



Appendix M-2

SOIL MANAGEMENT PLAN

**STANDARD PACIFIC HOMES
Proposed Westridge Residential Development
1400 South La Habra Hills Drive
La Habra, Orange County, California 90631**

September 29, 2015

EEI Project No: SPH-71933.7

SOIL MANAGEMENT PLAN

Prepared for:

Mr. Michael C. Battaglia
Vice President Project Development
Standard Pacific Homes
15360 Barranca Parkway
Irvine, California 92618

Site location:

Westridge Golf Club
1400 South La Habra Hills Drive
APNs 019-481-03 and 019-481-04
La Habra, Orange County, California 90631

Prepared under the direction of:



Bernard A. Sentianin, PG #5530
Principal Geologist



EEI
2195 Faraday Avenue, Suite K
Carlsbad, California 92008

EEI Project No. SPH-71933.7

This page intentionally left blank.

TABLE OF CONTENTS

GENERAL SITE INFORMATION i

1.0 INTRODUCTION 1

 1.1 Purpose 1

2.0 PHYSIOGRAPHIC SETTING 2

 2.1 Site Description 2

 2.2 Topography 2

 2.3 Regional and Local Geology 3

 2.4 Regional and Local Hydrogeology 3

 2.5 Hydrologic Flood Plain Information 3

3.0 SITE BACKGROUND 4

 3.1 Prior Uses and Site History 4

 3.2 Previous Investigations 4

 3.2.1 Miller Brooks, Closure Report, Closure Phase B, April 2, 1998 5

 3.2.2 Miller Brooks, Closure Report, Closure Phase A, June 1, 1999 6

 3.2.3 CRWQCB-SA Closure Report for Tracts 15030 and 15031, June 24, 1999 6

 3.2.4 OCHCA, Final Case Closure for Tracts 15030 and 15031, July 1, 1999 7

 3.2.5 Miller Brooks, Soil Sampling, December 1, 1999 7

 3.2.6 OCHCA, Completion Certificate, UST Case, December 22, 2002 9

 3.2.7 EEI, Methane Survey, September 25, 2015 9

4.0 SOIL MANAGEMENT 9

 4.1 Proposed Activity and Existing Conditions 9

 4.2 General Worker Health and Safety 10

 4.3 Management of Petroleum Hydrocarbon Impacted Soil 11

 4.4 Stockpile Management 12

 4.5 Fugitive Dust 13

 4.6 Stockpiled Soil Sampling Protocol 13

 4.7 Confirmation Sampling Protocol 14

5.0 LABORATORY ANALYTICAL PROTOCOL 14

6.0 REPORTING 15

7.0 LIMITATIONS 15

TABLES

Table 1 – Summary of Results from Previous Investigations

FIGURES

Figure 1 - Site Location

Figure 2 - Aerial Site Map

Figure 3 - Existing Soil Reuse Areas

Figure 4 – Proposed Soil Deep Burial Locations

APPENDICES

Appendix A – Geologic Map and Cross-sections (LGC Geotechnical, Inc.)

Appendix B – OCHCA Final Case Closure/Remedial Action Completion Certificate

Appendix C – Cut/Fill and 20-foot Hold Down Maps (Sukut Construction, Inc.)

GENERAL SITE INFORMATION

Project Information: Proposed Residential Development – 150-Acres

Proposed Activities: Excavation and removal of crude oil-impacted soils from two existing reuse areas. Relocate impacted soil into several new reuse/deep fill locations beneath the proposed residential development with a minimum of 20 feet of clean overburden. Collect confirmation soil samples to verify removals and characterize reuse soils.

EEI Project Number: SPH-71933.1

Site Information:

Westridge Golf Club
1400 South La Habra Hills Drive
APNs 019-481-03 and 019-481-04
La Habra, Orange County, California 90631

Consultant Information:

EEI
2195 Faraday Ave., Suite K
Carlsbad, CA 92008
Phone: 760.431.3747
Fax: 760.431.3748
E-mail Address: bsentianin@eetiger.com

Client Information:

Standard Pacific Homes
15360 Barranca Parkway
Irvine, California 92618
Michael C. Battaglia - Vice President Project Development (949) 789-1752

Environmental Consultants (Duties):

EEI (Due diligence, Observe and document excavation and removal/disposition of impacted soil)
2195 Faraday Avenue, Suite K
Carlsbad, California 92008-7207
Bernard A. Sentianin - Principal Geologist (805) 987-8728

VCS Environmental (Overall lead for entitlement, CEQA)
30900 Rancho Viejo Road, Suite 100
San Juan Capistrano, CA 92675
Peter Carlson (949) 489-2700 ext. x208

Grading Contractor:

Sukut Construction, Inc.
4010 West Chandler Avenue
Santa Ana, CA 92704
Steve Yurosek (714) 540-5351

1.0 INTRODUCTION

1.1 Purpose

The purpose of this Soils Management Plan (SMP) is to provide background information and general worker awareness information related to known environmental conditions, as well as action for potential unknown environmental conditions that may be encountered during future site improvements for a proposed residential development. Future site improvements include surface clearing; mass grading and earthwork; utility trenching; road work; and construction.

Known environmental conditions include soils impacted with low to moderate levels of crude oil in three designated soil reuse areas. The soils were generated during the investigation, remediation and grading of a portion of the former West Coyote Oil Field, in preparation for construction of the Westridge Golf Course. The SMP also provides general guidance on stockpiling and managing excavated soils impacted by chemicals of concern during site improvements, and general guidance if undocumented materials or contaminated soils are encountered during future grading activities.

This document should not be considered a remedial or corrective action plan, or a 29 Code of Federal Regulations (CFR) 1910 compliant Health and Safety Plan (H&SP), but rather as a general guidance document that provides insight for proposed subject property improvements. This document is based on findings from previous due diligence assessment and investigation (both research and physical sampling) conducted by EEI and previous consulting firms associated with the subject property development.

1.2 Development Project Description

Standard Pacific Homes (SPH) is currently seeking approval of several discretionary approvals, including a General Plan Amendment (GPA), Specific Plan Amendment (SPA), Specific Plan (SP), Vesting Tentative Tract Map (VTTM), Development Agreement (DA), and Design Review (DR) by the City of La Habra. SPH is proposing to construct a maximum of 420 homes, including 275 single-family homes and 145 multi-family residences, and an approximately 2.6 acre commercial pad designed to accommodate approximately 20,000 square feet of building for a specialty grocery store and restaurant, on the approximately 151-acre Westridge Golf Course property in the City of La Habra (**Figure 1**).

2.0 PHYSIOGRAPHIC SETTING

2.1 Site Description

The subject property is generally located at the southern terminus of South La Habra Hills Drive, approximately 900 feet south of its intersection with Imperial Highway (90) and South Beach Boulevard (Highway 39), in the City of La Habra, Orange County, California (**Figure 2**). The subject property is occupied by the Westridge Golf Club development which, besides the golf course and driving range areas, also includes a multi-story club house and a maintenance facility. The golf club is located north of the adjoining Westridge residential community.

The subject property is comprised of approximately 151 acres, on two parcels, identified by Assessor's Parcel Numbers (APNs) 019-481-03 and 019-481-04). The majority of the property is located on APN 019-481-004 (150.8-acres), while the smaller APN 019-481-03 (0.186-acres) is

located near the northwest corner of the property. The street address associated with the Westridge Golf Club is 1400 South La Habra Hills Drive. According to the Orange County Assessor, the address 1302 West Imperial Highway was historically associated with the subject property parcel 019-481-04.

The property, irregular in shape, is generally bound by a mix of commercial and residential development and a Southern California Substation to the north, residential development within the adjoining Westridge residential development to the south, and by South Idaho Street, and South Beach Boulevard (Highway 39) to the east and west, respectively. Surrounding properties to the north are mainly commercially developed, and a mix of single family and multi-family residential to the east and west. A large tract of vacant land lies farther south, beyond the Westridge residential development along West Nicklaus Avenue, which is outside of the City boundaries.

According to the City of La Habra Planning Department, the zoning classification for the subject property is the La Habra Hills Specific Plan. The La Habra Hills Specific Plan (1992) created a master planned community on 380 acres, which was originally part of the 915-acre West Coyote oil field operated by Chevron. The remaining 535 acres are located to the south in the City of Fullerton. The La Habra Hills Specific Plan Area is located in the southern part of the City of La Habra. The project site is generally bounded by the City of Fullerton to the south, the project site and existing residential homes to the north, Beach Boulevard to the west and Euclid Street to the east.

2.2 Topography

The subject property is located on the United States Geological Survey (USGS) 7.5 Minute La Habra Quadrangle map (USGS, 1981). The map indicates the elevation of the subject property ranges from approximately 200 feet above mean sea level (amsl) along the northwest portions to roughly 460 feet amsl at the southeast portions. The subject property is comprised of moderately sloping, hillside terrain, which slopes in a southwesterly direction.

2.3 Regional and Local Geology

The subject property and vicinity is located in the Orange County Coastal Basin, which is west of the Santa Ana Mountains, and within the northwestern portion of the Peninsular Ranges geomorphic province. The Peninsular Ranges geomorphic province, one of the largest geomorphic units in western North America, extends from the Transverse Ranges geomorphic province and the Los Angeles Basin, south to Baja California. The Peninsular Ranges are essentially a series of ranges separated by northwest trending valleys, sub-parallel to faults branching from the San Andreas Fault. The trend of topography is similar to the Coast Ranges, but the geology is similar to the Sierra Nevada, with granitic rock intruding the older metamorphic rocks. The Peninsular Ranges extend into lower California and are bound on the east by the Colorado Desert (CDMG, 2002).

The subject property is located within Seismic Zone 4 of Southern California, with active and potentially-active faults (CDMG, 1998). Major faults in the vicinity of the subject property include the Newport-Inglewood Fault, the Whittier Fault, and the Elsinore Fault. Additional known faults in the vicinity of the subject property include the Palos Verde Hills Fault, the Elysian Park Fault, the Sierra Madre Fault, the Cucamonga/San Jose Fault zone, the San Jacinto Fault zone, the San Andreas Fault zone, and the San Clemente Fault. A mapped earthquake fault zone (unnamed) is located on the eastern margin of the property, along Idaho Street (LGC Geotechnical, 2015).

Soil in the vicinity of the site has been identified by the United States Department of Agriculture - Natural Resource Conservation Service, online Web Soil Survey database as mainly clay loam of the Anaheim and Sorrento Soil Series at 2 to 50 percent (USDA, 2014). The soils of the Anaheim series are well-drained, moderately deep soils over weathered fine grained sandstone and shale. These soils have rapid to very rapid runoff. The Sorrento series consists of very deep well drained soils that formed in alluvium mostly from sedimentary rocks. These soils have negligible to medium runoff. These soils both have moderate to moderately slow permeability.

A geologic map of the subject property, along with cross sections depicting the site geologic profile, are included in **Appendix A**. The map and cross-sections were prepared by LGC Geotechnical, Inc. (LGC) as part of their evaluation of the subject property.

2.4 Regional and Local Hydrogeology

According to the Santa Ana Regional Water Quality Control (SARWQCB, 1994) the subject property is located within the La Habra Hydrologic sub area Split of the Anaheim hydrologic area within the Los Angeles San Gabriel River hydrologic unit. In general, groundwater in this unit has been designated as beneficial for domestic/municipal, agricultural, and industrial process supply. Regionally, the predicted groundwater surface flow follows the natural topography to the southwest.

The California Department of Water Resources Website indicates that there is one residential water supply well within a one-quarter mile radius of the subject property (Township 04 North Range 17 West Section 2). According to the website, data reported for the well (No. 03S10W18C001S) indicated depth to groundwater to range from 55.64 feet to 57.34 feet below ground surface (bgs).

Review of the nearest available case closure summary data (Leidos, 2014) for the, Chevron #9-6496 (1950 Imperial Highway), located approximately 1,500 feet (0.30 miles) north of subject property indicated that groundwater is present at depths of approximately 47 feet to 51 feet below ground surface. Groundwater flow direction was estimated to be towards the southeast (Leidos, 2014).

LGC Geotechnical, Inc. (2015), reported groundwater at a depth of 29 feet bgs in one boring location along Beach Boulevard (far western margin of the subject property). However, aside from seepage at a couple of locations, no groundwater was encountered in any of their other boring locations throughout the subject property, to a depth of 76.5 feet bgs.

2.5 Hydrologic Flood Plain Information

EEI reviewed the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) online database to determine if the subject property was in a flood zone. According to FIRM Number 060059C0036J and 060059C0037J Panel No's 36 and 37 of 539- effective December 6, 2009, the subject property is located within flood Zone X. FEMA defines Zone X as an area of minimal flood hazard, usually depicted on FIRMs as above the 500-year flood level.

3.0 SITE BACKGROUND

3.1 Prior Uses and Site History

The subject property was formerly used for oil production from the early 1900's through 1995. Oil operations at the West Coyote Oil field were principally conducted by Chevron USA, Inc. (Chevron), and oil produced from the property was transferred by pipeline to the Chevron Refinery in El Segundo, California. Natural gas produced from the field was piped to the south to Chevron's former Murphy-Coyote gas processing plant in Fullerton, California. Water produced during oil field operations was re-injected to enhance secondary oil recovery. A total of 23 oil wells were formerly in production at the subject property, and all of the wells have since been abandoned in accordance with Division of Oil, Gas, and Geothermal Resources (DOGGR) regulations. Other oil field operational facilities such as tank sites, sumps, pipelines, condensate drips, transformer sites, and a fueling facility were formerly present on the subject property, and were investigated and remediated during development of the Westridge Golf Club in 1996-1997.

In 1992, Pacific Coast Homes prepared the La Habra Hills Specific Plan to create a master planned community on 380 acres. The project site was originally part of the 915-acre West Coyote oil field operated by Chevron. The remaining 535 acres are located to the south in the City of Fullerton. The Specific Plan area was originally characterized as flood plain in the north and northwestern portion of the area and prominent ridgeline in the southern limits of the Specific Plan area, adjacent to the City of Fullerton.

The La Habra Hills Specific Plan created a development plan consisting of four residential neighborhoods totaling 700 residential dwelling units, an 18-hole golf course, a 29.5 acre community park, and 2.6 acres of open space. The four residential neighborhoods provide a range of housing types. Three of the residential neighborhoods, encompassing 600 homes, provide single-family residential homes with a gross density ranging from 3.0 to 3.5 dwelling units per acre. The fourth neighborhood is a multiple-family neighborhood with a gross density of 10 dwelling units per acre and 100 homes. The entire residential component of the Specific Plan has been constructed.

The golf course was designed in the northern portion of the Specific Plan area to provide a buffer between commercial land use to the north and the homes proposed within the Specific Plan. The golf course was also intended to provide a recreation amenity within the southern portion of the City of La Habra. Although privately owned, the golf course is open to the public for a fee for golf and/or use of the driving range. The golf course also includes a clubhouse with a restaurant and pro shop.

Due to the significant decrease in the number of rounds of golf played over the past several years at the Westridge Golf Club, the prediction of a continued downward trend in golf play in the future, and higher operational costs, especially the cost of water, the golf course owner has determined that it is no longer feasible to continue to operate and maintain the facility.

3.2 Previous Assessments

Based on the information provided by the property owner representative, and the Client, previous site investigation activities have been conducted on the subject property. The following section summarizes the information EEI reviewed.

3.2.1 Miller Brooks Environmental, Inc., Closure Report, For Soil Remediation Activities at the PLC Land Company, Tract 15030, Closure Phase B, Former West Coyote Hills Oil Field, La Habra, California (Project No. 245-0001-04), April 2, 1998.

The above referenced report documented soil remediation activities and grading phase assessment at the PLC Land Company (PLC) proposed residential and golf course development, Tracts 15030 and 15031, the northern portion of which included the subject property. These tracts were formerly part of Chevron's West Coyote Oil Field. Tracts 15030 and 15031 were being developed as residential housing, a golf course, and a reservoir site. Remediation activities within Tracts 15030 and 15031 were initiated in December 1996.

The report stated that four closure reports would be prepared that followed the completion of rough grade activities through Tracts 15030 and 15031. The four areas were identified as Closures Phases A through D. The subject property encompasses Closure Phases A (western portion of the golf course) and B (eastern portion of the golf course). Closure Phases C and D were located to the south of the subject property and have since been developed as a residential community.

Closure Phase B, which encompasses the eastern portion of the subject property, and consists of approximately one-third of the total acreage of Tract 15030. The boundaries of Closure Phase B were defined by a Southern California Edison Company substation and a residential development on the north, by Idaho Street on the east, Tract 15030 residential tract developments on the south, and a golf course access road on the west.

This closure report was based on information collected within Closure Phase B during remediation activities conducted by Miller Brooks under the jurisdiction of the RWQCB-SA and the OCHCA. The report stated that in 1996 and 1997, the consultant conducted soil remediation and grading phase observations with Closure Phase B, which included removal of previously identified crude oil affected soil, identified additional impacted areas, conducted limited additional soil assessment sampling, and collected confirmation soil samples to verify that impacted soils were removed during remediation and grading activities. The areas of environmental concern previously identified within Closure Phase B included well sites and tank settings. According to the report, additional areas were identified during grading phase activities which were previously unidentified sites and impacted soil that extended beyond the limits estimated during Phase II site assessment activities. The remediation and grading phase observation activities included identification of 104 oil wells within Tracts 15030 and 15031 (six were within Closure Phase B); four of which did not require remediation. Two of the wells were identified as impacted, remediated, and confirmation soil samples collected. A previously identified tank setting was identified as impacted, remediated, and confirmation soil samples collected. In addition, two previously unidentified sites were located during grading activities, identified as impacted, remediated, and confirmation soil samples collected.

The report stated that abandonment and removal of former oil production facilities, tank settings and other former historical oil field sites within Tract 15030 and 15031 was conducted by others in 1995 and 1996 under the direction of Chevron. The report also stated that oil well abandonment within Tracts 15030 and 15031 were conducted by others under the direction of Chevron and the California Department of Conservation, Division of Oil, Gas and Geothermal Resources (DOGGR).

3.2.2 Miller Brooks Environmental, Inc., Closure Report, For Soil Remediation Activities at the PLC Land Company, Tract 15030, Closure Phase A, Former West Coyote Hills Oil Field, La Habra, California (Project No. 245-0001-04), June 1, 1999.

The above referenced report documented soil remediation activities and grading phase assessment at the PLC Land Company (PLC) proposed residential and golf course development, Tracts 15030 and 15031 (i.e. the subject property). The report stated that four closure areas had been designated that followed the completion of rough grade activities through Tracts 15030 and 15031. The four areas were identified as Closures A through D. Closure reports for Phases B, C and D (Miller Brooks, 1998a, 1998b, and 1998d) had been previously submitted, reviewed and approved by the RWQCB-SA (RWQCB, 1998a, 1998b, and 1998e) and the Orange County Health Care Agency (OCHCA), Department of Environmental Health (OCHCA, 1998a and 1998b).

Closure Phase A encompasses the western portion of the subject property, and consists of approximately one-third of the total acreage of Tract 15030 and included the western portion of the golf course. The boundaries of Closure Phase A were defined by Beach Boulevard and Chevrons Research Facility on the north, a golf course access road on the east, Tract 15031 residential developments on the south, and the western property boundary and the City of La Mirada on the west.

This closure report was based on information collected within Closure Phase A during remediation activities conducted by Miller Brooks under the jurisdiction of the RWQCB-SA and the OCHCA. The objectives of site remediation included: (1) monitoring the removal of previously identified environmentally impacted soil; (2) observing grading activities to identify additional impacted areas; (3) conducting limited additional soil assessment sampling where necessary; (4) collecting confirmation soil samples to verify that impacted soils were removed during remediation and grading activities; (5) monitoring the handling of impacted soil; and (6) monitoring and sampling impacted soil placed within three approved Reuse Areas, identified as RUA 1, RUA 2, and RUA 3. A summary of concentrations from samples collected during the placement of soil into the three reuse areas is included in **Table 1**. The report stated that abandonment and removal of former oil production facilities, tank settings and other former historical oil field sites within Tract 15030 and 15031 was conducted by others in 1995 and 1996 under the direction of Chevron. The report also stated that oil well abandonment within Tracts 15030 and 15031 were conducted by others under the direction of Chevron and the DOGGR.

3.2.3 California Regional Water Quality Control Board – Santa Ana Region (RWQCB-SA), Closure Letter for Tract 15030, Phase A at the Former West Coyote Hills Oil Field, City of La Habra, dated June 24, 1999.

The letter, addressed to PLC Land Company, indicated that the RWQCB-SA reviewed the June 1, 1999 submittal of the Closure Report for Tract 15030, Phase A at the former West Coyote Hills Oil Field, prepared and submitted by Miller Brooks Environmental, Inc. (see above). The report summarized the remedial and closure activities which were carried out in accordance with the requirements outlined in the previously approved workplan. The letter was the last in a series of four, which completed the full closure of Tracts 15030 and 15031 within the former West Coyote Hills Oil Field. The letter stated that after reviewing the report and the analytical results of the confirmation samples, the RWQCB-SA believed that the site no longer posed a threat to water quality; therefore, no further action would be necessary at the site. The closure letter stated that it did not relieve PLC Land Company of its responsibility to comply with the rules and regulations set forth by other agencies.

3.2.4 County of Orange Health Care Agency (OCHCA), Public Health Division of Environmental Health, Final Case Closure, PLC Land Company, Tracts 15030 and 15031, Southeast Quadrant – Beach Boulevard and Imperial Highway, La Habra, CA 92631, OCHCA Case #97IC7; dated July 1, 1999.

The above referenced letter was addressed to Mr. Jeff Rulon with PLC Land Company, and confirmed the completion of remedial action at the above-referenced site. With the provision that the information provided to the OCHCA was accurate and representative of existing conditions, it was the position of the OCHCA that no further action was required at that time. The letter stated that the confirmation of completion was limited in scope and limited to site conditions made known to the agency. It was based on an evaluation of the health threat presented by the inhalation, ingestion, or dermal absorption of the residual contaminants. In addition, the evaluation considered the present and proposed use of the property.

The letter noted that changes in the present or proposed land use may require further site characterization and/or site mitigation activity. The letter stated that the presence of the petroleum hydrocarbons and the potential for residual contamination to cause groundwater contamination at this site was evaluated by the RWQCB-SA in its letter dated June 24, 1999, which concluded that no further action was required for the site (Tracts 15030 and 15031). The letter advised that it did not relieve PLC Land Company of any liability under the California Health and Safety Code or Water Code for past, present or future operations at the site. Nor did it relieve PLC Land Company of the responsibility to clean up existing, additional or previously unidentified conditions at the site which cause or threaten to cause pollution or nuisance or otherwise pose a threat to water quality or public health. The letter concluded that it was the property owners' responsibility to notify the OCHCA of any changes in future contamination findings or site usage. Depths to groundwater were reported at 100-110 feet below ground in mid-evaluation areas. A copy of the Final Closure Letter is included in **Appendix B**.

3.2.5 Miller Brooks Environmental, Inc., Report of Supplemental Confirmation Soil Sampling, OCHCA, Case #99UT43, PLC Land Company, Tract 15030, Former Facility Service Station Site, Former West Coyote Hills Oil Field, La Habra, California, dated December 1, 1999.

The report documented the supplemental confirmation soil sampling activities at the PLC Land Company, Tract 15030, and former service station site located within the former West Coyote Hills Oil Field. The site was occupied by the driving range of the golf course. The former oil field fuel service site reportedly consisted of two USTs of unknown volume and one Dispenser Island. Reportedly, in the mid-1980's Chevron USA Production Company (Chevron) removed the USTs dispenser island, associated piping, and impacted soil for offsite disposal.

The report outlined a previous Phase II Site Assessment Report (Environmental Science and Engineering, Inc.), conducted at the site in November 1995, where six borings were drilled within the vicinity of the former fuel station area. Results of laboratory analysis indicated that petroleum hydrocarbons were not detected in four (B2, B3, B4, and B6) of the six borings. And that soil samples collected from soil borings B1 and B5 contained maximum concentrations of 340 milligrams per kilogram (mg/kg) total petroleum hydrocarbons as gasoline (TPH-G), 6,500 mg/kg total petroleum hydrocarbons as diesel (TPH-D), 4,300 total recoverable petroleum hydrocarbons (TRPH), no detectable benzene, 0.190 mg/kg toluene, 0.830 mg/kg ethylbenzene, and 2.0 mg/kg total xylenes.

In 1997, as part of the oil field cleanup activities, this area was excavated and approximately 500 cubic yards of contaminated soil was transported offsite for disposal. Excavation confirmation samples were collected and analyzed until all samples were non-detected for TPH-g, TPH-d, TRPH and BTEX.

In June 1999, a Closure Report (Miller Brooks, 1999a) presented the results of soil remediation confirmation sampling and laboratory analysis conducted as part of environmental oversight activities during grading operations at Tract 15030. Soil remediation oversight, confirmation sampling, and laboratory analysis were performed in accordance with the Remedial Action Plan (Miller Brooks, 1997a) and associated amendments approved by the OCHCA, and the CRWQCB-SA). Remediation activities included the excavation, temporary stockpiling, and offsite transport of affected soil to the Waste Management, Inc., Bradley Landfill and Recycling Center located in Sun Valley, California, in accordance with the state and federal regulations and the RWQCB-LA approval. Results of soil sample confirmation laboratory analysis at the former fuel service area indicated no detectable TPH-G, no detectable TPH-D, no detectable concentrations of benzene, toluene, ethylbenzene, and total xylenes (BTEX), and a maximum concentration of 51 mg/kg TRPH. Approximately 500 cubic yards of impacted soil was excavated and transported offsite for disposal.

In a Notice of Responsibility dated August 11, 1999 (OCHCA, 1999b), the OCHCA gave formal notification of “responsibility to investigate and remedy the effects of” leaking underground storage tanks at the site. A workplan (Miller Brooks, 1996b) was prepared and submitted to the OCHCA that proposed soil samples be collected at a depth of approximately 5 feet below the former excavation bottom from three borings drilled within the excavation limits of the former fuel service site. The OCHCA approved the work plan with the recommendation that additional soil samples be collected at depths between 5 and 15 feet below the bottom of the former excavation and 5 feet above the bottom of the former excavation.

Field activities during the supplemental assessment (i.e. December 1999) included drilling three supplemental confirmation soils borings within the excavation limits of the former fuel service station. Soil samples were collected in each boring at depths of approximately 5 feet above and 5, 10, and 15 feet below the bottom of the original excavation and field-screened for petroleum hydrocarbon vapors using a photoionization detector (PID). Based on the results of field hydrocarbon vapor screening, additional soil samples were collected at 20 and 25 feet below the bottom of the original excavation in Boring PLC-SS-CB-1. Groundwater was not encountered during supplemental confirmation soil sampling activities. Soil samples selected for analysis were submitted to a state certified laboratory and analyzed in accordance with the approved work plan for BTEX and methyl tertiary butyl ether (MTBE) using EPA Method 8020, and TPH-G using EPA Method 8015. The consultant concluded that supplemental confirmation soil samples collected from the soil borings contained no detectable BTEX, MTBE, or TPH-G. No additional areas of concern were identified during the activities associated with the supplemental confirmation soil sampling activities. Based on field observations and the results of laboratory analysis of soil samples collected during the supplemental investigation, no evidence of a significant hydrocarbon discharge was found. Based on the results of previous confirmation soil sampling and analysis and the results of the supplementary confirmation soil sampling and analysis, it was the opinion of Miller Brooks that no further site assessment or remediation activities were warranted, and that the site met the criteria to be granted environmental closure. Based upon the results of the soil sample laboratory analysis soil cuttings generated during drilling operations were reused on site in landscape areas.

3.2.6 County of Orange Health Care Agency, Environmental Health, Remedial Action Completion Certification, Underground Storage Tank Case, Former Facility Service Station at Former W. Coyote Hills Oil Field, Tract 15030, 3282 South Beach Boulevard, La Habra, CA 92631, OCHCA Case #99UT043; dated November 22, 2002.

The letter confirmed the completion of site investigation and corrective action for the USTs formerly located at the site. The letter stated that the OCHCA found that the site investigation and corrective action carried out at the UST site was in compliance with the agency regulations and that no further action related to the petroleum release at the site was required. A Copy of the Remedial Action Completion Certificate is included in **Appendix B**.

3.2.7 EEI, Methane Survey, Westridge Golf Course, 1400 South La Habra Hills Drive, La Habra, CA, report dated September 25, 2015.

The letter documents the Methane Survey conducted by EEI at the subject property on September 16 and 18, 2015. A total of 28 locations were sampled at a depth of 5 feet bgs for the presence of methane gas using a Landtec GEM 2000 meter. Nineteen of the locations were in the western half of the golf course, either above or in close proximity to the crude oil-impacted soil designated reuse areas. Nine of the locations were in the eastern half of the golf course, in areas of former oil field operations. Of the 28 locations surveyed, only 5 indicated detectable methane concentrations (0.01% or 1,000 ppm). The remaining 23 locations had no detectable concentrations of methane.

The screening level for methane utilized during this survey was 0.5% or 5,000 ppm, the level at which Mandatory Procedures for Mitigation are required under the Orange County Fire Agency's *Combustible Soil Gas Hazard Mitigation* guidance document (C-03) dated January 1, 2014. In addition, EEI collected samples for laboratory analysis at two of the survey locations in order to verify the results of the survey. Based on laboratory analytical results, the two samples (which had indicated a field measurement of 0.1% or 1,000 ppm) contained less than 10 ppm methane. Based on the results of the field survey and laboratory analytical data, methane mitigation does not appear to be warranted at the subject property.

4.0 SOIL MANAGEMENT

4.1 Proposed Activities and Existing Conditions

Proposed field activities including mass grading, utility trenching, excavating and stockpiling soils, and related activities will be conducted in areas previously identified as having VOC and/or petroleum hydrocarbon impacted soils. The contractor is responsible for identifying any areas where soil suspected of containing contamination due to color, odor, or other attributes.

Prior to construction of the golf course, the Project site was an oil field. At the time the golf course was constructed, extensive grading occurred in conjunction with the development of the Westridge neighborhood to the south of the golf course. However, the grading that occurred to accommodate the golf course is neither suitable for, nor compatible with, residential development. During grading of the golf course approximately 430,000 cubic yards of soil containing Total Petroleum Hydrocarbons (TPH) were placed in three designated soil reuse areas beneath the golf course.

The proposed plan involves the following steps:

- 1) Remove “clean” overburden soils and segregate for reuse on site as cover.
- 2) Remove crude oil-impacted soil from Reuse Areas 1, 2, and eastern portion of 3 and place in one of four identified fill locations.
- 3) Collect confirmation soil samples from former Reuse Areas upon completion to verify removal and facilitate closure.
- 4) Upon completing placement of crude oil-impacted soils into deep fill locations, place a minimum of 20 feet of “clean” (i.e., less than 100 mg/kg TPH) cover soil.

Reuse Area 1 (RUA 1) is the largest of the reuse areas and is located in the central portion of what was formerly Closure Phase A, in the western portion of the golf course. It is estimated that RUA 1 contains approximately 220,000 cubic yards of crude-oil impacted soil. RUA 2 is located east of RUA 1, beneath the golf course driving range, and contains an estimated 30,000 cubic yards of crude oil-impacted soil. RUA 3 is located in the far western portion of the subject property, and contains an estimated 176,000 cubic yards of crude oil-impacted soil. The locations of three reuse areas is depicted in **Figure 3**. The reuse areas are also depicted on the geologic map and cross-sections prepared by LGC and included in **Appendix A**.

On-site grading requires removal of all previously placed fill material until either bedrock or suitable material is reached. Once grading for the proposed Project reaches bedrock or suitable material, the approximately 260,000 cubic yards of TPH soil removed from RUA 1, RUA 2, and the eastern margin of RUA 3, would be placed in one of four, pre-designated deep fill locations in accordance with standards previously established by the Orange County Health Care Agency (OCHCA) and the Regional Water Quality Control Board (RWQCB). Additional fill, consisting of “clean” (less than 100 mg/kg TPH) soil would be placed over the deep fills at a minimum thickness of 20 feet and compacted to over 90% to comply with residential development standards. The majority of RUA 3 will not be affected by development as the portion of the subject property overlying RUA 3 is to be designated as open space, as will not be subject to grading and construction. A map of the anticipated deep fill locations, with a minimum of 20 feet of clean overburden, are depicted in **Figure 4**. Detailed maps depicting the estimated cut/fill locations for mass grading as well as the estimated deep fill locations with 20 feet of “clean” soil cover (i.e., 20-foot hold down) were prepared by the grading contractor for the project, Sukut Construction, Inc., and are included in **Appendix C**.

4.2 General Worker Health and Safety

The following section describes general worker health and safety during proposed excavation and/or related grading activities in areas with documented environmental conditions at the subject property. A Health & Safety Plan (HSP) for work conducted in environmentally-impacted areas should be generated prior to field activities; note that all Contractors are responsible for the health and safety of their workers.

Detectable concentrations of petroleum hydrocarbons (carbon range C13+) have been reported in RUA 1, RUA 2, and RUA 3, up to a maximum of 13,000 milligrams per kilogram (mg/kg) Total Recoverable Petroleum Hydrocarbons. The presence of petroleum contaminated soil represents only a minor potential exposure hazard to site workers, which can be mitigated by proper dust control measures, limiting skin exposure by use of gloves, eye protection, and hard hat, hand washing, and limiting incidental ingestion of soil.

Inhalation hazards in the area of the proposed excavation are not anticipated. However, standard work practices, such as dust suppression, performing proposed site improvements in the upwind position, and monitoring for the potential presence of VOCs, should be observed whenever possible. Where impractical, the site safety officer (SSO), or designated alternate, should be consulted to identify acceptable alternatives. If an inhalation hazard is identified, Level C respiratory protection utilizing NIOSH-approved half-face air purifying respirators (APR) with volatile organic or combination high-efficiency particulate (HEPA)/volatile organic cartridges may be required. Specific requirements regarding respiratory protection, potential routes of entry and air monitoring should be provided for in the subcontractor's HSP for the subject property.

Under California's Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65), individuals who may be exposed in the work place to chemicals that may cause cancer or birth defects must be warned of such hazards pursuant to California Health and Safety Code 25249.6.

Pursuant to Section 25249.6 of the California Health and Safety Code and Section 17601 (c)(3)(A) and 12601 (C)(3)(B), the following warning must be made for all workers that will be conducting planned field activities at the subject property if potential exposures exceed the State of California no significant rise level of 10-5:

WARNING: This area contains chemicals known to the State of California to cause cancer.

It is the responsibility of the contractor or subcontractor to meet local, state, or federal training requirements and health and safety compliance when operating equipment or working in areas with chemicals of concern impacted soils. At a minimum, all site workers within the project location should have completed 40-hour HAZWOPER training, as well as any required annual refresher courses.

4.3 Petroleum Hydrocarbon and Volatile Organic Compound Impacted Soils

Petroleum hydrocarbon-impacted soils are known to be present within the three Reuse Areas (**Figure 3**), and will be encountered during the excavation and relocation of these soils into the designated deep fill locations. However, additional impacted soil may be encountered as well during excavation or grading activity. Since crude oil-impacted soil is typically stained a dark green/grey, visual indicators are useful in initially screening site soils for further characterization. During excavation of the proposed project area, excavated soil originating from outside of the three Reuse Areas that visually displays dark discoloration/staining, should be flagged and segregated during the excavation process. These segregated soils shall be tested in accordance with Section 5.0, to determine whether the soil can be reused as cover or must be placed within a deep fill location.

Potentially impacted soils should be stockpiled on plastic sheeting to segregate contaminated soils from clean soils. Vapor and dust from excavation and stockpiling activities should be controlled utilizing one or more of the following: water misting; covering with poly sheeting; backfilling of off-gassing excavations; locating stockpiles away from and/or downwind of onsite workers and public receptors; reducing the pace of project site activities and/or halting activities. In general, flagged (impacted) locations outside of the Reuse Areas should be visually located, and confirmed by hand-held (or equivalent) global positioning system (GPS) equipment, when necessary.

Excavation efforts should proceed at individual flagged (impacted) suspect areas based upon visual staining, and/or other methods (i.e., air monitoring equipment). Confirmation soil samples should be collected from stockpiled soil and excavation limits, and properly documented as excavation

proceeds. Final excavation confirmation sampling should be conducted at a rate of at least one (1) soil sample per 5-foot vertical interval/20-foot horizontal interval of exposed sidewall and/or excavation floor. However, this sample frequency may be modified in the field based on site-specific conditions such as accessibility, soil homogeneity, and results of previous sampling data.

Soil samples should be collected using appropriate hand sampling tools or from the bucket of the excavation equipment and placed in laboratory-supplied glass sample jars and/or stainless steel sleeves, as required. In either case, samples should be compacted within the sample container to remove any head space. Soil samples should be sealed with Teflon-lined lids/caps, labeled with a number unique to the sample, placed in a chilled cooler and logged under proper chain-of-custody (COC) protocol for transportation to a California-state certified laboratory. A mobile laboratory may be utilized to analyze soil samples during the excavation confirmation process, depending upon the nature of the contaminant and/or the scheduling needs of the project. See below for the suggested analytical program.

4.4 Stockpile Management

If known or potentially impacted soils require stockpiling, EEI recommends the following:

- Place impacted soil stockpiles in locations which minimize impacts to the general public and surrounding neighborhoods, taking into considerations such factors as noise, odor, dust, and prevailing wind direction.
- Place impacted soil on a relatively impervious surface such as covered asphalt, concrete, or plastic sheeting.
- Moisten to minimize dust emissions during stockpiling (no runoff is to be created during this process).
- Construct and maintain the stockpile in a manner that prevents surface and rainwater from entering the stockpile.
- Secure covering with heavy plastic sheeting to minimize vapor emissions and prevent runoff from rain (sheeting must be maintained in good condition).
- Remove stockpiled soil in a timely manner after excavation to avoid nuisance complaints. Stockpiles exhibiting TPH concentrations below 100 mg/kg will be deemed acceptable for reuse as cover or fill soil. Stockpiles exhibiting TPH concentrations above 100 mg/kg shall be placed within one of the designated deep fill locations,
- Minimum stormwater Best Management Practices (BMP) requirements must be met per the local and State guidelines.

All stockpiled soils exhibiting characteristic petroleum hydrocarbon odors should be monitored for the presence of volatile organic compounds (VOCs) as regulated by South Coast Air Quality Management District (SCAQMD) Rule 1166 (SCAQMD, 2001), utilizing a photoionization detector (PID) or equivalent monitoring device. Soils which are verified as impacted by substances that are exempted from Rule 1166 should not need to be covered unless air monitoring indicates an air-exposure hazard exist. At this time, it is not anticipated that Rule 1166 monitoring will be required.

The following is a brief summary of SCAQMD Rule 1166:

Rule 1166 – Volatile Organic Compound Emissions from Decontamination of Soil

(a) Applicability

This rule sets requirements to control the emission of VOCs from excavating, grading, handling and treating VOC contaminated soil as a result of leakage from storage or transfer operations, accidental spillage, or other deposition.

(b) Definitions

(1) EXCAVATION is the process of digging out and removing materials, including any material necessary to that process such as the digging out and removal of asphalt or concrete necessary to expose, dig out and remove known VOC contaminated soil.

(e) Test Methods

(1) A person shall measure excavated soils for VOCs to determine contamination by:
(A) Using an organic vapor analyzer calibrated to hexane, complying with 40 CFR Part 60 Appendix A, EPA Reference Method 21 Section 3 or any equivalent method with prior approval in writing by the Executive Officer.
(B) Placing the probe inlet at a distance of no more than three inches from the surface of the excavated soil and while slowly moving the probe across the soil surface, observe the instrument readout. If an increased meter reading is observed, continue to sample the excavated soil until the maximum meter reading is obtained. Leave the probe inlet at this maximum meter reading location for approximately double the instrument response time. If the maximum observed meter reading is greater than the 50 ppm standard in the regulation, record and report the results.

4.5 Fugitive Dust

Soil excavation and any stockpiled soils at the subject property will require fugitive dust control. The South Coast Air Quality Management District (SCAQMD), generally prohibits visible dust emissions beyond property lines as defined in Rule 403. Dust suppression, such as periodic watering, covering, or restricted activities during high wind events should be conducted during soil excavation and stockpiling activities at the subject property. Additional Fugitive Dust suppression may be required as part of subject property redevelopment; therefore, should be handled according to the methods provided by the project's General Contractor.

4.6 Stockpiled Soil Sampling Protocol

The following section provides guidance on properly sampling stockpiled soils, when necessary. The suggested laboratory analytical program is provided under section **5.0 Laboratory Analytical Program**.

The following bulleted items summarize the minimum number of samples to be collected from stockpiled material, and assumes a representative distribution of sample points:

- Stockpiles less than 600 cubic yards (cy): a minimum of three (3) samples must be collected.
- Stockpiles from 600 to 2,000 cy: a minimum of one sample per 200 cy must be collected.
- Stockpiles from 2,000 to 10,000 cy: a minimum of one sample per 500 cy must be collected.
- Stockpiles greater than 10,000 cy: a minimum of (1) sample for each 1,000 cy or portion must be collected.

Stockpiled soil is assumed to have a non-homogeneous distribution of contaminants. If a stockpile previously characterized by this protocol is split for any reason, the remaining mass must be re-sampled as a new stockpile per the protocol listed above.

4.7 Confirmation Sampling Protocol

As directed by OCHCA, confirmation soil samples will be collected from the Reuse Areas, as well as any previously unidentified areas of impact, upon completion of excavation to verify the removal of crude oil-impacted soil and facilitate closure. The selection of confirmation sample locations will be based in part on physical observation and fieldscreening, and in part upon consultation with OCHCA personnel. At a minimum, it is anticipated that one sample will be collected from each of the sidewalls at approximately 5-foot vertical intervals, and roughly 100-foot horizontal intervals. Bottom samples will be collected at representative locations, based on accessibility, with a minimum anticipated frequency of one bottom sample from each excavation location per 100-foot horizontal interval.

Soil samples will be collected from the excavation using an excavator bucket or equivalent. A sample will be extracted from the bucket in laboratory-supplied glass sampling jars. The open ends of the sampling jars will be secured with a Teflon-lined lid. The sample containers will then be stored in a cooler chilled with artificial ice, and select samples delivered under Chain-of-Custody documentation to a State-certified laboratory.

5.0 LABORATORY ANALYTICAL PROGRAM

The following section is a suggested laboratory analytical program for additional testing/screening of soils impacted by chemicals of concern. This laboratory analytical program, may be altered and/or amended, based on field observations, OCHCA directives (if applicable), and/or disposal facility requirements.

- All soil samples collected from excavations and stockpiled soil should be analyzed using: EPA Test Method 8015M (Total Petroleum Hydrocarbons) for the presence of gasoline, diesel and motor oil; and if the presence of VOC is indicated by field screening, EPA Test Method 8260B for the presence of VOCs.

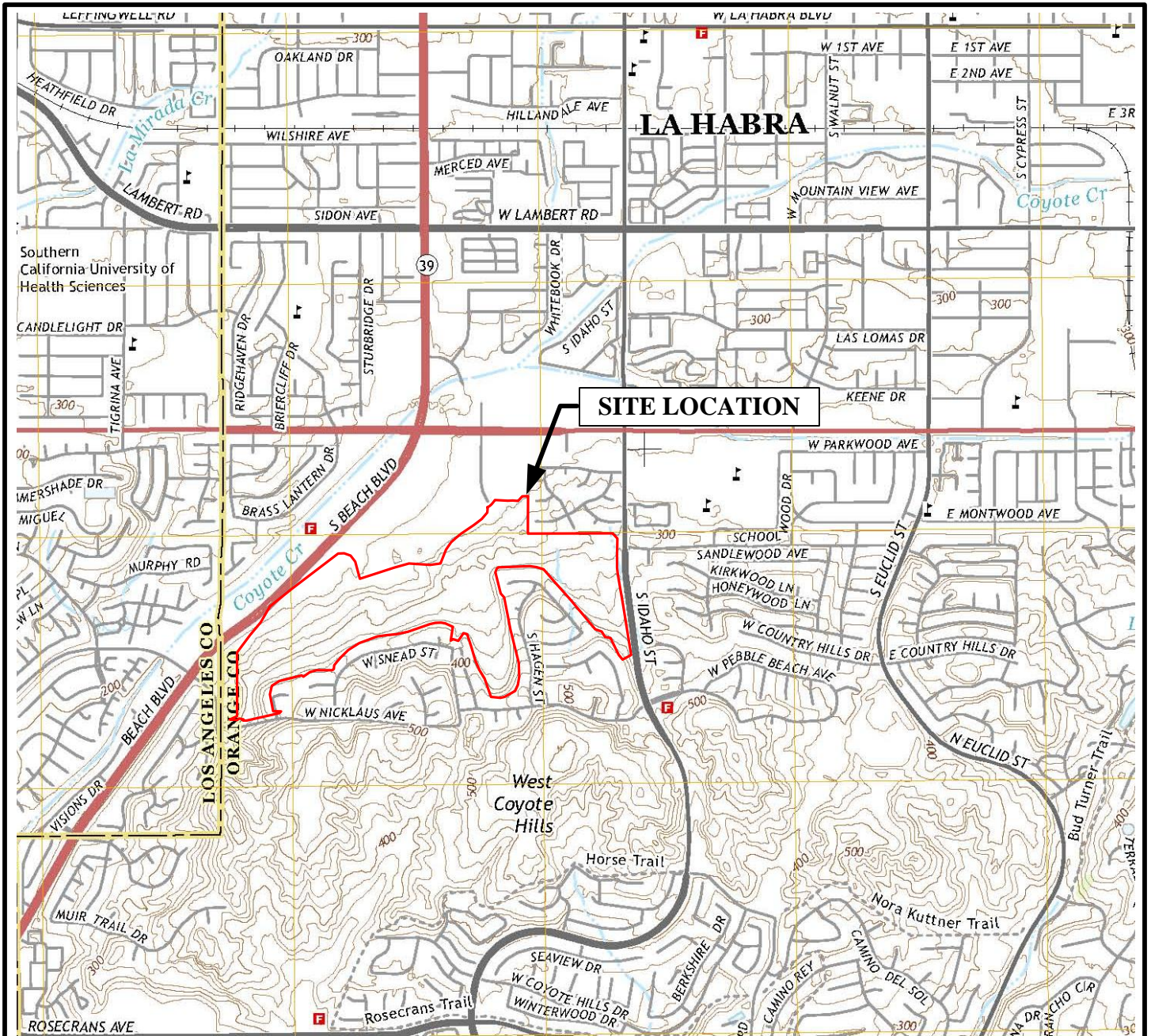
6.0 REPORTING

Following the implementation and conclusion of the work described in this Soil Management Plan, a technical report for the outlined activities will be prepared, and shall discuss all pertinent observations, procedures and findings related to the described activities and related laboratory analyses. Based on the findings and conclusions, appropriate recommendations will be made.

7.0 LIMITATIONS

This SMP is based upon the information obtained during the preparation of past and present investigation activities, information supplied by third parties, and subject property constraints. As always, this SMP reflects EEI's best efforts to meet the expectations of our clients' needs. Please note that individual tasks or projects discussed in this SMP may require specific health and safety plans, regulatory notification, and documentation not identified in this document. Additionally, all invasive subject property investigations are inherently based upon a small fraction of the actual subsurface data set, and conclusions are commonly based upon a variety of assumptions which may or may not be accurate. No warranty; expressed or implied, is made upon our investigation, nor its results and conclusions, due to these inherent uncertainties and unknowns.

FIGURES



Map Source: USGS La Habra, California 7.5 Minute Quadrangle map (USGS, 2015)

LEGEND



Scale: 1" = 2,000'



Note: All Locations Are Approximate

SITE LOCATION MAP

STANDARD PACIFIC HOMES

Proposed Residential Property

1400 South La Habra Hills Drive

APNs 019-481-03 and 019-481-04

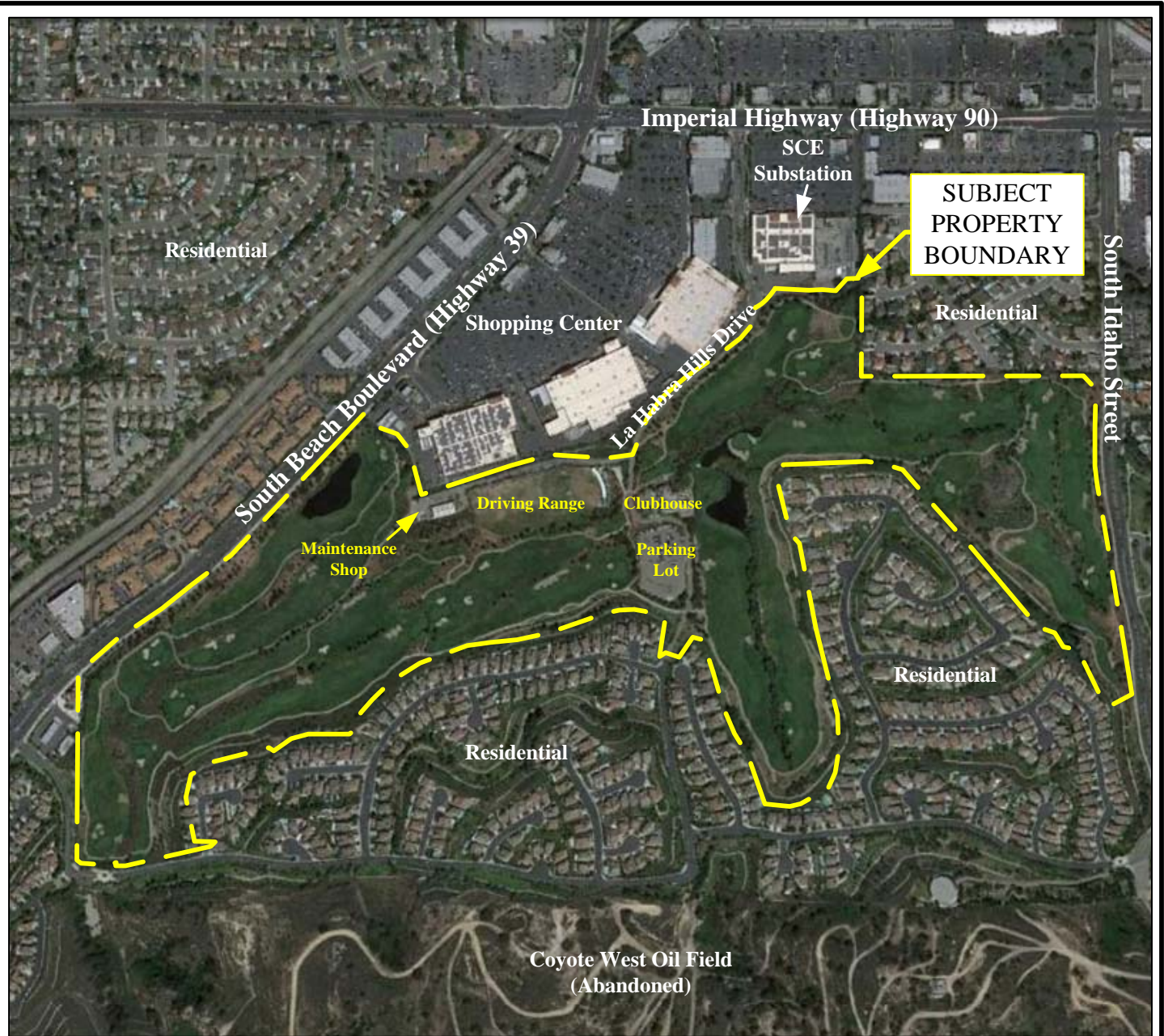
La Habra, Orange County, California 90631

EEl Project Number SPH-71933.1

Created May 2015



FIGURE 1

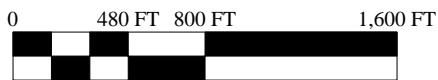


Source: Google Earth, 2014; Image Date: April 16, 2013

LEGEND



Scale: 1" = 800'



Note: All Locations Are Approximate

AERIAL SITE MAP

STANDARD PACIFIC HOMES

Proposed Residential Property

1400 South La Habra Hills Drive

APNs 019-481-03 and 019-481-04

La Habra, Orange County, California 90631

EEl Project Number SPH-71933.1

Created June 2014



FIGURE 2


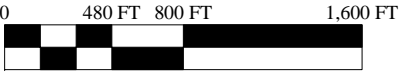
This page intentionally left blank.



Source: Google Earth, 2015; Image Date: April 23, 2015

LEGEND

 Existing Soil Reuse Areas

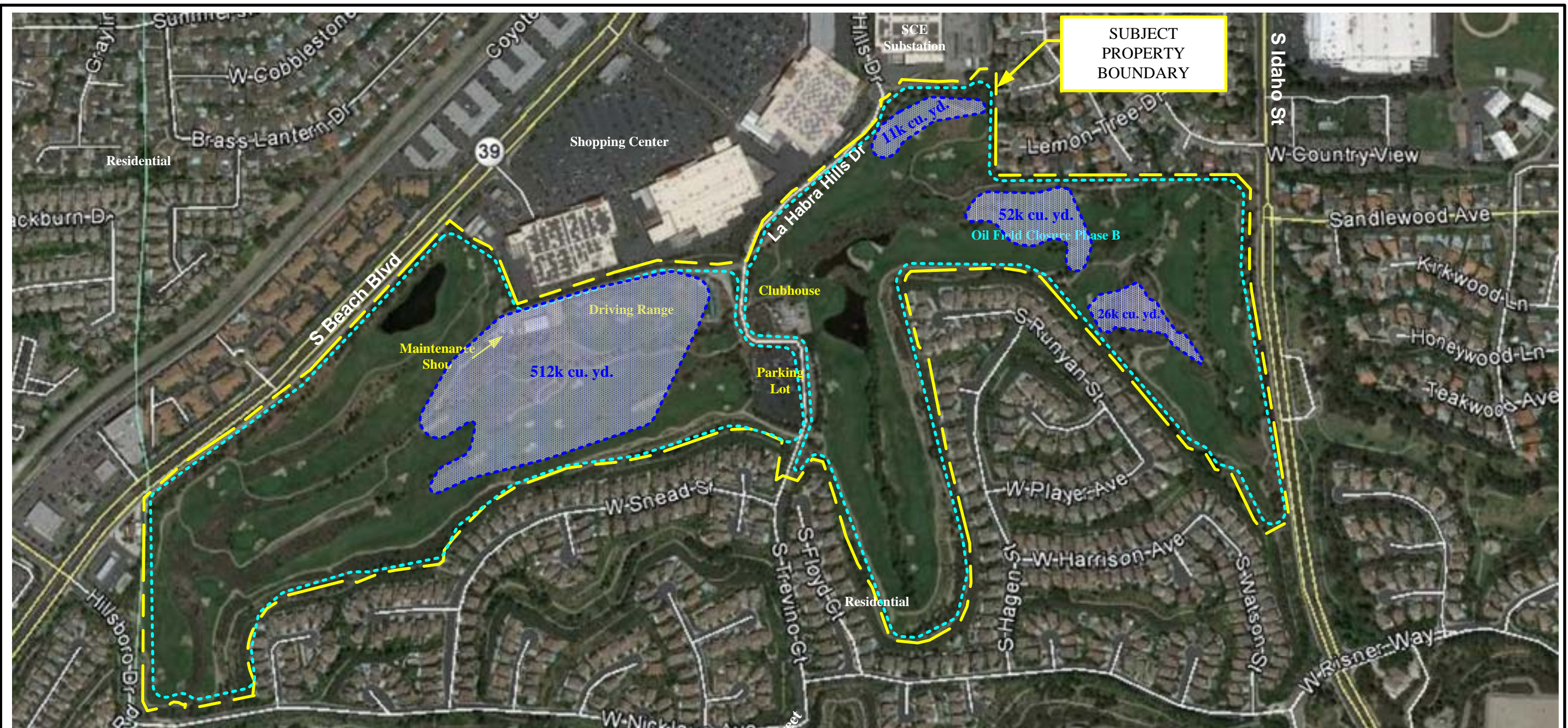

Scale: 1" = 800'

 Note: All Locations Are Approximate

SITE MAP w/ Existing Reuse Areas
 STANDARD PACIFIC HOMES
Proposed Residential Property
 1400 South La Habra Hills Drive
 APNs 019-481-03 and 019-481-04
 La Habra, Orange County, California 90631
 EEI Project Number SPH-71933.1
 Created June 2015



FIGURE 3

This page intentionally left blank.

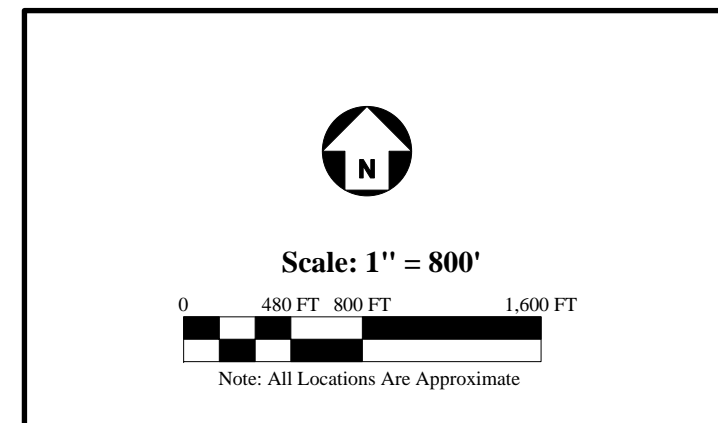


Source: Google Earth, 2015; Image Date: April 23, 2015

LEGEND



**Proposed Soil Deep Fill (20-ft. Cover) Areas
w/ estimated volume (in cubic yards)**



SITE MAP w/ Deep Fill Locations

STANDARD PACIFIC HOMES
Proposed Residential Property
 1400 South La Habra Hills Drive
 APNs 019-481-03 and 019-481-04
 La Habra, Orange County, California 90631
 EEI Project Number SPH-71933.1
 Created July 2015



FIGURE 4

This page intentionally left blank.

TABLES

RESULTS OF STATISTICAL ANALYSIS OF INPLACE SOIL SAMPLING FOR REUSE AREA 1

	Laboratory Analytical Test Method		
	EPA 418.1 (TRPH)	EPA 8015M (Diesel Range Petroleum Hydrocarbons)	EPA 8015M (Gasoline Range Petroleum Hydrocarbons)
Sample Mean (mg/kg)	1,559	296	6.1
Standard Deviation (mg/kg)	2,085	515.5	28.5
Standard Error	142.5	35.2	2
Tabulated "t" Value	1.280	1.280	1.280
Upper Limit of Confidence Interval (mg/kg)	1,741.5	341	8.6
Maximum Concentration (mg/kg)	13,000	3,600	240

RESULTS OF STATISTICAL ANALYSIS OF INPLACE SOIL SAMPLING FOR REUSE AREA 2

	Laboratory Analytical Test Method		
	EPA 418.1 (TRPH)	EPA 8015M (Diesel Range Petroleum Hydrocarbons)	EPA 8015M (Gasoline Range Petroleum Hydrocarbons)
Sample Mean (mg/kg)	1,640	272	35.7
Standard Deviation (mg/kg)	2408.5	438.3	85.2
Standard Error	322	58.6	11.4
Tabulated "t" Value	1.296	1.296	1.296
Upper Limit of Confidence Interval (mg/kg)	2,057	348	50.4
Maximum Concentration (mg/kg)	13,000	1,672	350

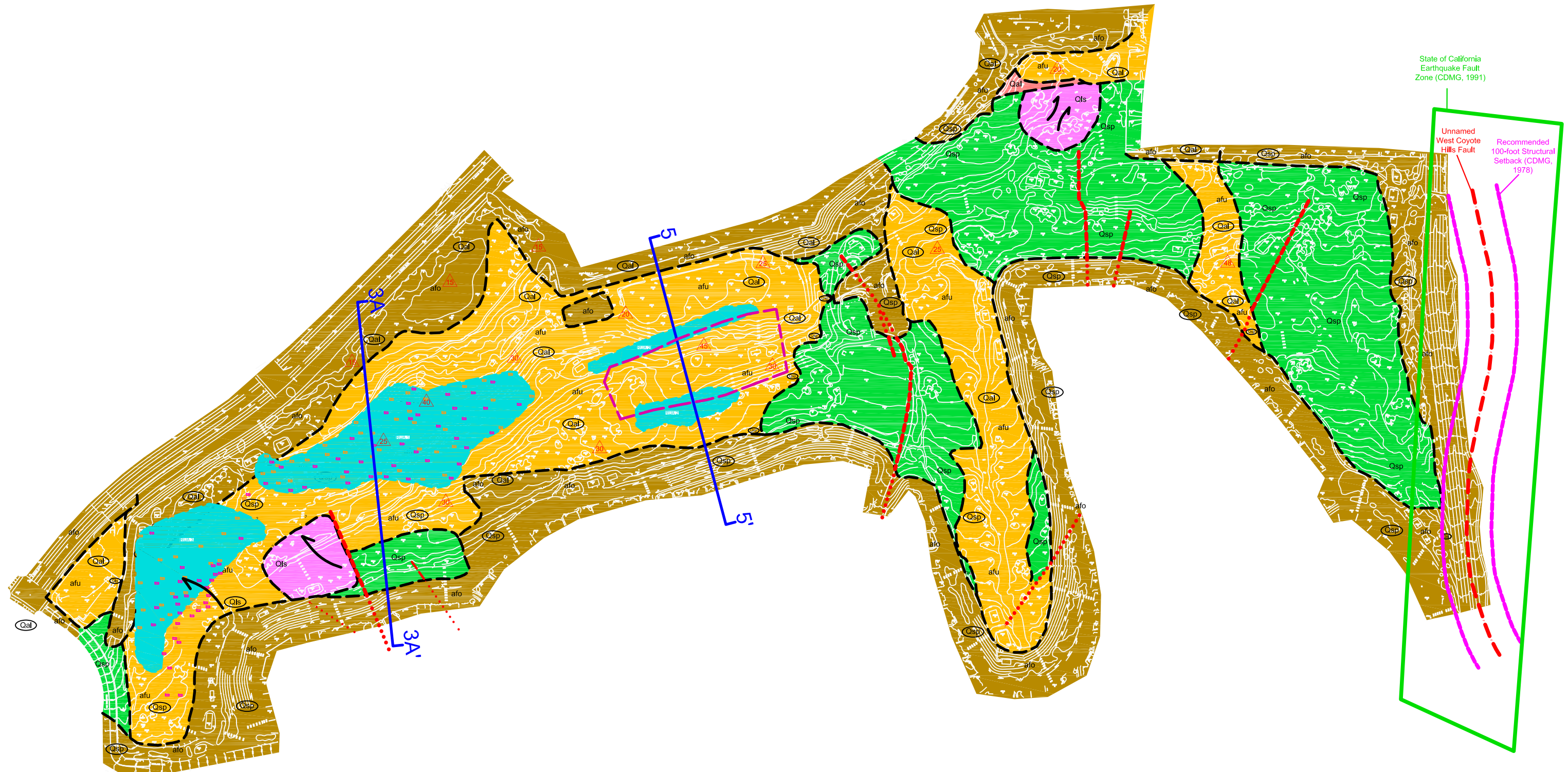
RESULTS OF STATISTICAL ANALYSIS OF INPLACE SOIL SAMPLING FOR REUSE AREA 3

	Laboratory Analytical Test Method		
	EPA 418.1 (TRPH)	EPA 8015M (Diesel Range Petroleum Hydrocarbons)	EPA 8015M (Gasoline Range Petroleum Hydrocarbons)
Sample Mean (mg/kg)	2995	1,001.55	69.66
Standard Deviation (mg/kg)	2319.4	1,576.23	102
Standard Error	190.1	129.2	8.36
Tabulated "t" Value	1.280	1.280	1.280
Upper Limit of Confidence Interval (mg/kg)	3238	1,167	80.36
Maximum Concentration (mg/kg)	16,862	6,800	600

Source: Closure Report (Miller Brooks Environmental, Inc., June 1, 1999)

**APPENDIX A
GEOLOGIC MAP AND CROSS-SECTIONS (LGC GEOTECHNICAL, INC.)**

This page intentionally left blank.



State of California
Earthquake Fault
Zone (CDMG, 1991)

Unnamed
West Coyote
Hills Fault
Recommended
100-foot Structural
Setback (CDMG,
1978)

DRAFT



LGC Geotechnical, Inc.
131 Calle Iglesia, Ste. 200
San Clemente, CA 92672
TEL (949) 369-6141 FAX (949) 369-6142

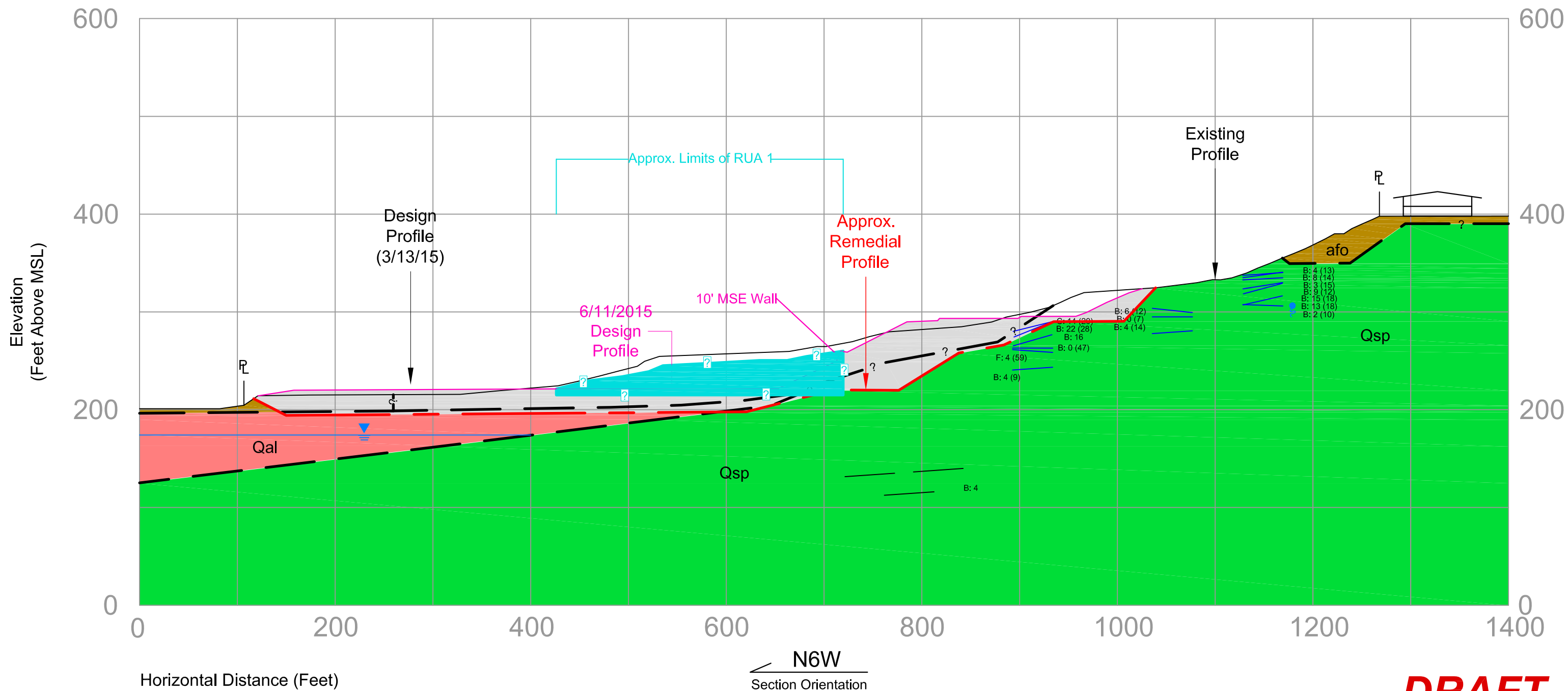
Draft Geotechnical Map

PROJECT NAME	Westridge
PROJECT NO.	14057-01
ENG. / GEOL.	DJB / KTM
SCALE	1" = 400'
DATE	June 2015

This page intentionally left blank.

3A

3A'



DRAFT



LGC Geotechnical, Inc.
 131 Calle Iglesia, Ste. 200
 San Clemente, CA 92672
 TEL (949) 369-6141 FAX (949) 369-6142

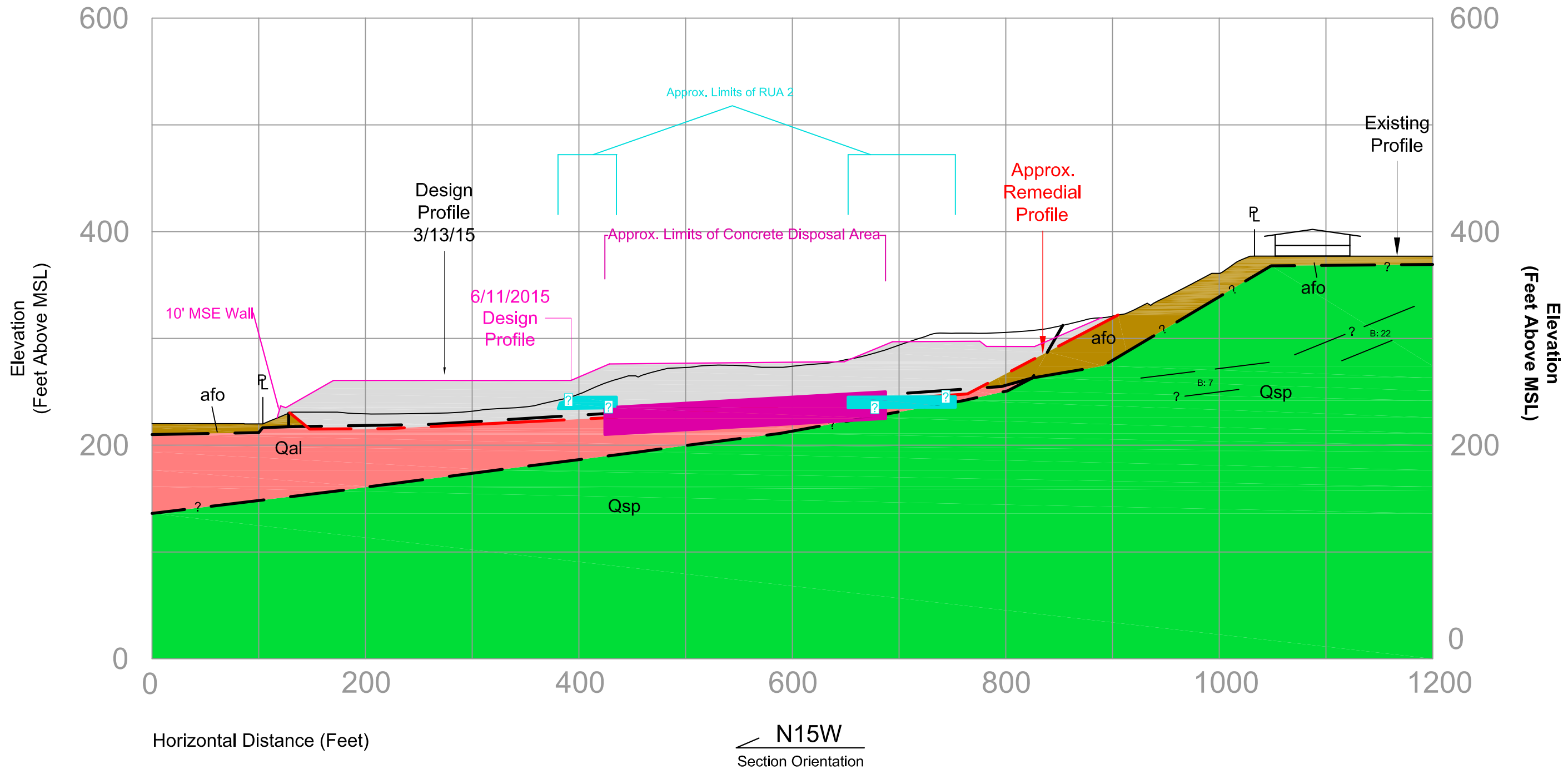
**Draft Geotechnical Cross Section
 3A-3A'**

PROJECT NAME	Westridge
PROJECT NO.	14057-01
ENG. / GEOL.	DJB / KTM
SCALE	1" = 100'
DATE	June 2015

This page intentionally left blank.

5

5'



DRAFT



LGC Geotechnical, Inc.
 131 Calle Iglesia, Ste. 200
 San Clemente, CA 92672
 TEL (949) 369-6141 FAX (949) 369-6142

Draft Geotechnical Cross Section
5-5'

PROJECT NAME	Westridge
PROJECT NO.	14057-01
ENG. / GEOL.	DJB / KTM
SCALE	1" = 100'
DATE	June 2015

This page intentionally left blank.

**APPENDIX B
OCHCA FINAL CASE CLOSURE/REMEDIAL ACTION COMPLETION CERTIFICATE**



**COUNTY OF ORANGE
HEALTH CARE AGENCY**

DONALD R. OXLEY
DIRECTOR

HILDY MEYERS, M.D.
INTERIM HEALTH OFFICER

JACK MILLER, REHS
DEPUTY DIRECTOR

**PUBLIC HEALTH
DIVISION OF ENVIRONMENTAL HEALTH**

MAILING ADDRESS:
2009 EAST EDINGER AVENUE
SANTA ANA, CA 92705-4720

TELEPHONE: (714) 667-3600
FAX: (714) 568-5116

July 1, 1999

Jeff Rulon
PLC Land Company
23 Corporate Plaza, Suite 250
Newport Beach, CA 92660

Subject: **Final Case Closure**

Re: PLC Land Company
Tracts 15030 and 15031
SE Quadrant - Beach Blvd & Imperial Highway
La Habra, CA 92631
OCHCA Case # 97IC7

Dear Mr. Rulon:

This letter confirms the completion of remedial action at the above-referenced site. With the provision that the information provided to this Agency was accurate and representative of existing conditions, it is the position of this office that no further action is required at this time.

This confirmation of completion is limited in scope. It is limited to site conditions made known to this Agency under the above-referenced case number. It is based on an evaluation of the health threat presented by the inhalation, ingestion, or dermal absorption of the residual contaminants. In addition, this evaluation considered the present and proposed use of the property. Changes in the present or proposed land use may require further site characterization and/or site mitigation activity.

The presence of the petroleum hydrocarbons and the potential for residual contamination to cause groundwater contamination at this site was evaluated by Ray Akhtarshad of the Santa Ana Regional Water Quality Control Board. The Santa Ana Regional Board, in its letter dated June 24, 1999, concluded that no further action is required for this site (Tracts 15030 and 15031) at this time.

Please be advised that this letter does not relieve you of any liability under the California Health and Safety Code or Water Code for past, present or future operations at the site. Nor does it relieve you of the responsibility to clean up existing, additional or previously unidentified conditions at the site which cause or threaten to cause pollution or nuisance or otherwise pose a threat to water quality or public health. It is the property owner's responsibility to notify this Agency of any changes in future contamination findings or site usage.

Closure Rationale

OCHCA Case No.: **97IC7**

June 25, 1999

D.B.A.: **PLC Land Tracts 15030 & 15031**
 SE Corner of Beach Blvd & Imperial Highway
 West Coyote Hills
 La Habra, CA 90631

Responsible Party: Jeff Rulon c/o
 PLC Land Company

Current Land Use: Vacant
Current Adjacent Land Use: Vacant/Under Development
Future Land Use: Recreational (Golf Course)

Table I. Nature & Degree of Contamination

Contaminants	Maximum Concentrations (mg/kg)		PRG [*]	STLC ^{**}
	Initial	Final	(mg/kg)	(mg/l)
TRPH (418.1)	17,000 (3' bg*) 57,000 (27' bg)	610 (5' bfg*); 631 (12' bfg) 16,862 (25' bfg)	--	--
TPH 8015-gas	8,900 (3' bg) 9,200 (5' bg)	0.53 (87' bfg) 600 (25' bfg)	--	--
TPH 8015-diesel	Not Tested	6,800 (25' bfg)	--	--
Benzene	0.013 (5' bg); 0.05 (25' bfg)	N.D. (5' bfg); 0.05 (25' bfg)	0.62	--
Ethylbenzene	N.D. (5' bg); 1.86 (39' bfg)	N.D. (5' bfg); 1.86 (39' bfg)	230	--
Toluene	0.022 (5' bg); 1.56 (39' bfg)	1.56 (39' bfg)	520	--
Xylene (meta)	N.D. (5' bg); 7.35 (82' bfg)	7.35 (82' bfg)	210	--
Lead (Pb)	220 (3' bg) [total]	53.5 (5' bg) [total] 0.97 mg/l (5' bg) [soluble]	130	5
Nickel (Ni)	590 (4.5' bg) [total] 61 mg/l (4.5' bg) [soluble]	54.6 (5' bg) [total]	150	20
PCB (Aroclor 1254)	660 (1/2' bg)	<6 (30' bfg)	0.20 1.3 (industrial)	--

* bg = depth below (initial) grade; bfg = depth below final grade

**Soluble Threshold Limit Concentration

^{*} Preliminary Remediation Goals, US EPA 9, residential

Soil Types: Generally sand, with occasional silt, clay and gravel

Depths to Groundwater: 100-110 ft bg in mid-elevation areas; measured

The portion of Chevron's West Coyote oil field included in this rationale is comprised of Phase A within Tract 15030 that is being developed as a golf course, and is the last of four development phases within this property to be remedied. Remedial action on three other portions of the property—that are slated for housing development and a reservoir site—have been completed. Phases D and B were granted OCHCA closure in April 1998 (with the SARWQCB granting Phase D closure in April 1998 and Phase B closure in May 1998); OCHCA granted Phase C closure in October 1998 following SARWQCB's closure for the same in September 1998. Remedial action objectives for this phase include the monitoring of previously known impacted soil, observing grading activities to identify additional impacted areas, conducting additional soil assessment where necessary, collecting confirmation samples to verify successful removal of contaminated soil, monitoring the handling of impacted soil—including the monitoring and sampling of impacted soil placed within approved "reuse areas"—three areas within the proposed golf course that the SARWQCB and OCHCA approved for placement of impacted soil as long as placement of affected soil was in accordance with the SARWQCB's *General Guidelines for the Reuse of Petroleum Contaminated Soil as Construction Fill for Roadway Projects* and OCHCA's approved remedial action plan cleanup standards.

Identification of areas of environmental concern within the Chevron property as a whole was accomplished during various site assessments performed by Dames & Moore and Environmental Science & Engineering from 1990 through 1996. The areas of concern within Phase A include oil wells sites, 'historical sites' (areas utilized as containment sumps for spills, drill mud and oil production discharges, or areas considered as potential containment sites), tank settings, previously unidentified sites uncovered during excavation and grading activities, and miscellaneous locations that include a former garage/repair shop and detention basin berms. A former facility service station site, located in the northern portion of Closure Phase A, used to contain two underground fuel storage tanks (UST) and one dispenser island. These were removed sometime in 1986 and soil impacted with fuel waste was reportedly excavated and transported to the Bradley Landfill in Sun Valley, CA. No permits for the UST are available, nor do records exist of any tank removal at this facility. Because of the reported presence of contamination resulting from the UST release, all information pertaining to this UST facility has been forwarded to Local Oversight Program (LOP) staff who will open an UST case file and proceed to address the UST fuel release.

During the course of investigation within this former Chevron property, all samples were analyzed for total petroleum hydrocarbons by EPA Methods 418.1 or 8015, and selected samples were routinely analyzed for VOC by either EPA Methods 8010/8020 or 8260, semi-volatile organics (including PAHs) by EPA Method 8270, CAM metals by EPA Method 6010, pesticides and PCBs by EPA Method 8080 (in areas where transformers were known to have been located or where pesticides were suspected to have been applied), and pH by EPA Method 9045. In closure Phase C, no pesticides or PCBs were detected. Except for insignificant amounts of some chemicals such as acetone and BETX, isolated occurrences of naphthalene and other unregulated hydrocarbon compounds, as well as some metals with concentrations greater than 10 x STLCs but less than PRGs, no other significant contamination by 8010, 8020, 8240 and 8270 compounds was detected. The range of pH values in soil samples was well within acceptable limits.

Summary of Mitigation Effort. The following summarizes the assessment/mitigation activities conducted in areas of concern within this closure Phase A for the period December 1996 to December 1998.

A. Well Sites

Of the 104 wells drilled within the Chevron West Coyote property, 17 were located within closure Phase A; 6 of these were found to be impacted with TRPH above cleanup criteria. These were excavated to remove impacted material and confirmed by subsequent sampling to have no significant residual contamination. One well site, MC-319, was not assessed during an earlier investigation but was observed and field-screened during grading operations: no impacted soil was identified in this well site.

B. Historical Sites

Ten former 'historical sites' were present within Phase A. Of these, eight were identified as having been impacted by crude oil above cleanup criteria. One of these (HS 106) was addressed during the remediation program on the easterly adjacent Emery Lease property (granted OCHCA closure in December 1997) but was again included in the Phase A remediation and grading activities. Three others (HS 3, HS 6 and HS 7) were encompassed by the '1945 Unit Stock Tank' (a tank setting site) excavation and confirmation sampling, while HS 11 and HS 13 were actually extensions from a previous (Phase C) excavation. With the exception of those included as part of a tank setting site, confirmation sampling of the historical sites showed successful removal of significantly impacted soil.

C. Tank Settings

In addition to the 3 former tank settings known from earlier investigations, 3 others were discovered during remediation/grading activities as having been impacted with crude oil. One tank setting was discovered during trenching activities associated with the installation of a storm drain that extended into and subsequently overlapped another tank setting excavation. Another tank setting (MC-313TS) was an extension of a Phase C excavation that extended into Phase A. All significantly impacted soil from all these tank settings were excavated and verification sampling results indicate successful removal of soil impacted above cleanup criteria.

D. Previously Unidentified Sites

Three previously unknown impacted sites were identified during grading operations. One of these was an extension of an affected area within Phase C. All three sites were excavated and confirmed to contain no significant residual contamination.

E. Miscellaneous Areas

Storm water containment (detention basin) berms were constructed by Chevron parallel to Beach Blvd. in the former locations of 1945 Unit Stock tanks, HS 6 and 7 and well MC-317. Impacted soil from these areas was excavated and utilized in berm construction. Prior to grading activities this impacted soil was assessed, and berm sections identified to

contain TRPH above cleanup levels were removed and placed in one of three designated stockpile areas. Two relatively high TRPH spots (2,900 and 4,500 mg/kg @ 5' bg) were left in place, but these would eventually be at a depth of at least 25' bfg.

From June 1995 through November 1996, Chevron's former field services maintenance area and a power pole site further south were investigated for possible contamination. Soil samples collected from trenches dug in the field maintenance area showed that the former garage/repair shop had soil contaminated by high levels of lead (100 mg/kg Pb) and nickel (590 mg/kg Ni), although other metals, TRPH, TPH and volatile organics were present in insignificant amounts. The transformer on the power pole, on the other hand was reportedly struck by lightning and one surface soil sampling in this location showed that PCBs were present to a depth of 3' bg. After delineating the extent of impact in both areas, contaminated soil was removed and transported under manifest to an approved disposal facility. Verification sampling confirmed that residual Pb and Ni are below 10xSTLCs at a depth of 5' bg, while a maximum concentration of 6 mg/kg residual PCBs is present in the power pole area at a depth of 5' below original grade. The power pole area, after grading, is now situated at a depth of 30' below final grade.


Final Closure Activities. Upon excavation, all crude oil-impacted soil from closure Phases A, B, C and D was transported to SARWQCB-approved stockpile areas located at the northern part of Phase A (Tract 15030) for eventual re-use within the western portion of the designated golf course (Phase A). Three stockpile areas were used, depending of the degree of crude oil impact: Stockpile 1 for <5,000 ppm TRPH; Stockpile 2 for 5,000-20,000 ppm TRPH; and Stockpile 3 for >20,000 ppm TRPH. During placement of impacted soil, the soil piles were disced and hydrated regularly to help the natural degradation of TRPH. When the stockpiled soil was ultimately relocated within the reuse areas, the underlying native soil in stockpile sites was sampled and analyzed for TRPH by EPA Method 418.1 and confirmed to contain no detectable or minimal TRPH.


Placement of stockpiled, crude oil-affected soil in reuse areas was approved by the Regional Board and OCHCA primarily because of the low potential for TRPH to leach from the soil; a minimum of 20 to 25 ft of clean soil cover would be placed above the impacted soil; utility lines within the reuse areas would be within the top 10 ft of soil; and the reuse areas are to have no other development in the future aside from a golf course and ancillary facilities.

Reuse Areas 1 and 2 are located in the driving range of the golf course, while Reuse Area 3 is between the greens of proposed Hole 7 and Hole 2. A licensed surveyor delineated the locations of the reuse areas and provided elevation controls to insure that a minimum of 20 ft of clean soil would cap Reuse Areas 2 and 3, and a minimum of 25 ft of clean cover would be placed in Reuse Area 1. During placement of affected soil in the reuse areas, random soil samples were collected at a ratio of one sample to about 1,000 cubic yards of material, for analysis of TRPH (EPA 418.1), TPH/gasoline and TPH/diesel (EPA 8015M), and BTEX (EPA 8020). When analytical results showed the presence of BTEX, re-analysis by EPA 8260 was conducted for greater analytical accuracy. When contaminant concentrations exceeded cleanup criteria, the affected soil was returned to the temporary stockpile for additional biodegradation. A final tally of analytical data showed that TRPH concentrations in the reuse areas ranged from N.D. to 12,000 mg/kg, except one sample from Reuse Area 2 with 13,000 mg/kg TRPH and another from Reuse Area 3 with 16,862 mg/kg TRPH.

Based on the remedial action accomplished at this site, and the results of confirmation sampling and final field inspections, removal of significantly impacted soil from closure Phase A is deemed complete, leaving site soils with residual contaminant concentrations within approved cleanup goals. With the added safeguard of deep burial (at no less than 20 ft below grade), residual soil contamination poses no significant threat to human health or the environment; it is therefore recommended that no further action be required for this portion (Phases A) of the property. Furthermore, since all the three other development phases (B, C and D) within this property have equally been successfully mitigated in accordance with approved Agency guidelines, it is recommended that this case be closed.

The Santa Ana Regional Water Quality Control Board (SARWQCB) has determined that development Phases B, C and D of the property no longer pose a threat to water quality and granted them closure in 1998. A similar favorable determination has been made for Phase A, and a final closure for the entire development was granted by the Regional Board on June 24, 1999.


Luis Lodrigueza
Hazardous Waste Specialist


6/28/99

Karen J. Havel
7/1/99



California Regional Water Quality Control Board

Santa Ana Region



Gray Davis
Governor

Winston H. Hickox
Secretary for
Environmental
Protection

Internet Address: <http://www.swrcb.ca.gov>
3737 Main Street, Suite 500, Riverside, California 92501-3339
Phone (909) 782-4130 • FAX (909) 781-6288

June 24, 1999

Jeff Rulon
PLC Land Company
23 Corporate Plaza, Suite 250
Newport Beach, CA 92660

DEVIS (10)
PLC Land
(7) 99J09 - PLC Land

CLOSURE REPORT FOR TRACT 15030, PHASE A AT THE FORMER WEST COYOTE HILLS OIL FIELD, CITY OF LA HABRA

Dear Mr. Rulon:

We have reviewed your June 1, 1999 submittal of the Closure Report (report) for Tract 15030, Phase A at the former West Coyote Hills oil field. This report was prepared and submitted by your consultant, Miller Brooks Environmental, Inc. The report summarizes the remedial and closure activities at the above site, which were carried out in accordance with the requirements outlined in the previously approved workplan. This report is the last in a series of four, which completes the full closure of Tracts 15030 and 15031 within the former West Coyote Hills oil field.

After reviewing the report and the analytical results of the confirmation samples, we believe that the site no longer poses a threat to water quality; therefore, no further action will be necessary at this site (Tracts 15030 and 15031). This closure letter does not relieve you of your responsibility to comply with the rules and regulations set forth by other agencies.

If you have any questions, please contact me at (909) 320-2024.

Sincerely,

Ray Akhtarshad
Associate Water Resources Control Engineer

cc: Tom Rauls, Miller Brooks Environmental, Inc.
Michael J. Stafford, Chevron Land and Development Company
Lloyd Dick, City of La Habra, Community Development Department
Luis Lodriguiza, OCHCA

RAIC:\DATA\PETRO\CHEVRON\COYOTE-8.DOC

California Environmental Protection Agency





COUNTY OF ORANGE
HEALTH CARE AGENCY

REGULATORY HEALTH SERVICES
ENVIRONMENTAL HEALTH

JULIETTE A. POULSON, RN, MN
DIRECTOR

MIKE SPURGEON
DEPUTY AGENCY DIRECTOR
REGULATORY HEALTH SERVICES

STEVEN K. WONG, REHS, MPH
DIRECTOR
ENVIRONMENTAL HEALTH

MAILING ADDRESS:
2009 EAST EDINGER AVENUE
SANTA ANA, CA 92705-4720

TELEPHONE: (714) 667-3600
FAX: (714) 972-0749

E-MAIL: environhealth@hca.co.orange.ca.us

*Excellence
Integrity
Service*

November 22, 2002

Jeff Rulon
PLC Land Company
19 Corporate Plaza
Newport Beach, CA 92660

Subject: **Remedial Action Completion Certification**

Re: Underground Storage Tank (UST) Case
Former Facility Service Station at Former W. Coyote Hills Oil Field, Tract 15030
3282 South Beach Boulevard, La Habra, CA
O.C.H.C.A. Case # 99UT043

Dear Mr. Rulon:

This letter confirms the completion of site investigation and corrective action for the underground storage tank(s) formerly located at the above-described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tank(s) are greatly appreciated.

Based on information in the above-referenced file and with the provision that the information provided to this Agency was accurate and representative of site conditions, this Agency finds that the site investigation and corrective action carried out at your underground storage tank(s) site is in compliance with the requirements of subdivisions (a) and (b) of Section 25299.37 of the Health and Safety Code and with corrective action regulations adopted pursuant to Section 25299.77 of the Health and Safety Code and that no further action related to the petroleum release(s) at the site is required.

This notice is issued pursuant to subdivision (h) of Section 25299.37 of the Health and Safety Code.

Please contact Kathryn Cross of our office at (714) 667-3759 if you have any questions regarding this matter.

Sincerely,

Steven K. Wong, REHS, MPH, Director
Environmental Health Division

SKW:dp

Attachment: Case Closure Summary

cc: Rose Scott, Santa Ana Regional Water Quality Control Board
SB 562 Database, State Water Resources Control Board
Cleanup Fund Manager, State Water Resources Control Board
Larry Honeybourne, Environmental Health



COUNTY OF ORANGE
HEALTH CARE AGENCY

**REGULATORY HEALTH SERVICES
ENVIRONMENTAL HEALTH**

Cross
JULIETTE A. POULSON, RN, MN
DIRECTOR

MIKE SPURGEON
DEPUTY AGENCY DIRECTOR
REGULATORY HEALTH SERVICES

STEVEN K. WONG, REHS, MPH
DIRECTOR
ENVIRONMENTAL HEALTH

MAILING ADDRESS:
2009 EAST EDINGER AVENUE
SANTA ANA, CA 92705-4720

TELEPHONE: (714) 667-3600
FAX: (714) 972-0749
E-MAIL: environhealth@hca.co.orange.ca.us

*Excellence
Integrity
Service*

August 21, 2002

La Habra Westridge Partners
2222 E. 17th Street
Santa Ana, CA 92705-8608

Subject: **Draft Case Closure Summary Submission to Landowners**

Re: Underground Storage Tank (UST) Case
Former Facility Service Station at Former W. Coyote Hills Oil Field, Tract 15030
3282 South Beach Boulevard, La Habra, CA
O.C.H.C.A. Case # 99UT043

Dear Sirs:

This Agency has reviewed the case history of the subject site for the purpose of evaluating case closure. A Case Closure Summary prepared by this Agency has been forwarded to the California Regional Water Quality Control Board – Santa Ana Region (RWQCB) for their review and concurrence. Pursuant to Sections 25297.1 and 25297.15 of the California Health and Safety Code, this letter is being issued to notify you of our intention to seek concurrence with case closure by the RWQCB and to forward a copy of the draft Case Closure Summary for your information. If you have any information that would suggest that this case should not be closed, please inform this Agency, in writing at the above address, or by calling the undersigned within 30 days of the date of this letter.

If you have any questions regarding this matter or the requirements of this letter, please contact Kathryn Cross at (714) 667-3759.

Sincerely,

Karen L. Hodel

Karen L. Hodel
Program Manager
Hazardous Materials Mitigation Section
Environmental Health

Enclosure

cc: Rose Scott, Santa Ana Regional Water Quality Control Board

Case Closure Summary

Leaking Underground Fuel Tank Program

I. Agency Information

Date: July 1, 2002

Agency Name: Orange County Health Care Agency	Address: 2009 East Edinger Avenue
City/State/Zip: Santa Ana, CA 92705	Phone: (714) 667-3759
Responsible staff person: Kathryn Cross	Title: Hazardous Waste Specialist

II. Case Information

Site Facility Name: Former Facility Service Station at Former W. Coyote Hills Oil field, Tract 15030				
Site Facility Address: 3282 South Beach Boulevard, La Habra, CA				
RB LUSTIS Case No.: 083003650T		Local Case No.:		LOP Case No.: 99UT043
URF Filing Date:		SWEEPS No.		
Responsible Party		Address		Phone Number
Jeff Rulon PLC Land Company		23 Corporate Plaza, Suite 250 Newport Beach, CA 92660		949-721-9777
Tank No	Size in Gal.	Contents	Closed in-Place/Removed?	Date
1	10,000 gallon	Gasoline	Removed	12-23-86
2	6,000 gallon	Gasoline	Removed	12-23-86
3	3,000 gallon	Diesel	Removed	12-23-86
4	3,000 gallon	Diesel	Removed	12-23-86
5	350 gallon	New oil	Removed	4-28-86
6	500 gallon	Waste oil	Removed	4-28-86
7	5,000 gallon	Waste oil	Removed	4-28-86

III. Release and Site Characterization Information

Cause and type of release: Not known				
Site characterization complete? Yes			Date approved by oversight agency: Jan. 4, 2000	
Monitoring wells installed? No		Number: 0	Proper screened interval? NA	
Highest GW depth BGS: estimated > 100 feet		Lowest depth:	Flow direction:	
Most sensitive current use: Domestic and Municipal Supply				
Are drinking water wells affected? No			Aquifer name:	
Is surface water affected? No			Nearest/affected SW name: Coyote Creek	
Off-site beneficial use impacts (addresses/locations): None				
Report(s) on file? Yes			Where is report(s) filed? OCHCA	

Case Closure Summary
Leaking Underground Fuel Storage Tank Program

Case#: 99UT43
Date: May 13, 2002

III. Release and Site Characterization Information (Continued)

Treatment and Disposal of Affected Material			
Material	Amount (include Units)	Action (treatment or disposal/destination)	Date
Tank	7-USTs	Unknown	Unknown
Piping			
Soil	500 cubic yards	Bradley Landfill & Recycling Center, Sun Valley, CA	Unknown
Groundwater			

Maximum Documented Contaminant Concentrations - - Before and After Cleanup									
Contaminant	Soil (ppm)		Water (ppm)		Contaminant	Soil (ppm)		Water (ppm)	
	Before	After	Before	After		Before	After	Before	After
TPH (gas)	340	1.6	NA	NA	Ethylbenzene	0.830	<0.003	NA	NA
TPH (diesel)	6,500	150	NA	NA	Xylenes	2.0	<0.003	NA	NA
TRPH	13,600	380	NA	NA	MTBE	NA	<0.005	NA	NA
Benzene	<0.063	<0.003	NA	NA					
Toluene	0.220	<0.003	NA	NA					

Comments (Depth of Remediation, etc.):

This site was an oil field service station for maintenance and fueling of Chevron facility vehicles and consisted on seven underground storage tanks (USTs). In 1986, the seven USTs were removed and contamination noted however, a cleanup case was not opened until contamination was encountered during a land development project. Total recoverable petroleum hydrocarbon (TRPH) concentrations were 13,600 parts per million (ppm) at the time of tank removal and a narrative of the UST removal explained that all visible contaminated soil was removed and used for road base on the oil field.

In September 1995, a phase II assessment revealed that petroleum hydrocarbons existed in the area of the former oil field service station. Six soil borings (B1 through B6) were drilled to a depth of 20 feet below ground surface (bgs) except for boring B5; this borehole was drilled to a depth of 35 feet bgs. The highest detected total petroleum hydrocarbons quantified using a gasoline standard (TPH-g) was 340 ppm in Boring B1 at 10 feet bgs. Boring B5 at 20 feet had the highest concentration of TPH-diesel (d) at 6,500 ppm and toluene, ethylbenzene and total xylenes (TEX) at 0.190, 0.830 and 2.0 ppm, respectively.

In 1997, as part of the oil field cleanup activities, this area was excavated and approximately 500 cubic yards of contaminated soil was transported offsite for disposal. Excavation confirmation samples were collected and analyzed until all samples were non-detected for TPH-g, TPH-d, TRPH and BTEX.

Case Closure Summary
Leaking Underground Fuel Storage Tank Program

Case#: 99UT43
Date: **May 13, 2002**

Comments (Depth of Remediation, etc.): (Continued)

In September 1999, the Orange County local oversight program (LOP) that provides oversight of UST sites for the state was notified of the former UST site on the oil field property. This Agency required three borings at the former oil field service station. Boring B1 was drilled to a depth of 52.5 feet bgs and B2 and B3 were drilled to a depth of 42.5 feet bgs. The depths of these borings below ground surface do not exactly equate to the previous sampling depth due to grading activities that added 20 feet of soil to the area. However, the depth of Boring B1 exceeded the depths of the pre-1999 sampling. TPH-g, TPH-d and BTEX were not detected in any of the soil samples collected from these borings.

Groundwater was not detected during any of the phases of investigation and is estimated to be greater than 100 feet bgs. There is one production well located up-gradient approximately 1500 feet from the site.

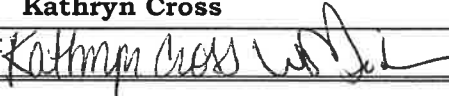
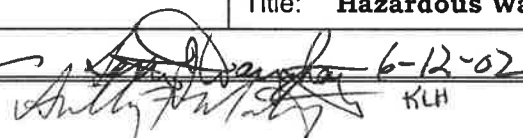
This site is recommended for closure based on the following:

- The area of the former oil field service station has been excavated twice resulting in the removal of the contaminated soil,
- During the second excavation activities, soil was excavated until petroleum hydrocarbons were no longer detected,
- TPH-g, TPH-d, BTEX and MTBE was not detected in the soil during confirmation drilling, and
- Groundwater is estimated to be greater than 100 feet bgs.

IV. Closure

Does completed corrective action protect <i>existing</i> beneficial uses per the Regional Board Basin Plan?		Yes
Does completed corrective action protect <i>potential</i> beneficial uses per the Regional Board Basin Plan?		Yes
Does corrective action protect public health for current land use?		Yes
Site management requirements: None		
Should corrective action be reviewed if land use changes?		No
Monitoring wells decommissioned: No	Number decommissioned: 0	Number Retained: 0
List enforcement actions taken: None		
List enforcement actions rescinded: None		

V. Local Agency Representative Data

Name: Kathryn Cross	Title: Hazardous Waste Specialist
Signature: 	Date: 5-13-02
 6-12-02 KLH	

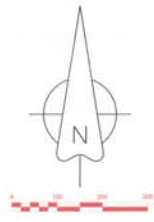
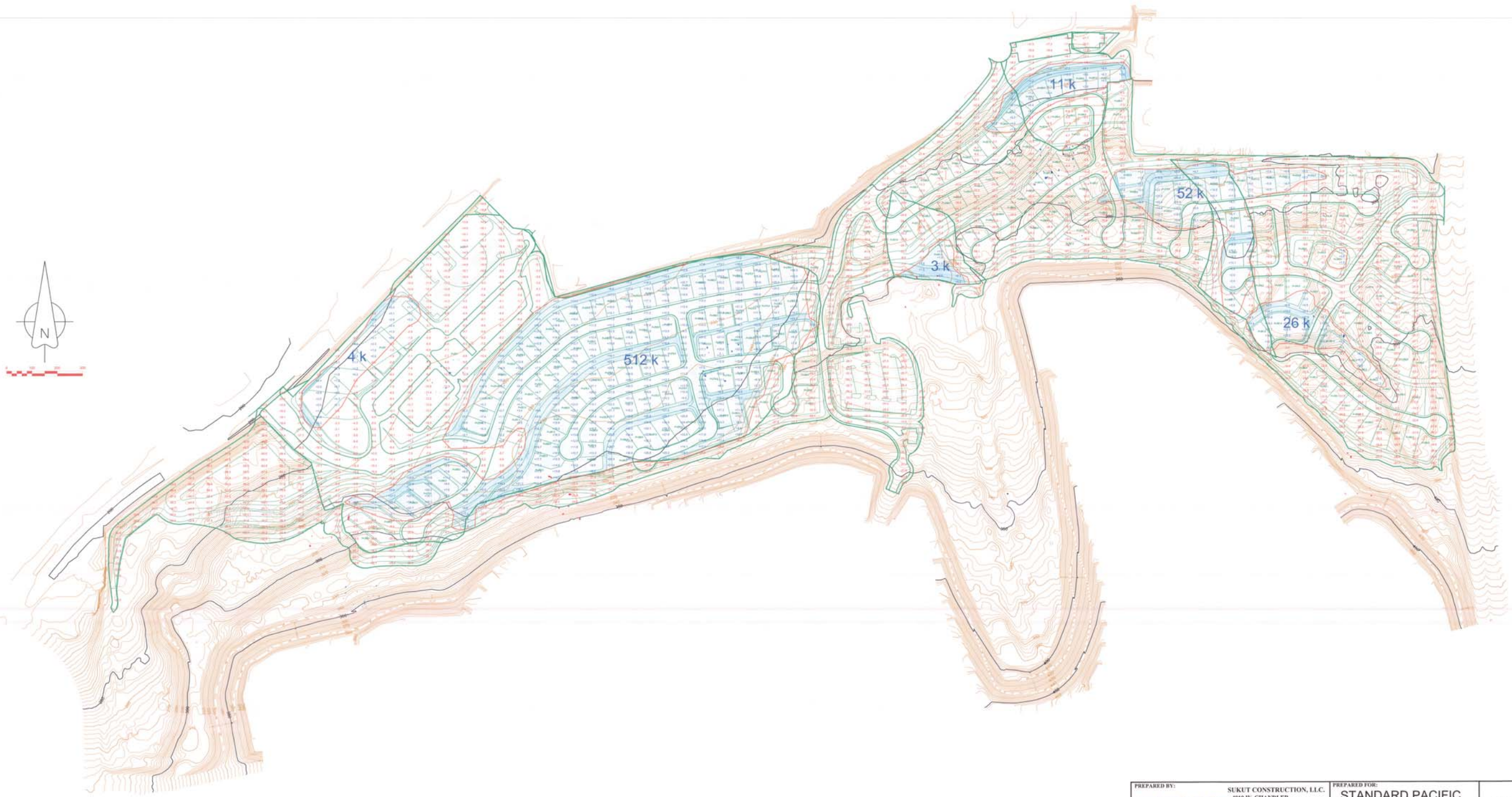
VI. RWQCB Notification

Date Submitted to RB:	RB Response:	
RWQCB Staff Name:	Title:	Date:
Signature:	Title: Chief, UST Section	Date:

This page intentionally left blank.

**APPENDIX C
CUT/FILL AND 20-FOOT HOLD DOWN MAPS (SUKUT CONSTRUCTION, INC.)**

This page intentionally left blank.



PREPARED BY: SUKUT CONSTRUCTION	SUKUT CONSTRUCTION, LLC. 4010 W. CHANDLER SANTA ANA, CA 92704 PHON(714)545-5151 FAX(714)545-2003 www.Sukut.com	PREPARED FOR: STANDARD PACIFIC HOMES	WESTRIDGE 20 Ft Hold Down with Removal
SHEET NUMBER: 14-106		SCALE: 1:100	DATE: June 2015
SHEET TITLE: 20 FT HOLD DOWN WITH REMOVAL		SHEET 1 OF 1	

This page intentionally left blank.

This page intentionally left blank.