27 located on site (delineated on Plate 1), may be utilized onsite as artificial fill at locations and depths which will effectively eliminate future human contact, as well as eliminate potential impacts to surface water and groundwater, in accordance with the approval of the governing agency, as warranted. Recommendations for this are summarized below:

  Based upon the Tentative Parcel Map For The Pavilion at Oceanside plans prepared by O'Day Consultants, dated December 19, 2007, grading for the project will include import of fill to raise site grades an average of 3 to 4 feet. Based upon these grading plans, GSI recommends placing the dieldrin and toxaphene affected soil located around affected Soil Samples SP-1, SP-2, SP-4, SP-5, and SP-27, delineated on Plate 1, to a depth of 2 foot (approximately 502,600 cubic feet or 18,615 cubic yards), on the site at elevations ranging from about ±34 to ±35 feet MSL. GSI recommends placing the dieldrin affected soil located around affected Soil Sample SP-26, delineated on Plate 1, to a depth of 3 feet (approximately 21,254 cubic feet, or 787 cubic yards), on the site at elevations ranging from about ±34 to ±36 feet MSL. The approximate locations of the proposed removal areas for affected soils are provided on Plate 1. The placement locations for the affected soil are indicated on Plate 2. Based on our calculations (a total of approximately 19,402 cubic yards of affected soil), there appears to be sufficient available volume (calculated at 22,686 cubic yards) to place the affected soil. This location will thus provide a minimum fill cap of approximately 3 feet over the affected soil. The locations are located in the proposed parking lot areas of The Pavilion at Oceanside, and not in close proximity to proposed underground utilities (at least 10 feet away). The affected soil will be located a minimum of 7 feet above groundwater (groundwater elevation is about 25 feet MSL), and more than 1,500 feet west of the San Luis Rey Levee after completion of grading. This will effectively eliminate potential impacts to surface water and groundwater.

LIMITATIONS

GSI has performed the services for this project in accordance with the terms of a specific scope in a contract between GSI and Client, and in general accordance with current professional standards for investigations of this type. The conclusions presented in this report are based on the information collected during the study, the present understanding of the site conditions, and professional judgment.

Please note, subsurface and hazardous waste/toxic substance conditions may vary from those provided in historical documents reviewed by GSI. The interpretations and recommendations of GSI are based solely on such information and/or information supplied by Client. Findings of this assessment based on data provided by others carries no warranty, express or implied, as a result of the usage of such data.

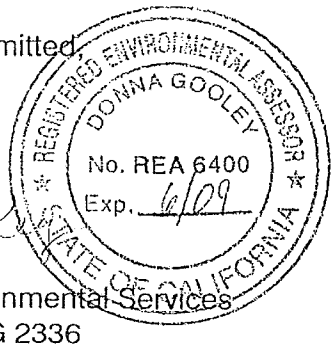
It is possible that future assessments may reveal additional data or variations of the current data which may require the current conclusions and recommendations to be reevaluated. As a result, GSI makes no warranty, either express or implied, as to its findings, opinions, recommendations, specifications, or professional advice except that they were promulgated after being prepared in accordance with generally accepted standards of care and diligence normally practiced by recognized consulting firms performing services of a similar nature.

The information in this report is relevant to the date of the site work and should not be relied on to represent conditions at any later date. Facts, conditions, and acceptable risk factors change with time, accordingly, this report should be viewed within this context.

The opportunity to be of services is appreciated. If you should have any questions, please do not hesitate to contact the undersigned at (760) 438-3155.

Respectfully submitted,

GeoSoils, Inc.



Donna Gooley
Director of Environmental Services
REA-1 6400, CEG 2336

John P. Franklin
Environmental Assessor
REA-1 1675, CEG 1340

DG/BEV/JPF/jk

Attachments: Appendix A - References
Appendix B - Laboratory Reports And Chain of Custody Record (May 2007)
Appendix C - Laboratory Reports And Chain of Custody Record (November and December 2007)
Plate 1 - Soil Sample Location Map
Plate 2 - Proposed Dieldrin and Toxaphene Affected Soil and Placement Map
Plate 3 - Cross Sections of Proposed Location of Dieldrin and Toxaphene Affected Soils

Distribution: (2) Addressee (1 unbound)
(2) Thomas Enterprises, Attention: Mr. Garrett Colburn
(1) Affinis Environmental, Attention: Ms. Nicole Wegher

APPENDIX A

REFERENCES

APPENDIX A

REFERENCES

California Regional Water Quality Control Board, 1995, Water quality control plan for the San Diego basin (9), dated September 8.

Eberhart/United Consultants, 2006, Preliminary geotechnical feasibility study, the Pavilion at Oceanside, Expressway 76 and Mission Avenue, Oceanside, California, W.O. 81-02048-0031, dated May 24.

GeoSoils, Inc., 2007a, Work plan for detailed agricultural chemical residues in Siegal property, Former Oceanside Drive-In Theater, APNs 160-270-31, -73, -79, and 169-280-14, 48-51, 53-55, City of Oceanside, County of San Diego, California 92054, W.O. E4704.2-SC, dated July 20.

_____, 2007b, Request for Assistance, Siegal property, Former Oceanside Drive-In Theater, APNs 160-270-31, -73, -79 and 169-280-14, 48-51, 53-55, City of Oceanside, County of San Diego, California 92054, W.O. E4704.2-SC, dated July 23.

_____, 2007c, Revised limited phase II environmental assessment, The Pavilion at Oceanside, Siegal property, North of Highway 76 (Former Oceanside Drive-In Theater), Oceanside, San Diego County, California 92054, Voluntary Assistance Case No. H39715, W.O. E4704.1-SC, revised October 29.

_____, 2005, Phase I environmental site assessment, The Pavilion at Oceanside, Siegal Property, North of Highway 76 (Former Oceanside Drive-In Theater), Oceanside, San Diego County, California 92054, W.O. E4704-SC, dated February 24.

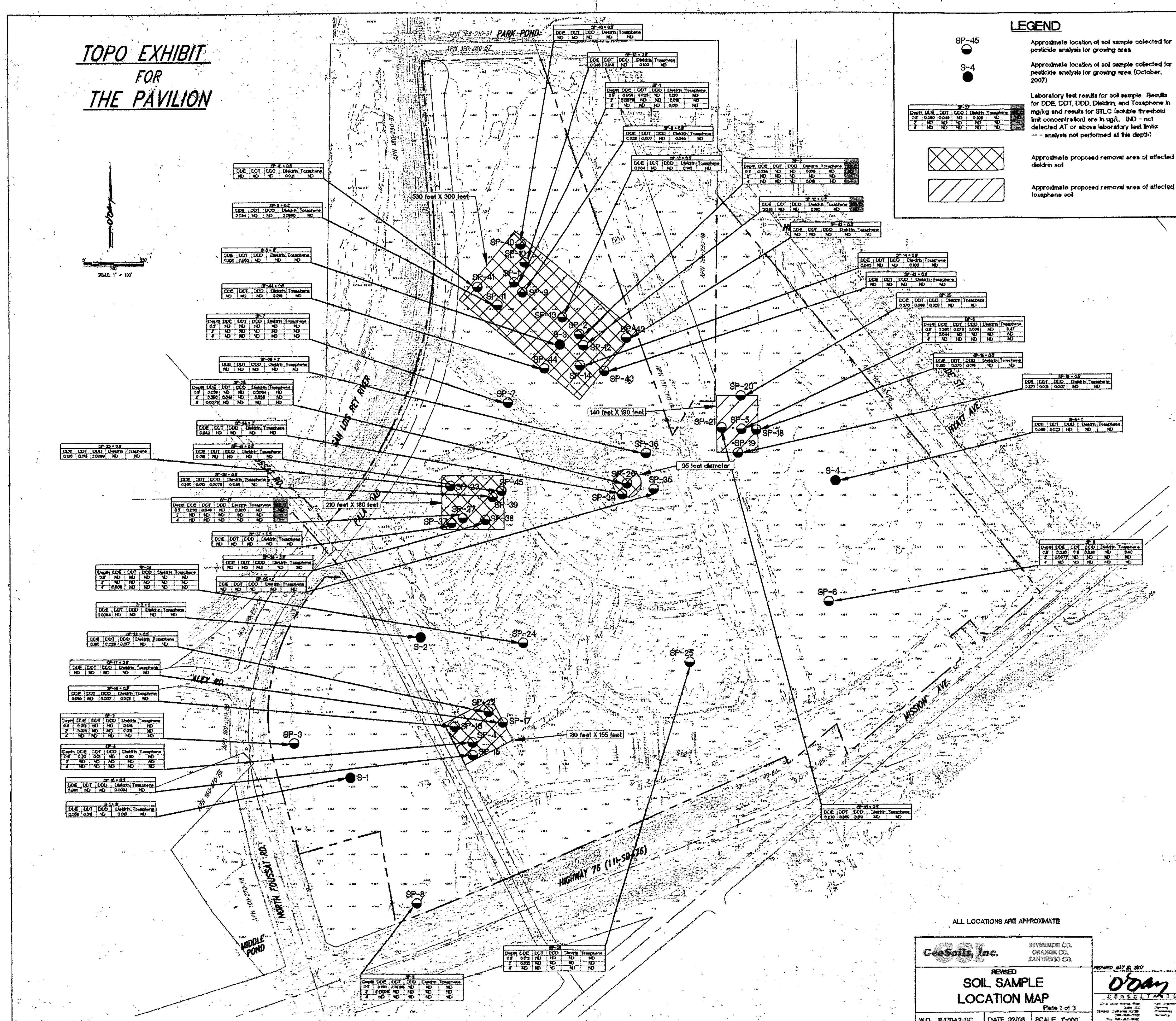
O'Day Consultants, 2007, Tentative parcel map for The Pavilion at Oceanside, dated December 19.

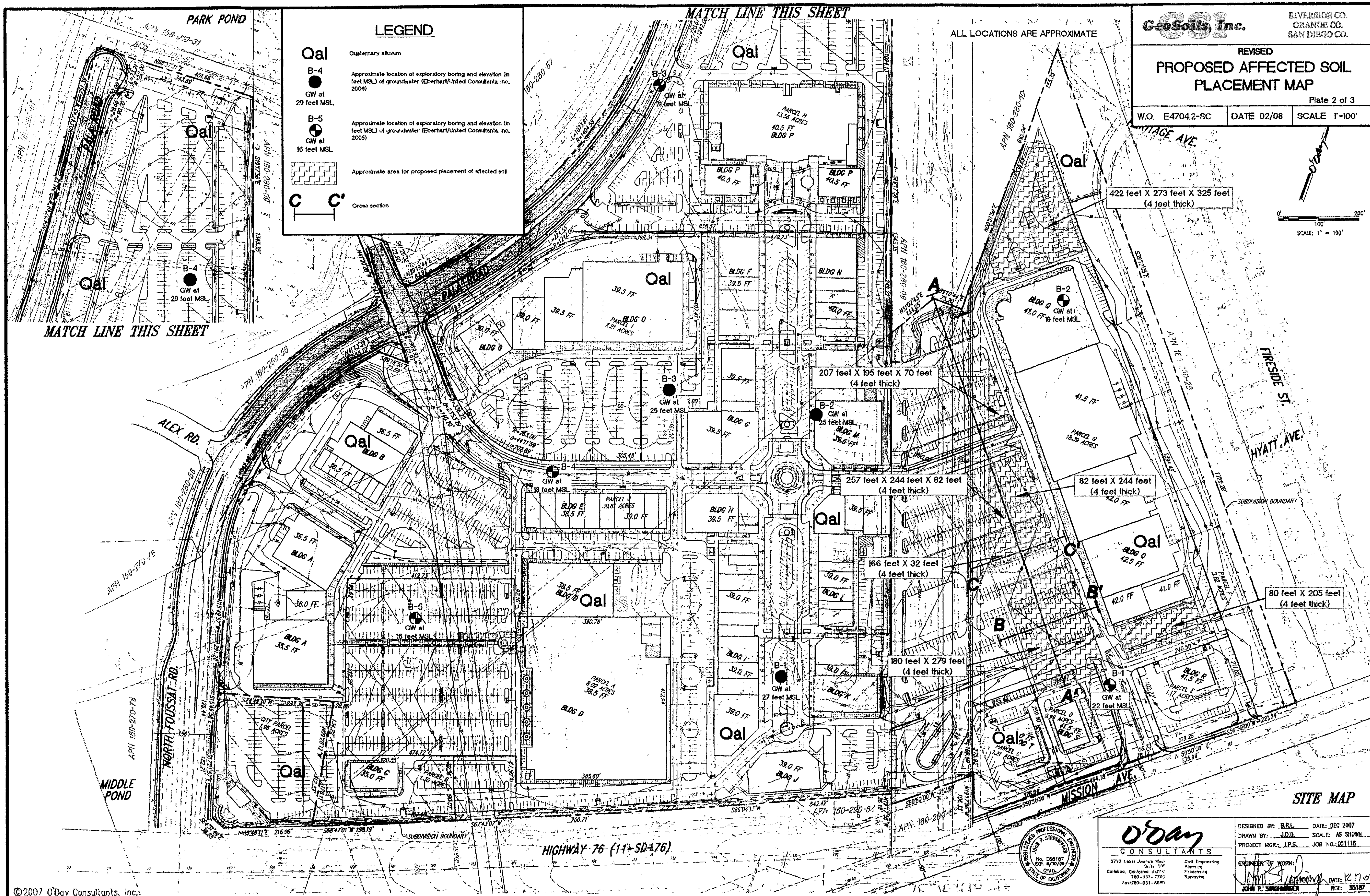
Smucker, Stanford J., 2002, United States Environmental Protection Agency (USEPA), Region IX, Region 9 preliminary remediation goals (PRGs) Table 2002 update, dated November 1.

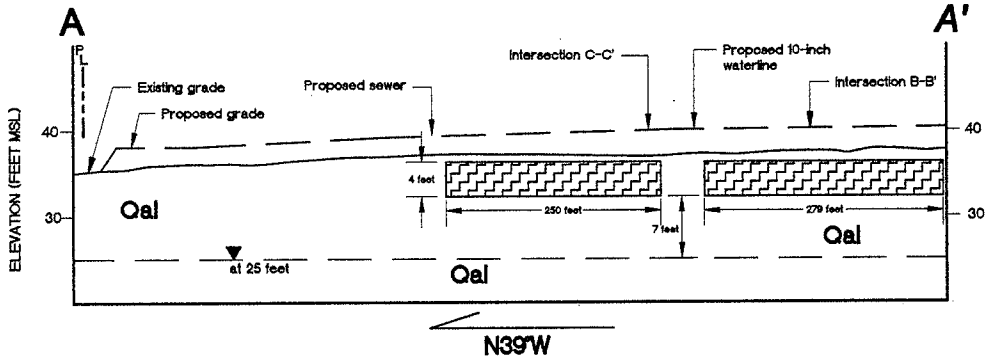
State of California Environmental Protection Agency, 1992, Supplemental guidance for human health multimedia risk assessments of hazardous waste sites and permitted facilities, Chapter 8, 'DDT in Soil' guidance for the assessment of health risk to humans, dated July.

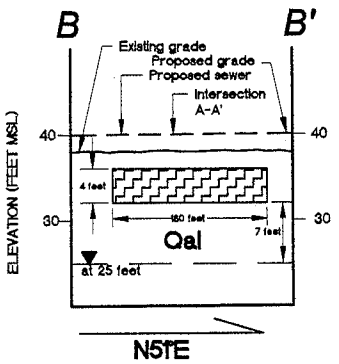
NOTE:

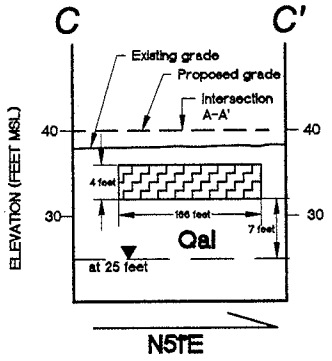
APPENDICES, INCLUDING WORKSHEETS ARE IN A SEPARATE TECHNIC ON FILE WITH THE CITY OF OCEANSIDE'S PLANNING DIVISION AND MAY BE VIEWED AT THAT LOCATION DURING NORMAL BUSINESS HOURS.


TOPO EXHIBIT
FOR
THE PAVILION
SCALE: 1" = 100'
LEGEND
SP-45
Approximate location of soil sample collected for pesticide analysis for growing area
S-4
Approximate location of soil sample collected for pesticide analysis for growing area (October, 2007)
Laboratory test results for soil sample. Results for DDE, DDT, DDD, Dieldrin, and Toxaphene in mg/kg and results for STLC (soluble threshold limit concentration) are in ug/L. (ND - not detected AT or above laboratory test limits; - - analysis not performed at this depth)
Approximate proposed removal area of affected dieldrin soil
Approximate proposed removal area of affected toxaphene soil
PARK POND
530 feet X 300 feet
140 feet X 180 feet
95 feet diameter
210 feet X 180 feet
180 feet X 155 feet
SAN LUIS REY RIVER
ALEX RD.
NORTH FOUSSAT RD.
MIDDLE POND
HIGHWAY 76 (11-SD-76)
MISSION AVE.
HYATT AVE.
SP-40
SP-41
SP-11
SP-9
SP-13
SP-2
SP-42
SP-12
SP-44
SP-14
SP-43
SP-7
SP-20
SP-21
SP-5
SP-18
SP-19
SP-36
SP-35
SP-34
SP-45
SP-39
SP-27
SP-37
SP-38
S-4
SP-6
S-2
SP-24
SP-25
SP-22
SP-17
SP-3
SP-15
S-1
SP-8
ALL LOCATIONS ARE APPROXIMATE
GeoSoils, Inc.
RIVERSIDE CO.
ORANGE CO.
SAN DIEGO CO.
REVISED
SOIL SAMPLE
LOCATION MAP
Plate 1 of 3
W.O. E47042-SC
DATE 02/08
SCALE 1"=100'
PREPARED MAY 30, 2007
O'Day CONSULTANTS
©2007 O'Day Consultants, Inc.


GeoSoils, Inc.
RIVERSIDE CO.
ORANGE CO.
SAN DIEGO CO.
REVISED
PROPOSED AFFECTED SOIL PLACEMENT MAP
Plate 2 of 3
W.O. E4704.2-SC
DATE 02/08
SCALE 1"=100'
ALL LOCATIONS ARE APPROXIMATE
LEGEND
Qal
Quaternary alluvium
B-4
GW at 29 feet MSL
Approximate location of exploratory boring and elevation (in feet MSL) of groundwater (Eberhart/United Consultants, Inc. 2006)
B-5
GW at 16 feet MSL
Approximate location of exploratory boring and elevation (in feet MSL) of groundwater (Eberhart/United Consultants, Inc. 2005)
Approximate area for proposed placement of affected soil
C C'
Cross section
MATCH LINE THIS SHEET
PARK POND
PALA ROAD
ALEX RD.
NORTH FOUSSAT RD.
MIDDLE POND
HIGHWAY 76 (11-SD-76)
MISSION AVE.
FIRESIDE ST.
HYATT AVE.
422 feet X 273 feet X 325 feet (4 feet thick)
207 feet X 195 feet X 70 feet (4 feet thick)
257 feet X 244 feet X 82 feet (4 feet thick)
82 feet X 244 feet (4 feet thick)
166 feet X 32 feet (4 feet thick)
80 feet X 205 feet (4 feet thick)
180 feet X 279 feet (4 feet thick)
B-1 GW at 27 feet MSL
B-1 GW at 22 feet MSL
B-2 GW at 25 feet MSL
B-2 GW at 19 feet MSL
B-3 GW at 25 feet MSL
B-3 GW at 21 feet MSL
B-4 GW at 18 feet MSL
B-4 GW at 29 feet MSL
B-5 GW at 16 feet MSL
SUBDIVISION BOUNDARY
SITE MAP
O'Day CONSULTANTS
DESIGNED BY: B.R.L.
DATE: DEC 2007
DRAWN BY: J.D.D.
SCALE: AS SHOWN
PROJECT MGR.: J.P.S.
JOB NO.: 051115
ENGINEER OF WORK:
JOHN P. STROHMINGER
RCE 55187
©2007 O'Day Consultants, Inc.







LEGEND

Qal — Quaternary alluvium

Approximate location of water table

Approximate area of proposed placement of affected soil

ALL LOCATIONS ARE APPROXIMATE

HORIZONTAL SCALE: 1"=100'
VERTICAL SCALE: 1"=10'

GeoSoils, Inc.

RIVERSIDE CO.
ORANGE CO.
SAN DIEGO CO.

REVISED

CROSS SECTIONS

Plate 3 of 3

W.O. E4704.2-SC	DATE 02/08	SCALE 100:10

LIMITED PHASE II ENVIRONMENTAL ASSESSMENT
THE PAVILION AT OCEANSIDE, SIEGAL PROPERTY
NORTH OF HIGHWAY 76 (FORMER OCEANSIDE DRIVE-IN THEATER), OCEANSIDE
SAN DIEGO COUNTY, CALIFORNIA 92054
VOLUNTARY ASSISTANCE CASE NO. H39715

FOR

THOMAS ENTERPRISES, INC.
2385 SHELTER ISLAND DRIVE, SUITE 202
SAN DIEGO, CALIFORNIA 92106

W.O. E4704.1-SC JUNE 11, 2007
REVISED OCTOBER 29, 2007

GeoSoils, Inc.

Geotechnical • Coastal • Geologic • Environmental

5741 Palmer Way • Carlsbad, California 92010 • (760) 438-3155 • FAX (760) 931-0915

June 11, 2007
Revised October 29, 2007

W.O. E4704.1-SC

Thomas Enterprises, Inc.
2385 Shelter Island Drive, Suite 202
San Diego, California 92106

Attention: Mr. Garrett Colburn

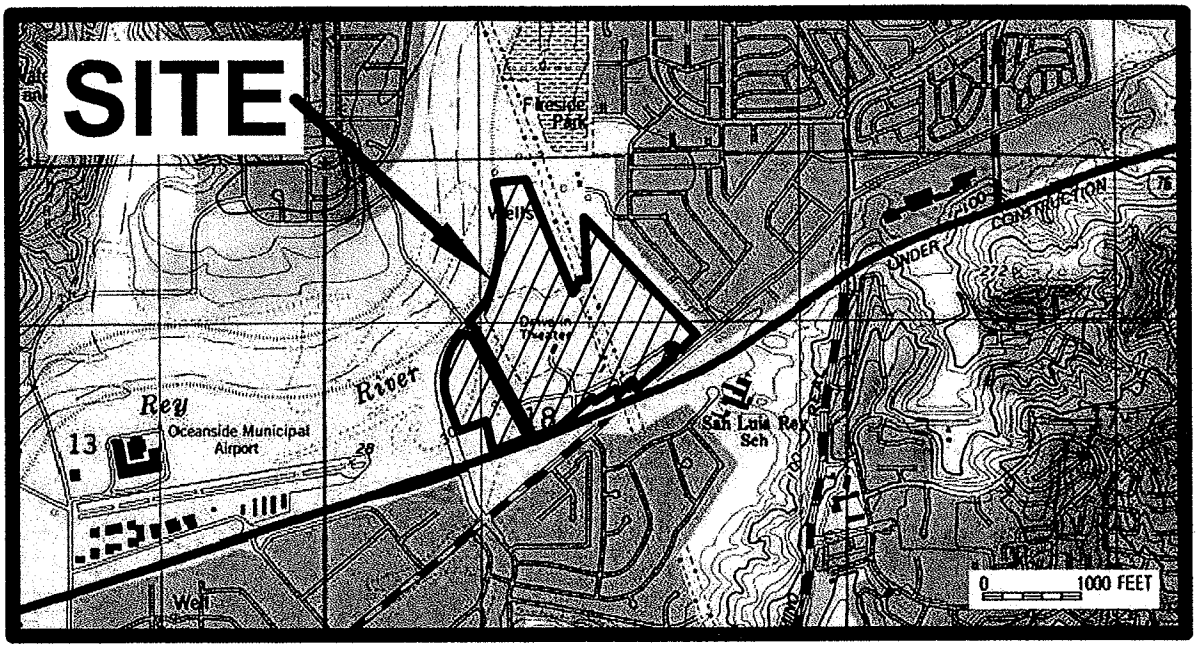
Subject: Revised Limited Phase II Environmental Assessment, The Pavilion at Oceanside, Siegal Property, North of Highway 76 (Former Oceanside Drive-In Theater), Oceanside, San Diego County, California 92054, Voluntary Assistance Case No. H39715

Dear Mr. Colburn:

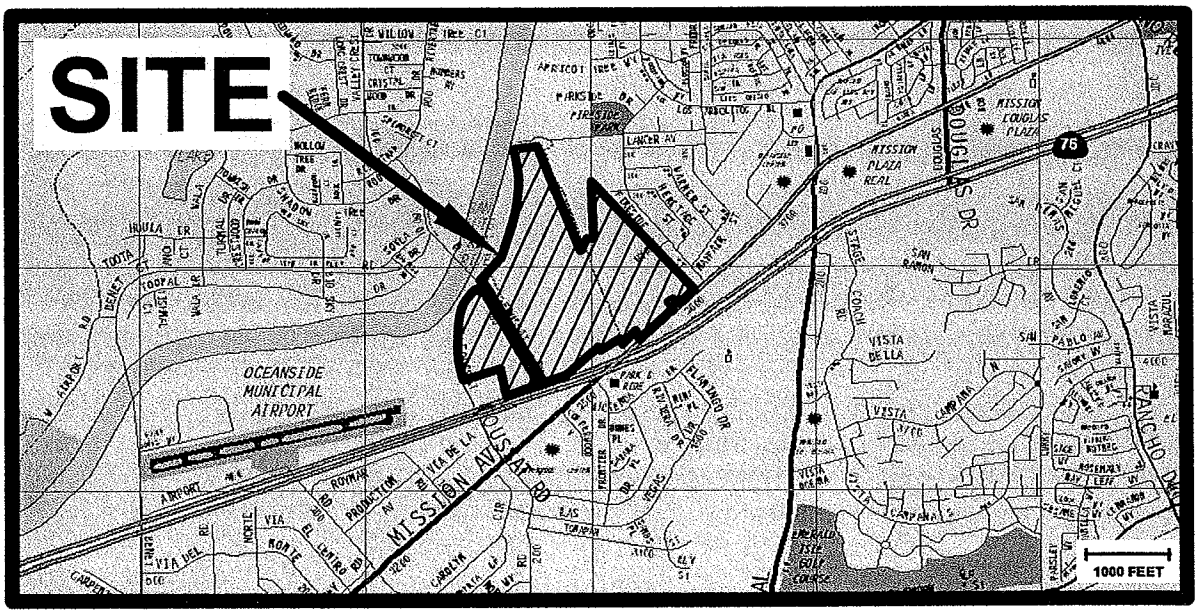
GeoSoils, Inc. (GSI) has prepared this revised report to include the Preliminary Remedial Goals (PRGs), as requested by Mr. Ewan Moffat of the County of San Diego Department of Environmental Health (DEH) for File Case No. H39715, for the subject report. The purpose of the detailed agricultural chemical residue survey is to generally satisfy the requirements of the controlling authorities and to provide conclusions and recommendations relative to proposed development of the site as a commercial shopping center. The scope of our work has included a review of the referenced documents in Appendix A, field sampling and laboratory analyses for pesticides, review of the County of San Diego, Department of Environmental Health (DEH) files for Case Number H21760-001, analysis of data, and preparation of this report. The purpose of the limited agricultural survey was to evaluate the historical agricultural use(s) of the subject property, addressing the potential presence of restricted agricultural residues.

SITE CONDITIONS AND PROPOSED DEVELOPMENT

The irregularly-shaped property currently consists of vacant, undeveloped land and the former Oceanside Drive-In Theater. The Assessor's Parcel Numbers for the property are 160-270-31, -73, -79, and 160-280-14, 48-51, and 53-55. The property is located on the northeast corner of State Route 76 and Foussat Road, in Oceanside, San Diego County, California (see Figure 1, Site Location Map). The former Valley Drive-In Theater (opened in 1967, closed in 1999) still exists on the property and is utilized by the Oceanside Swap Meet on weekends. Site elevations range from about 25 to 37 feet Mean Sea Level (MSL). The site slopes gently to the west/southwest.



Base Map: TOPO!® ©2003 National Geographic, U.S.G.S. San Luis Rey Quadrangle, California -- Riverside Co., 7.5 Minute, dated 1997, current 1999.



Base Map: The Thomas Guide, Riverside County, Street Guide and Directory, 2005 Edition, by Thomas Bros. Maps, page 1086.

N

GeoSoils, Inc.

W.O. E4704.1-SC

SITE LOCATION MAP

Figure 1

It is our understanding that the existing drive-in theater will be demolished. Based on our conversations with the Client, GSI understands that currently proposed development of the site will consist of construction of a commercial shopping center with parking and utility improvements. Grading for the project will include import of fill to raise site grades an average of 3 to 4 feet.

BACKGROUND

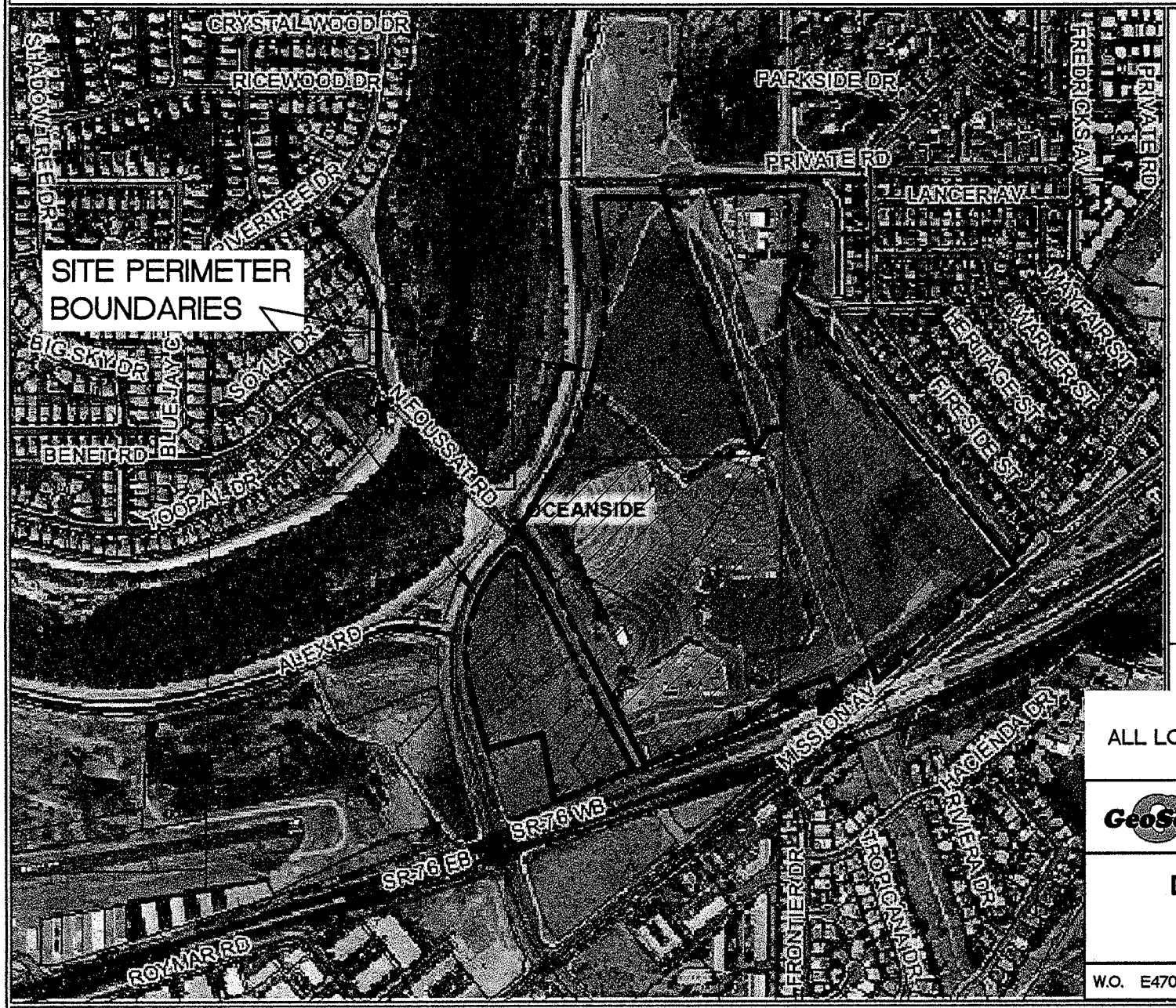
Based upon our review of our environmental site assessment (GSI, 2005) and additional research, portions of the subject site appear to have been utilized for agriculture from at least 1928 until possibly 2001. The type of agriculture is not known. The Valley Drive-In Theater opened on the site in 1967 and closed in 1999. The theater property has been utilized for the Oceanside Swap Meet on weekends up to the present. The address of the Drive-In is 3480 Mission Avenue. As was discussed in our Phase I Environmental Site Assessment (GSI, 2005), a Leaking Underground Storage Tank site was reported in our agency data base search. The site was reported as Mission Auto & Self Storage (Solus Western Portfolio). The search indicated the site address is at 3520 Mission Avenue, with a status of case closed in 1993. Based on information provided by Ewan Moffat of the DEH, their records indicate a case number of H39715-1 and the case was closed in 1993. This risk site is not located on the property; however, the subject property surrounding this site is located on the southeast border of the subject property. At present, a City of Oceanside structure exists on the former Mission Auto & Self Storage site (see Figure 2). It is GSI's opinion that this risk site does not pose an environmental threat to the subject property.

SURFACE WATER AND GROUNDWATER

The property lies within the Mission Hydrologic Subarea (HSA 903.11) of the Lower San Luis Hydrologic Area (HA 903.10) of the San Luis Rey Hydrologic Unit (HU 903.00) within the San Diego Region (CRWQCB, 1995). Oceanside falls within Region 9 (San Diego) of the California Regional Water Quality Control Board (CRWQCB). Existing beneficial uses of groundwater within this HSA are reported to include municipal and domestic supply, agricultural supply, and industrial service supply.

The relative distance from the subject property to the San Luis Rey River is approximately 350 to 400 feet (approximate distance between the northwest limits of the site to the banks of San Luis Rey River). A levee constructed by the Army Corp of Engineers in the 1990s, adjacent to the San Luis Rey River and the site boundary, consists of an approximately 20-foot high, rip-rap armored berm. San Luis Rey River flows to the Pacific Ocean, which is located approximately 16,000 feet (3 miles) southwest of the subject property, following the San Luis Rey River route. Reported beneficial uses of the San Luis Rey River in the general area include agricultural supply and industrial service supply; contact and non-contact recreational use; warm freshwater habitant; and wildlife habitat.

H39715



Legend

- Parcels
- Streets
- Highways
- Freeways
- SAM Environmental Listing
- County Boundary
- Cities
- 2005 Orthophoto South West
- 2005 Orthophoto South East
- 2005 Orthophoto North West
- 2005 Orthophoto North East

DEH

ALL LOCATIONS ARE APPROXIMATE

GeoSoils, Inc.

RIVERSIDE CO.
ORANGE CO.
SAN DIEGO CO.

DEH CASE NO. H39715
LOCATION MAP

FIGURE 2

W.O. E4704.1-SC	DATE 10/07	SCALE 1:8,287

Scale 1:8,287
San Diego County Department of Environmental Health

Printed: Oct 25, 2007 2:56:31 PM

Groundwater beneath the site was encountered at depths of 5 to 10 feet below existing ground surface (begs) in 1992 during our subsurface investigation (GSI, 1992), or approximate elevations of 20 to 27 feet (MSL). In January 2005, groundwater was encountered at depths of 12 to 17 feet begs, or approximate elevations of 16 to 21 feet MSL, and in May 2006, groundwater was encountered at depths of 7 to 12 feet begs, or approximate elevations of 22 to 29 feet MSL (Eberhart/United Consultants, 2006). The local shallow groundwater gradient is to the west/southwest following the San Luis Rey River. Surface flow is to the west/southwest.

According to information provided by Mr. John Strohminger of O'Day Consultants, Inc., four wells were formerly located on the property. The wells were owned by the City of Carlsbad (Carlsbad Municipal Water District). The wells were abandoned in the fall of 2006. Abandonment included filling the well casing with slurry and removing the top 10 or 20 feet of casing.

The Flood Insurance Rate Map (FIRM) from the Federal Emergency Management Agency (FEMA), dated January 19, 2001, indicates all of the subject property located within Zone A99. This zone is defined as an "area to be protected from the 100-year flood zone by a Federal Flood Protection System currently under construction." The protection system is a levee that was constructed by the Army Corp of Engineers in the 1990s. The system has not been certified by the Corp due to environmental issues with the maintenance and operation plan. Until the maintenance and operations plan is certified, FEMA will not revise the FIRM map to show the site to be fully protected from the 100-year flood.

SOIL PARAMETERS

Cone penetrometer soundings and sieve analysis (ASTM D422-63) performed on soil during a subsurface geotechnical evaluation of the subject property (Eberhart/United Consultants, 2006) indicated site soil in the alluvium in former growing areas may be classified as sand to silty sand based upon the Unified Soil Classification System (USCS). Based upon Eberhart's analyses, the soil type appears to be generally uniform and apparently does not vary significantly in texture and composition. Permeability of this soil type is typically medium.

LIMITED AGRICULTURAL RESIDUE SURVEY

In accordance with your request and authorization, GSI is providing the results of our limited agricultural survey on the subject property. This limited agricultural residue survey consisted of soil sampling for analysis of pesticides on the subject property, to evaluate the presence of restricted agricultural residue contamination on the property. Laboratory test results are provided in Appendix B.

To evaluate the potential for restricted agricultural chemical residues, surficial soil samples were collected on May 16, 2007, from depths of approximately 6 inches to 1 foot from four locations within the former agricultural areas of the subject property. Sample locations from this study are presented on Figure 3.

Test holes were excavated utilizing a hand auger. Samples were collected, stored, and transported to a California Department of Health Services (DHS) certified laboratory the same day, following quality assurance/quality control procedures (QA/QC) during all soil sampling activities. A Chain-of-Custody record was recorded with the laboratory and is included in the laboratory report in Appendix C. Chemical analyses included Chlorinated Pesticides utilizing EPA test method 8081A.

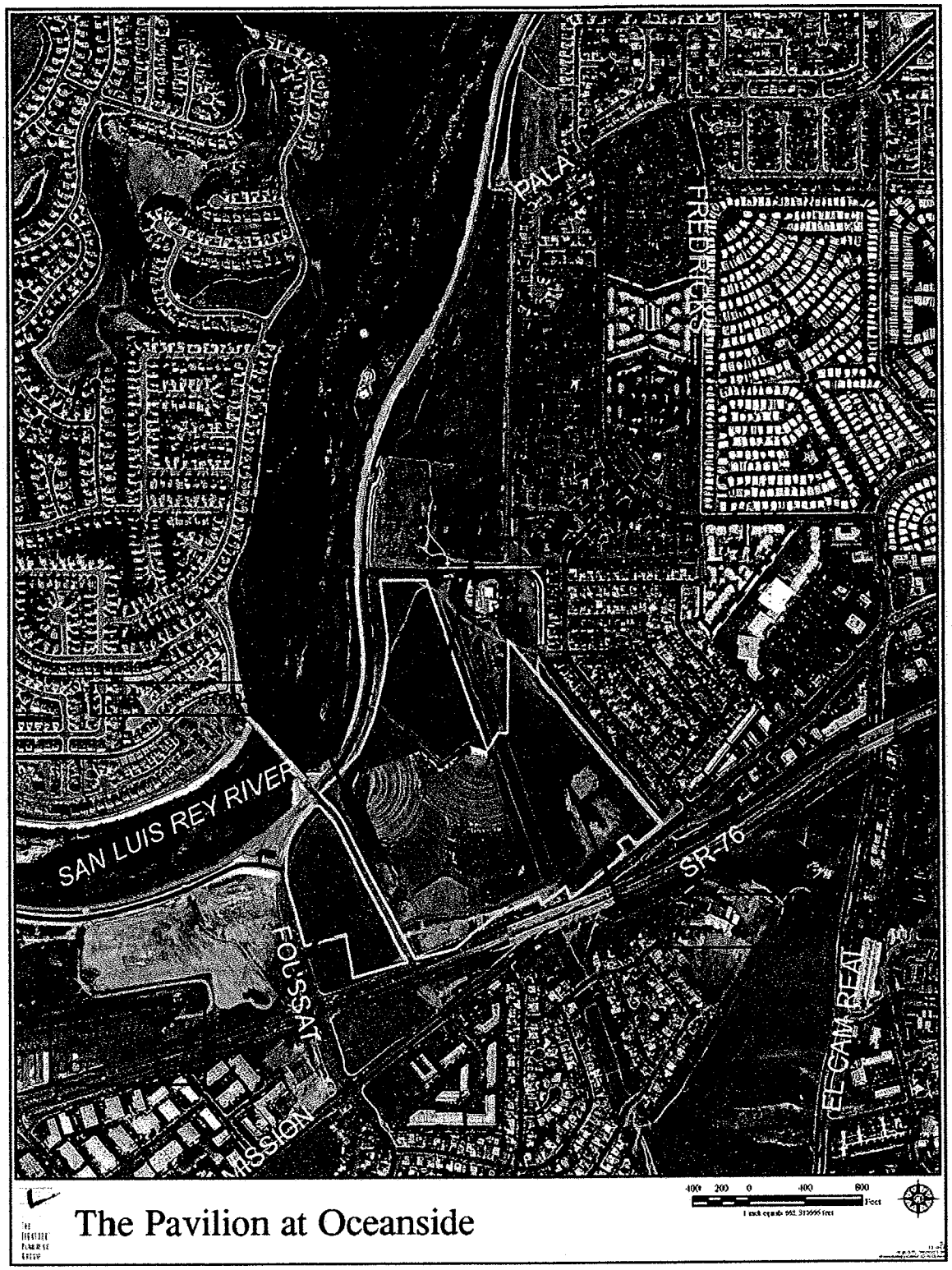
Laboratory Chemical Test Results

Based upon the laboratory test results, there were concentrations of analytes/compounds reported greater than the detection limits for Chlorinated Pesticides (EPA Test Method 8081A) in all four samples. Concentrations of DDE, DDT, and Dieldrin were detected in soil on the subject property. Dieldrin was reported in one sample at a concentration of 0.01 milligrams per kilogram (mg/kg). DDE was reported in four samples ranging from 0.0094 mg/kg to 0.23 mg/kg and DDT in three samples from 0.018 to 0.053 mg/kg. For comparison purposes, the Preliminary Remediation Goal (PRG) for residential soil for DDE and DDT is 1.7 mg/kg, and for Dieldrin it is 0.03 mg/kg. The California Code of Regulations (CCR), Title 22, Division 4.5, establishes a Total Threshold Limit Concentration (TTLC) for Dieldrin residues at 8.0 mg/kg and for DDE and DDT at 1.0 mg/kg each. Concentrations for Dieldrin, DDE, and DDT greater than the TTLC limits are designated as hazardous. There were no concentrations reported for Dieldrin, DDE, nor DDT that were at, or above, the TTLCs and concentration were all below the PRGs. The results of the laboratory data are presented in the following table and on Figure 3. The laboratory report is provided in Appendix B.

TABLE 1
SUMMARY OF CHEMICAL TEST RESULTS

SAMPLE ID	DATE COLLECTED	DDE mg/kg	DDT mg/kg	PRG DDE/DDT mg/kg	Dieldrin mg/kg	PRG Dieldrin mg/kg
S-1 @ 6"	5-16-07	0.058	0.018	1.7	0.010	0.03
S-2 @ 1'	5-16-07	0.0094	ND	1.7	ND	0.03
S-3 @ 6"	5-16-07	0.230	0.053	1.7	ND	0.03
S-4 @ 1'	5-16-07	0.069	0.023	1.7	ND	0.03

ND indicates not detected at or above laboratory detection limits.



LEGEND

S-4 • 1'

Approximate location of soil sample collected for pesticide analysis

Dieldrin	0.010
DDE	0.058
DDT	0.018

Laboratory test results in mg/kg

GeoSoils, Inc.

RIVERSIDE CO.
ORANGE CO.
SAN DIEGO CO.

REVISED

SOIL SAMPLE LOCATION MAP

Figure 3

W.O. E4704.1-SC	DATE 10/07	SCALE Bar Scale

The regulatory action levels for hazardous waste criteria TTLC, the PRGs for chemical residues (detected and non-detected onsite), and the chemical laboratory detection limits were compared. In summary, detection limits utilized by the testing laboratory were, overall, at least an order of magnitude (i.e., 10 times) below TTLC and PRG levels for all constituents. It appears, therefore, that detection limits utilized by the laboratory are suitable for agricultural-use chemicals.

Residue concentrations of DDE, DDT, and Dieldrin detected the soil samples onsite were compared to the PRGs for residential soil concentrations (Smucker, 2004). PRG tables combine existing USEPA toxicity values with generally accepted exposure factors to estimate concentrations in soil that do not represent a cancer risk to humans greater than one-in-one million (i.e., 1×10^{-6}). Exposure pathways considered include ingestion, inhalation and dermal absorption. Chemical concentrations presented in the PRG tables, therefore, can be directly compared to the residue concentrations detected in soils within the property. The PRG tables may be initially used in lieu of a health based risk assessment to determine the need for further evaluation of sites with concentrations of known cancer-causing contaminants (i.e., site screening).

It should be noted that human health-based risk concentration levels, which are typically lower than hazardous waste criteria concentrations, will likely be the default factor regarding the depth and amount of remedial grading needed to mitigate concentrations of pesticide residues detected onsite. Remedial grading may include (but not limited to) use of impacted earth materials as fill at locations and depths which will effectively eliminate future human contact, as well as eliminate potential impacts to surface water and groundwater.

The scope of work performed for this investigation represents a limited evaluation of restricted agricultural chemical residues onsite. Residues were detected and additional sampling and testing may be warranted. The Client and property owner should be aware that California law requires notification of the appropriate regulatory agency if hazardous concentrations of chemicals/substances are detected. Hazardous concentrations of pesticides were not detected in this limited survey.

If any concentration of pesticides is detected onsite, and the affected soil is to be re-used onsite (such as compacted fill during grading), waste discharge requirements (WDRs) must be obtained by the owner/discharger from the Regional Water Quality Control Board (RWQCB); however, prior to obtaining the WDRs, a Report of Waste Discharge (RWD) must be submitted to the RWQCB. The type of supporting information provided to the RWQCB in support of a RWD and application for WDRs depends on if the pesticide concentrations are found to be nonhazardous waste or hazardous waste. In this pesticide survey, pesticide concentrations were found to be nonhazardous.

The purpose of this preliminary evaluation was to screen the subject property for possible residues, and does not represent a detailed agricultural chemical residue survey which

may be required prior to receipt of WDRs and a grading permit. The Client may want to consider participating in the Voluntary Assistance Program (VAP) provided by the County of San Diego Department of Environmental Health (DEH) to provide project oversight to facilitate cost-effective resolution of contamination problems and to obtain a "closure letter" once the project is complete.

DEH FILE REVIEW FOR FILE NO. H21760-001

In our previous Phase I Environmental Site Assessment (GSI, 2005), the agency database records search reported a listing of a leaking underground storage tank (LUST). There was insufficient information for the site to be mapped. The risk site is listed as Ocean Place Cinemas on Mission Avenue, with no address provided. The status of the site is reported as leak to soil only (leak substance unknown) and post-remedial action monitoring in progress. GSI recommended a review of the DEH files for this risk site. On May 24, 2007, GSI reviewed the DEH files for File Number H21760-001. Ocean Place Cinemas is located at 401-423 Mission Avenue, greater than 1 mile west of the subject property (down groundwater gradient). As such, it is GSI's opinion that this risk site presents a very low potential to environmentally impact the subject site.

PRELIMINARY CONCLUSIONS AND RECOMMENDATIONS

Summary and Conclusions

Based upon the information obtained during the course of this study, as well as information provided in the referenced reports (see Appendix A), GSI presents the following summary of findings, conclusions, and recommendations:

- To evaluate the potential for restricted agricultural chemical residues, surficial soil samples were collected at depths of 6 inches to 1 foot within the subject property. Sampling of earth materials within the subject property consisted of a total of four soil samples collected from random locations. Soil samples collected were analyzed for Chlorinated Pesticides (EPA test method 8081A). Sample locations are shown on the Soil Sample Location Map (see Figure 3). The laboratory report is provided in Appendix B.

- Except for DDE, DDT, and Dieldrin, no constituents of the Chlorinated Pesticides were reported above the laboratory detection limits (i.e., non-detect). Dieldrin was reported in one sample at a concentration of 0.01 milligrams per kilogram (mg/kg). DDE was reported in four samples ranging from 0.0094 mg/kg to 0.23 mg/kg and DDT in three samples from 0.018 to 0.053 mg/kg

- For comparison purposes, regulatory action levels for hazardous waste criteria (i.e., Total Limit Threshold Concentration - TTLC) in soil are 1.0 mg/kg for DDE and DDT, and 8.0 mg/kg for Dieldrin. Detected concentrations of DDE, DDT, and Dieldrin onsite are considerably lower than the TTLC criteria. Thus, hazardous concentrations of pesticides were not detected in this survey.

- Preliminary Remedial Goals (PRGs), which combine existing USEPA toxicity values with generally accepted exposure factors to estimate concentrations in residential soil that do not represent a cancer risk to humans greater than one-in-one million (i.e., 1×10^{-6}), are 1.7 mg/kg DDE and DDT, and 0.03 mg/kg Dieldrin. Reported concentrations were found to be less than the criteria established as a potential risk to human health (Smucker, 2004).

- Groundwater beneath the site was encountered at a range of depths from 5 to 17 feet below existing ground sur fro 1992 to 2006 (GSI, 1992; Eberhart/United Consultants, 2006) or approximate elevations of 16 to 29 feet MSL. The local shallow groundwater gradient is to the west/southwest.

Recommendations

Based upon the scope of work completed, GSI concludes that the concentrations of DDE, DDT, and Dieldrin detected in earth materials on the subject property generally are sufficiently below PRGs so as not to represent a significant risk to human health. Based upon the information obtained during the course of this assessment, GSI presents the following recommendations:

- All other recommendations contained in GSI (2005) should be implemented.

- If required, the appropriate regulatory agencies should be provided with a copy of this report for their review and comment.

- Based upon the scope of limited work completed, GSI concludes that the concentrations of DDE, DDT, and Dieldrin detected in earth materials on the subject property are sufficiently below PRGs so as not to represent a risk to human health; however, residues were detected and additional sampling and testing may be required by the regulatory agencies. The client may want to consider participating in the Voluntary Assistance Program (VAP) provided by the County of San Diego Department of Environmental Health (DEH) to provide project oversight to facilitate cost-effective resolution of contamination problems and to obtain a "closure letter" once the project is complete.

LIMITATIONS

GSI has performed the services for this project in accordance with the terms of a specific scope in a contract between GSI and Client, and in general accordance with current professional standards for investigations of this type. The conclusions presented in this report are based on the information collected during the study, the present understanding of the site conditions, and professional judgment.

Please note, subsurface and hazardous waste/toxic substance conditions may vary from those provided in historical documents reviewed by GSI. The interpretations and recommendations of GSI are based solely on such information and/or information supplied by Client. Findings of this assessment based on data provided by others carries no warranty, express or implied, as a result of the usage of such data.

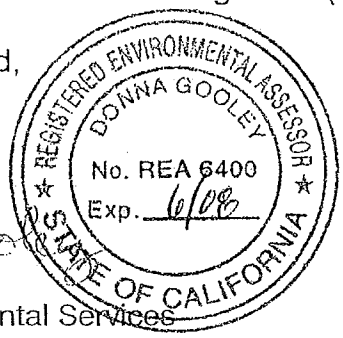
It is possible that future assessments may reveal additional data or variations of the current data which may require the current conclusions and recommendations to be reevaluated. As a result, GSI makes no warranty, either express or implied, as to its findings, opinions, recommendations, specifications, or professional advice except that they were promulgated after being prepared in accordance with generally accepted standards of care and diligence normally practiced by recognized consulting firms performing services of a similar nature.

The information in this report is relevant to the date of the site work and should not be relied on to represent conditions at any later date. Facts, conditions, and acceptable risk factors change with time, accordingly, this report should be viewed within this context.

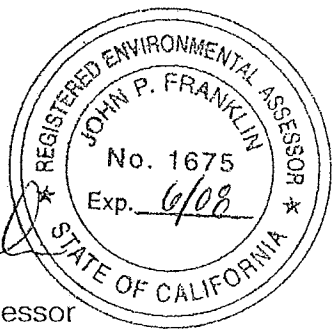
The opportunity to be of services is appreciated. If you should have any questions, please do not hesitate to contact the undersigned at (760) 438-3155.

Respectfully submitted,

GeoSoils, Inc.



Donna Gooley
Director of Environmental Services
REA-1 6400, CEG 2336



John P. Franklin
Environmental Assessor
REA-1 1675, CEG 1340

DG/JPF/jk

Attachments: Appendix A - References
Appendix B - Laboratory Reports and Chain-of-Custody

Distribution: (2) Addressee
(1) County of San Diego, Attention: Mr. Ewan Moffat

APPENDIX A

REFERENCES

APPENDIX A

REFERENCES

California Regional Water Quality Control Board, 1995, Water quality control plan for the San Diego basin (9), dated September 8.

Eberhart/United Consultants, 2006, Preliminary geotechnical feasibility study, the Pavilion at Oceanside, Expressway 76 and Mission Avenue, Oceanside, California, W.O. 81-02048-0031, dated May 24.

GeoSoils, Inc., 2005, Phase I environmental site assessment, Siegel property, north of Highway 76, (former Oceanside Drive-In Theater), Oceanside, San Diego County, California 92054, W.O. E4704-SC, dated February 24.

_____ ,1993, Addendum geotechnical evaluation, Wal-Mart site at Ocean Pointe, Oceanside, California, W.O. 1465W-SD, dated February 9.

_____, 1992, Preliminary geotechnical evaluation, Wal-Mart and theater structures at the Ocean Pointe commercial complex, Oceanside, California, W.O. 1465-SD, dated November 5.

Smucker, Stanford J., 2004, United States Environmental Protection Agency (USEPA), Region IX, Region 9 preliminary remediation goals (PRGs) Table 2004 update, dated October.

State of California Environmental Protection Agency, 1992, Supplemental guidance for human health multimedia risk assessments of hazardous waste sites and permitted facilities, Chapter 8, 'DDT in Soil' guidance for the assessment of health risk to humans, dated July.

APPENDIX B

LABORATORY REPORTS AND CHAIN-OF-CUSTODY

Calscience
Environmental
Laboratories, Inc.

May 21, 2007

Donna Gooley
GeoSoils, Inc.
5741 Palmer Way
Carlsbad, CA 92010-7248

Subject: **Calscience Work Order No.:** **07-05-1217**
Client Reference: **E4704.1-SC**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 5/16/2007 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

S. Lane

Calscience Environmental
Laboratories, Inc.
Steven L. Lane
Laboratory Director

Calscience Environmental Laboratories, Inc.

Analytical Report

GeoSoils, Inc.
5741 Palmer Way
Carlsbad, CA 92010-7248

Project: E4704.1-SC

Date Received: 05/16/07
Work Order No: 07-05-1217
Preparation: EPA 3545
Method: EPA 8081A
Units: ug/kg

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
S-1 @ 6"	07-05-1217-1	05/16/07	Solid	GC 16	05/17/07	05/18/07	070517L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Alpha-BHC	ND	5.0	1		Endrin	ND	5.0	1	
Gamma-BHC	ND	5.0	1		Endrin Aldehyde	ND	5.0	1	
Beta-BHC	ND	5.0	1		4,4'-DDD	ND	5.0	1	
Heptachlor	ND	5.0	1		Endosulfan II	ND	5.0	1	
Delta-BHC	ND	5.0	1		4,4'-DDT	18	5.0	1	
Aldrin	ND	5.0	1		Endosulfan Sulfate	ND	5.0	1	
Heptachlor Epoxide	ND	5.0	1		Methoxychlor	ND	5.0	1	
Endosulfan I	ND	5.0	1		Chlordane	ND	50	1	
Dieldrin	10	5.0	1		Toxaphene	ND	100	1	
4,4'-DDE	58	25	5		Endrin Ketone	ND	5.0	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Decachlorobiphenyl	89	50-130			2,4,5,6-Tetrachloro-m-Xylene	95	50-130		

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
S-2 @ 1'	07-05-1217-2	05/16/07	Solid	GC 16	05/17/07	05/18/07	070517L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Alpha-BHC	ND	5.0	1		Endrin	ND	5.0	1	
Gamma-BHC	ND	5.0	1		Endrin Aldehyde	ND	5.0	1	
Beta-BHC	ND	5.0	1		4,4'-DDD	ND	5.0	1	
Heptachlor	ND	5.0	1		Endosulfan II	ND	5.0	1	
Delta-BHC	ND	5.0	1		4,4'-DDT	ND	5.0	1	
Aldrin	ND	5.0	1		Endosulfan Sulfate	ND	5.0	1	
Heptachlor Epoxide	ND	5.0	1		Methoxychlor	ND	5.0	1	
Endosulfan I	ND	5.0	1		Chlordane	ND	50	1	
Dieldrin	ND	5.0	1		Toxaphene	ND	100	1	
4,4'-DDE	9.4	5.0	1		Endrin Ketone	ND	5.0	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Decachlorobiphenyl	93	50-130			2,4,5,6-Tetrachloro-m-Xylene	104	50-130		

RL - Reporting Limit . DF - Dilution Factor . Qual - Qualifiers

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GeoSoils, Inc.
5741 Palmer Way
Carlsbad, CA 92010-7248

Project: E4704.1-SC

Date Received: 05/16/07
Work Order No: 07-05-1217
Preparation: EPA 3545
Method: EPA 8081A
Units: ug/kg

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
S-3 @ 6"	07-05-1217-3	05/16/07	Solid	GC 16	05/17/07	05/18/07	070517L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Alpha-BHC	ND	5.0	1		Endrin	ND	5.0	1	
Gamma-BHC	ND	5.0	1		Endrin Aldehyde	ND	5.0	1	
Beta-BHC	ND	5.0	1		4,4'-DDD	ND	5.0	1	
Heptachlor	ND	5.0	1		Endosulfan II	ND	5.0	1	
Delta-BHC	ND	5.0	1		4,4'-DDT	53	10	2	
Aldrin	ND	5.0	1		Endosulfan Sulfate	ND	5.0	1	
Heptachlor Epoxide	ND	5.0	1		Methoxychlor	ND	5.0	1	
Endosulfan I	ND	5.0	1		Chlordane	ND	50	1	
Dieldrin	ND	5.0	1		Toxaphene	ND	100	1	
4,4'-DDE	230	50	10		Endrin Ketone	ND	5.0	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Decachlorobiphenyl	86	50-130			2,4,5,6-Tetrachloro-m-Xylene	96	50-130		

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
S-4 @ 1'	07-05-1217-4	05/16/07	Solid	GC 16	05/17/07	05/18/07	070517L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Alpha-BHC	ND	5.0	1		Endrin	ND	5.0	1	
Gamma-BHC	ND	5.0	1		Endrin Aldehyde	ND	5.0	1	
Beta-BHC	ND	5.0	1		4,4'-DDD	ND	5.0	1	
Heptachlor	ND	5.0	1		Endosulfan II	ND	5.0	1	
Delta-BHC	ND	5.0	1		4,4'-DDT	23	5.0	1	
Aldrin	ND	5.0	1		Endosulfan Sulfate	ND	5.0	1	
Heptachlor Epoxide	ND	5.0	1		Methoxychlor	ND	5.0	1	
Endosulfan I	ND	5.0	1		Chlordane	ND	50	1	
Dieldrin	ND	5.0	1		Toxaphene	ND	100	1	
4,4'-DDE	69	25	5		Endrin Ketone	ND	5.0	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Decachlorobiphenyl	93	50-130			2,4,5,6-Tetrachloro-m-Xylene	102	50-130		

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

GeoSoils, Inc.
5741 Palmer Way
Carlsbad, CA 92010-7248

Project: E4704.1-SC

Date Received: 05/16/07
Work Order No: 07-05-1217
Preparation: EPA 3545
Method: EPA 8081A
Units: ug/kg

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date Analyzed	QC Batch ID
Method Blank	099-12-537-43	N/A	Solid	GC 16	05/17/07	05/17/07	070517L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Alpha-BHC	ND	5.0	1		Endrin	ND	5.0	1	
Gamma-BHC	ND	5.0	1		Endrin Aldehyde	ND	5.0	1	
Beta-BHC	ND	5.0	1		4,4'-DDD	ND	5.0	1	
Heptachlor	ND	5.0	1		Endosulfan II	ND	5.0	1	
Delta-BHC	ND	5.0	1		4,4'-DDT	ND	5.0	1	
Aldrin	ND	5.0	1		Endosulfan Sulfate	ND	5.0	1	
Heptachlor Epoxide	ND	5.0	1		Methoxychlor	ND	5.0	1	
Endosulfan I	ND	5.0	1		Chlordane	ND	50	1	
Dieldrin	ND	5.0	1		Toxaphene	ND	100	1	
4,4'-DDE	ND	5.0	1		Endrin Ketone	ND	5.0	1	

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	85	50-130		2,4,5,6-Tetrachloro-m-Xylene	96	50-130	

RL - Reporting Limit, DF - Dilution Factor, Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

GeoSoils, Inc.
5741 Palmer Way
Carlsbad, CA 92010-7248

Date Received: 05/16/07
Work Order No: 07-05-1217
Preparation: EPA 3545
Method: EPA 8081A

Project E4704.1-SC

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
07-05-1267-3	Solid	GC 16	05/17/07	05/17/07	070517S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gamma-BHC	107	118	50-135	10	0-25	
Heptachlor	90	97	50-135	7	0-25	
Endosulfan I	84	90	50-135	8	0-25	
Dieldrin	96	103	50-135	7	0-25	
Endrin	123	130	50-135	6	0-25	
4,4'-DDT	87	114	50-135	28	0-25	4

RPD - Relative Percent Difference , CL - Control Limit

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Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

GeoSoils, Inc.
5741 Palmer Way
Carlsbad, CA 92010-7248

Date Received: N/A
Work Order No: 07-05-1217
Preparation: EPA 3545
Method: EPA 8081A

Project: E4704.1-SC

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-537-43	Solid	GC 16	05/17/07	05/17/07	070517L01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gamma-BHC	86	95	50-135	10	0-25	
Heptachlor	74	82	50-135	10	0-25	
Endosulfan I	70	78	50-135	12	0-25	
Dieldrin	75	85	50-135	12	0-25	
Endrin	73	83	50-135	13	0-25	
4,4'-DDT	56	65	50-135	14	0-25	

RPD - Relative Percent Difference , CL - Control Limit

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Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 07-05-1217

Qualifier	Definition
*	See applicable analysis comment.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike or Matrix Spike Duplicate compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported with no further corrective action required.
A	Result is the average of all dilutions, as defined by the method.
B	Analyte was present in the associated method blank.
C	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
H	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
N	Nontarget Analyte.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
U	Undetected at the laboratory method detection limit.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

W.O. E4704.1-SC

Plate B-8

CALSCIENCE ENVIRONMENTAL
LABORATORIES, INC.
7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1427
TEL: (714) 895-5494 • FAX: (714) 894-7501

CHAIN OF CUSTODY RECORD

Date 5-16-07

Page 1 of 1

LABORATORY CLIENT: GeoSoils Inc
ADDRESS: 5741 Palmer Way
CITY: Carlsbad STATE: CA ZIP: 92010
TEL: 760 438 3155 FAX: 760 931 0915 E-MAIL: dgooley@geosoilsinc.com
TURNAROUND TIME: ☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☐ 10 DAYS
SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY): ☐ RWQCB REPORTING FORMS ☐ COELT EDF ☐
SPECIAL INSTRUCTIONS:

CLIENT PROJECT NAME / NUMBER: E4704.1-SC
PROJECT CONTACT: Donna Gooley
SAMPLER(S): (SIGNATURE) Donna Gooley
COELT LOG CODE: ☐☐☐☐
P.O. NO.:
LAB USE ONLY: 05-1217
COOLER RECEIPT TEMP = °C

REQUESTED ANALYSES

LAB USE ONLY	SAMPLE ID	FIELD POINT NAME (FOR COELT EDF)	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPH (G)	TPH (D) or	BTEX / MTBE (8260B) or	OXYGENATES (8260B)	VOCs (8260B)	5035 ENCORE PREP	SVOCs (8270C)	PEST (8081A)	PCBs (8082)	CAC, T22 METALS (6010B) / 747	PNAs (8310) or (8270C)	VOCs (TO-14A) or (TO-15)	TPH(G) (TO-3M)
	S-1@6"		5-16-07		Soil	1								/					
	S-2@1'		"		"	1								/					
	S-3@6"		"		"	1								/					
	S-4@1'		"		"	1								/					

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Donna Gooley	CEL	5/16/07	1120
Relinquished by: (Signature)	Received by: (Signature) WCheatham CEL	Date: 5/16/7	Time: 1600
Relinquished by: (Signature)	Received for Laboratory by: (Signature)	Date:	Time:

DISTRIBUTION: When with final report, Green to file, Yellow to Client.
Please note that pages 1 and 2 of 2 of our T/Cs are printed on the reverse side of the Green and Yellow copies respectively.

10/20/04 Revision

Q&Q Graphic 714-898-9702

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 07 - 05 - 1217

Cooler 1 of 1

SAMPLE RECEIPT FORM

CLIENT: Geosoils DATE: 5/16/17

TEMPERATURE – SAMPLES RECEIVED BY:

CALSCIENCE COURIER:

_____ Chilled, cooler with temperature blank provided.
_____ Chilled, cooler without temperature blank.
✓ Chilled and placed in cooler with wet ice.
_____ Ambient and placed in cooler with wet ice.
_____ Ambient temperature.
3.7 °C Temperature blank.

LABORATORY (Other than Calscience Courier):

_____ °C Temperature blank.
_____ °C IR thermometer.
_____ Ambient temperature.

Initial: [signature]

CUSTODY SEAL INTACT:

Sample(s): _____ Cooler: _____ No (Not Intact) : _____ Not Present: ✓

Initial: [signature]

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody document(s) received with samples	✓		
Sampler's name indicated on COC	✓		
Sample container label(s) consistent with custody papers	✓		
Sample container(s) intact and good condition	✓		
Correct containers and volume for analyses requested	✓		
Proper preservation noted on sample label(s)			✓
VOA vial(s) free of headspace.			✓
Tedlar bag(s) free of condensation			✓

Initial: [signature]

COMMENTS:

PHASE I ENVIRONMENTAL SITE ASSESSMENT
SIEGEL PROPERTY, NORTH OF HIGHWAY 76
(FORMER OCEANSIDE DRIVE-IN THEATER)
OCEANSIDE, SAN DIEGO COUNTY CALIFORNIA 92054

FOR

THOMAS ENTERPRISE
2385 SHELTER ISLAND DRIVE, SUITE 202
SAN DIEGO, CALIFORNIA 92106

W.O. E4704-SC FEBRUARY 24, 2005

GeoSoils, Inc.

Geotechnical • Geologic • Environmental

PHASE I ENVIRONMENTAL SITE ASSESSMENT
SIEGEL PROPERTY, NORTH OF HIGHWAY 76
(FORMER OCEANSIDE DRIVE-IN THEATER)
OCEANSIDE, SAN DIEGO COUNTY CALIFORNIA 92054

FOR

THOMAS ENTERPRISE
2385 SHELTER ISLAND DRIVE, SUITE 202
SAN DIEGO, CALIFORNIA 92106

W.O. E4704-SC FEBRUARY 24, 2005

GeoSoils, Inc.

Geotechnical · Geologic · Environmental

5741 Palmer Way • Carlsbad, California 92008 • (760) 438-3155 • FAX (760) 931-0915

February 24, 2005

W.O. E4704-SC

Thomas Enterprise
2385 Shelter Island Drive, Suite, 202
San Diego, California 92106

Attention: Mr. Mel Cuhnel

Subject: Phase I Environmental Site Assessment, Siegal Property, North of Highway 76 (Former Oceanside Drive-In Theater), Oceanside, San Diego County, California 92054

Dear Mr. Cuhnel:

GeoSoils, Inc. (GSI) is pleased to present the results of our Phase I Environmental Site Assessment completed on the subject property. This study was conducted for the purpose of assessing the potential for the presence, to the extent practical, of hazardous materials/waste and/or petroleum contamination associated with the subject site.

SUMMARY

Based upon the information obtained during the course of this investigation, GSI presents the following summary of findings and conclusions:

- Based upon our review of historic land use utilizing readily available maps and photographs and our recent site reconnaissance, the subject site appears to have been partially occupied by a drive-in theater since at least 1970 until the present. Portions of the property have been utilized for agriculture since at least 1928 until at least 1989, possibly until 2001. During this time, "restricted" (i.e., permitted) agricultural chemicals may have been utilized on commercial crops and nursery plants, as was throughout California. It has been our experience, however, that minimal chemical residues (if any) are detected on land that has been dry farmed.

- Based upon the historical use of the subject property for agricultural purposes, there is a potential for historically restricted agricultural chemicals (i.e., pesticides and/or herbicides) to have been applied onsite. As is typical in San Diego County and throughout California, this use may have resulted in detectable concentrations of chemical residues to remain within near surface earth materials. It is likely that

significantly high residue concentrations would not be detected unless agricultural chemicals were stored onsite or were accidently spilled, improperly applied, or illegally disposed of onsite. Although a majority of currently banned (i.e., restricted) pesticides have not been used for at least 20 years, there remains a potential for historical farming operations to have utilized restricted agricultural chemicals onsite. This application may have resulted in some persistent chemical residues to remain on the subject property. Under normal conditions, most restricted pesticides/herbicides currently used in California readily degrade, and are not overly persistent in nature. There are, however, certain restricted (and currently banned) agricultural chemicals that were commonly used over 20 years ago throughout California that are known to be a persistent substance in nature.

- Based upon our recent site reconnaissance on February 15, 2005, a portion of the property is currently vacant and undeveloped with the former Oceanside Drive-In Theater located in the central portion of the property. Four large outdoor screens, asphalt parking lots, and structures exist in the former drive-in area. This portion of the site is utilized part-time for a public swamp meet. Temporary storage bins are located in this area. Minor petroleum staining, typical of a parking lot, was observed on the asphalt covering the parking lot area onsite. A pile of concrete rubble and a pile of concrete and steel foundations were located in the former drive-in area. Scattered trash/debris was observed along Foussat Road, consisting of paper, plastic, bottles, cans, etc. A San Diego Gas and Electric easement crosses the southeast portion of the property. There does not appear to be significant surficial evidence of onsite hazardous materials/waste and/or petroleum contamination; however, the rubble, trash/debris, etc. was not disturbed. There was no evidence of underground storage tanks nor above ground tanks observed.

- Several water wells in the near vicinity of the subject site reported groundwater at approximately 18 feet below ground surface. Groundwater was encountered during GSI's previous geotechnical investigation of the site at depths of 5 to 10 feet (GSI, 1992). Perched groundwater conditions along fill/bedrock contacts, and along zones of contrasting permeabilities, may not be precluded from occurring in the future due to site irrigation, poor drainage conditions, or damaged utilities. "Perched" groundwater, where relatively impermeable sediments underlie relatively permeable sediments or rocks filled with water may, however, be encountered at shallower depths, especially during the rainy season. Based upon topography, the overall groundwater gradient in the immediate site vicinity is estimated to be southwesterly.

- Properties adjacent to and surrounding the site currently consist of the Oceanside Municipal Airport to the west, Mission Avenue and Highway 76 to the south, residential to the east, and the San Luis Rey River to the north. These properties are not anticipated to represent a significant environmental concern to the subject site, provided lawful procedures for petroleum products and restricted household/agricultural chemical use and storage are followed.

- Based upon review of our agency database records search (Appendix C), there is a listing of a leaking underground storage tank (LUST) possibly on the subject property. There is insufficient information for the site to be mapped. The risk site is listed as Ocean Place Cinemas on Mission Avenue, with no address provided. The status of the site is reported as leak to soil only (leak substance unknown) and post-remedial action monitoring in progress. As such, this LUST may represent a possible environmental concern to the subject property. There are no database listings regarding the handling, storage, use, or disposal of hazardous materials/waste on the site. Three mapped risk sites with multiple listings were reported in the 1-mile radius search performed for the subject site. Mission Auto & Self Storage (Solus Western Portfolio) at 3530 Mission Avenue, located on the adjacent property to the south of the subject property (down groundwater gradient), is reported as a LUST site with a status of case closed. Precision Tune at 3596 Mission Avenue, located on the adjacent property to the south (down groundwater gradient), is reported as a small quantity hazardous waste generator with no reported violations. Mission Avenue Sewer Lift Station at 3476 Mission Avenue, located on the adjacent property to the south (down groundwater gradient), is reported to have a registered underground storage tank with no reported leaks or violations. Based upon the location (down groundwater gradient) and status of these risk sites, it is GSI's opinion that these risk sites do not pose an environmental threat to the subject site. Two unmapped risk sites with multiple listings were reported. GSI reviewed the information and location of the sites. Both sites are not located in the search radius. As such, it is GSI's opinion that these two sites present a very low potential to environmentally impact the subject site.

- This assessment has revealed no evidence of recognized environmental conditions in connection with the property based on the currently proposed development.

Based on the scope of work completed and currently proposed development, GSI concludes that the potential for onsite hazardous concentrations of materials/waste and/or petroleum contamination is low to moderate; however, the uncertainty of potential environmental concerns cannot be totally eliminated. At this time, no further actions are recommended from an environmental standpoint, other than the following:

- Based upon the historic use of the subject property for agricultural purposes, an agricultural chemical residue survey should be considered. Accordingly, the Client may consider having language in the purchase contract regarding this contingency, and the potential monetary ramifications for the remediation (if any) of chemical residues detected onsite during the future survey, because the exact form of mitigation (if any) is unknown at this time.

  If any concentration of pesticides is detected onsite, and the affected soil is to be re-used onsite (such as compacted fill during grading), waste discharge requirements (WDRs) must be obtained by the owner/discharger from the Regional Water Quality Control Board (RWQCB); however, prior to obtaining the WDRs, a

Report of Waste Discharge (RWD) must be submitted to the RWQCB. The type of supporting information provided to the RWQCB in support of a RWD and application for WDRs depends on if the pesticide concentrations are found to be nonhazardous waste or hazardous waste.

The purpose of a preliminary evaluation, therefore, is to screen the subject property for possible residues, and does not represent a detailed agricultural chemical residue survey which may be required prior to receipt of WDRs and a grading permit. A preliminary (i.e., limited) survey would allow for detection of specific constituents which may better define overall future costs, if any.

- All trash, debris, and waste materials should be disposed of offsite, in accordance with current local, state, and federal disposal regulations. Any materials containing petroleum residues encountered during property improvements should be evaluated prior to removal and disposal, following proper procedures. Any buried trash/debris encountered should be evaluated by an experienced environmental consultant prior to removal.

- Based upon the possibility that a LUST previously existed on the site, a file review of the County of San Diego, Department of Environmental Health (DEH) case number H21760-001 for Ocean Place Cinemas should be performed to further evaluate this potential.

- Based upon the age of the structures onsite, there is the potential for construction materials to contain asbestos and/or lead-based paint, GSI recommends that an asbestos and lead survey should be performed on the materials by a licensed asbestos/lead contractor prior to demolition, removal, and disposal.

- Based upon the information collected by GSI during this environmental site assessment, further studies or action, other than the above, are not proposed from an environmental viewpoint, at this time.

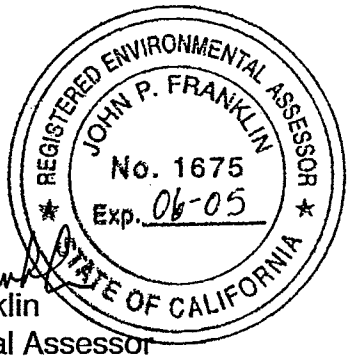
Please note, we have performed this Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E-1527-00. This practice is intended, by the ASTM Committee E-50, to be a general guideline standard and used on a voluntary basis. Any major exceptions to, or deletions from, this practice are described in the relevant sections of this report.

If you have any questions pertaining to this report or any other matter, please do not hesitate to contact the undersigned at (760) 438-3155. We appreciate the opportunity to be of service to you.

Respectfully submitted,

GeoSoils, Inc.

Donna Gooley
Director of Environmental Services
REA-1 6400, CEG 2336



John P. Franklin
Environmental Assessor
REA-1 1675, CEG 1340

DG/JPF/jk

Distribution: (4) Addressee

TABLE OF CONTENTS

PHASE I ENVIRONMENTAL SITE ASSESSMENT
SIEGEL PROPERTY, NORTH OF HIGHWAY 76
(FORMER OCEANSIDE DRIVE-IN THEATER)
OCEANSIDE, SAN DIEGO COUNTY CALIFORNIA 92054

INTRODUCTION

Purpose and Scope

In accordance with our proposal and Client's authorization, GeoSoils, Inc. (GSI) has completed this Phase I Environmental Site Assessment (ESA) report covering the subject site, the location of which is illustrated in Figure 1. The subject property is described as:

Siegel Property
Oceanside, San Diego County, California 92054

This ESA was prepared for the purpose of assessing, to the extent practical, the potential for *recognized environmental conditions* from past or present uses at the subject property. A *recognized environmental condition* is defined by ASTM Standard E-1527-00 as:

> *The presence or likely presence, of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include "de minimis" conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be subject of an enforcement action if brought to the attention of appropriate governmental agencies.*

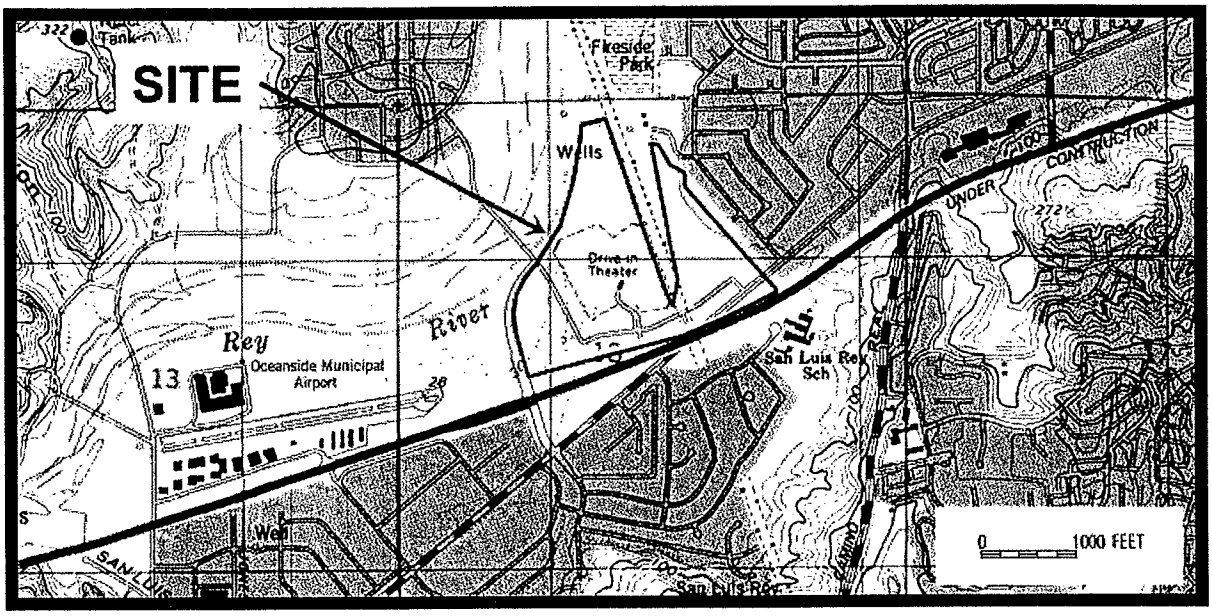
This ESA was prepared for the purpose of assessing the potential for hazardous materials/waste and/or petroleum contamination from past or present uses at the subject property.

The scope of work included:

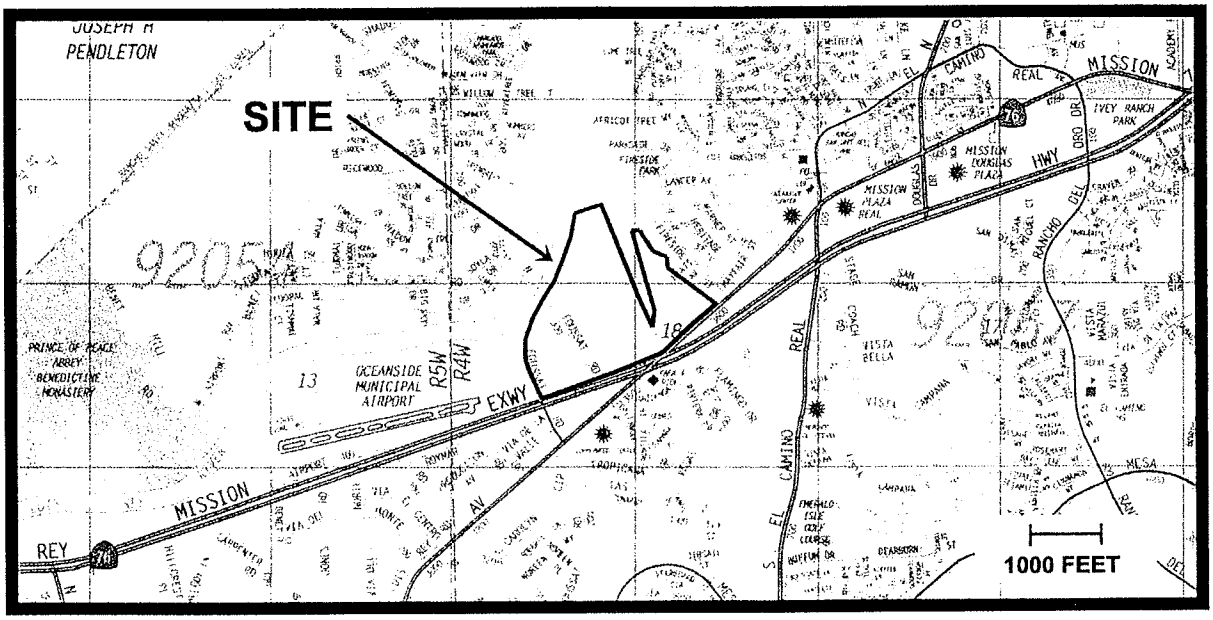
1. A review of the subject property's geologic and hydrogeologic setting (Appendix A);

2. A reconnaissance of the subject property and surrounding areas to visually assess and document (Appendix B) current utilization for indications of potential surface contamination;

3. A review of historical aerial photographs, to assess the subject property's historical land utilization and for indications of potential contamination or sources of contamination;



Base Map: TOPO!® ©2003 National Geographic, USGS San Luis Rey Quadrangle, California–San Diego Co., 7.5-Minute, dated 1997, current 1999.



Base Map: The Thomas Guide, San Diego Co. Street Guide and Directory, 2005 Edition, by Thomas Bros. Maps, page 1086.

LOCATION AND SCALES APPROXIMATE

N

GeoSoils, Inc.	W.O. E4704-SC
SITE LOCATION MAP	
Figure 1	

4. A review of government databases and interviews with appropriate government agencies concerning available pertinent environmental information for the subject property (Appendix C); and,

5. Preparation of this report which relates the findings of these studies and presents GSI's conclusions and recommendations.

Limitations and Exceptions

This study does not include any of the following:

- Subsurface or geotechnical evaluation (including subsidence) of the subject property;
- Soil or water sampling and analyses;
- Evaluation of identification of wetlands, habitat, or biological concerns;
- Consideration of possible future contamination of the subject property from adjacent or surrounding facilities or properties; and,
- Asbestos, radon gas, lead or lead paint, mold, methane, electromagnetic, or biologic evaluation(s).

Special Terms and Conditions

This report is intended for the use of the Client (Thomas Enterprise). The contents should not be relied upon by any party other than the aforementioned without the express written consent of GSI.

This report does not consider possible future contamination of the subject property from adjacent or surrounding facilities or properties. All judgements concerning adjoining properties apply only to conditions observed during the time of the on-site reconnaissance.

SITE DESCRIPTION AND RECONNAISSANCE OBSERVATIONS

Site/Project Description

The site consists of an irregularly-shaped property located north of Highway 76, east of Foussat Road, and south of the San Luis Rey River in the City of Oceanside (see Figure 1, Site Location Map). Elevations across the site range between approximately 25 and 40 feet Mean Sea Level (MSL). The property appears to gently slope to the southwest. Site drainage appears to be directed toward the southwest via sheet flow runoff and the southwest flowing San Luis Rey River located on the north side of the property. Vegetation on the vacant portion of the property consists of grasses and clusters of trees around the drive-in.

Proposed Development

Proposed site development is anticipated to consist of preparing the site for residential and commercial development.

Observational Reconnaissance

Onsite Reconnaissance

On February 15, 2005, a GSI representative visited the subject site to assess current site utilization and observe for signs of possible surface contamination. Features observed during the site reconnaissance are described below and illustrated on the Site Map (see Plate 1). Photographs of the subject property are presented in Appendix B.

A portion of the property is currently vacant and undeveloped with the former Oceanside Drive-In Theater located in the central portion of the property. Four large outdoor screens, asphalt parking lots and structures exist in the former drive-in area. This portion of the site is utilized part-time for a public swamp meet. Temporary storage bins are located in this area. Minor petroleum staining, typical of a parking lot, was observed on the asphalt covering the parking lot area onsite. A pile of concrete rubble and a pile of concrete and steel foundations were located in the former drive-in area. Scattered trash/debris was observed along Foussat Road consisting of paper, plastic, bottles, cans, etc. A San Diego Gas and Electric easement crosses the southeast portion of the property. There does not appear to be significant surficial evidence of onsite hazardous materials/waste and/or petroleum contamination; however, the rubble, trash/debris, etc. was not disturbed. There was no evidence of underground storage tanks nor above ground tanks observed.

- **Buildings on Property and General Usage** - A portion of the property is currently vacant and undeveloped with the former Oceanside Drive-In Theater located in the central portion of the property. Four large outdoor screens, asphalt parking lots and structures exist in the former drive-in area.

- **Storage Tanks** - There are no signs of underground storage tanks. No above ground storage tanks were noted on the subject site.

- **Chemical Storage** - There is no known storage of hazardous chemicals on the subject property.

- **Potential Sources of Polychlorinated Biphenyls (PCBs)** - Overhead power lines were observe crossing the southeast portion of the property. Previous conversations with San Diego Gas & Electric (SDG&E) has indicated that the possibility of PCB's leaking from their transformers is extremely unlikely, and the transformers are now probably filled with mineral oil. SDG&E has indicated that should transformers leak, it would be their responsibility to perform cleanup.

- **Utility Structures, Roads, Disposal Systems, Water Wells** - Access to the site is off of Foussat Road and Mission Avenue. The site will likely be served by municipal storm drain, water, and sewer. Obvious evidence of onsite private sewage disposal systems were not observed. Based on our review, there are no water wells known to exist onsite.

- **Environmental Releases and Spills** - No surficial soil staining was observed on the subject site. Our review of database files (Appendix C) did indicate a possible LUST site was located on the property. There was insufficient information to determine if the LUST site is located on the subject property.

- **Asbestos** - Evaluation of the presence of asbestos onsite is beyond the scope of this current study; however, there are structures onsite that may contain asbestos containing materials.

- **Lead or Lead Paint** - Evaluation of the presence of lead or lead paint on the site is beyond the scope of this current study; however, there are structures onsite that would have utilized lead paint.

- **Radon** - A detailed radon survey was not a part of this ESA; however, the potential for radon gas accumulation is low in southern California. A publication by the American Society of Testing and Materials (ASTM) suggests that the pacific coastal range areas are expected to have a low to moderate radon potential. In addition, a study reported by the Los Angeles Times (Nagda, 1994) and California Environmental Protection Agency (CAL EPA) suggested a very localized geographic radon problem within the state. California school officials found virtually no elevated radon levels in public schools (Nagda, 1994). Because of this, and due to the mild climate in San Diego County and the nature of standard building industry construction techniques in southern California (i.e., vapor barriers under slabs), the potential for radon gas accumulation is not considered a significant environmental threat to the planned development.

  In 1990, the State of California (1990) conducted a radon survey in the state. The results of the survey indicate that for the 182 samples obtained in Region 9 which included San Diego County, the arithmetic mean radon levels were 0.6pCi/l. This average total is below the radon action level of 4 pCi/l.

- **Electromagnetic Evaluation** - Overhead distribution lines were observed crossing the southeast portion of the property. Evaluation of electric and magnetic fields (EMF) is beyond this current scope of work. Based upon a public information booklet by a southern California power company, the magnetic field from transmission lines get weaker with distance. Magnetic fields are reported to vary from 1 to 300 milliGauss (mG) at the edge of the right of way. For comparison purposes, magnetic fields range from 0.1 mG to 8 mG on microwave ovens or

televisions at a distance of 39 inches. Although there is some speculation that EMFs represent a risk to human health, medical and scientific research has yet to determine exposure levels related to health risks. In a 1995 article in the San Diego Union-Tribune, it was reported that studies (to date) have been inconclusive as to the possible dangers from EMFs. Additional information is available from Southern California Edison (SCE), the United States Environmental Protection Agency, The National Academy of Sciences or the American Medical Association.

Border Zone Reconnaissances

Adjacent property use is as follows:

Residential property is located to the east of the subject property. The San Luis Rey River bounds the property to the north. Mission Avenue and Highway 76 is located to the south and Oceanside Municipal Airport is located to the west of the site.

No adverse uses were noted on any of the adjoining properties that would contribute significant hazardous waste/material and/or petroleum contamination directly to the subject property, provided lawful procedures of storage, hauling and disposal are followed.

Photographic Record

Representative color photographs have been taken of the various items mentioned in the site reconnaissance observations presented above. These photographs are presented in Appendix B.

LOCAL GEOLOGIC AND HYDROGEOLOGIC SETTING

Geology

The subject property lies within the Peninsular Ranges geomorphic province of southern California. The inland portion of San Diego County in this province is underlain locally by Eocene-age marine sedimentary deposits mantling a suite of volcanic/metavolcanic and granitic bedrock, ranging from Jurassic- to Cretaceous-age, respectively. The bedrock is commonly mantled by alluvium in the canyons and surficial soils (topsoil/slopewash) in mesas and slope areas. Bedrock has been faulted and fractured by both strike-slip and compressional northwest-trending faults which are related to the San Andreas transform-fault system. Some of these fault zones have remained active to the present time, including the San Jacinto fault zone, the Elsinore fault zone, the Newport-Inglewood - Rose Canyon fault zone, and other offshore faults (Jennings, 1994). No known active or potentially active faults are shown crossing the site on published maps (Jennings, 1994; Weber, 1982).

Site Geology

Earth materials on the site generally consist of fill, topsoil/colluvium and alluvium (GSI, 1992).

Hydrogeology

The property lies within the Mission Hydrologic Subarea (HSA 903.11) of the Lower San Luis Hydrologic Area (HA 903.10) of the San Luis Rey Hydrologic Unit (HU 903.00) within the San Diego Region (California RWQCB, 1994). Oceanside falls within Region 9 (San Diego) of the California Regional Water Quality Control Board (RWQCB). Existing potential beneficial uses of groundwater within this HSA are reported to include municipal and domestic supply, and existing beneficial uses are agricultural supply and industrial service supply.

Several water wells in the near vicinity of the subject site reported groundwater at approximately 18 feet below ground surface. Groundwater was encountered during GSI's previous geotechnical investigation of the site at depths of 5 to 10 feet (GSI, 1992). Perched groundwater conditions along fill/bedrock contacts, and along zones of contrasting permeabilities, may not be precluded from occurring in the future due to site irrigation, poor drainage conditions, or damaged utilities. "Perched" groundwater, where relatively impermeable sediments underlie relatively permeable sediments or rocks filled with water may, however, be encountered at shallower depths, especially during the rainy season. Based upon topography, the overall groundwater gradient in the immediate site vicinity is estimated to be southwesterly (Figure 2).

RESULTS OF SITE HISTORICAL REVIEW

Discussions With Persons Familiar With Site

There were no contacts nor property owners available for consultation.

Summary of Historical Maps and Aerial Photographs Review

Historical aerial photographs were reviewed as a part of this assessment for indications of historical land utilization, and for signs of potential hazardous materials/waste and/or petroleum storage, usage, contamination, or disposal areas. Historical photographs were reviewed at the San Diego County Department of Planning and Land Use office on February 22, 2005. A summary of our review is provided in Table 1.

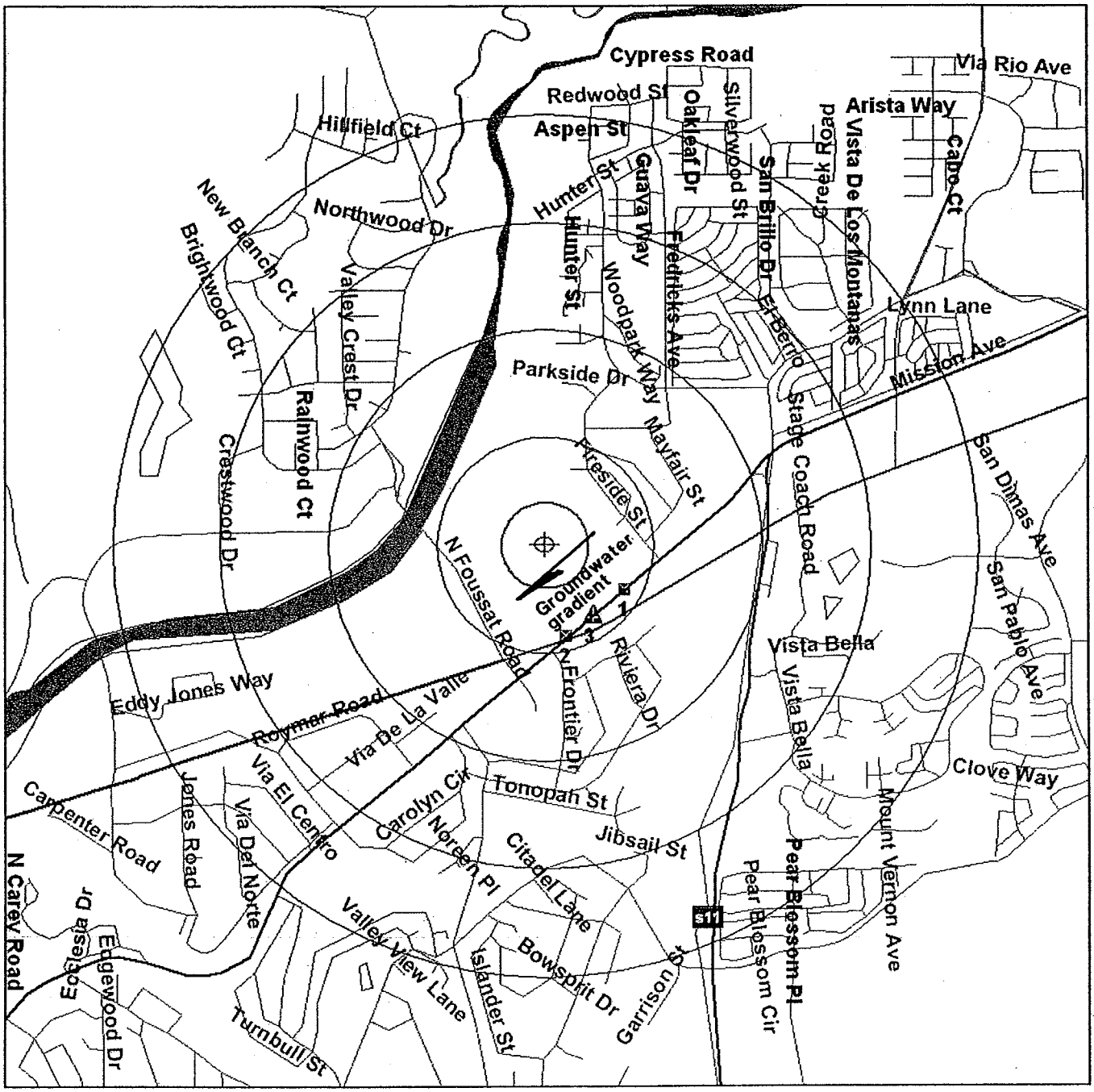
An in-house United States Geological Survey (USGS) quadrangle topographic map was also reviewed (San Luis Rey, California, 7.5-minute quadrangle sheet, 1968, revised 1975).

Environmental FirstSearch

1 Mile Radius

ASTM: All Databases

FOUSSAT , 76 , OCEANSIDE CA 92054



Source: 1999 U.S. Census TIGER Files

Revised by GSI, 2/05

Target Site (Latitude: 33.222892 Longitude: -117.34011) .....

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

W.O. E4704-SC **GROUNDWATER GRADIENT MAP** **Figure 2**

The topographic map (Figure 1) indicated the site was generally vacant and undeveloped. In our historical photograph and topographic map review, there was no surficial evidence of site improvements noted that represent a significant potential source of petroleum contamination and/or hazardous waste observed immediately adjacent to or within the subject property.

Table 1
Historic Aerial Photograph Review Summary

DATE	PHOTO I.D./SUMMARY	SCALE
1928	County of San Diego, Flight 23, Photo No. D2: Site and vicinity were generally vacant with scattered agriculture. There were no structures onsite. Mission Avenue existed and a farm was located on property to the east along Mission. A north-south road crossed the center of the subject site. The east portion of the property appeared cultivated.	1"=1,000'
5-2-53	County of San Diego, Flight 14M-23: Site and vicinity similar to 1928 photo. Southern portion of property appears cultivated. North portion appears to be part of the San Luis Rey River flood plain. A farm is located onsite along Mission near the north-south road. Adjacent property south and east appears cultivated.	1"=2,000'
11-28-60	County of San Diego, Flight 5-38: Site and vicinity similar to 1953 photo.	1"=2,000'
10-9-70	County of San Diego, Flight 2-6: A drive-in theater with two screens is present in the central portion of the property. Some residential development exists to the east and south. The transmission lines are present as is the substation to the northeast. Airport exists to the west.	1"=2,000'
2-17-79	County of San Diego, Flight 13, Photo B13: Site and vicinity similar to 1970 photo. Drive-in expanded to 4 screens. One business exists to south (gas station?).	1"=1,000'
4-7-89	County of San Diego, Flight WAC 89CA, Photo No.3-11: Similar to 1979 photo. Additional commercial businesses to south.	1"=2,640'
January 2001	LENSKA'S Aerial Atlas, Page 1086: Similar to 1989 photo. Highway 76 constructed.	1"=½ mile

Review of Previous Reports

Several geotechnical reports for the site by GSI were reviewed (Appendix A). Information from these reports was used in this reports site geology section. The reports reviewed mentioned no environmental concerns on the subject property.

Chain-of-Title

A 50-year chain-of-title search was not requested or provided by the Client.

RESULTS OF GOVERNMENT AGENCY/DOCUMENTS REVIEW

List of Government Agencies and Databases Reviewed

In compliance with ASTM Standard of Practice E-1527-00, a search of selected federal and state government databases was conducted for GSI, by TrackInfo Services, LLC. Following is a list of the agency databases reviewed for this report. Search distances are per the ASTM standard.

LIST OF DATABASES SEARCHED	
FEDERAL AND STATE ASTM STANDARD	ASTM SUPPLEMENTAL
NPL	PERMITS
CERCLIS	OTHER
NFRAP	
RCRA TSD	
RCRA COR	
RCRA GEN	
ERNS	
STATE SITES	
SPILLS - 1990	
SWL	
REG UST/AST	
LEAKING UST	

*Details and descriptions of these databases can be found in Appendix C.

Results of Government Agency/Document Review

A review of the Government Records Database search report dated February 11, 2005, indicated the subject property was not listed in any of the databases searched. The base map for Figure 2 is a graphic depiction of the search. Complete details for the database search may be found in Appendix C.

Based upon review of our agency database records search (Appendix C), there is a listing of a leaking underground storage tank (LUST) possibly on the subject property. There is insufficient information for the site to be mapped. The risk site is listed as Ocean Place Cinemas on Mission Avenue, with no address provided. The status of the site is reported as leak to soil only (leak substance unknown) and post remedial action monitoring in progress. As such, this LUST may represent a possible environmental concern to the subject property. There are no database listings regarding the handling, storage, use, or disposal of hazardous materials/waste on the site. Three mapped risk sites with multiple listings were reported in the 1-mile radius search performed for the subject site. Mission Auto & Self Storage (Solus Western Portfolio) at 3530 Mission Avenue, located on the adjacent property to the south of the subject property (down groundwater gradient), is reported as a LUST site with a status of case closed. Precision Tune at 3596 Mission Avenue, located on the adjacent property to the south (down groundwater gradient), is reported as a small quantity hazardous waste generator with no reported violations. Mission Avenue Sewer Lift Station at 3476 Mission Avenue, located on the adjacent property to the south (down groundwater gradient), is reported to have a registered underground storage tank with no reported leaks or violations. Based upon the location (down groundwater gradient) and status of these risk sites, it is GSI's opinion that these risk sites do not pose an environmental threat to the subject site. Two unmapped risk sites with multiple listings were reported. GSI reviewed the information and location of the sites. Both sites are not located in the search radius. As such, it is GSI's opinion that these two sites present a very low potential to environmentally impact the subject site.

Solid Waste Landfills (SWLF)

There were no solid waste landfills reported in the radius search.

Oil and Gas Well Activity

No oil or gas wells were observed on the subject property during our site reconnaissance on February 15, 2005. An in-house review of the Munger Map Book for oil and gas fields in California and Alaska (Munger, 2003) indicated there are no oil/gas wells located in immediate vicinity of the subject property.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Based upon the information obtained during the course of this investigation, GSI presents the following summary of findings and conclusions:

- Based upon our review of historic land use utilizing readily available maps and photographs and our recent site reconnaissance, the subject site appears to have

been partially occupied by a drive-in theater since at least 1970 until the present. Portions of the property have been utilized for agriculture since at least 1928 until at least 1989, possibly until 2001. During this time, "restricted" (i.e., permitted) agricultural chemicals may have been utilized on commercial crops and nursery plants, as was throughout California. It has been our experience, however, that minimal chemical residues (if any) are detected on land that has been dry farmed.

- Based upon the historical use of the subject property for agricultural purposes, there is a potential for historically restricted agricultural chemicals (i.e., pesticides and/or herbicides) to have been applied onsite. As is typical in San Diego County and throughout California, this use may have resulted in detectable concentrations of chemical residues to remain within near surface earth materials. It is likely that significantly high residue concentrations would not be detected unless agricultural chemicals were stored onsite or were accidently spilled, improperly applied, or illegally disposed of onsite. Although a majority of currently banned (i.e., restricted) pesticides have not been used for at least 20 years, there remains a potential for historical farming operations to have utilized restricted agricultural chemicals onsite. This application may have resulted in some persistent chemical residues to remain on the subject property. Under normal conditions, most restricted pesticides/herbicides currently used in California readily degrade, and are not overly persistent in nature. There are, however, certain restricted (and currently banned) agricultural chemicals that were commonly used over 20 years ago throughout California that are known to be a persistent substance in nature.

- Based upon our recent site reconnaissance on February 15, 2005, a portion of the property is currently vacant and undeveloped with the former Oceanside Drive-In Theater located in the central portion of the property. Four large outdoor screens, asphalt parking lots, and structures exist in the former drive-in area. This portion of the site is utilized part-time for a public swamp meet. Temporary storage bins are located in this area. Minor petroleum staining, typical of a parking lot, was observed on the asphalt covering the parking lot area onsite. A pile of concrete rubble and a pile of concrete and steel foundations were located in the former drive-in area. Scattered trash/debris was observed along Foussat Road, consisting of paper, plastic, bottles, cans, etc. A San Diego Gas and Electric easement crosses the southeast portion of the property. There does not appear to be significant surficial evidence of onsite hazardous materials/waste and/or petroleum contamination; however, the rubble, trash/debris, etc. was not disturbed. There was no evidence of underground storage tanks nor above ground tanks observed.

- Several water wells in the near vicinity of the subject site reported groundwater at approximately 18 feet below ground surface. Groundwater was encountered during GSI's previous geotechnical investigation of the site at depths of 5 to 10 feet (GSI, 1992). Perched groundwater conditions along fill/bedrock contacts, and along zones of contrasting permeabilities, may not be precluded from occurring in the

future due to site irrigation, poor drainage conditions, or damaged utilities. "Perched" groundwater, where relatively impermeable sediments underlie relatively permeable sediments or rocks filled with water may, however, be encountered at shallower depths, especially during the rainy season. Based upon topography, the overall groundwater gradient in the immediate site vicinity is estimated to be southwesterly.

- Properties adjacent to and surrounding the site currently consist of the Oceanside Municipal Airport to the west, Mission Avenue and Highway 76 to the south, residential to the east, and the San Luis Rey River to the north. These properties are not anticipated to represent a significant environmental concern to the subject site, provided lawful procedures for petroleum products and restricted household/agricultural chemical use and storage are followed.

- Based upon review of our agency database records search (Appendix C), there is a listing of a leaking underground storage tank (LUST) possibly on the subject property. There is insufficient information for the site to be mapped. The risk site is listed as Ocean Place Cinemas on Mission Avenue, with no address provided. The status of the site is reported as leak to soil only (leak substance unknown) and post-remedial action monitoring in progress. As such, this LUST may represent a possible environmental concern to the subject property. There are no database listings regarding the handling, storage, use, or disposal of hazardous materials/waste on the site. Three mapped risk sites with multiple listings were reported in the 1-mile radius search performed for the subject site. Mission Auto & Self Storage (Solus Western Portfolio) at 3530 Mission Avenue, located on the adjacent property to the south of the subject property (down groundwater gradient), is reported as a LUST site with a status of case closed. Precision Tune at 3596 Mission Avenue, located on the adjacent property to the south (down groundwater gradient), is reported as a small quantity hazardous waste generator with no reported violations. Mission Avenue Sewer Lift Station at 3476 Mission Avenue, located on the adjacent property to the south (down groundwater gradient), is reported to have a registered underground storage tank with no reported leaks or violations. Based upon the location (down groundwater gradient) and status of these risk sites, it is GSI's opinion that these risk sites do not pose an environmental threat to the subject site. Two unmapped risk sites with multiple listings were reported. GSI reviewed the information and location of the sites. Both sites are not located in the search radius. As such, it is GSI's opinion that these two sites present a very low potential to environmentally impact the subject site.

- This assessment has revealed no evidence of recognized environmental conditions in connection with the property based on the currently proposed development.

Based on the scope of work completed and currently proposed development, GSI concludes that the potential for onsite hazardous concentrations of materials/waste and/or petroleum contamination is low to moderate; however, the uncertainty of potential environmental concerns cannot be totally eliminated. At this time, no further actions are recommended from an environmental standpoint, other than the following:

- Based upon the historic use of the subject property for agricultural purposes, an agricultural chemical residue survey should be considered. Accordingly, the Client may consider having language in the purchase contract regarding this contingency, and the potential monetary ramifications for the remediation (if any) of chemical residues detected onsite during the future survey, because the exact form of mitigation (if any) is unknown at this time.

  If any concentration of pesticides is detected onsite, and the affected soil is to be re-used onsite (such as compacted fill during grading), waste discharge requirements (WDRs) must be obtained by the owner/discharger from the Regional Water Quality Control Board (RWQCB); however, prior to obtaining the WDRs, a Report of Waste Discharge (RWD) must be submitted to the RWQCB. The type of supporting information provided to the RWQCB in support of a RWD and application for WDRs depends on if the pesticide concentrations are found to be nonhazardous waste or hazardous waste.

  The purpose of a preliminary evaluation, therefore, is to screen the subject property for possible residues, and does not represent a detailed agricultural chemical residue survey which may be required prior to receipt of WDRs and a grading permit. A preliminary (i.e., limited) survey would allow for detection of specific constituents which may better define overall future costs, if any.

- All trash, debris, and waste materials should be disposed of offsite, in accordance with current local, state, and federal disposal regulations. Any materials containing petroleum residues encountered during property improvements should be evaluated prior to removal and disposal, following proper procedures. Any buried trash/debris encountered should be evaluated by an experienced environmental consultant prior to removal.

- Based upon the possibility that a LUST previously existed on the site, a file review of the County of San Diego, Department of Environmental Health (DEH) case number H21760-001 for Ocean Place Cinemas should be performed to further evaluate this potential.

- Based upon the age of the structures onsite, there is the potential for construction materials to contain asbestos and/or lead-based paint, GSI recommends that an asbestos and lead survey should be performed on the materials by a licensed asbestos/lead contractor prior to demolition, removal, and disposal.

- Based upon the information collected by GSI during this environmental site assessment, further studies or action, other than the above, are not proposed from an environmental viewpoint, at this time.

LIMITATIONS

GSI has performed the services for this project in accordance with the terms of a contract between GSI and Client and in accordance with current professional standards for investigations of this type. The conclusions presented in this report are based on the information collected during the study, the present understanding of the site conditions and professional judgment.

Please note, subsurface and hazardous waste/toxic substance conditions may vary from those provided in historical documents reviewed by GSI. The interpretations and recommendations of GSI are based solely on such information and/or information supplied by Client. Findings of this investigation based on data provided by others carries no warranty, expressed or implied, as a result of the usage of such data.

It is possible that future investigations may reveal additional data or variations of the current data which may require the current conclusions and recommendations to be reevaluated. As a result, GSI makes no warranty, either expressed or implied, as to its findings, opinions, recommendations, specifications, or professional advice except that they were promulgated after being prepared in accordance with generally accepted standards of care and diligence normally practiced by recognized consulting firms performing services of a similar nature.

The information in this report is relevant to the date of the site work and should not be relied on to represent conditions at any later date. Facts, conditions, and acceptable risk factors change with time, accordingly, this report should be viewed within this context.

APPENDIX A

REFERENCES

APPENDIX A

REFERENCES

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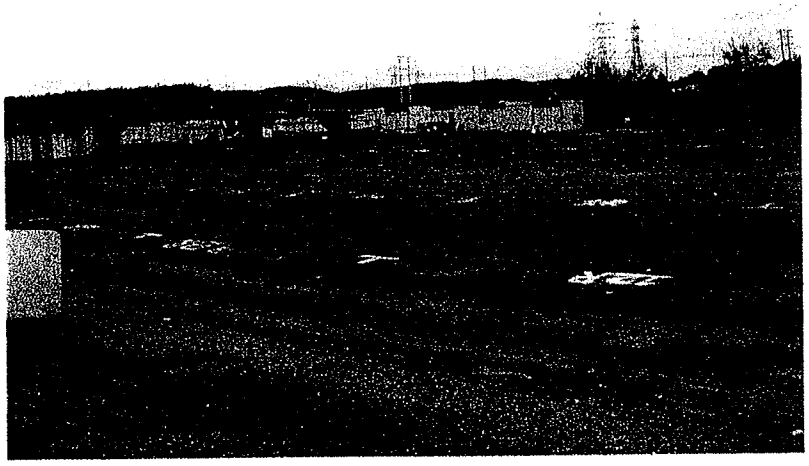
APPENDIX B

SITE PHOTOGRAPHS

1. West view near southwest portion of property with pile of concrete.



2. Northeast view within drive-in area with storage bins located on north portion of property.

GeoSoils, Inc.

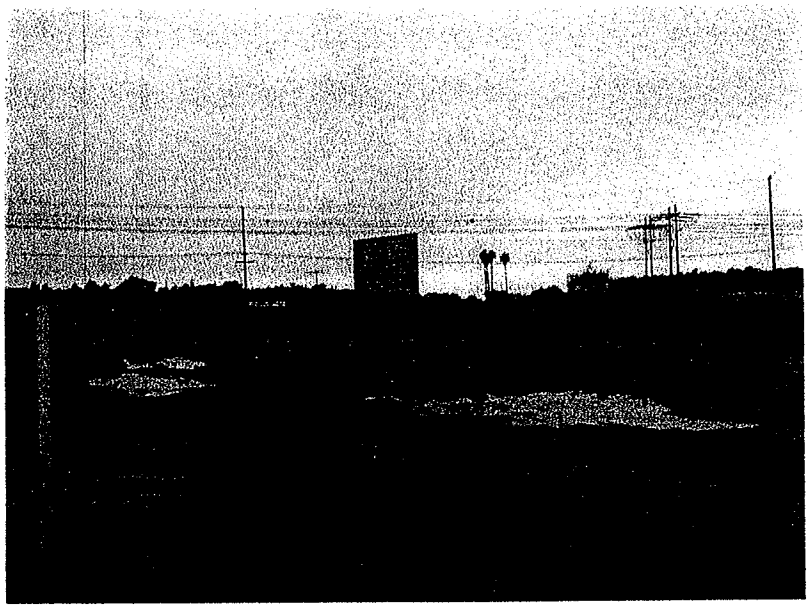
SITE PHOTOGRAPHS

Plate B-1

DATE 2/05 | W.O. NO. E4704-SC

Geotechnical · Coastal · Geologic · Environmental

3. North view near southwest portion of property with pile of concrete and metal foundations.



4. Northwest view near southeast portion of property with drive-in screen and overhead transmission lines.

GeoSoils, Inc.

SITE PHOTOGRAPHS

Plate B-2

DATE 2/05 | W.O. NO. E4704-SC

Geotechnical · Coastal · Geologic · Environmental

APPENDIX C

AGENCY RECORDS SEARCH

TRACK ➤ INFO SERVICES, LLC

Environmental FirstSearch™ Report

TARGET PROPERTY:

FOUSSAT , 76

OCEANSIDE CA 92054

Job Number: E4704-SC

PREPARED FOR:

GeoSoils, Inc.

5741 Palmer Way

Carlsbad, CA 92008

02-11-05

Tel: (323) 664-9981 *Fax: (323) 664-9982*

Environmental FirstSearch
Search Summary Report

Target Site: FOUSSAT , 76
OCEANSIDE CA 92054

FirstSearch Summary

Database	Sel	Updated	Radius	Site	1/8	1/4	1/2	1/2>	ZIP	TOTALS
NPL	Y	12-10-04	1.00	0	0	0	0	0	0	0
CERCLIS	Y	01-18-05	0.50	0	0	0	0	-	0	0
NFRAP	Y	06-23-04	0.12	0	0	-	-	-	0	0
RCRA TSD	Y	09-12-04	0.50	0	0	0	0	-	0	0
RCRA COR	Y	09-12-04	1.00	0	0	0	0	0	0	0
RCRA GEN	Y	09-12-04	0.25	0	0	1	-	-	1	2
RCRA NLR	Y	07-12-04	0.12	0	0	-	-	-	0	0
ERNS	Y	12-31-04	0.12	0	0	-	-	-	0	0
State Sites	Y	11-09-04	1.00	0	0	0	0	0	0	0
Spills-1990	Y	07-01-03	0.12	0	0	-	-	-	0	0
SWL	Y	01-19-05	0.50	0	0	0	0	-	1	1
Permits	Y	02-11-04	0.12	0	0	-	-	-	0	0
Other	Y	11-09-04	0.12	0	0	-	-	-	0	0
REG UST/AST	Y	01-04-05	0.25	0	0	2	-	-	0	2
Leaking UST	Y	02-07-05	0.50	0	0	2	0	-	2	4
- TOTALS -				0	0	5	0	0	4	9

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

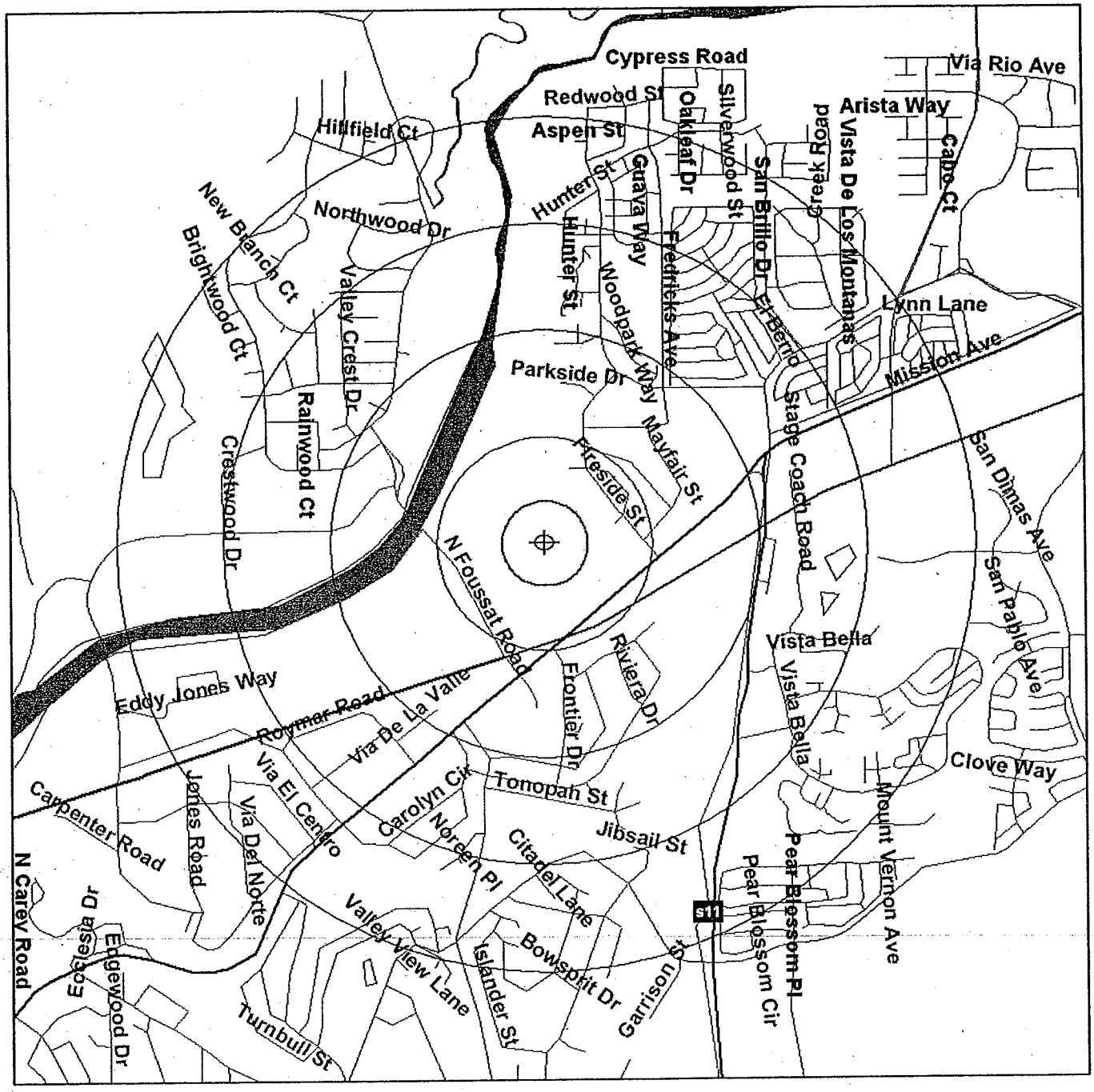
Although TRACK Info Services uses its best efforts to research the actual location of each site, TRACK Info Services does not and can not warrant the accuracy of these sites with regard to exact location and size. All authorized users of TRACK Info Services's services proceeding are signifying an understanding 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

1 Mile Radius

ASTM: NPL, RCRACOR, STATE

FOUSSAT , 76 , OCEANSIDE CA 92054



Source: 1999 U.S. Census TIGER Files

Target Site (Latitude: 33.222892 Longitude: -117.34011) .....

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

ASTM: CERCLIS, RCRATSD, LUST, SWL

FOUSSAT , 76 , OCEANSIDE CA 92054

Source: 1999 U.S. Census TIGER Files

Target Site (Latitude: 33.222892 Longitude: -117.34011) .....

Identified Site, Multiple Sites, Receptor .....

NPL, Solid Waste Landfill (SWL) or Hazardous Waste .....

Railroads .....

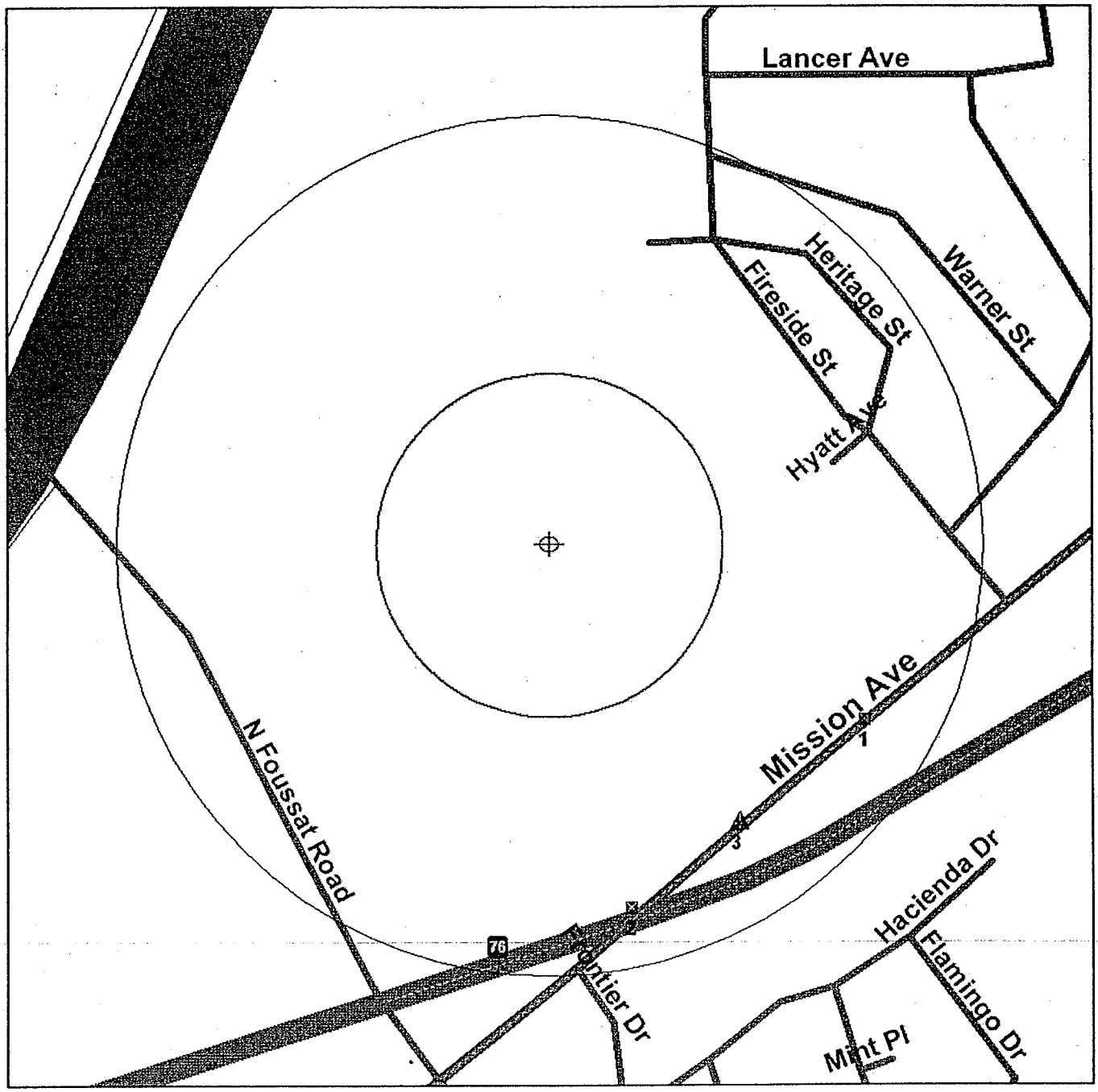
Black Rings Represent 1/4 Mile Radii; Red Ring Represents 500 ft. Radius

Environmental FirstSearch

.25 Mile Radius

ASTM: RCRAGEN, UST

FOUSSAT , 76 , OCEANSIDE CA 92054



Source: 1999 U.S. Census TIGER Files

Target Site (Latitude: 33.222892 Longitude: -117.34011) .....

Identified Site, Multiple Sites, Receptor .....

NPL, Solid Waste Landfill (SWL) or Hazardous Waste .....

Railroads .....

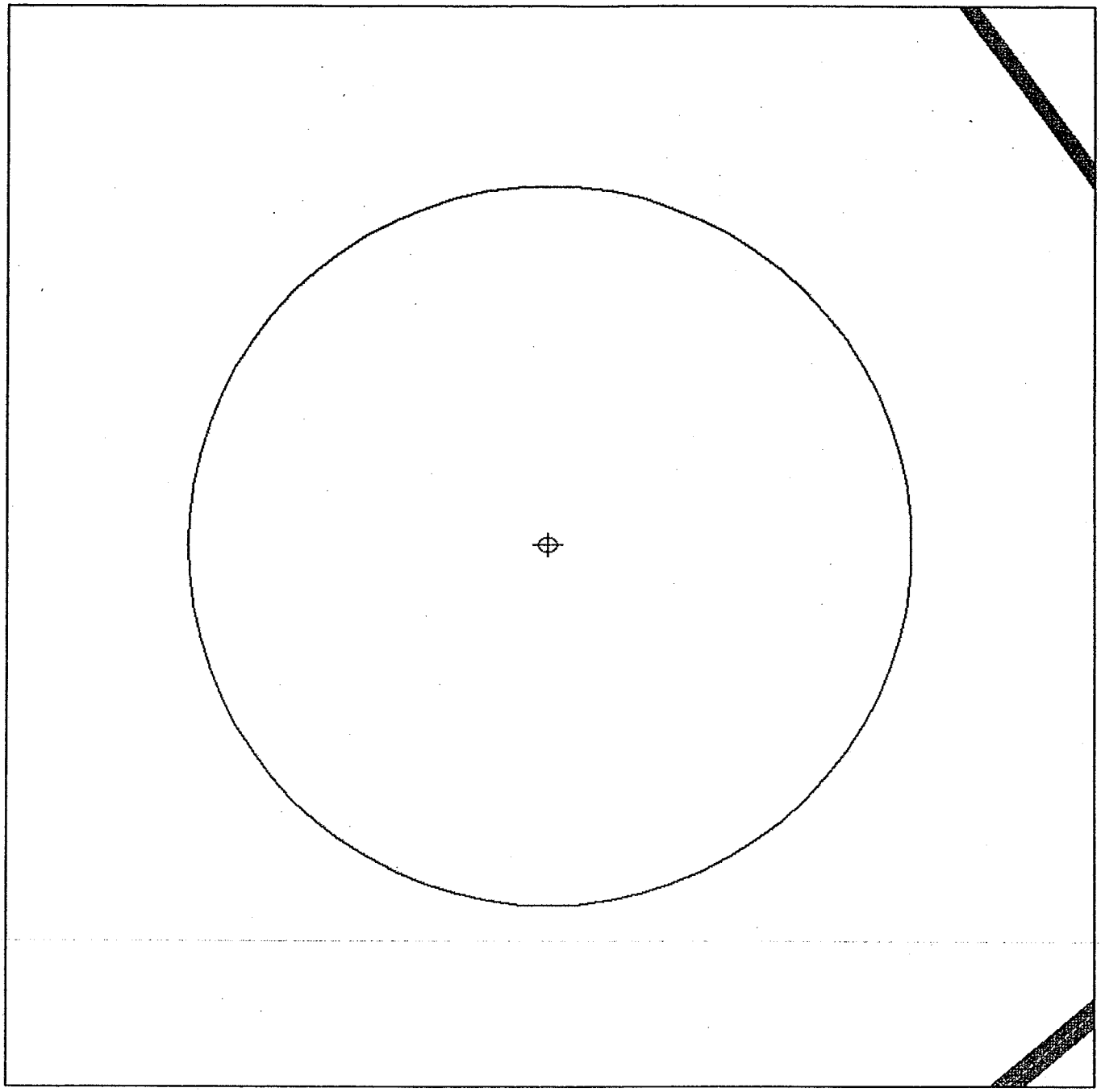
Black Rings Represent 1/4 Mile Radii; Red Ring Represents 500 ft. Radius

Environmental FirstSearch

.12 Mile Radius

ASTM: Multiple Databases

FOUSSAT , 76 , OCEANSIDE CA 92054



Source: 1999 U.S. Census TIGER Files

Target Site (Latitude: 33.222892 Longitude: -117.34011) .....

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
Site Information Report

Request Date:	02-11-05	**Search Type:**	COORD
Requestor Name:	Donna Gooley	**Job Number:**	E4704-SC
Standard:	ASTM		**Filtered Report**

TARGET ADDRESS: FOUSSAT , 76
OCEANSIDE CA 92054

Demographics

Sites:	9	**Non-Geocoded:**	4	**Population:**	NA
Radon:	1 PCI/L				

Site Location

	Degrees (Decimal)	**Degrees (Min/Sec)**		**UTMs**
Longitude:	-117.34011	-117:20:24	**Easting:**	468307.694
Latitude:	33.222892	33:13:22	**Northing:**	3675856.859
			Zone:	11

Comment

Comment:

Additional Requests/Services

Adjacent ZIP Codes: 0 Mile(s)

ZIP Code	City Name	ST	Dist/Dir	Sel

Services:

	Requested?	Date
Sanborns	No	
Aerial Photographs	No	
Topographical Maps	No	
City Directories	No	
Title Search	No	
Municipal Reports	No	
Online Topos	No	

Environmental FirstSearch
Sites Summary Report

TARGET SITE: FOUSSAT , 76
OCEANSIDE CA 92054

JOB: E4704-SC

TOTAL: 9 **GEOCODED:** 5 **NON GEOCODED:** 4 **SELECTED:** 0

ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	Map ID
4	LUST	MISSION AUTO & SELF STORAGE T0607301285/CASE CLOSED	3520 MISSION AV OCEANSIDE CA 92054	0.19 SE	3
5	LUST	SOLUS WESTERN PORTFOLIO HE17H23615	3520 MISSION AV OCEANSIDE CA 92054	0.19 SE	3
3	UST	SOLUS WESTERN PORTFOLIO HE17H23615	3520 MISSION AV OCEANSIDE CA 92054	0.19 SE	3
1	RCRAGN	PRECISION TUNE CAD981572001/SGN	3596 MISSION AVE OCEANSIDE CA 92054	0.21 SE	1
2	UST	MISSION AV SEWER LIFT STATION HE17H20633	3476 MISSION AV OCEANSIDE CA 92054	0.22 SE	2

Environmental FirstSearch
Sites Summary Report

TARGET SITE: FOUSSAT , 76
OCEANSIDE CA 92054

JOB: E4704-SC

TOTAL: 9 **GEOCODED:** 5 **NON GEOCODED:** 4 **SELECTED:** 0

ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	Map ID
6	RCRAGN	EXXONMOBIL OIL CORP. CAL000055785/LGN	3945 MISSION AVE. OCEANSIDE CA 92054	NON GC	
7	SWL	MISSION AVE LANDFILL WMUD9 000000342/ACTIVE	MISSION AVE OCEANSIDE CA 92054	NON GC	
8	LUST	MOBIL OIL 18-AED T0608147532/REMEDIAL ACTION	3945 MISSION AV OCEANSIDE CA 92054	NON GC	
9	LUST	OCEAN PLACE CINEMAS T0608138593/POST REMEDIAL ACTION	MISSION AV OCEANSIDE CA 92054	NON GC	

Environmental FirstSearch
Normalized Sites Summary Report

TARGET SITE: FOUSSAT , 76
OCEANSIDE CA 92054

JOB: E4704-SC

TOTAL: 9 **GEOCODED:** 5 **NON GEOCODED:** 4 **SELECTED:** 0

Site Name	Address	Dist/Dir	Map ID	Total Sites
MISSION AUTO & SELF STORAGE	3520 MISSION AV OCEANSIDE CA 92054	0.19 SE	3	3

NP	CE	NF	RT	RC	RG	RN	ER	ST	SP	LF	PE	OT	US	LS
0	0	0	0	0	0	0	0	0	0	0	0	0	1	2

PRECISION TUNE	3596 MISSION AVE OCEANSIDE CA 92054	0.21 SE	1	1

NP	CE	NF	RT	RC	RG	RN	ER	ST	SP	LF	PE	OT	US	LS
0	0	0	0	0	1	0	0	0	0	0	0	0	0	0

MISSION AV SEWER LIFT STATION	3476 MISSION AV OCEANSIDE CA 92054	0.22 SE	2	1

NP	CE	NF	RT	RC	RG	RN	ER	ST	SP	LF	PE	OT	US	LS
0	0	0	0	0	0	0	0	0	0	0	0	0	1	0

Database Legend

80:	Spills 80	FL:	Fed Land Use	HM:	HMIRS	NP:	NPL	PE:	Permits	RN:	RCRA NLR	ST:	State
AC:	ACEC	FN:	FINDS	LF:	Landfill	NS:	NPDES	PW:	Pub Water Supply	RP:	Receptors	TO:	Towers
AQ:	Aquifers	FP:	Floodplains	LS:	Lust	NU:	Nuclear Permits	RC:	RCRA COR	RT:	RCRA TSD	TR:	TRIS
CE:	CERCLIS	FW:	Fed Wells	NC:	NCDB	OT:	Other	RE:	Releases	SP:	Spills 90	US:	Ust
ER:	ERNS	HS:	Historic	NF:	NFRAP	PA:	Pads	RG:	RCRA GEN	SO:	SOILS	WE:	Wetlands

Environmental FirstSearch
Site Detail Report

TARGET SITE: FOUSSAT , 76
OCEANSIDE CA 92054

JOB: E4704-SC

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 4 **DIST/DIR:** 0.19 SE **MAP ID:** 3

NAME: MISSION AUTO & SELF STORAGE
ADDRESS: 3520 MISSION AV
OCEANSIDE CA 92054
SAN DIEGO
CONTACT:

REV: 02/07/05
ID1: T0607301285
ID2:
STATUS: CASE CLOSED
PHONE:

RELEASE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

Please note that some data previously provided by the State Water Resources Control Board in the LUSTIS database is not currently being provided by the agency in the most recent edition. Incidents that occurred dating after the year 2000 may not have much information. Field headers with blank information following after should be interpreted as unreported by the agency.

LEAD AGENCY: *LOCAL AGENCY*
REGIONAL BOARD: *09*
LOCAL CASE NUMBER: *H23615-001*
RESPONSIBLE PARTY:
ADDRESS OF RESPONSIBLE PARTY:
SITE OPERATOR:
WATER SYSTEM:

CASE NUMBER: *9UT2540*
CASE TYPE: *AQUIFER AFFECTED*
SUBSTANCE LEAKED: *unk*
SUBSTANCE QUANTITY:
LEAK CAUSE:
LEAK SOURCE:
HOW LEAK WAS DISCOVERED:
DATE DISCOVERED (blank if not reported): *1993-04-22*
HOW LEAK WAS STOPPED:
STOP DATE (blank if not reported):
STATUS: *CASE CLOSED*
ABATEMENT METHOD (please note that not all code translations have been provided by the reporting agency):
ENFORCEMENT TYPE (please note that not all code translations have been provided by the reporting agency): *1*
DATE OF ENFORCEMENT (blank if not reported):

ENTER DATE (blank if not reported):
REVIEW DATE (blank if not reported):
DATE OF LEAK CONFIRMATION (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN WAS SUBMITTED (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN BEGAN (blank if not reported): *1993-04-22*
DATE POLLUTION CHARACTERIZATION PLAN BEGAN (blank if not reported):
DATE REMEDIATION PLAN WAS SUBMITTED (blank if not reported):
DATE REMEDIAL ACTION UNDERWAY (blank if not reported): *1993-10-28*
DATE POST REMEDIAL ACTION MONITORING BEGAN (blank if not reported):
DATE CLOSURE LETTER ISSUED (SITE CLOSED) (blank if not reported): *1993-12-30*
REPORT DATE (blank if not reported):

MTBE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

MTBE DATE(Date of historical maximum MTBE concentration):
MTBE GROUNDWATER CONCENTRATION:
MTBE SOIL CONCENTRATION:
MTBE CNTS: *0*
MTBE FUEL: *0*
MTBE TESTED: *NOT REQUIRED TO BE TESTED*
MTBE CLASS: *

Environmental FirstSearch
Site Detail Report

TARGET SITE: FOUSSAT , 76
OCEANSIDE CA 92054

JOB: E4704-SC

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 5 **DIST/DIR:** 0.19 SE **MAP ID:** 3

NAME:	SOLUS WESTERN PORTFOLIO	**REV:**	08/21/00
ADDRESS:	3520 MISSION AV	**ID1:**	HE17H23615
	OCEANSIDE CA 92054	**ID2:**	
	San Diego	**STATUS:**	
CONTACT:	STEVE COLLINS	**PHONE:**	(619)722-1855

Release Occurance Number:	*001*
Historical Name:	*MISSION AUTO & SELF STORAGE*
Date Release Began:	*4/22/93*
Lead Agency:	*DEH*
Case Type:	*TANK, Release (W)*
Case Status:	*CLOSED*
Case Status Date:	*12/30/93*

Environmental FirstSearch
Site Detail Report

TARGET SITE: FOUSSAT , 76
OCEANSIDE CA 92054

JOB: E4704-SC

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 3 **DIST/DIR:** 0.19 SE **MAP ID:** 3

NAME:	SOLUS WESTERN PORTFOLIO	**REV:**	02/06/03
ADDRESS:	3520 MISSION AV	**ID1:**	HE17H23615
	OCEANSIDE CA 92054	**ID2:**	
	SAN DIEGO	**STATUS:**	
CONTACT:	STEVE COLLINS	**PHONE:**	(619)722-1855

TANK ID s

Permit Number:	*H23615*
Tank Number:	*T001*
Tank ID Number:	*AT2999*

TANK CHARACTERISTICS INFORMATION

Capacity:	*550.00*
Manufacturer Code:	
Year Installed:	
Contents:	*WASTE OIL*
Tank Content Chemical Name:	
Tank Content CAS Number:	
Tank System Type:	*TANK TYPE NOT AVAILABLE*
Primary Tank Material:	*NO PRIMARY TANK MATERIAL INFO*
Tank Interior Lining or Coating:	*NO SECONDARY TANK MTRL INFO*
Tank Exterior Corrosion Protection:	*NO EXTERIOR CORR PROT INFO*
Overfill Device:	*NO OVERFILL INFORMATION*
Spill Buckets:	
Is Groundwater Greater Than 20 Feet (Y/N):	*NO*

TANK TESTING & MONITORING INFORMATION

Below Grade Equipment:	*999*
Is System 1998 Standards Certified (Y/N):	
Tank Monitor Device:	*NO TANK MONIT DEV INFO*
Automatic Tank Gauges:	*NO ATGS INFO AVAILABLE*
Tank Test Status:	*INVALID CODE*
Tank Test Date:	*03/25/94*

PIPING INFORMATION

Piping Corrosion Protection:	*NO PIPE PROTECTION INFO*
Pressure Pipe Loss Leak Detector Type:	*NO PPLLD BRAND INFO*
Pipe System Type:	*PIPE TYPE NOT AVAILABLE*
Pipe Construction:	*NO PIPE CONSTRUCTION INFO*
Pipe Primary Material:	*NO PRIMARY PIPE MATERIAL INFO*
Pipe Monitor Device:	*NO PIPE MONIT DEV INFO*

PIPING INFORMATION

Pipe Test Date:	*01/01/01*

REGULATORY INFORMATION

Tank Exempt Indicator:	*NO*
Hazard Category 1:	
Regulatory Status Code Description:	*CLOSED BY REMOVAL*

TARGET SITE: FOUSSAT , 76
OCEANSIDE CA 92054

JOB: E4704-SC

RCRA GENERATOR SITE

SEARCH ID: 1 **DIST/DIR:** 0.21 SE **MAP ID:** 1

NAME:	PRECISION TUNE	**REV:**	12/10/04
ADDRESS:	3596 MISSION AVE	**ID1:**	CAD981572001
	OCEANSIDE CA 92054	**ID2:**	
	SAN DIEGO	**STATUS:**	SGN
CONTACT:		**PHONE:**	

SITE INFORMATION

UNIVERSE TYPE:

SQG - SMALL QUANTITY GENERATOR: GENERATES 100 - 1000 KG/MONTH OF HAZARDOUS WASTE

SIC INFORMATION:

ENFORCEMENT INFORMATION:

VIOLATION INFORMATION:

Environmental FirstSearch
Site Detail Report

TARGET SITE: FOUSSAT , 76
OCEANSIDE CA 92054

JOB: E4704-SC

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 2 **DIST/DIR:** 0.22 SE **MAP ID:** 2

NAME:	MISSION AV SEWER LIFT STATION	**REV:**	02/06/03
ADDRESS:	3476 MISSION AV	**ID1:**	HE17H20633
	OCEANSIDE CA 92054	**ID2:**	
	SAN DIEGO	**STATUS:**	
CONTACT:	CITY OF OCEANSIDE	**PHONE:**	(760)966-4850

TANK ID s

Permit Number:	*H20633*
Tank Number:	*T001*
Tank ID Number:	*1*

TANK CHARACTERISTICS INFORMATION

Capacity:	*500.00*
Manufacturer Code:	
Year Installed:	*1967*
Contents:	*DIESEL*
Tank Content Chemical Name:	
Tank Content CAS Number:	*12034*
Tank System Type:	*SINGLE WALL W/O SECNDRY CNTMNT*
Primary Tank Material:	*CARBON STEEL*
Tank Interior Lining or Coating:	*NO SECONDARY TANK MTRL INFO*
Tank Exterior Corrosion Protection:	*NONE*
Overfill Device:	*NO OVERFILL INFORMATION*
Spill Buckets:	
Is Groundwater Greater Than 20 Feet (Y/N):	*NO*

TANK TESTING & MONITORING INFORMATION

Below Grade Equipment:	
Is System 1998 Standards Certified (Y/N):	
Tank Monitor Device:	*NO TANK MONIT DEV INFO*
Automatic Tank Gauges:	*NO ATGS INFO AVAILABLE*
Tank Test Status:	*N/A*
Tank Test Date:	*08/11/86*

PIPING INFORMATION

Piping Corrosion Protection:	*UNKNOWN*
Pressure Pipe Loss Leak Detector Type:	*NO PPLLD BRAND INFO*
Pipe System Type:	*PIPE TYPE NOT AVAILABLE*
Pipe Construction:	*NO PIPE CONSTRUCTION INFO*
Pipe Primary Material:	*NO PRIMARY PIPE MATERIAL INFO*
Pipe Monitor Device:	*NO PIPE MONIT DEV INFO*

PIPING INFORMATION

Pipe Test Date:	*08/11/86*

REGULATORY INFORMATION

Tank Exempt Indicator:	*NO*
Hazard Category 1:	
Regulatory Status Code Description:	*CLOSED BY REMOVAL*

Environmental FirstSearch
Site Detail Report

TARGET SITE: FOUSSAT , 76
OCEANSIDE CA 92054

JOB: E4704-SC

RCRA GENERATOR SITE

SEARCH ID: 6 **DIST/DIR:** NON GC **MAP ID:**

NAME:	EXXONMOBIL OIL CORP.	**REV:**	12/10/04
ADDRESS:	3945 MISSION AVE.	**ID1:**	CAL000055785
	OCEANSIDE CA 92054	**ID2:**	
	CA073	**STATUS:**	LGN
CONTACT:	JOHN HOOVER	**PHONE:**	8002538054

DETAILS NOT AVAILABLE

Environmental FirstSearch
Site Detail Report

TARGET SITE: FOUSSAT , 76
OCEANSIDE CA 92054

JOB: E4704-SC

SOLID WASTE LANDFILL SITE

SEARCH ID: 7 **DIST/DIR:** NON GC **MAP ID:**

NAME: MISSION AVE LANDFILL
ADDRESS: MISSION AVE
OCEANSIDE CA 92054
SAN DIEGO
CONTACT: JAMES STILLMAN

REV: 07/03/00
ID1: WMUD9 000000342
ID2: 37-AK-0001
STATUS: ACTIVE
PHONE:

WMUDS FACILITY INFORMATION (blank = not reported)

Regional ID #:
NPDES ID #:
Region: *9*
Edit Date:
Last Edit:

Waste Discharger Facility: *Yes*

Sub Chapter 15 Facility: *Yes*
Solid Waste Assessment Test Site: *Yes*
Toxic Pits Cleanup Act Facility: *No*
RCRA Facility: *No*
Department of Defense Facility: *No*
Municipal Solid Waste Facility: *No*

Total WMUS at Facility: *1*
Facility Open to the Public: *No*
Facility Type: *SW3*
SIC 1 & SIC 2: *4953 /*

Primary Waste Type: *NONHAZARDOUS SOLID WASTES: SOLID WASTES*
Secondary Waste Type:
Tons Per Day: *0*
Complexity: *CATEGORY B - Any facility having a physical, chemical, or biological waste treatment system (except for septic systems with subsurface disposal), or any Class II or III disposal site, or facilites without treatment systems that are complex, such as marina*

LAND OWNER INFORMATION

Land Owner: *OCEANSIDE UNIFIED SCHOOL DISTR*
Department:
Contact & Phone: *, 7147572560*
Land Owner Address: *2111 MISSION AVE, OCEANSIDE, CA 92054*

AGENCY INFORMATION

Agency Name: *OCEANSIDE, CITY OF*
Department: *PUBLIC SERVICE DEPARTMENT*
Agency Contact & Phone: *ESTER BEATTY, 6199664504*

WASTE MANAGEMENT UNIT INFORMATION (blank = not reported)

WMU ID #: *9 000000342-01*
WMU Status: *POST-CLOSURE*
WMU Size in Acres: *14*
Year WMU Will Reach Capacity:
Close Plan: *0*
Avg Depth to Groundwater: *110*
Primary Liner Present: *0*

- Continued on next page -

Environmental FirstSearch
Site Detail Report

TARGET SITE: FOUSSAT , 76
OCEANSIDE CA 92054

JOB: E4704-SC

SOLID WASTE LANDFILL SITE

SEARCH ID: 7 **DIST/DIR:** NON GC **MAP ID:**

NAME:	MISSION AVE LANDFILL	**REV:**	07/03/00
ADDRESS:	MISSION AVE	**ID1:**	WMUD9 000000342
	OCEANSIDE CA 92054	**ID2:**	37-AK-0001
	SAN DIEGO	**STATUS:**	ACTIVE
CONTACT:	JAMES STILLMAN	**PHONE:**	

SOLID WASTE ASSESSMENT TEST PROGRAM INFORMATION (SWAT) (blank = not reported)

Site Name:	*MISSION AVENUE LANDFILL*
Site Rank:	*2*
Leak to Surface Water:	*U*
Leak to Ground:	*U*
Leak to Vandose Zone:	*U*

Environmental FirstSearch
Site Detail Report

TARGET SITE: FOUSSAT , 76
OCEANSIDE CA 92054

JOB: E4704-SC

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 8 **DIST/DIR:** NON GC **MAP ID:**

NAME: MOBIL OIL 18-AED
ADDRESS: 3945 MISSION AV
OCEANSIDE CA 92054
SAN DIEGO
CONTACT:

REV: 02/07/05
ID1: T0608147532
ID2:
STATUS: REMEDIAL ACTION
PHONE:

RELEASE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

Please note that some data previously provided by the State Water Resources Control Board in the LUSTIS database is not currently being provided by the agency in the most recent edition. Incidents that occurred dating after the year 2000 may not have much information. Field headers with blank information following after should be interpreted as unreported by the agency.

LEAD AGENCY: *LOCAL AGENCY*
REGIONAL BOARD: *09*
LOCAL CASE NUMBER: *H20634-001*
RESPONSIBLE PARTY:
ADDRESS OF RESPONSIBLE PARTY:
SITE OPERATOR:
WATER SYSTEM:

CASE NUMBER:
CASE TYPE: *OTHER*
SUBSTANCE LEAKED: *UNLEADED GASOLINE*
SUBSTANCE QUANTITY:
LEAK CAUSE:
LEAK SOURCE:
HOW LEAK WAS DISCOVERED:
DATE DISCOVERED (blank if not reported): *2001-06-13*
HOW LEAK WAS STOPPED:
STOP DATE (blank if not reported):
STATUS: *REMEDIAL ACTION*
ABATEMENT METHOD (please note that not all code translations have been provided by the reporting agency):
ENFORCEMENT TYPE (please note that not all code translations have been provided by the reporting agency):
DATE OF ENFORCEMENT (blank if not reported):

ENTER DATE (blank if not reported):
REVIEW DATE (blank if not reported):
DATE OF LEAK CONFIRMATION (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN WAS SUBMITTED (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN BEGAN (blank if not reported): *1965-01-03*
DATE POLLUTION CHARACTERIZATION PLAN BEGAN (blank if not reported):
DATE REMEDIATION PLAN WAS SUBMITTED (blank if not reported):
DATE REMEDIAL ACTION UNDERWAY (blank if not reported): *1965-01-03*
DATE POST REMEDIAL ACTION MONITORING BEGAN (blank if not reported):
DATE CLOSURE LETTER ISSUED (SITE CLOSED) (blank if not reported):
REPORT DATE (blank if not reported):

MTBE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

MTBE DATE(Date of historical maximum MTBE concentration):
MTBE GROUNDWATER CONCENTRATION:
MTBE SOIL CONCENTRATION:
MTBE CNTS: *0*
MTBE FUEL: *1*
MTBE TESTED: *YES*
MTBE CLASS: *

Environmental FirstSearch
Site Detail Report

TARGET SITE: FOUSSAT , 76
OCEANSIDE CA 92054

JOB: E4704-SC

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 9 **DIST/DIR:** NON GC **MAP ID:**

NAME: OCEAN PLACE CINEMAS
ADDRESS: MISSION AV
OCEANSIDE CA 92054
SAN DIEGO
CONTACT:

REV: 02/07/05
ID1: T0608138593
ID2:
STATUS: POST REMEDIAL ACTION MONITORIN
PHONE:

RELEASE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

Please note that some data previously provided by the State Water Resources Control Board in the LUSTIS database is not currently being provided by the agency in the most recent edition. Incidents that occurred dating after the year 2000 may not have much information. Field headers with blank information following after should be interpreted as unreported by the agency.

LEAD AGENCY: *LOCAL AGENCY*
REGIONAL BOARD: *09*
LOCAL CASE NUMBER: *H21760-001*
RESPONSIBLE PARTY:
ADDRESS OF RESPONSIBLE PARTY:
SITE OPERATOR:
WATER SYSTEM:

CASE NUMBER:
CASE TYPE: *SOIL ONLY*
SUBSTANCE LEAKED: *unk*
SUBSTANCE QUANTITY:
LEAK CAUSE:
LEAK SOURCE:
HOW LEAK WAS DISCOVERED:
DATE DISCOVERED (blank if not reported): *1999-03-11*
HOW LEAK WAS STOPPED:
STOP DATE (blank if not reported):
STATUS: *POST REMEDIAL ACTION MONITORING*
ABATEMENT METHOD (please note that not all code translations have been provided by the reporting agency):
ENFORCEMENT TYPE (please note that not all code translations have been provided by the reporting agency):
DATE OF ENFORCEMENT (blank if not reported):

ENTER DATE (blank if not reported):
REVIEW DATE (blank if not reported):
DATE OF LEAK CONFIRMATION (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN WAS SUBMITTED (blank if not reported):
DATE PRELIMINARY SITE ASSESSMENT PLAN BEGAN (blank if not reported): *1965-01-03*
DATE POLLUTION CHARACTERIZATION PLAN BEGAN (blank if not reported):
DATE REMEDIATION PLAN WAS SUBMITTED (blank if not reported):
DATE REMEDIAL ACTION UNDERWAY (blank if not reported): *1965-01-03*
DATE POST REMEDIAL ACTION MONITORING BEGAN (blank if not reported): *2002-02-01*
DATE CLOSURE LETTER ISSUED (SITE CLOSED) (blank if not reported):
REPORT DATE (blank if not reported):

MTBE DATA FROM THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD LUSTIS DATABASE

MTBE DATE(Date of historical maximum MTBE concentration):
MTBE GROUNDWATER CONCENTRATION:
MTBE SOIL CONCENTRATION:
MTBE CNTS: *0*
MTBE FUEL: *0*
MTBE TESTED: *NOT REQUIRED TO BE TESTED*
MTBE CLASS: *

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 UNERGOROUND 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; therefor, 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 / Sebastapol, Petaluma, Santa Rosa
STANINSLAUS 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: FOUSSAT , 76
OCEANSIDE CA 92054

JOB: E4704-SC

Street Name	Dist/Dir	Street Name	Dist/Dir
Fireside St	0.19 NE		
Frontier Dr	0.25 SE		
Heritage St	0.19 NE		
Highway 76	0.22 SE		
Hyatt Ave	0.17 NE		
Mayfair St	0.23 NE		
Mission Ave	0.20 SE		
N Foussat Rd	0.22 SW		
NORTH Foussat Rd	0.22 SW		
Warner St	0.24 NE		