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**TRANSMITTAL**

DATE: May 27, 2011 REFERENCE NO.: 240695  
PROJECT NAME: 4895 Hacienda Drive, Dublin  
TO: Jerry Wickham  
Alameda County Environmental Health  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502

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Environmental Health

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 Prints

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 Overnight Courier  Other GeoTracker and Alameda County FTP

QUANTITY	DESCRIPTION
1	Revised Subsurface Investigation Work Plan

As Requested  For Review and Comment  
 For Your Use  \_\_\_\_\_  
 \_\_\_\_\_

**COMMENTS:**  
If you have any questions regarding the content of this document, please contact Peter Schaefer at (510) 420-3319.

Copy to: Denis Brown, Shell Oil Products US (electronic copy)  
Carl Cox, CJC Hacienda LLC, 4431 Stoneridge Drive #100, Pleasanton, CA 94588-8417  
Cheryl Dizon, Zone 7 Water Agency, 100 North Canyons Parkway, Livermore, CA 94551

Completed by: Peter Schaefer Signed: *Peter Schaefer*

Filing: Correspondence File



Mr. Jerry Wickham  
Alameda County Environmental Health  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6577

**Denis L. Brown**  
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Re: Shell-branded Service Station  
4895 Hacienda Drive  
Dublin, California  
SAP Code 165112  
Incident No. 97795893  
ACEH Case No. RO0002985

Dear Mr. Wickham:

The attached document is provided for your review and comment. Upon information and belief, I declare, under penalty of perjury, that the information contained in the attached document is true and correct.

If you have any questions or concerns, please call me at (707) 865-0251.

Sincerely,

A handwritten signature in black ink, appearing to read "Denis L. Brown", is written over a horizontal line.

Denis L. Brown  
Senior Program Manager



## **REVISED SUBSURFACE INVESTIGATION WORK PLAN**

**SHELL-BRANDED SERVICE STATION  
4895 HACIENDA DRIVE  
DUBLIN, CALIFORNIA**

**SAP CODE            165112  
INCIDENT NO.      97795893  
AGENCY NO.        RO0002985**

**MAY 27, 2011**

**REF. NO. 240695 (3)**

This report is printed on recycled paper.

**Prepared by:  
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## 1.0 INTRODUCTION

Conestoga-Rovers & Associates (CRA) prepared this revised work plan on behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell), as discussed in our February 17, 2011 meeting with Alameda County Environmental Health (ACEH). This work plan supersedes Delta Consultants' (Delta's) September 10, 2010 *Additional Site Assessment Work Plan*. As discussed in our February 17, 2011 meeting with ACEH, Delta's work plan proposed drilling two on-site soil borings to assess the vertical extent of groundwater impacts and installing one down-gradient well to assess the horizontal extent of groundwater impacts. We propose to complete the on-site borings as proposed by Delta; however, due to off-site access issues, we propose drilling three off-site soil borings instead of installing a down-gradient well. ACEH's February 14, 2011 letter granted an extension for the investigation report to June 18, 2011.

The subject site is an active Shell-branded Service Station located on the northeastern corner of Hacienda Drive and Martinelli Way in a primarily commercial area of Dublin, California (Figure 1). The site layout includes a fuel underground storage tank complex, four dispensers, a car wash, and a station building (Figure 2).

A summary of previous work performed at the site and additional background information is contained in Appendix A.

## 2.0 WORK TASKS

### 2.1 PERMITS

CRA will obtain drilling permits from the Zone 7 Water Agency and access agreements with the respective property owners.

### 2.2 HEALTH AND SAFETY PLAN (HASP)

CRA will prepare a HASP to protect site workers. The plan will be kept on site during field activities and will be reviewed and signed by each site worker.

### 2.3 UTILITY CLEARANCE

CRA will mark the proposed drilling locations, and the locations will be cleared through Underground Service Alert and a private line locator service prior to drilling.

### 2.4 SUBSURFACE INVESTIGATION

CRA will drill two on-site cone-penetrometer test (CPT) borings (CPT-1 and CPT-2) to investigate the vertical extent of groundwater impacts and three off-site CPT borings (CPT-3 through CPT-5) to investigate the horizontal and vertical extent of groundwater impacts (Figure 2).

Four CPT borings will be advanced at each on-site location and at the location of CPT-4. The first boring at each location will be advanced to 60 feet below grade (fbg) and will provide a continuous CPT log. The remaining borings will be advanced to collect grab groundwater samples from each discrete water-bearing zone. Based on lithologic data from well boring MW-5, we anticipate collecting water samples at approximately 40, 45, and 55 fbg. Data collected from the initial CPT borings (stratigraphy and pore pressure dissipation tests) will be used to adjust the groundwater sampling depths.

Two CPT borings will be advanced at the locations of CPT-3 and CPT-5. The first boring at each location will be advanced to 40 fbg and will provide a continuous CPT log. The second boring will be advanced to collect a grab groundwater sample from the first-encountered water-bearing zone, which is anticipated to be at approximately 20 fbg. Data collected from the initial CPT borings (stratigraphy and pore pressure dissipation tests) will be used to adjust the groundwater sampling depth.

Grab groundwater samples will be collected with CPT groundwater sampling equipment and transferred into vials containing hydrochloric acid preservative with no head space and into 1-liter amber glass bottles. The samples will be labeled, entered onto a chain-of-custody record, and placed into a cooler with ice for transport to a State of California certified laboratory for analyses. CRA will request a standard 2-week turn around time for laboratory results.

Upon completion, the CPT borings will be sealed with cement grout to match the existing grade. A CPT log will be prepared for each boring. CRA will not retain soil samples for chemical analysis.

CRA will perform this work under the supervision of a professional geologist or engineer.

## **2.5      CHEMICAL ANALYSES**

Grab groundwater samples will be analyzed for total petroleum hydrocarbons as diesel by EPA Method 8015 (Modified) and for total petroleum hydrocarbons as gasoline, benzene, toluene, ethylbenzene, xylenes, methyl-tertiary butyl ether, di-isopropyl ether, ethyl tertiary-butyl ether, tertiary-amyl methyl ether, tertiary-butyl alcohol, ethanol, 1,2-dichloroethane, and 1,2-dibromoethane by EPA Method 8260B.

## **2.6      REPORT PREPARATION**

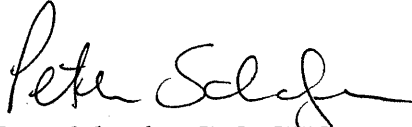
Following the receipt of analytical results from the laboratory, CRA will prepare a written report which will include field procedures, laboratory results, and CPT logs.

## **3.0      SCHEDULE**

CRA will begin work upon receiving ACEH's written approval of this work plan, appropriate access agreements, and the appropriate drilling permits. To allow time to obtain access agreements and complete this investigation, we request an extension of the June 18, 2011 due date for an investigation report specified in ACEH's February 4, 2011 correspondence to December 19, 2011.



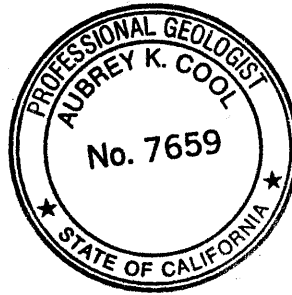
All of Which is Respectfully Submitted,  
CONESTOGA-ROVERS & ASSOCIATES



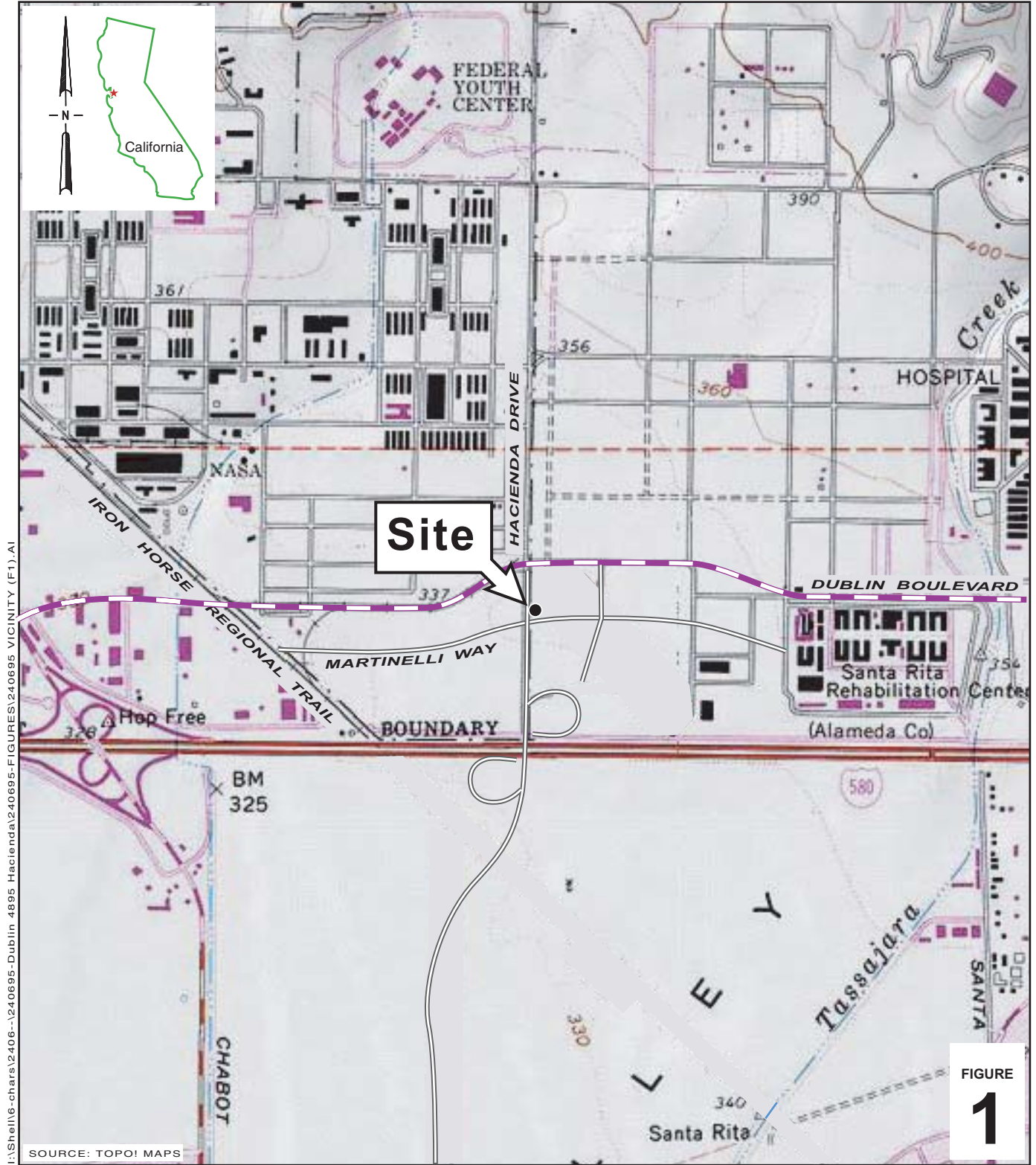
Peter Schaefer, CEG, CHG



Aubrey K. Cool, PG



FIGURES






**Shell-branded Service Station**  
 4895 Hacienda Drive  
 Dublin, California



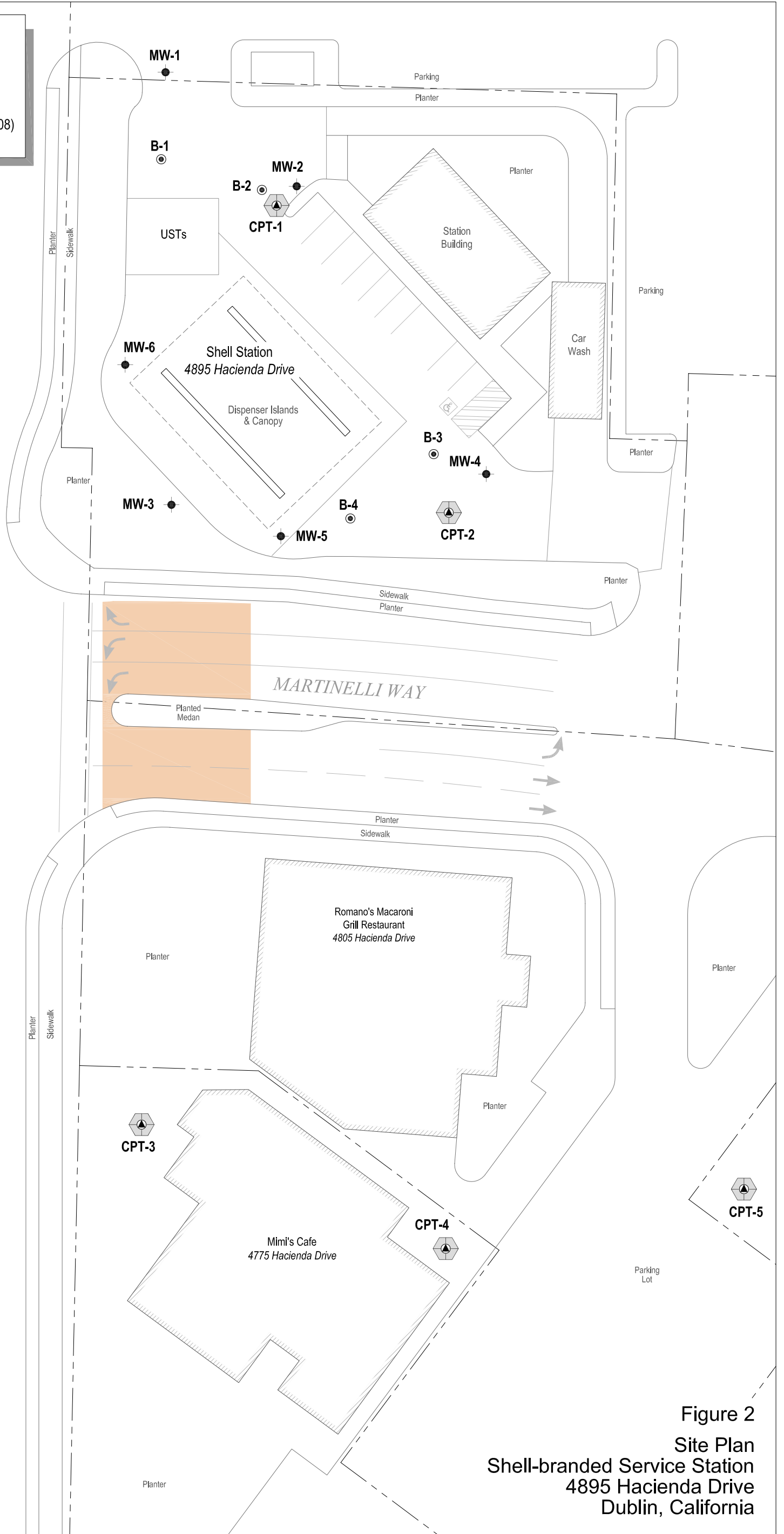
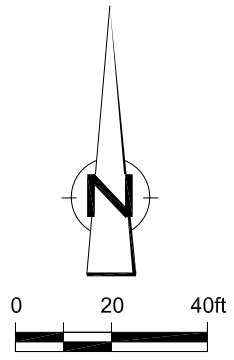
**CONESTOGA-ROVERS  
 & ASSOCIATES**

**Vicinity Map**

**EXPLANATION**

- CPT-1  Proposed CPT location
- MW-1  Monitoring well location
- B-1  Soil boring location (Delta, 2008)

HACIENDA DRIVE



**Figure 2**  
**Site Plan**  
**Shell-branded Service Station**  
**4895 Hacienda Drive**  
**Dublin, California**



APPENDIX A

SITE HISTORY

## SITE HISTORY

**2008 Phase II Investigation:** In August 2008, Delta Consultants (Delta) drilled four soil borings (B-1 through B-4) to characterize soil and groundwater beneath the site. Soil samples collected from the soil borings contained up to 39 milligrams per kilogram (mg/kg) total petroleum hydrocarbons as diesel and 0.073 mg/kg methyl tertiary-butyl ether (MTBE). Grab groundwater samples collected from soil borings B-1 and B-2 contained up to 320 micrograms per liter ( $\mu\text{g}/\text{l}$ ) total petroleum hydrocarbons as gasoline and 370  $\mu\text{g}/\text{l}$  MTBE. No other constituents of concern (COCs) were detected in the soil or grab groundwater samples. Based on these results, Shell Oil Products US submitted an *Underground Storage Tank Unauthorized Release (Leak)/Contamination Site Report* on September 4, 2008. Delta's October 28, 2008 *Phase II Site Assessment* presents results of this investigation.

**2010 Subsurface Investigation:** In February 2010, Delta installed six groundwater monitoring wells (MW-1 through MW-6). Soil samples collected from the well borings contained up to 0.057 mg/kg MTBE. No other COCs were detected in the soil samples. Delta's April 15, 2010 *Well Installation Report* presents results of this investigation.

**2010 Well Survey:** Delta conducted a survey of Zone 7 Water Agency (Zone 7) and California Department of Well Resources (DWR) records for wells within 2,000 feet of the site. Delta identified one water supply well approximately 1,750 feet southeast of the site (3S/1E-5K1). A 1912 DWR log for the well indicates the well was drilled to 130 feet below grade (fbg). Mr. Wyman Hong of Zone 7 reported to Delta that the well was un-locatable and most likely destroyed. Delta also identified a 35-foot deep test well (3S/1E-5H1) installed in 1986. Mr. Hong stated that the well's location could not be field-verified. Delta's September 10, 2010 *Additional Site Assessment Work Plan* presents results of the well survey.

**Groundwater Monitoring Program:** Groundwater sampling began in March 2010. Groundwater depth at the site has historically ranged from 11.65 to 14.45 fbg, and groundwater flow direction is generally southerly to southeasterly.