



## **EXECUTIVE SUMMARY**

SKA Consulting, L.P. (SKA), on behalf of Weingarten Realty Investors, Inc. (Weingarten), has prepared this Municipal Setting Designation (MSD) Application for approximately 28.7 acres of privately-owned, commercially-developed, land and publicly-owned street (Fondren Road) and right-of-way identified as the “designated property” and located north of the intersection of Fondren Road and West Bellfort Avenue in Houston, Harris County, Texas. The designated property is situated approximately 9 miles southwest of downtown Houston and is bordered by Sanford Road to the north, by West Bellfort Avenue to the south, by Larkwood Drive to the east, and by Braesridge Drive to the west.

No municipalities, other than the City of Houston, have corporate limits within one-half mile of the boundary of the designated property. In addition, public drinking water is currently available to the designated property and properties located within a one-half mile radius surrounding the designated property by the City of Houston public water supply system.

The current land use at the designated property is predominantly commercial/retail with a portion of the designated property (approximately 2.8 acres) developed for use as a public street (Fondren Road) and right-of-way. Properties in the vicinity of the designated property are predominantly mixed commercial/retail, single-family residential, and multi-family residential. The proposed future use of the designated property is anticipated to remain commercial/retail and publicly-owned street and right-of-way.

According to records obtained from the Texas Commission on Environmental Quality (TCEQ), the Harris-Galveston Subsidence District, and GeoSearch, approximately 750 registered/permitted water wells are reportedly located within a 5-mile radius of the designated property. Of these, two are reportedly located within a 0.5-mile radius of the designated property. The closest of these two water wells is reportedly located approximately 530 feet northwest of the designated property and the other is reportedly located approximately 2,160 feet south of the designated property. Both of these water wells are reportedly screened in groundwater bearing units (GWBUs) occurring more than 350 feet below ground surface (ft-bgs). As such, neither well will be affected by contaminants present in soil or groundwater at the designated property.

Of the approximately 750 registered/permitted water wells reportedly located within 5 miles of the designated property, approximately 51 are reportedly owned or operated by a public retail water utility. In addition, 17 of the 51 water wells reportedly located within 5 miles of the designated property are reportedly owned by municipalities other than the City of Houston. These municipalities include the City of Bellaire and the City of Meadows Place and several Municipal Utility Districts (MUDs).

Presently, the designated property's approximately 26 acres of commercially developed land is owned by Surrey Fondren Investors, LLC (Surrey) and enrolled in the TCEQ Voluntary Clean-Up Program (VCP) as VCP ID No. 1964.



## **EXECUTIVE SUMMARY**

Two areas of the designated property enrolled in the VCP Program are currently being assessed for adverse environmental impacts identified in connection with two former on-site chlorinated solvent dry cleaning operations (the Former Your Valet Cleaners and El Dorado Cleaners). These assessments are being conducted by SKA, on behalf of the previous property owner, Weingarten, under the rules of the TCEQ's Texas Risk Reduction Program (TRRP) found in 30 Texas Administrative Code (TAC) 350.

A third area of the designated property, which is also presently owned by Surrey and enrolled in the VCP Program, is currently being assessed for adverse environmental impacts identified in connection with a prior release of petroleum product from an active, on-site retail petroleum fueling station (Shell Station, Timewise Food Store #2801). The prior petroleum product release from the designated property's active retail petroleum fueling facility is currently being assessed by SKA, on behalf of the on-site Petroleum Storage Tank (PST) system's owner/operator, Landmark Industries, Inc. (Landmark), under the rules of the TCEQ PST Program (30 TAC 334).

The results of TRRP Affected Property Assessments and groundwater monitoring activities performed to date in the southwestern (area previously containing the Former Your Valet Cleaners) portion of the designated property have identified detectable concentrations of several chlorinated ethenes, including tetrachloroethene (PCE); trichloroethene (TCE); cis-1,2-dichloroethene (cis-1,2-DCE); and vinyl chloride (VC), in the soil and groundwater of the first and second GWBUs in the area of the Former Your Valet Cleaners tenant suite. The detectable concentrations of chlorinated ethenes exceed the TRRP Tier 1 residential groundwater-protective soil and groundwater ingestion protective concentration levels (PCLs).

The results of soil and groundwater monitoring activities performed to date in the east-central (area containing El Dorado Cleaners) portion of the designated property have identified PCE, TCE, cis-1,2-DCE, and VC in the soil immediately adjacent to the designated property's El Dorado Cleaners tenant suite. Concentrations of chlorinated ethenes exceed the TRRP Tier 1 residential groundwater-protective soil PCLs.

In addition, the results of TCEQ PST Program release determination and risk-based assessments and groundwater monitoring activities performed to date in the south-central portion of the designated property (area containing Shell Station) have identified detectable concentrations of several petroleum hydrocarbons, including benzene, toluene, ethylbenzene, methyl tert-butyl ether (MTBE), naphthalene, and total petroleum hydrocarbons (TPH) currently present in the soil and groundwater of the first GWBU in the area of the designated property's Shell Station in excess of applicable TRRP residential groundwater-protective soil and groundwater ingestion PCLs. No concentrations of any chemicals of concern (COCs) have been detected at the designated property in excess of any TRRP non-ingestion groundwater PCLs.

**CITY OF HOUSTON**



**PUBLIC WORKS AND  
ENGINEERING  
PLANNING & DEVELOPMENT  
DIVISION**

### **EXECUTIVE SUMMARY**

The results of assessment and monitoring activities performed to date indicate the TRRP groundwater ingestion PCLE zones associated with the chlorinated ethene COCs and petroleum hydrocarbon COCs in groundwater at the designated property are stable, decreasing in magnitude, and contained within the boundaries of the designated property. No COCs have been detected in soil or groundwater outside the designated property in excess of any TRRP ingestion or non-ingestion PCLs. In addition, no COCs are expected to migrate off the designated property in the future at concentrations that would exceed any applicable TRRP non-ingestion PCLs (the TRRP PCLs applicable for the designated property should an MSD be granted).

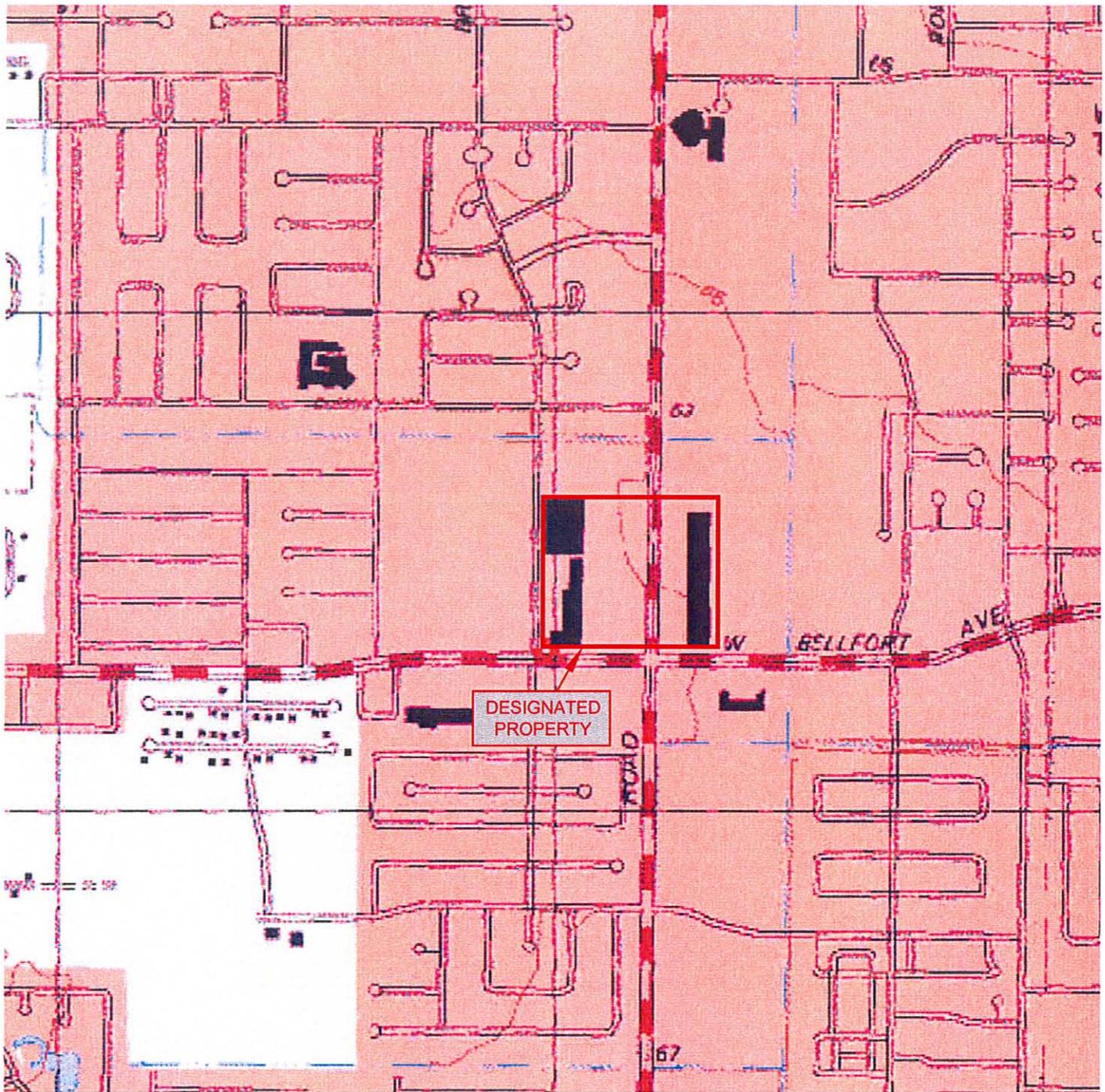
The following Items "A" through "AA" provide the requested documentation corresponding to the Items in the attached City of Houston MSD Application checklist. Supporting documentation for certain Items are attached and included with the Item's corresponding Appendix.

## Appendix B – Site Maps

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The following figures are included in *Appendix B*.

- Figure B.1 Site Location and Topographic Map
- Figure B.2 Watershed Map
- Figure B.3 Floodplain Map
- Figure B.4 Surrounding Land Use Map
- Figure B.5A Protective Concentration Level Exceedance Zone Soil Map
- Figure B.5B Protective Concentration Level Exceedance Zone Soil Map Inset, Former Your Valet Cleaners
- Figure B.5C Protective Concentration Level Exceedance Zone Soil Map Inset, El Dorado Cleaners
- Figure B.5D Protective Concentration Level Exceedance Zone Soil Map Inset, Shell Station
- Figure B.6A Protective Concentration Level Exceedance Zone Map, First Groundwater Bearing Unit
- Figure B.6B Protective Concentration Level Exceedance Zone Map, Second Groundwater Bearing Unit
- Figure B.7A Groundwater Gradient Map September 2009, First Groundwater Bearing Unit
- Figure B.7B Groundwater Gradient Map September 2009, Second Groundwater Bearing Unit
- Figure B.8A Soil and Groundwater Sampling Location Map
- Figure B.8B Soil and Groundwater Sampling Location Map Inset, Former Your Valet Cleaners
- Figure B.8C Soil and Groundwater Sampling Location Map Inset, El Dorado Cleaners



REFERENCE: USGS 7.5-MINUTE TOPOGRAPHIC QUADRANGLE  
ALIEF, TEXAS 1995



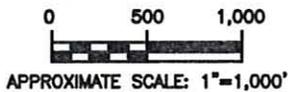
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HOUSTON TEXAS 77042

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Texas Registered Geoscience Firm 50011

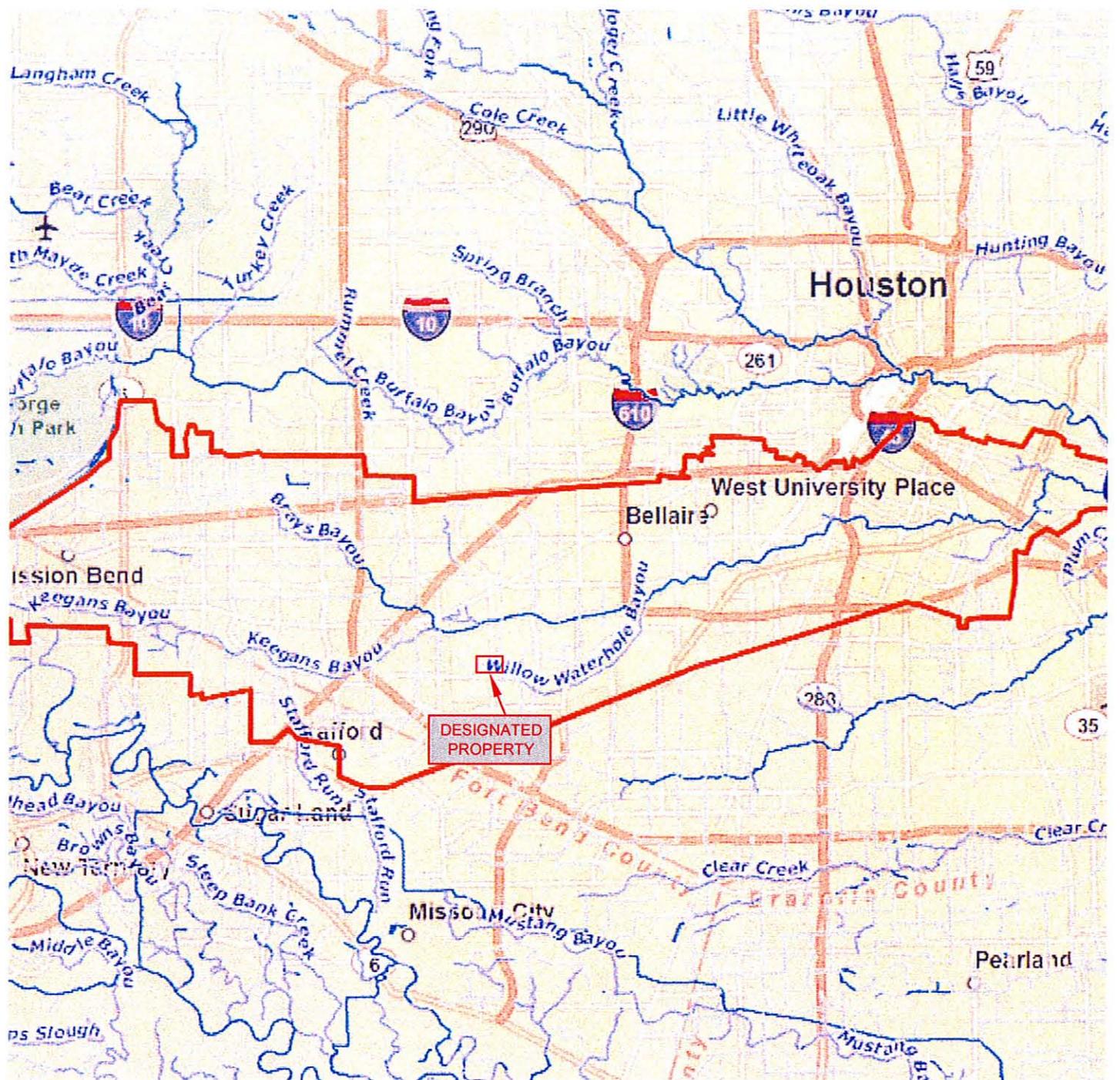
**SITE LOCATION AND TOPOGRAPHIC MAP**

FIGURE  
**B.1**

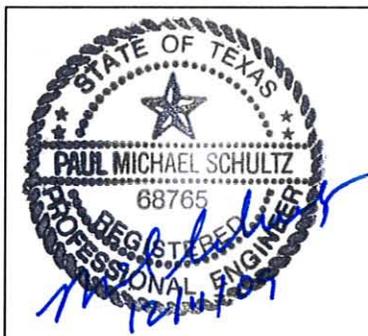
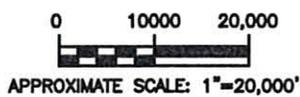
CITY OF HOUSTON MUNICIPAL SETTING DESIGNATION APPLICATION  
FONDREN SOUTHWEST SHOPPING CENTER  
FONDREN ROAD AND WEST BELLFORT AVENUE  
HOUSTON, HARRIS COUNTY, TEXAS  
VCP NO. 1964



DATE: DECEMBER 2009	JOB NO. 22006-0001	SCALE: AS SHOWN
1 FIRST REVISION	-	DRAWN BY: PSB
2 SECOND REVISION	-	CHECKED BY: RCP
3 THIRD REVISION	-	APPROVED BY: CDS



— BRAYS BAYOU WATERSHED



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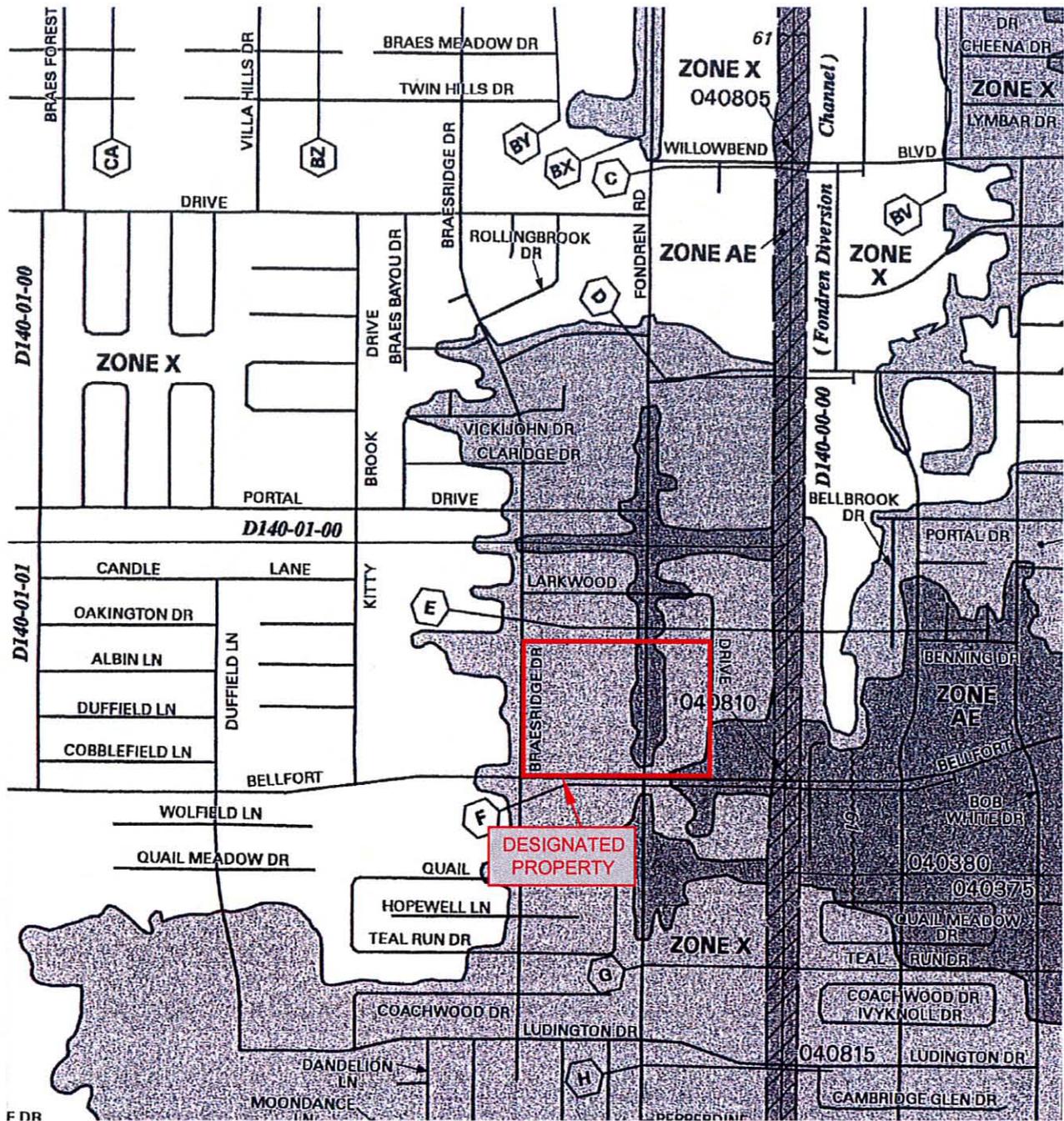
**WATERSHED MAP**

CITY OF HOUSTON MUNICIPAL SETTING DESIGNATION APPLICATION  
FONDREN SOUTHWEST SHOPPING CENTER  
FONDREN ROAD AND WEST BELLFORT AVENUE  
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2 SECOND REVISION	-	CHECKED BY: RCP
3 THIRD REVISION	-	APPROVED BY: CDS

FIGURE  
**B.2**





**EXPLANATION:**

- Zone AE - Base flood elevation determined.
- Zone X (Unshaded) - Areas determined to be outside the 0.2% annual chance floodplains.
- Zone X (shaded) - Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depth of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

**REFERENCE:**

FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA)  
JUNE 18, 2007



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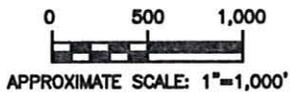
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**FLOODPLAIN MAP**

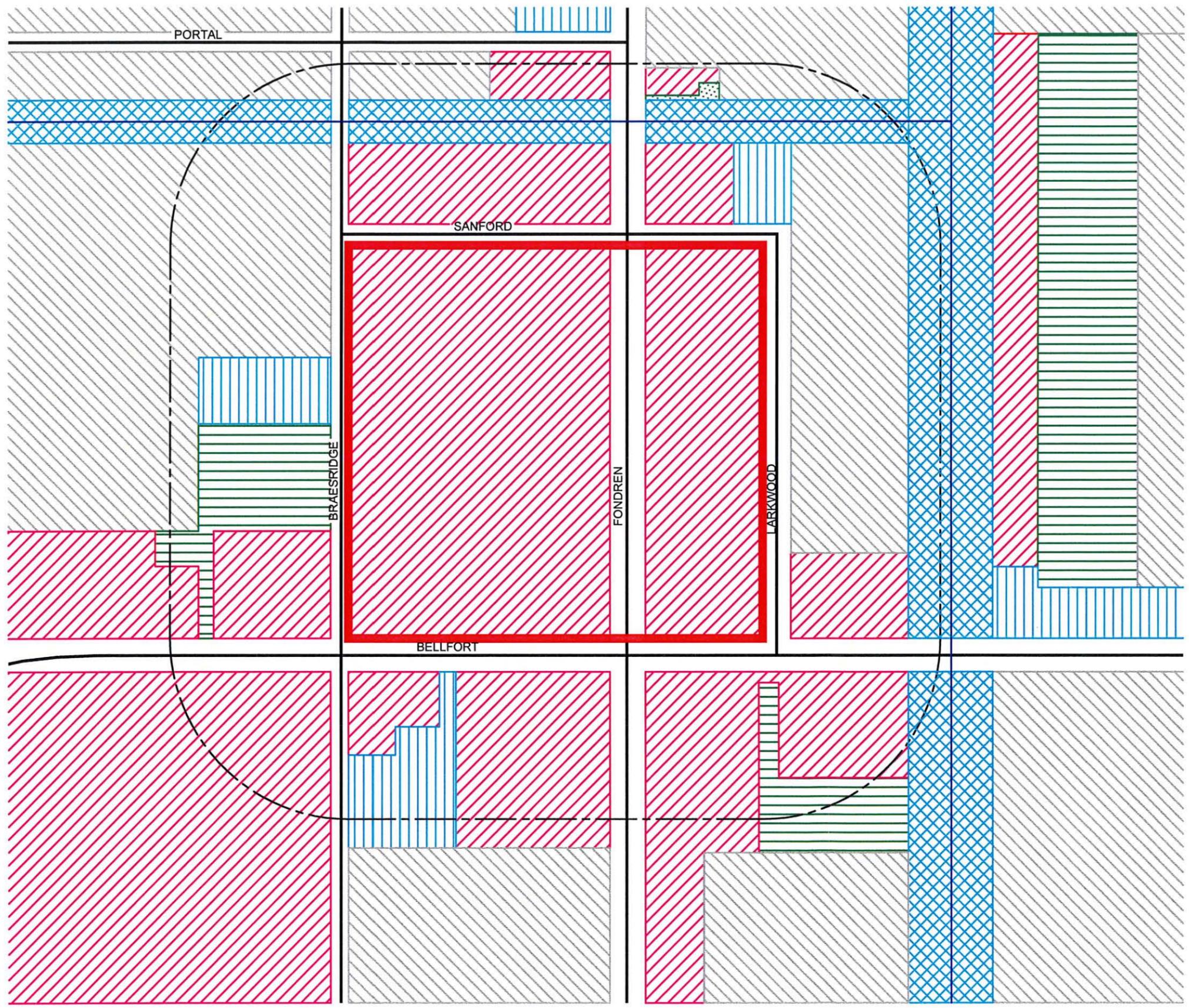
FIGURE  
**B.3**

CITY OF HOUSTON MUNICIPAL SETTING DESIGNATION APPLICATION  
FONDREN SOUTHWEST SHOPPING CENTER  
FONDREN ROAD AND WEST BELLFORT AVENUE  
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DATE: DECEMBER 2009	JOB NO: 22006-0001	SCALE: AS SHOWN
1 FIRST REVISION	-	DRAWN BY: PSB
2 SECOND REVISION	-	CHECKED BY: RCP
3 THIRD REVISION	-	APPROVED BY: CDS

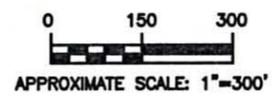


APPROXIMATE SCALE: 1"=1,000'



- LEGEND**
- DESIGNATED PROPERTY BOUNDARY
  - ROADS
  - SURFACE HYDROLOGY
  - 500' RADIUS

- PARCEL LAND USE**
- COMMERCIAL
  - RESIDENTIAL
  - OTHER LAND USES (E.G. SCHOOLS, HOSPITALS)
  - VACANT
  - FLOOD CONTROL



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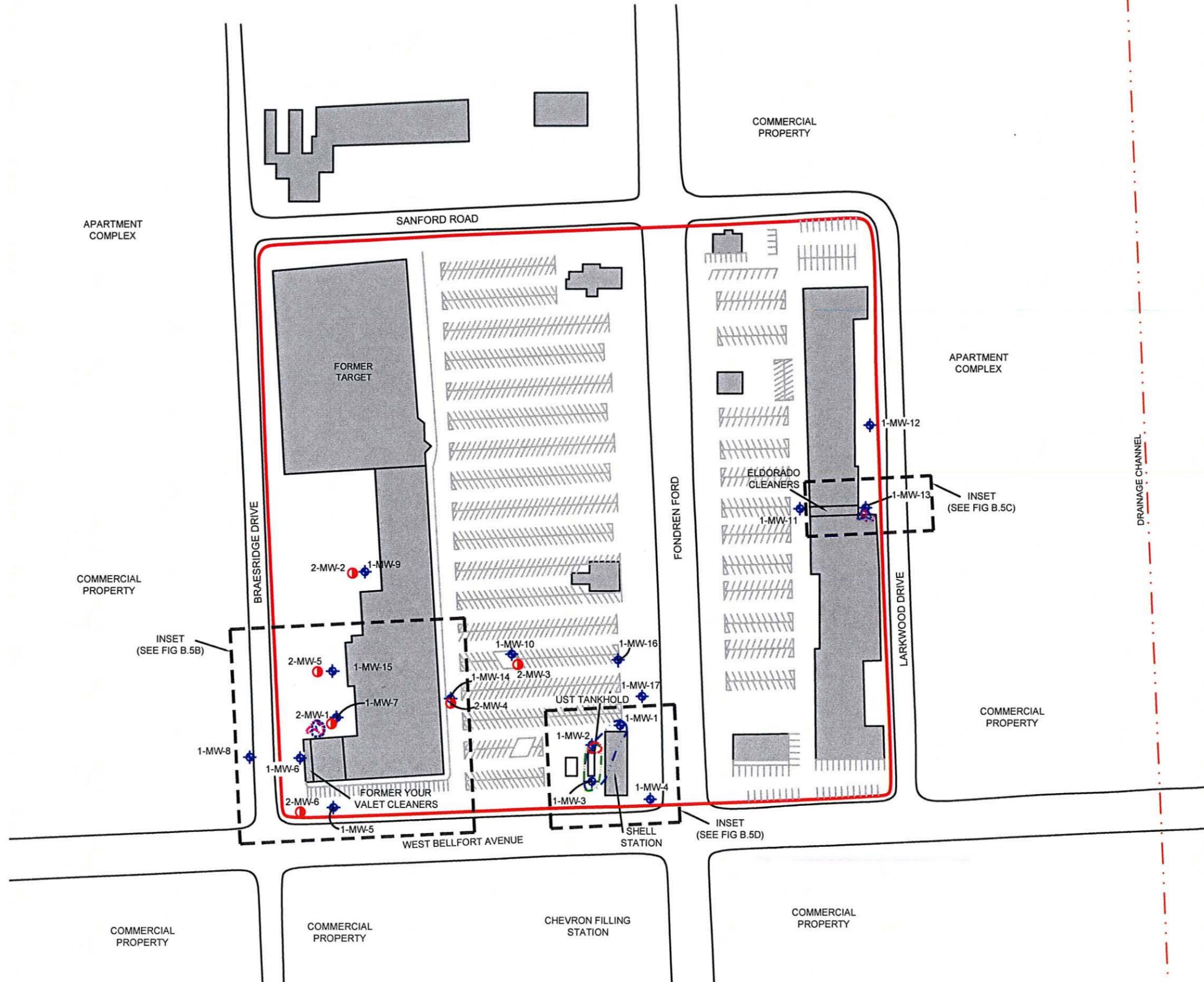
**SURROUNDING LAND USE MAP**

FIGURE  
**B.4**

CITY OF HOUSTON MUNICIPAL SETTING DESIGNATION APPLICATION  
 FONDREN SOUTHWEST SHOPPING CENTER  
 FONDREN ROAD AND WEST BELLFORT AVENUE  
 HOUSTON, HARRIS COUNTY, TEXAS  
 VCP NO. 1964

DATE: DECEMBER 2009	JOB NO: 22006-0001	SCALE: AS SHOWN
1 FIRST REVISION	-	DRAWN BY: HSB
2 SECOND REVISION	-	CHECKED BY: RCP
3 THIRD REVISION	-	APPROVED BY: CDS



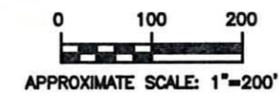


**LEGEND**

	DESIGNATED PROPERTY BOUNDARY
	1-MW-7 FIRST GROUNDWATER-BEARING UNIT MONITORING WELL
	2-MW-3 SECOND GROUNDWATER-BEARING UNIT MONITORING WELL
	PCE PCLE ZONE
	TCE PCLE ZONE
	CIS-1,2-DCE PCLE ZONE
	VC PCLE ZONE
	BENZENE PCLE ZONE
	ETHYLBENZENE PCLE ZONE
	MTBE PCLE ZONE

**NOTES:**

- PCE IS TETRACHLOROETHENE
- TCE IS TRICHLOROETHENE
- CIS-1,2-DCE IS CIS-1,2-DICHLOROETHENE
- VC IS VINYL CHLORIDE
- MTBE IS METHYL TERT-BUTYL ETHER
- PCLE ZONES BASED ON SOIL SAMPLING RESULTS AND SHOW THE SOIL TO GROUNDWATER INGESTION PCLS (<sup>GW</sup>SOIL<sub>ING</sub> 0.5 ACRE).



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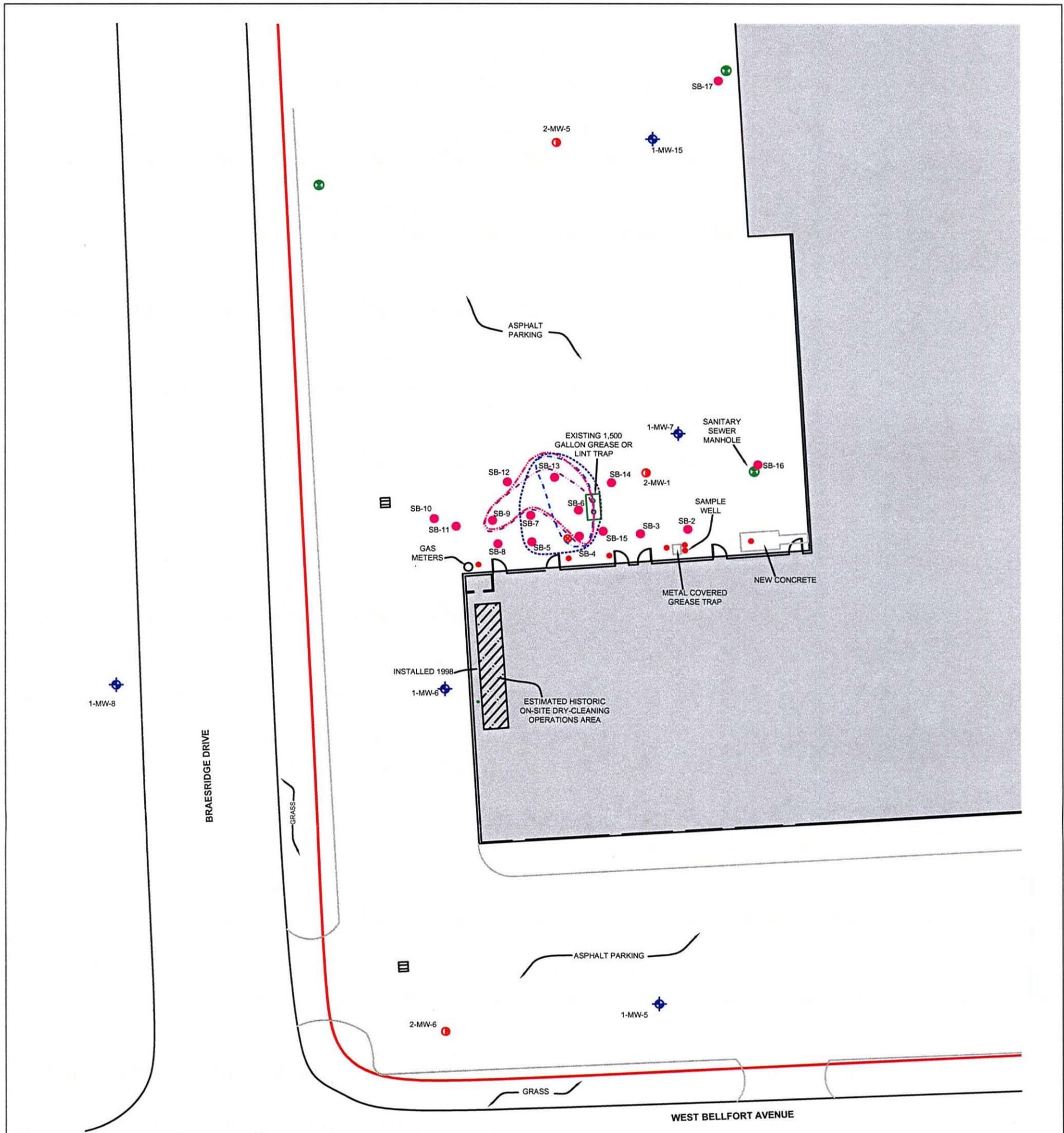
**PROTECTIVE CONCENTRATION LEVEL EXCEEDANCE ZONE SOIL MAP**

CITY OF HOUSTON MUNICIPAL SETTING DESIGNATION APPLICATION  
 FONDREN SOUTHWEST SHOPPING CENTER  
 FONDREN ROAD AND WEST BELLFORT AVENUE  
 HOUSTON, HARRIS COUNTY, TEXAS  
 VCP NO. 1964

DATE:	DECEMBER 2009	JOB NO.:	22006-0001	SCALE:	AS SHOWN
1	FIRST REVISION	-	DRAWN BY:	HSB	
2	SECOND REVISION	-	CHECKED BY:	RCP	
3	THIRD REVISION	-	APPROVED BY:	PMS	

FIGURE B.5A





**LEGEND**

- DESIGNATED PROPERTY BOUNDARY
- ◆ 1-MW-7 FIRST GROUNDWATER-BEARING UNIT MONITORING WELL
- 2-MW-3 SECOND GROUNDWATER-BEARING UNIT MONITORING WELL
- SB-2 SOIL BORING LOCATION
- ⊗ SANITARY SEWER SAMPLE PORT
- SANITARY SEWER CLEAN-OUT
- SANITARY SEWER MANHOLE
- STORM WATER DRAIN INLET
- - - PCE PCLE ZONE
- - - TCE PCLE ZONE
- - - CIS-1,2-DCE PCLE ZONE
- - - VC PCLE ZONE

**NOTE:**  
 - PCLE ZONES BASED ON SOIL SAMPLING RESULTS AND SHOW THE SOIL TO GROUNDWATER INGESTION PCLS (<sup>GW</sup>SOIL<sub>ING</sub> 0.5 ACRE).

APPROXIMATE SCALE: 1"=30'

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**PROTECTIVE CONCENTRATION LEVEL EXCEEDANCE ZONE SOIL MAP, INSET FORMER YOUR VALET CLEANERS**

**FIGURE B.5B**

CITY OF HOUSTON MUNICIPAL SETTING DESIGNATION APPLICATION  
 FONDREN SOUTHWEST SHOPPING CENTER  
 FONDREN AND WEST BELLFORT AVENUE  
 HOUSTON, HARRIS COUNTY, TEXAS  
 VCP NO. 1964

DATE: DECEMBER 2009	JOB NO: 22006-0001	SCALE: AS SHOWN
1 FIRST REVISION	-	DRAWN BY: HSB
2 SECOND REVISION	-	CHECKED BY: SBE
3 THIRD REVISION	-	APPROVED BY: CDS

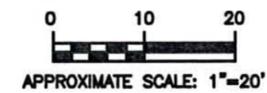




**LEGEND**

-  DESIGNATED PROPERTY BOUNDARY
-  1-MW-11 MONITORING WELL LOCATION
-  B-1 LAND AMERICA SOIL BORING LOCATION
-  SB-1E SKA SOIL BORING LOCATION
-  EL DORADO CLEANERS
-  PCE PCLE ZONE
-  TCE PCLE ZONE
-  CIS-1,2-DCE PCLE ZONE
-  VC PCLE ZONE

**NOTE:**  
 - PCLE ZONES BASED ON SOIL SAMPLING RESULTS AND SHOW THE SOIL TO GROUNDWATER INGESTION PCLS (GW<sub>SOILING</sub> 0.5 ACRE).



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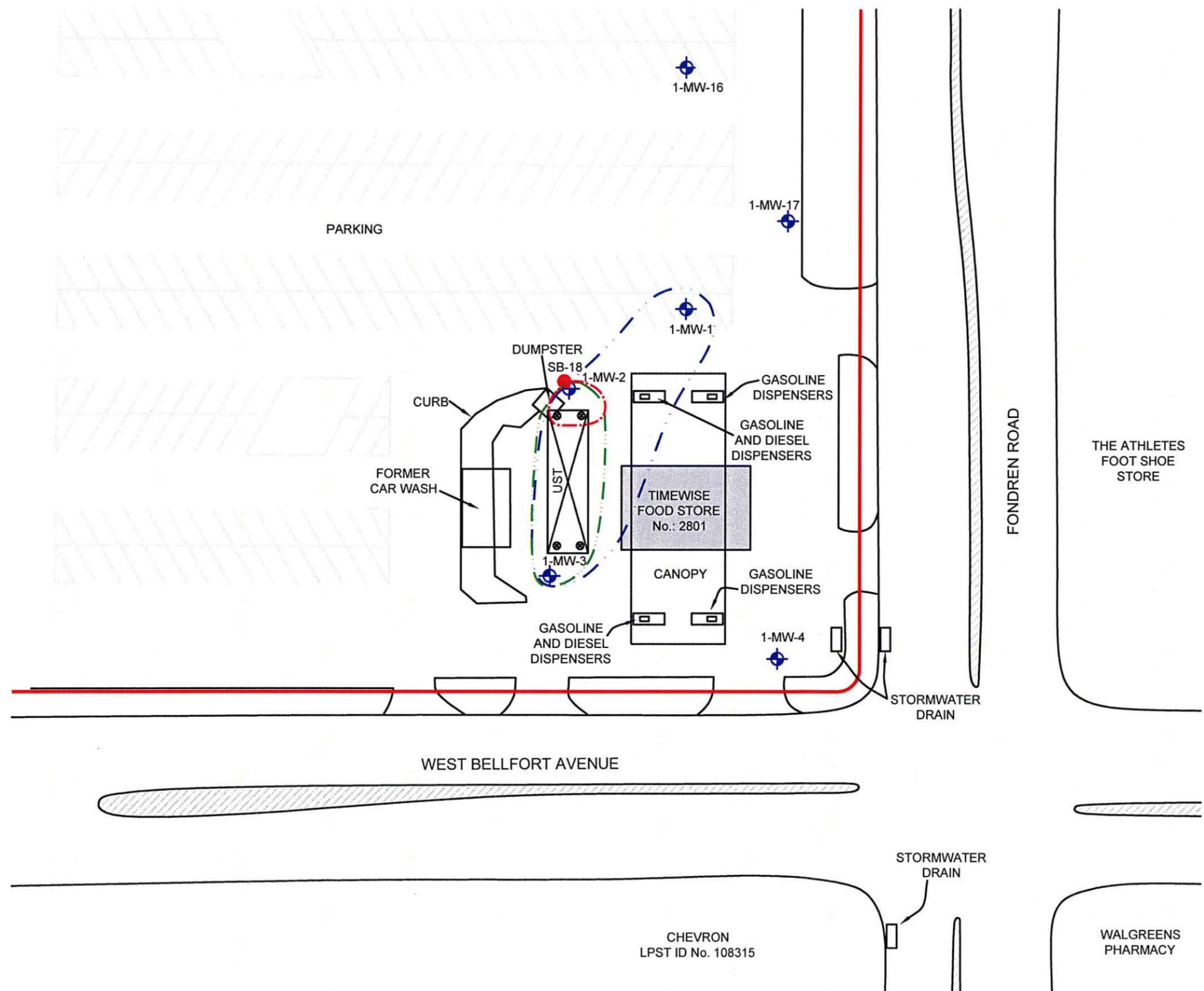
**PROTECTIVE CONCENTRATION LEVEL EXCEEDANCE ZONE SOIL MAP, INSET EL DORADO CLEANERS**

FIGURE B.5C

CITY OF HOUSTON MUNICIPAL SETTING DESIGNATION APPLICATION  
 FONDREN SOUTHWEST SHOPPING CENTER  
 FONDREN ROAD AND WEST BELLFORT AVENUE  
 HOUSTON, HARRIS COUNTY, TEXAS  
 VCP NO. 1964

DATE: DECEMBER 2009	JOB NO: 22006-0001	SCALE: AS SHOWN
1 FIRST REVISION	-	DRAWN BY: HSB
2 SECOND REVISION	-	CHECKED BY: RCP
3 THIRD REVISION	-	APPROVED BY: PMS

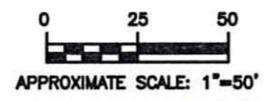




**LEGEND**

- DESIGNATED PROPERTY BOUNDARY
- 1-MW-2 MONITORING WELL LOCATION
- TANKHOLD OBSERVATION WELL
- SB-18 SOIL BORING LOCATION
- ON-SITE BUILDING
- CANOPY
- - - BENZENE PCLE ZONE
- - - ETHYLBENZENE PCLE ZONE
- - - MTBE PCLE ZONE

**NOTE:**  
 - PCLE ZONES BASED ON SOIL SAMPLING RESULTS AND SHOW THE SOIL TO GROUNDWATER INGESTION PCLS (<sup>GW</sup>SOIL<sub>ING</sub> 0.5 ACRE).



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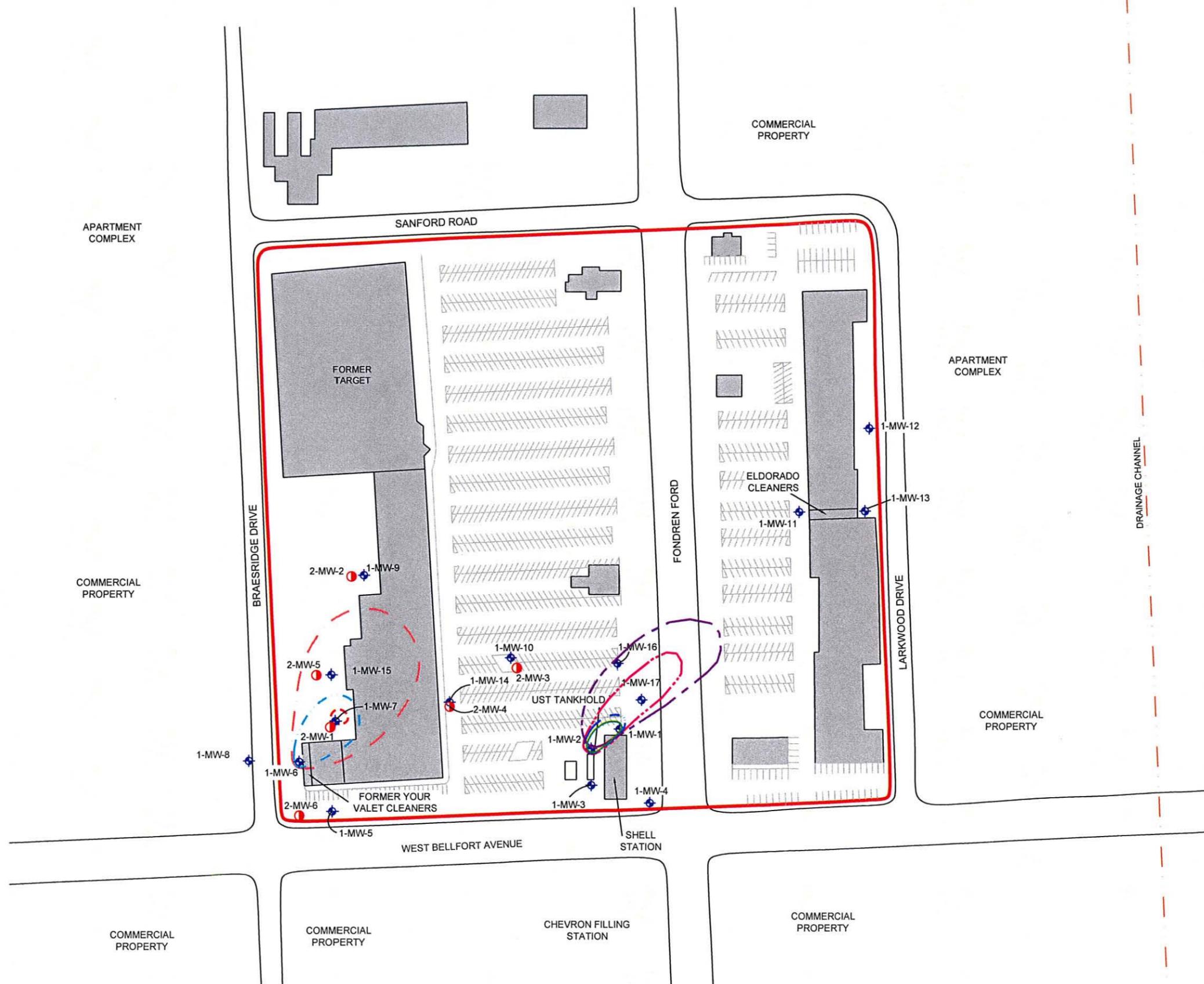
**PROTECTIVE CONCENTRATION LEVEL EXCEEDANCE ZONE SOIL MAP, INSET SHELL STATION**

FIGURE B.5D

CITY OF HOUSTON MUNICIPAL SETTING DESIGNATION APPLICATION  
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 FONDREN ROAD AND WEST BELLFORT AVENUE  
 HOUSTON, HARRIS COUNTY, TEXAS  
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DATE: DECEMBER 2009	JOB NO: 22006-0001	SCALE: AS SHOWN
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3 THIRD REVISION	-	APPROVED BY: CDS



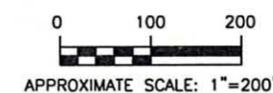


**LEGEND**

- DESIGNATED PROPERTY BOUNDARY
- ◆ 1-MW-7 FIRST GROUNDWATER-BEARING UNIT MONITORING WELL
- 2-MW-3 SECOND GROUNDWATER-BEARING UNIT MONITORING WELL
- - - PCE AND TCE PCLE ZONES
- - - CIS-1,2-DCE PCLE ZONE
- - - VC PCLE ZONE
- - - BENZENE PCLE ZONE
- - - ETHYLBENZENE PCLE ZONE
- - - MTBE PCLE ZONE
- - - TPH PCLE ZONE

**NOTES:**

- PCE IS TETRACHLOROETHENE
- TCE IS TRICHLOROETHENE
- CIS-1,2-DCE IS CIS-1,2-DICHLOROETHENE
- VC IS VINYL CHLORIDE
- MTBE IS METHYL TERT-BUTYL ETHER
- PCLE ZONES BASED ON GROUNDWATER SAMPLING RESULTS FROM SEPTEMBER 2009 (FORMER YOUR VALET CLEANERS) AND JULY 2009 (SHELL STATION) AND SHOW GROUNDWATER INGESTION PCLS.



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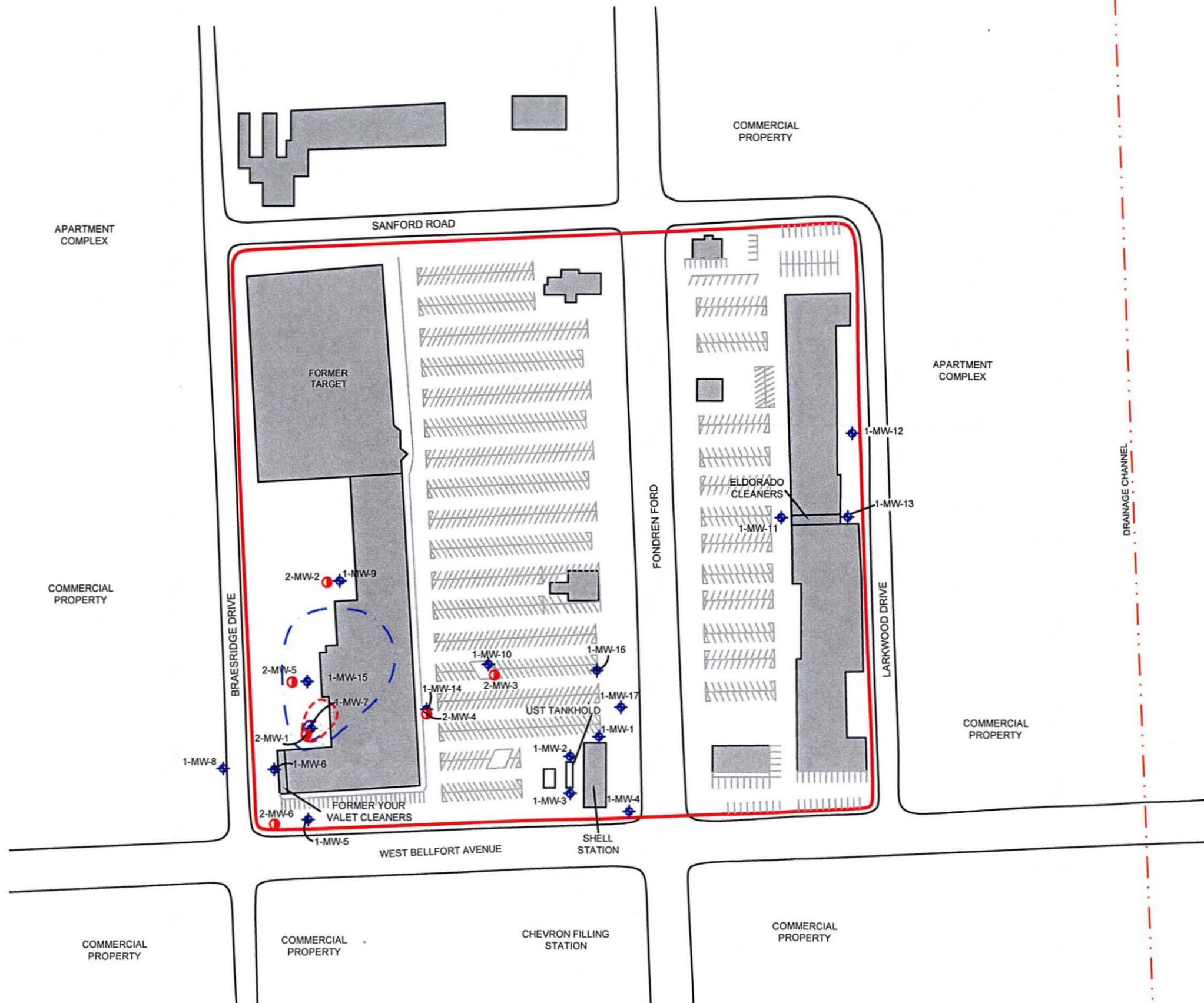
**PROTECTIVE CONCENTRATION LEVEL EXCEEDANCE ZONE MAP  
 FIRST GROUNDWATER BEARING UNIT**

FIGURE  
**B.6A**

CITY OF HOUSTON MUNICIPAL SETTING DESIGNATION APPLICATION  
 FONDREN SOUTHWEST SHOPPING CENTER  
 FONDREN ROAD AND WEST BELLFORT AVENUE  
 HOUSTON, HARRIS COUNTY, TEXAS  
 VCP NO. 1964

DATE: NOVEMBER 2009	JOB NO: 22006-0001	SCALE: AS SHOWN
1 FIRST REVISION	-	DRAWN BY: HSB
2 SECOND REVISION	-	CHECKED BY: RCP
3 THIRD REVISION	-	APPROVED BY: PMS

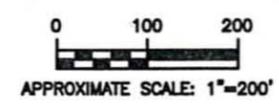




- LEGEND**
- DESIGNATED PROPERTY BOUNDARY
  - ◆ 1-MW-7 FIRST GROUNDWATER-BEARING UNIT MONITORING WELL
  - 2-MW-3 SECOND GROUNDWATER-BEARING UNIT MONITORING WELL
  - PCE AND TCE PCLE ZONES
  - CIS-1,2-DCE PCLE ZONE
  - VC PCLE ZONE

**NOTES:**

- PCE IS TETRACHLOROETHENE
- TCE IS TRICHLOROETHENE
- CIS-1,2-DCE IS CIS-1,2-DICHLOROETHENE
- VC IS VINYL CHLORIDE
- PCLE ZONES BASED ON GROUNDWATER SAMPLING RESULTS FROM SEPTEMBER 2009 (FORMER YOUR VALET CLEANERS) AND SHOW GROUNDWATER INGESTION PCLS.



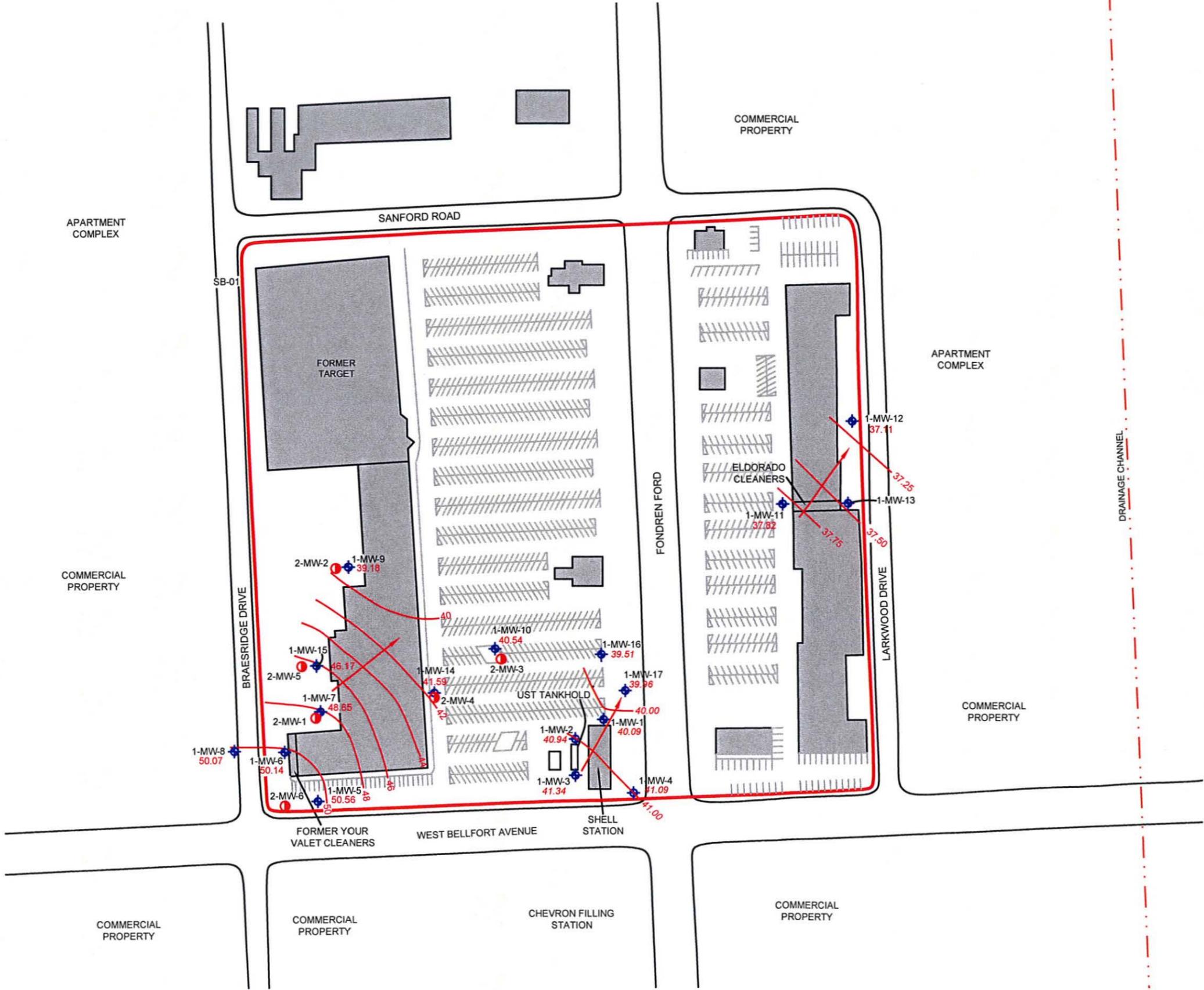
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**PROTECTIVE CONCENTRATION LEVEL EXCEEDANCE ZONE MAP  
 SECOND GROUNDWATER BEARING UNIT**

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FIGURE  
**B.6B**

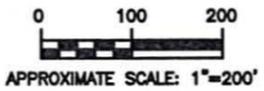


**LEGEND**

- DESIGNATED PROPERTY BOUNDARY
- 1-MW-7  
42.66  
FIRST GROUNDWATER-BEARING UNIT MONITORING WELL WITH GROUNDWATER ELEVATION
- 2-MW-3  
SECOND GROUNDWATER-BEARING UNIT MONITORING WELL
- 42  
GROUNDWATER ELEVATION CONTOUR
- GROUNDWATER FLOW DIRECTION

**NOTES:**

1. GROUNDWATER GRADIENT AT THE FORMER YOUR VALET CLEANERS IS 0.04 FEET/FOOT IN THE NORTHEAST DIRECTION.
2. GROUNDWATER GRADIENT AT EL DORADO CLEANERS IS 0.004 FEET/FOOT IN THE NORTHEAST DIRECTION.
3. GROUNDWATER GRADIENT AT THE SHELL STATION IS 0.013 FEET/FOOT IN THE NORTHEAST DIRECTION. GROUNDWATER ELEVATIONS WERE MEASURED BY SKA ON JULY 28, 2009.
4. GROUNDWATER ELEVATION MEASURED IN FEET ABOVE MEAN SEA LEVEL BASED ON MONITOR WELL SURVEY COMPLETED BY RESIDENTIAL LAND SURVEYORS, INC. IN JANUARY 2007.



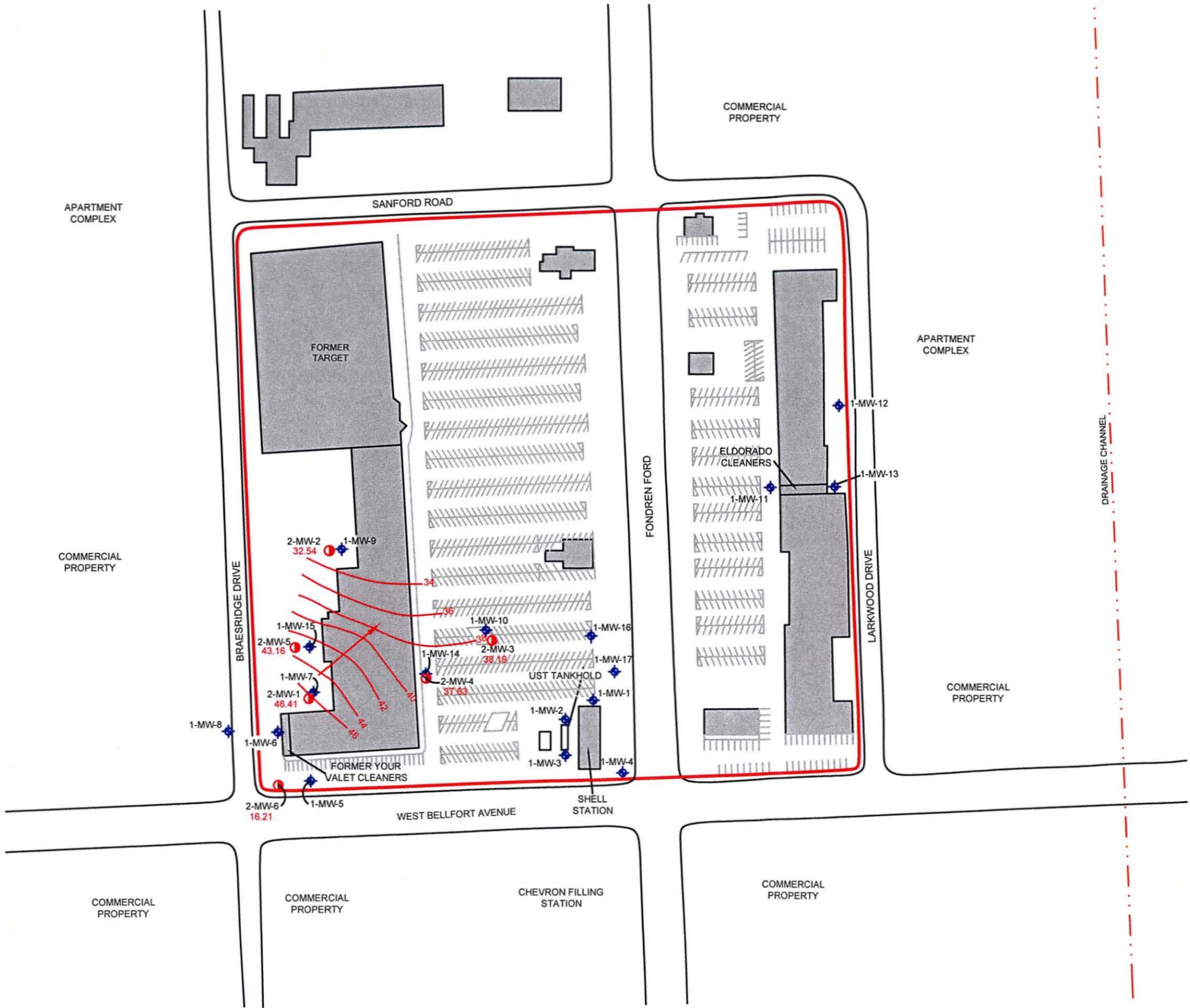
**ska** SKA CONSULTING, L.P.  
 10260 WESTHEIMER, SUITE 605  
 HOUSTON TEXAS 77042  
 Texas Registered Engineering Firm F-005009  
 Texas Registered Geoscience Firm 50011

**GROUNDWATER GRADIENT MAP  
 SEPTEMBER 2009  
 FIRST GROUNDWATER-BEARING UNIT**

**FIGURE  
 B.7A**

CITY OF HOUSTON MUNICIPAL SETTING DESIGNATION APPLICATION  
 FONDREN SOUTHWEST SHOPPING CENTER  
 FONDREN ROAD AND WEST BELLFORT AVENUE  
 HOUSTON, HARRIS COUNTY, TEXAS  
 VCP NO. 1964

DATE: DECEMBER 2009	JOB NO: 22006-0001	SCALE: AS SHOWN
1 FIRST REVISION	-	DRAWN BY: HSB
2 SECOND REVISION	-	CHECKED BY: RCP
3 THIRD REVISION	-	APPROVED BY: PMS

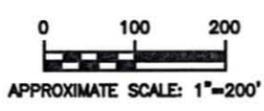


**LEGEND**

- DESIGNATED PROPERTY BOUNDARY
- 1-MW-7 FIRST GROUNDWATER-BEARING UNIT MONITORING WELL
- 2-MW-3 42.66 SECOND GROUNDWATER-BEARING UNIT MONITORING WELL WITH GROUNDWATER ELEVATION
- 42 GROUNDWATER ELEVATION CONTOUR
- GROUNDWATER FLOW DIRECTION

**NOTES:**

1. GROUNDWATER GRADIENT AT THE FORMER YOUR VALET CLEANERS IS 0.04 FEET/FOOT IN THE NORTHEAST DIRECTION.
2. GROUNDWATER ELEVATIONS MEASURED IN FEET ABOVE MEAN SEA LEVEL. BASED ON MONITOR WELL SURVEY COMPLETED BY RESIDENTIAL LAND SURVEYORS, INC. IN JANUARY 2007.
3. GAUGING RESULTS FROM MW-6 WERE NOT USED ON THE GRADIENT MAP.



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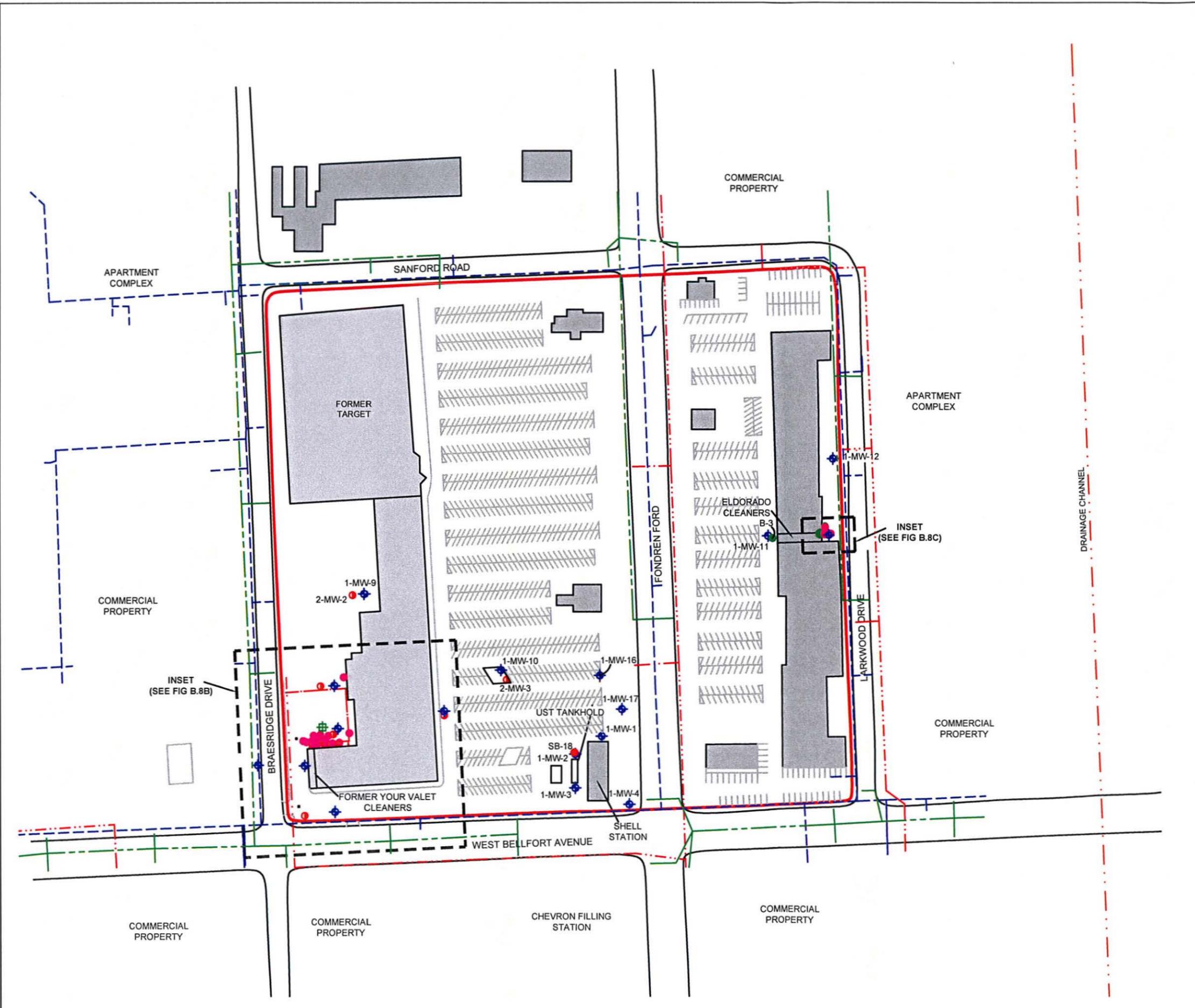
**GROUNDWATER GRADIENT MAP  
 SEPTEMBER 2009  
 SECOND GROUNDWATER-BEARING UNIT**

FIGURE  
**B.7B**

CITY OF HOUSTON MUNICIPAL SETTING DESIGNATION APPLICATION  
 FONDREN SOUTHWEST SHOPPING CENTER  
 FONDREN AND WEST BELLFORT AVENUE  
 HOUSTON, HARRIS COUNTY, TEXAS  
 VCP NO. 1964

DATE:	DECEMBER 2009	JOB NO.:	22006-0001	SCALE:	AS SHOWN
1	FIRST REVISION	-	DRAWN BY:	HSB	
2	SECOND REVISION	-	CHECKED BY:	RCP	
3	THIRD REVISION	-	APPROVED BY:	PMS	



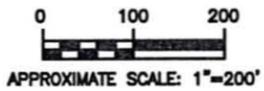


**LEGEND**

- DESIGNATED PROPERTY BOUNDARY
- 1-MW-7 FIRST GROUNDWATER-BEARING UNIT MONITORING WELL
- 2-MW-3 SECOND GROUNDWATER-BEARING UNIT MONITORING WELL
- 3-MW-1 THIRD GROUNDWATER-BEARING UNIT MONITORING WELL (PLUGGED AND ABANDONED OCTOBER 2008)
- SB-2 SOIL BORING LOCATION BY SKA
- B-3 SOIL BORING LOCATION BY LAND AMERICA
- WASTE WATER LINE
- STORM WATER LINE
- WATER LINE

**NOTES:**

1. FIGURE B.8B SHOWS A CLOSE UP OF THE FORMER YOUR VALET CLEANERS.
2. FIGURE B.8C SHOWS A CLOSE UP OF EL DORADO CLEANERS.



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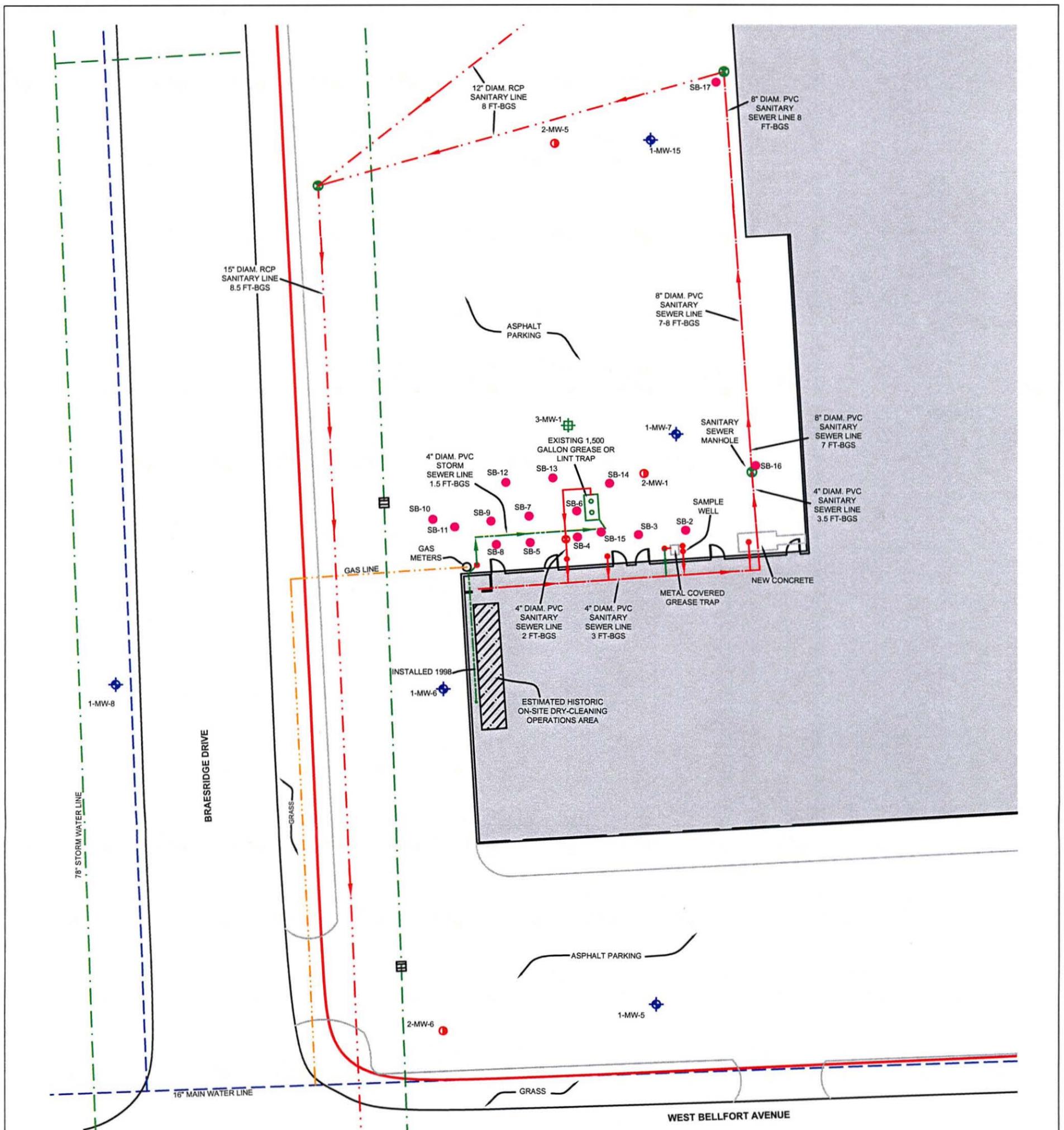
**SOIL AND GROUNDWATER SAMPLING LOCATION MAP**

FIGURE B.8A

CITY OF HOUSTON MUNICIPAL SETTING DESIGNATION APPLICATION  
 FONDREN SOUTHWEST SHOPPING CENTER  
 FONDREN ROAD AND WEST BELLFORT AVENUE  
 HOUSTON, HARRIS COUNTY, TEXAS  
 VCP NO. 1964

DATE:	DECEMBER 2009	JOB NO:	22006-0001	SCALE:	AS SHOWN
1	FIRST REVISION	-	DRAWN BY:	HSB	
2	SECOND REVISION	-	CHECKED BY:	RCP	
3	THIRD REVISION	-	APPROVED BY:	PMS	





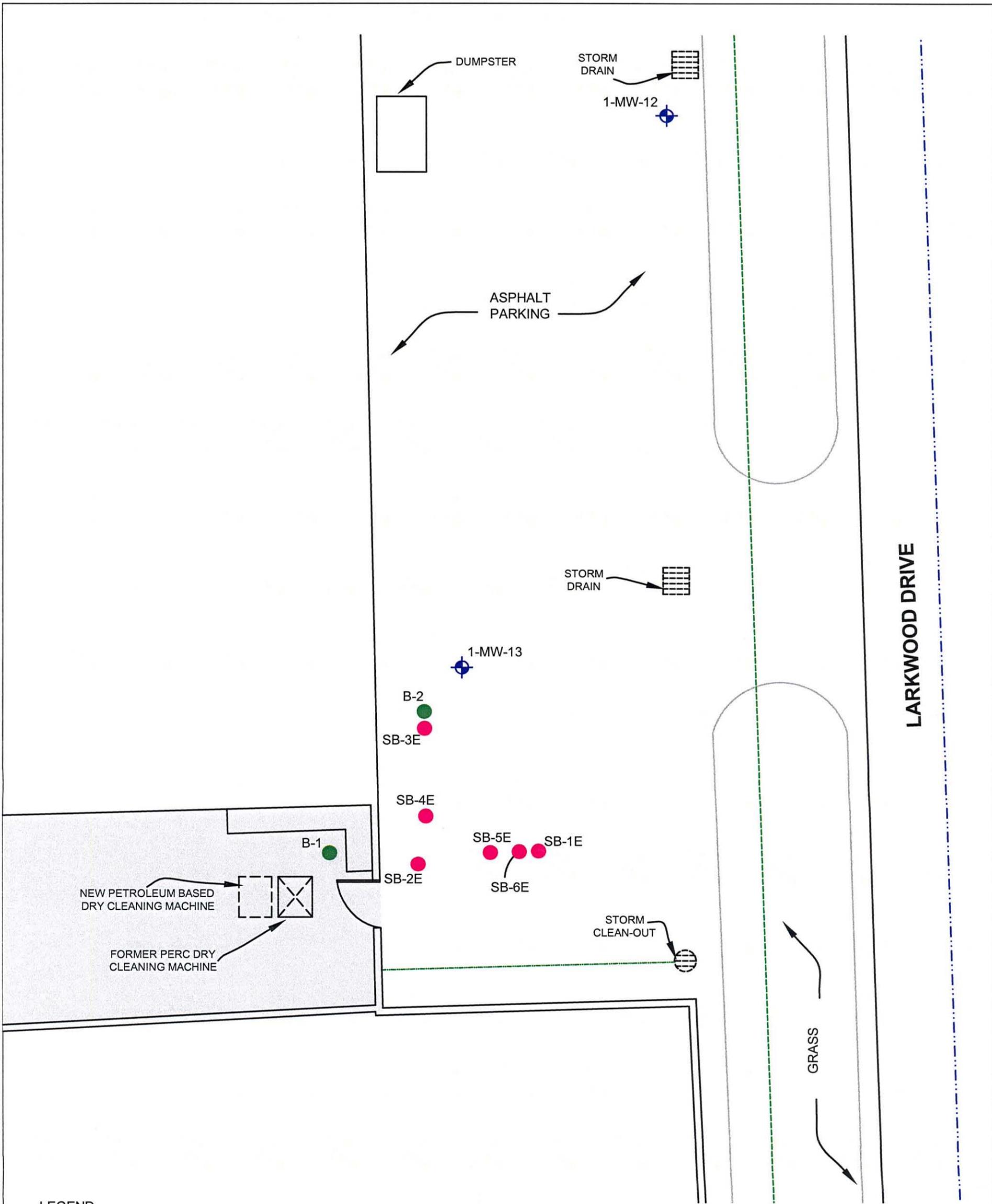
**LEGEND**

- DESIGNATED PROPERTY BOUNDARY
- - - SANITARY SEWER LINE (PVC)
- - - GREASE OR LINT TRAP LINE
- · - · - SANITARY SEWER LINE (RCP)
- · - · - STORM SEWER LINE
- - - WATER LINE
- - - NATURAL GAS LINE
- ◆ 1-MW-7 FIRST GROUNDWATER-BEARING UNIT MONITORING WELL
- 2-MW-3 SECOND GROUNDWATER-BEARING UNIT MONITORING WELL
- ⊕ 3-MW-1 THIRD GWBU MONITORING WELL (PLUGGED AND ABANDONED OCTOBER 2008)
- SB-2 SOIL BORING LOCATION
- ⊗ SANITARY SEWER SAMPLE PORT
- SANITARY SEWER CLEAN-OUT
- SANITARY LINE FLOW DIRECTION
- ⊕ SANITARY SEWER MANHOLE
- ⊞ STORM WATER DRAIN INLET

APPROXIMATE SCALE: 1"=30'

**SKA CONSULTING, L.P.**  
 10260 WESTHEIMER, SUITE 605  
 HOUSTON TEXAS 77042  
 Texas Registered Engineering Firm F-005009  
 Texas Registered Geoscience Firm 50011

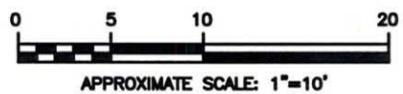
<b>SOIL AND GROUNDWATER SAMPLING LOCATION MAP INSET, FORMER YOUR VALET CLEANERS</b>		<b>FIGURE B.8B</b>
CITY OF HOUSTON MUNICIPAL SETTING DESIGNATION APPLICATION FONDREN SOUTHWEST SHOPPING CENTER FONDREN AND WEST BELLFORT AVENUE HOUSTON, HARRIS COUNTY, TEXAS VCP NO. 1964		
DATE: DECEMBER 2009	JOB NO: 22006-0001	SCALE: AS SHOWN
1 FIRST REVISION	-	DRAWN BY: HSB
2 SECOND REVISION	-	CHECKED BY: SBE
3 THIRD REVISION	-	APPROVED BY: CDS



LARKWOOD DRIVE

**LEGEND**

- 1-MW MONITORING WELL LOCATION
- B-1 LAND AMERICA SOIL BORING LOCATION
- SB-1E SKA SOIL BORING LOCATION
- EL DORADO CLEANERS
- STORMWATER LINES
- POTABLE WATER LINES
- IMPLIED SANITARY SYSTEM



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HOUSTON TEXAS 77042

**SOIL AND GROUNDWATER SAMPLING LOCATION  
MAP INSET, EL DORADO CLEANERS**

FIGURE  
B.8C

CITY OF HOUSTON MUNICIPAL SETTING DESIGNATION APPLICATION  
FONDREN SOUTHWEST SHOPPING CENTER  
FONDREN AND WEST BELLFORT AVENUE  
HOUSTON, HARRIS COUNTY, TEXAS  
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1 FIRST REVISION	-	DRAWN BY: HSB
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3 THIRD REVISION	-	APPROVED BY: CDS



## Appendix C – Property Use

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The following is a description of the current land use, and to the extent known, the anticipated uses of the designated property and surrounding properties located within 500 feet of the designated property boundary.

### **Designated Property**

The designated property consists of approximately 28.7 acres of commercially-developed, privately-owned land and publicly-owned street (Fondren Road) and right-of-way, north of the intersection of Fondren Road and West Belfort Avenue in Houston, Harris County, Texas (**Figure B.1**). The designated property is contiguous, rectangular in-shape, and located approximately 9 miles southwest of downtown Houston, Texas.

The designated property is bordered to the north by Sanford Road, to the south by West Belfort Avenue, to the east by Larkwood Drive, and to the west by Braesridge Drive. A metes and bounds description of the designated property is included in **Appendix A**.

Approximately 99 percent of the designated property is covered by paved driveways, sidewalks, parking areas, roads, and commercial/retail buildings. The remainder of the designated property (approximately 1 percent) is covered by unpaved, decorative landscaped areas. The current land use is predominantly commercial/retail with a portion of the property developed as a public street and right-of-way (Fondren Road). The proposed future use of the designated property is anticipated to remain commercial/retail and publicly-owned street and right-of-way.

The designated property is located in the Brays Bayou Watershed. According to the Federal Emergency Management Agency (FEMA) Federal Flood Insurance Rate Map (FIRM) for the area containing the designated property, a majority of the designated property is located within Flood Zone X and has a 0.2% annual chance flood risk. The remainder of the designated property, primarily along Fondren Road, is located in Flood Zone AE, a special flood hazard area where base flood elevations have been determined. A watershed map and a FEMA floodplain map of the area containing the designated property are included as **Figures B.2** and **B.3**, respectively.

A portion of Fondren Road and its associated publicly-owned (City of Houston) right-of-way extend north to south through the interior of the designated property. East and west of Fondren Road, the designated property is commercially developed and contains the following improvements:

- two retail shopping centers with associated paved parking areas, sidewalks, driveways, and outparcel developments on the east and west sides of Fondren Road, respectively;
- a stand-alone retail petroleum fueling station (Shell Station operated by Landmark Industries, Inc.) at the northwest corner of West Belfort Avenue and Fondren Road;

- three stand-alone fast-food restaurants, two on the east side of Fondren Road and one on the west side of Fondren Road;
- a stand-alone retail store on the east side of Fondren Road; and
- a stand-alone banking facility on a shopping center outparcel on the west side of Fondren Road).

The commercially developed, privately-owned portions of the designated property encompass approximately 26 acres and are currently owned by Surrey Fondren Investors, LLC (Surrey). Surrey acquired the property with its current commercial developments, from Weingarten in 2006. Weingarten originally purchased the designated property, excluding Fondren Road and its associated right-of-way, in 1978 for commercial/retail use and development.

The entire privately-owned 26 acres of the designated property currently owned by Surrey is enrolled in the TCEQ VCP as ID No. 1964. At the present time, two areas of the designated property that are currently enrolled in the VCP Program are being assessed by the previous property owner, Weingarten, under the TCEQ Texas Risk Reduction Program (TRRP, 30 TAC 350) for adverse environmental impacts identified in connection with two former on-site chlorinated solvent dry cleaning operations. In addition, another area of the designated property that is currently enrolled in the VCP Program is being assessed under the TCEQ Petroleum Storage Tank (PST) Program (30 TAC 334) for adverse environmental impacts identified in connection with a prior release of petroleum product from an active on-site retail petroleum fueling station. This assessment is being conducted by the current PST operator, Landmark Industries, Inc. (Landmark). The following provides a brief summary of the environmental assessment history and historical environmental conditions identified in connection with the designated property since environmental assessment of the designated property began in 2006.

#### **Historical Environmental Conditions**

In 2006, SKA Consulting, L.P. (SKA), LandAmerica Assessment Corporation (LandAmerica), and Buchanan Environmental Services, Inc. (BES) conducted Phase II Environmental Site Assessments (ESAs) on the commercially-developed portions of the designated property to evaluate soil and groundwater conditions in four areas of potential environmental concern previously identified on the designated property by Velocity Consulting, Inc. during performance of a routine Phase I ESA in June 2006. The four areas of potential environmental concern initially identified during the Phase I ESA and subsequently investigated at the designated property, as part of the 2006 Phase II ESAs, included the following:

- The area of the designated property containing El Dorado Dry Cleaners (11175 Fondren Road), an active dry cleaning facility that conducts dry cleaning operations using a petroleum distillate dry cleaning system and that previously conducted dry cleaning operations utilizing chlorinated solvent dry cleaning chemicals in a centrally-located suite of the designated property's east shopping center from 1985 through 2006.

- The area of the designated property previously containing 1-Hour Martinizing and Your Valet Cleaners (7590 West Bellfort), two former dry cleaning businesses that previously conducted dry cleaning operations utilizing chlorinated solvent dry cleaning chemicals in the southwest suite of the designated property's west shopping center (Fondren Southwest Village) from approximately 1979 through 1996.
- The area of the designated property containing the Shell Station (11290 Fondren Road), a retail petroleum fueling station that has continuously operated an underground petroleum storage tank (PST) system consisting of an approximate 31,000-gallon underground PST with underground product piping and four fuel dispensers in the south-central portion of the designated property since 1992.
- The area of the designated property previously containing a Target automotive repair shop (11110 Fondren Road) in the northwest portion of the designated property from approximately 1978 through 1998. The former automotive repair shop reportedly previously contained a diesel underground storage tank (UST) that was removed sometime between 1989 and 1992, a waste oil UST that was reportedly removed in approximately 1986, and several below-ground hydraulic lifts that were apparently removed prior to 2006.

The results of the 2006 Phase II ESAs revealed no evidence of environmental impacts to soil or groundwater in relation to the designated property's former Target automotive repair shop. However, the results of the 2006 Phase II ESAs revealed the presence of several chemicals of concern (COCs) in soil and/or shallow groundwater in the vicinity of the designated property's Former Your Valet Cleaners (southwestern portion of the designated property), El Dorado Cleaners (extreme east-central portion of the designated property), and Shell Station (south-central portion of the designated property).

The results of subsequent TCEQ TRRP (30 TAC 350) Affected Property Assessments and groundwater monitoring activities performed to date in the area of the designated property's El Dorado Cleaners and the Former Your Valet Cleaners (by SKA for the previous property owner, Weingarten) have revealed detectable concentrations of tetrachloroethene (PCE); trichloroethylene (TCE); cis-1,2-dichloroethene (cis-1,2-DCE); trans-1,2-dichloroethene (trans-1,2-DCE); and vinyl chloride (VC) present in the soil in the vicinity of the El Dorado Cleaners and detectable concentrations of PCE; TCE; 1,1-dichloroethene (1,1-DCE); trans-1,2-DCE; cis-1,2-DCE; and VC present in the soil and groundwater of the first and second groundwater-bearing units (GWBU) in the vicinity of the Former Your Valet Cleaners. In addition, the results of subsequent TCEQ PST Program (30 TAC 334) release determination and risk-based assessments and groundwater monitoring activities performed to date in the area of the Shell Station (by Associated Environmental Consultants and SKA for the current PST system owner/operator, Landmark) have revealed detectable concentrations of total petroleum hydrocarbons (TPH); benzene, toluene, ethylbenzene, and xylenes (BTEX); methyl tert-butyl ether (MTBE); and naphthalene present in the soil and groundwater of the first GWBU in the vicinity of the Shell Station.

### **Surrounding Properties**

Properties in the vicinity of the designated property are predominantly mixed commercial/retail, single-family residential, and multi-family residential. Commercial buildings are located directly north of Sanford Road and south of West Bellfort Avenue. Residential properties are located immediately east of Larkwood Drive. A City of Houston Fire Station, a vacant lot, and residential properties are located west of Braesridge Drive. Single-family residential properties make up a majority of the areas further to the west, south, and north of the designated property. Multi-family residential properties dominate the area to the east of the designated property. A map detailing the land use of the surrounding properties within 500 feet of the designated property is presented as **Figure B.4**. The future use of the land in the area of the designated property is anticipated to remain mixed commercial/retail, single-family residential, and multi-family residential.

### **Water Wells**

According to a GeoSearch water well report, two water wells are reportedly located within a 0.5-mile radius of the designated property. The closest of these water wells is reportedly owned by Braesridge Apartments and located approximately 530 feet northwest of the designated property. Water well records indicate the Braesridge Apartments water well was installed in 2002 to a depth of 406 feet below ground surface (ft-bgs) reportedly for domestic use. SKA contacted Braesridge Apartments to inquire on the current status and use of this water well. The Braesridge Apartments' property manager confirmed that the water well is currently in use but indicated that the water well was only used for landscape irrigation purposes and not for human consumption.

The second water well reportedly located within a 0.5-mile radius of the designated property is reportedly owned by the Alsay Pipe Company and located approximately 2,160 feet south of the designated property. Water well records indicate this water well was installed in 1971 to a depth of 304 ft-bgs for purposes of industrial use. However, the Alsay Pipe Company property and the surrounding properties were developed with residential housing in the early 1980s and the water well appears to have been abandoned.

## Appendix D – PCLE Zone Discussion

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Affected soil and/or groundwater in the vicinity of the designated property's Former Your Valet Cleaners and El Dorado Cleaners are currently being assessed under TRRP (30 TAC 350). In accordance with TRRP, PCLs for COCs present in soil and/or groundwater in the areas of the designated property's Former Your Valet Cleaners and El Dorado Cleaners have been developed for human ingestion and non-ingestion exposure pathways based on TRRP Tier 1 residential soil and groundwater PCLs. For purposes of this MSD application and in accordance with City of Houston, Texas Ordinance No. 2007-959 (pertaining to MSDs), the most restrictive of the current TRRP Tier 1 residential soil and groundwater ingestion and non-ingestion PCLs developed for COCs in the vicinity of the designated property's Former Your Valet Cleaners and El Dorado Cleaners have been compared to the most recent soil and groundwater sampling and analysis results obtained for samples collected from these areas of the designated property to determine the current location and extent of TRRP soil and groundwater ingestion and non-ingestion PCL exceedance (PCLE) zones.

In the area of the designated property's Shell Station, soil and groundwater affected by petroleum hydrocarbons are currently being assessed under the TCEQ's PST Program (30 TAC 334). As such, TRRP and its associated PCLs do not directly apply to this portion of the designated property. However, for purposes of this MSD application and in accordance with City of Houston, Texas Ordinance No. 2007-959 (pertaining to MSDs), the most recent soil and groundwater sampling and analysis results obtained for samples collected from the area of the designated property's Shell Station have been compared to the most restrictive TRRP Tier 1 residential soil and groundwater PCLs promulgated for ingestion and non-ingestion exposure pathways to determine the current location and extent of TRRP soil and groundwater ingestion and non-ingestion PCLE zones in the vicinity of the Shell Station.

The TRRP PCLs utilized for determination of the designated property's soil and groundwater ingestion and non-ingestion PCLE zones are included in **Tables E.1** and **E.2** in **Appendix E** with summaries of all soil and groundwater sampling and analysis results. The locations of all soil and groundwater sampling points are shown on **Figures B.8A, B.8B** and **B.8C** and the approximate locations of all TRRP soil and groundwater ingestion and non-ingestion PCLE zones are shown on **Figures B.5** and **B.6**. A discussion of the designated property's TRRP soil and groundwater ingestion and non-ingestion PCLE zones and a discussion of the geochemical properties of the COCs detected in the designated property's soil and groundwater is included below.

### **Soil PCLE Zones**

Soil sampling and analysis results obtained for soil samples collected from the designated property since 2006 indicate PCE; TCE; cis-1,2 DCE; and VC are present in the soil in the immediate vicinity of the designated property's Former Your Valet Cleaners (southwestern portion of the designated property) and El Dorado Cleaners (east-central portion of the designated property) in excess of the COCs' applicable TRRP soil ingestion PCLs (TRRP Tier 1 residential<sup>GW</sup> Soil<sub>ing</sub> PCLs). In addition, soil sampling and analysis results indicate benzene,

toluene, ethylbenzene, and MTBE are present in the soil in the vicinity of the designated property's Shell Station (south-central portion of the designated property) in excess of the COCs' applicable TRRP soil ingestion PCLs (TRRP Tier 1 residential <sup>GW</sup>Soil<sub>Ing</sub> PCLs). The locations of the designated property's TRRP soil ingestion PCLE zones are shown on **Figures B.5A, B.5B, B.5C, and B.5D**.

Based on soil and groundwater assessment results obtained from sampling conducted in the area of the Former Your Valet Cleaners, the TRRP soil ingestion PCLE zones for PCE, TCE, cis-1,2 DCE; and VC generally occur co-located in a relatively small area immediately north of the Former Your Valet Cleaners suite and extend vertically from just below the ground surface to the second GWBU (approximately 65 ft-bgs). Based on soil and groundwater assessment results obtained from sampling conducted in the area of the El Dorado Cleaners, the TRRP soil ingestion PCLE zones for PCE, TCE, cis-1,2 DCE; and VC appear to occur co-located in a relatively small area immediately adjacent to the east of the El Dorado Cleaners suite and extend vertically from just below the ground surface to at least approximately 20 ft-bgs but not more than approximately 27.5 ft-bgs, the approximate depth at which the first GWBU occurs in the area. In the area of the designated property's Shell Station, soil and groundwater assessment results indicate the TRRP soil ingestion PCLE zones for benzene, toluene, ethylbenzene, and MTBE occur immediately north of the current PST tankhold and extend vertically from at least approximately 15 ft-bgs to near the top of the first GWBU (approximately 25 ft-bgs).

None of the COCs detected in the soil in the vicinity of the designated property's Former Your Valet Cleaners, El Dorado Cleaners, or Shell Station exceed their applicable TRRP non-ingestion soil PCLs (TRRP Tier 1 residential <sup>Tot</sup>Soil<sub>Comb</sub> PCLs for surface soils or <sup>Air</sup>Soil<sub>Inh-V</sub> PCLs for subsurface soils). As such, no TRRP non-ingestion soil PCLE zones exist at the designated property.

#### **Groundwater PCLE Zones**

The most recent groundwater sampling and analysis results indicate PCE; TCE; cis-1,2 DCE; and VC are present in the groundwater of the first and second GWBUs in the vicinity of the designated property's Former Your Valet Cleaners in excess of the COCs' applicable TRRP groundwater ingestion PCLs (TRRP Tier 1 residential <sup>GW</sup>GW<sub>Ing</sub> PCLs). In addition, the most recent groundwater sampling and analysis results indicate benzene, ethylbenzene, MTBE, TPH, and naphthalene are present in the groundwater of the first GWBU in the vicinity of the designated property's Shell Station in excess of the COCs' applicable TRRP groundwater ingestion PCLs (TRRP Tier 1 residential <sup>GW</sup>GW<sub>Ing</sub> PCLs).

None of the COCs detected in the groundwater of the first and second GWBU in the vicinity of the Former Your Valet Cleaners and none of the COCs detected in the groundwater of the first GWBU in the vicinity of the Shell Station currently exceed their applicable TRRP non-ingestion groundwater PCLs (TRRP Tier 1 residential <sup>Air</sup>GW<sub>Inh-V</sub> PCLs). As such, no TRRP non-ingestion groundwater PCLE zones exist at the designated property.

No impacts to groundwater of the designated property's third GWBU have been identified at the designated property. As such, no TRRP groundwater PCLEs zones exist in the third GWBU. In addition, groundwater sampling conducted over nine monitoring events since December 2006 in the area of the designated property's El Dorado Cleaners have indicated no groundwater impact to date by any of the chlorinated ethene COCs detected in the soil in this portion of the designated property. However, synthetic precipitation leaching procedure (SPLP) analytical results from May 2009 indicated that chlorinated ethene COCs within the soil are leachable at concentrations that would exceed their respective TRRP groundwater ingestion PCLs. Currently, no groundwater PCLE zones exist in this area of the designated property.

The designated property's affected first and second GWBUs in the vicinity of the Former Your Valet Cleaners occurs at approximate depths of 20 ft-bgs for the first GWBU and 45 ft-bgs for the second GWBU. In the area of the designated property's Shell Station, the affected first GWBU occurs at an approximate depth of 17 ft-bgs.

Groundwater gauging data collected to date from monitoring wells installed in the affected first and second GWBUs in the vicinity of the designated property's Former Your Valet Cleaners indicate groundwater in both the first and second GWBUs in the area of the Former Your Valet Cleaners consistently moves in a northeasterly direction. Groundwater gauging data collected to date from monitoring wells installed in the affected first GWBU in the vicinity of the designated property's Shell Station also indicate groundwater in this area of the designated property consistently moves in a northeasterly direction. Groundwater data collected from the unaffected first GWBU in the vicinity of the designated property's El Dorado Cleaners also is shown to move in a northeasterly direction.

Further discussion regarding each of the designated property's current TRRP groundwater ingestion PCLE zones follows. The locations of each of the designated property's TRRP groundwater PCLE zones are shown on **Figures B.6A** and **B.6B** in **Appendix B**.

#### PCE PCLE Zones

The most recent groundwater monitoring data indicate PCE groundwater ingestion PCLE zones currently exist in the first and second GWBUs in the vicinity of the designated property's Former Your Valet Cleaners. The current PCE groundwater ingestion PCLE zones occur in the first GWBU in the area of monitoring wells 1-MW-6, 1-MW-7, and 1-MW-15 and in the second GWBU in the area of monitoring wells 2-MW-1 and 2-MW-5.

The current PCE groundwater ingestion PCLE zones in the first and second GWBUs are delineated vertically by third GWBU monitoring well 3-MW-1 and laterally in all directions by first GWBU monitoring wells 1-MW-5, 1-MW-8, 1-MW-9, 1-MW-10, and 1-MW-14 and second GWBU monitoring wells 2-MW-6, 2-MW-2, 2-MW-3, and 2-MW-4. The current extent of the PCE groundwater ingestion PCLE zones are estimated to be approximately 51,500 square feet in the first GWBU and approximately 41,000 square feet in the second GWBU.

The current maximum PCE concentration detected in the groundwater of the first GWBU is 4.3 mg/L detected at monitoring well 1-MW-7. The current maximum PCE concentration detected in the groundwater of the second GWBU is 5.7 mg/L detected at monitoring well 2-MW-1. Both concentrations exceed PCE's applicable TRRP groundwater ingestion PCL (TRRP Tier 1 residential <sup>GW</sup>GW<sub>ing</sub> PCL) of 0.005 mg/L.

No concentrations of PCE have been detected in the groundwater in excess of PCE's applicable TRRP non-ingestion groundwater PCL (the TRRP Tier 1 residential <sup>Air</sup>GW<sub>inh-v</sub> PCL for a 0.5-Acre Source Area) of 500 mg/L. As such, no PCE non-ingestion PCLE zones occur in groundwater at the designated property.

### TCE

The most recent groundwater monitoring data indicate TCE groundwater ingestion PCLE zones currently exist in the first and second GWBUs in the vicinity of the designated property's Former Your Valet Cleaners. The current TCE groundwater ingestion PCLE exceedance zones occur in the first GWBU in the area of monitoring wells 1-MW-6, 1-MW-7, and 1-MW-15 and in the second GWBU in the area of monitoring wells 2-MW-1 and 2-MW-5.

The current TCE groundwater ingestion PCLE zones are delineated vertically by third GWBU monitoring well 3-MW-1 and laterally in all directions by first GWBU monitoring wells 1-MW-5, 1-MW-8, 1-MW-9, 1-MW-10, and 1-MW-14 and second GWBU monitoring wells 2-MW-6, 2-MW-2, 2-MW-3, and 2-MW-4. The current extent of the TCE groundwater ingestion PCLE zones are estimated to be approximately 51,500 square feet in the first GWBU and approximately 41,000 square feet in the second GWBU.

The current maximum TCE concentration detected in the groundwater of the first GWBU is 0.24 mg/L detected at monitoring well 1-MW-7. The current maximum TCE concentration detected in the groundwater of the second GWBU is 0.41 mg/L detected at monitoring well 2-MW-1. Both concentrations exceed TCE's applicable TRRP groundwater ingestion PCL (TRRP Tier 1 residential <sup>GW</sup>GW<sub>ing</sub> PCL) of 0.005 mg/L.

No concentrations of TCE have been detected in groundwater in excess of TCE's applicable TRRP non-ingestion groundwater PCL (the TRRP Tier 1 residential <sup>Air</sup>GW<sub>inh-v</sub> PCL for a 0.5-Acre Source Area) of 120 mg/L. As such, no TCE non-ingestion PCLE zones occur in groundwater at the designated property.

### Cis-1,2-DCE

The most recent groundwater monitoring data indicate cis-1,2-DCE groundwater ingestion PCLE zones currently exist in the first and second GWBUs in the vicinity of the designated property's Former Your Valet Cleaners. The current cis-1,2-DCE groundwater ingestion PCLE zones occur in the first GWBU in the area of monitoring well 1-MW-7 and in the second GWBU in the area of monitoring well 2-MW-1.

The current cis-1,2-DCE groundwater ingestion PCLE zones are delineated vertically by third GWBU monitoring well 3-MW-1 and laterally in all directions by first GWBU monitoring wells 1-MW-5, 1-MW-6, 1-MW-8, 1-MW-15, 1-MW-9, 1-MW-10, and 1-MW-14 and second GWBU monitoring wells 2-MW-6, and 2-MW-5, 2-MW-2, 2-MW-3, and 2-MW-4. The current extent of the cis-1,2-DCE groundwater ingestion PCLE zones are estimated to be approximately 680 square feet in the first GWBU and approximately 3,550 square feet in the second GWBU.

The current maximum cis-1,2-DCE concentration detected in the groundwater of the first GWBU is 3.9 mg/L detected at monitoring well 1-MW-7. The current maximum cis-1,2-DCE concentration detected in the groundwater of the second GWBU is 3.8 mg/L detected at monitoring well 2-MW-1. Both concentrations exceed cis-1,2-DCE's applicable TRRP groundwater ingestion PCL (TRRP Tier 1 residential <sup>GW</sup>GW<sub>ing</sub> PCL) of 0.07 mg/L.

No concentrations of cis-1,2-DCE have been detected in groundwater in excess of cis-1,2-DCE's applicable TRRP non-ingestion groundwater PCL (the TRRP Tier 1 residential <sup>Air</sup>GW<sub>inh-v</sub> PCL for a 0.5-Acre Source Area) of 16,000 mg/L. As such, no cis-1,2-DCE non-ingestion PCLE zones occur in groundwater at the designated property.

#### VC

The most recent groundwater monitoring data indicate VC groundwater ingestion PCLE zones currently exist in the first and second GWBUs in the vicinity of the designated property's Former Your Valet Cleaners. The current VC groundwater ingestion PCLE zones occur in the first GWBU in the area of monitoring wells 1-MW-6 and 1-MW-7 and in the second GWBU in the area of monitoring well 2-MW-1.

The current VC groundwater ingestion PCLE zones are delineated vertically by third GWBU monitoring well 3-MW-1 and laterally in all directions by first GWBU monitoring wells 1-MW-5, 1-MW-8, 1-MW-15, 1-MW-9, 1-MW-10, and 1-MW-14 and second GWBU monitoring wells 2-MW-6, and 2-MW-5, 2-MW-2, 2-MW-3, and 2-MW-4. The current extent of the VC groundwater ingestion PCLE zones are estimated to be approximately 11,000 square feet in the first GWBU and approximately 1,000 square feet in the second GWBU.

The current maximum VC concentration detected in the groundwater of the first GWBU is 0.47 mg/L detected at monitoring well 1-MW-7. The current maximum VC concentration detected in the groundwater of the second GWBU is 0.54 mg/L detected at monitoring well 2-MW-1. Both concentrations are well above VC's applicable TRRP groundwater ingestion PCL (TRRP Tier 1 residential <sup>GW</sup>GW<sub>ing</sub> PCL) of 0.002 mg/L.

No concentrations of VC have been detected in groundwater in excess of VC's applicable TRRP non-ingestion groundwater PCL (the TRRP Tier 1 residential <sup>Air</sup>GW<sub>inh-v</sub> PCL for a 0.5-Acre Source Area) of 3.8 mg/L. As such, no VC non-ingestion PCLE zones occur in groundwater at the designated property.

### Benzene

The most recent groundwater monitoring data indicate a benzene groundwater ingestion PCLE zone occurs in the first GWBU in the area of the designated property's Shell Station. Specifically, the current benzene groundwater ingestion PCLE zone occurs in the area of monitoring wells 1-MW-2, 1-MW-1, and 1-MW-17.

Although not necessarily required for satisfactory completion of assessments conducted for compliance with current TCEQ PST Program rules (30 TAC 334), groundwater sampling and monitoring activities performed to date in the vicinity of the designated property's Shell Station have revealed that the current benzene groundwater ingestion PCLE zone is delineated in up-gradient and down-gradient directions by first GWBU monitoring wells 1-MW-4, 1-MW-3, 1-MW-16 to the west of Fondren Road, and 1-MW-11 to the east of Fondren Road. Based on these results, the current aerial extent of the benzene groundwater ingestion PCLE zone is estimated to be approximately 7,050 square feet. Due to benzene's chemical and physical properties (relatively high solubility and low density), the vertical extent of the benzene groundwater ingestion PCLE zone is most likely confined to the designated property's uppermost GWBU.

The current maximum benzene concentration detected in the groundwater of the first GWBU is 3.0 mg/L detected at monitoring well 1-MW-2. This current benzene concentration exceeds benzene's applicable TRRP groundwater ingestion PCL (TRRP Tier 1 residential <sup>GW</sup>GW<sub>Ing</sub> PCL) of 0.005 mg/L. No concentrations of benzene have been detected in the groundwater in excess of benzene's applicable TRRP non-ingestion groundwater PCL (the TRRP Tier 1 residential <sup>Air</sup>GW<sub>Inh-v</sub> PCL for a 0.5-Acre Source Area) of 180 mg/L. As such, no benzene non-ingestion PCLE zones occur in groundwater at the designated property.

### Ethylbenzene

The most recent groundwater monitoring data indicate an ethylbenzene groundwater ingestion PCLE zone occurs in the first GWBU in the area of the designated property's Shell Station. Specifically, the current ethylbenzene groundwater ingestion PCLE zone occurs in the area of monitoring wells 1-MW-2 and 1-MW-1.

Although not necessarily required for satisfactory completion of assessments conducted for compliance with current TCEQ PST Program rules (30 TAC 334), groundwater sampling and monitoring activities performed to date in the vicinity of the designated property's Shell Station have revealed the current ethylbenzene groundwater ingestion PCLE zone is delineated in up-gradient and down-gradient directions by first GWBU monitoring wells 1-MW-4, 1-MW-3, 1-MW-16, and 1-MW-17. Based on these results, the current aerial extent of the ethylbenzene groundwater ingestion PCLE zone is estimated to be approximately 3,320 square feet. Due to ethylbenzene's chemical and physical properties (relatively high solubility and low density), the vertical extent of the ethylbenzene groundwater ingestion PCLE zone is most likely confined to the designated property's uppermost GWBU.

The current maximum ethylbenzene concentration detected in the groundwater of the first GWBU is 2.9 mg/L detected at monitoring well 1-MW-2. This current concentration exceeds

ethylbenzene's applicable TRRP groundwater ingestion PCL (TRRP Tier 1 residential <sup>GW</sup>GW<sub>Ing</sub> PCL) of 0.7 mg/L. No concentrations of ethylbenzene have been detected in the groundwater in excess of ethylbenzene's applicable TRRP non-ingestion groundwater PCL (the TRRP Tier 1 residential <sup>Air</sup>GW<sub>Inh-v</sub> PCL for a 0.5-Acre Source Area) of 16,000 mg/L. As such, no ethylbenzene non-ingestion PCLE zones occur in groundwater at the designated property.

#### MTBE

The most recent groundwater monitoring data indicate an MTBE groundwater ingestion PCLE zone occurs in the first GWBU in the area of the designated property's Shell Station. Specifically, the current MTBE groundwater ingestion PCLE zone occurs in the area of monitoring wells 1-MW-2, 1-MW-1, 1-MW-17, and 1-MW-16.

Although not necessarily required for satisfactory completion of assessments conducted for compliance with current TCEQ PST Program rules (30 TAC 334), groundwater sampling and monitoring activities performed to date in the vicinity of the designated property's Shell Station have revealed the current MTBE groundwater ingestion PCLE zone is delineated in up-gradient and down-gradient directions by first GWBU monitoring wells 1-MW-4, 1-MW-3, and 1-MW-11. Based on these results, the current aerial extent of the MTBE groundwater ingestion PCLE zone is estimated to be approximately 18,200 square feet. Due to MTBE's chemical and physical properties (relatively high solubility and low density), the vertical extent of the MTBE groundwater ingestion PCLE zone is most likely confined to the designated property's uppermost GWBU.

The current maximum MTBE concentration detected in the groundwater of the first GWBU is 22 mg/L detected at monitoring well 1-MW-2. This current concentration is well above MTBE's applicable TRRP groundwater ingestion PCL (TRRP Tier 1 residential <sup>GW</sup>GW<sub>Ing</sub> PCL) of 0.24 mg/L. No concentrations of MTBE have been detected in the groundwater in excess of MTBE's applicable TRRP non-ingestion groundwater PCL (the TRRP Tier 1 residential <sup>Air</sup>GW<sub>Inh-v</sub> PCL for a 0.5-Acre Source Area) of 4,000 mg/L. As such, no MTBE non-ingestion PCLE zones occur in groundwater at the designated property.

#### TPH

The most recent groundwater monitoring data indicate TRRP groundwater ingestion PCLE zones for TPH in the C6-C12 hydrocarbon range, TPH in the C12-C28 hydrocarbon range, and TPH in the C12-C35 hydrocarbon range occur in the first GWBU in the area of the designated property's Shell Station. Specifically, the current TRRP groundwater ingestion PCLE zones for TPH in the C6-C12 and C12-C35 hydrocarbon ranges occur in the area of monitoring wells 1-MW-2 and 1-MW-1 and the current TRRP groundwater ingestion PCLE zone for TPH in the C12-C28 hydrocarbon range occurs in the area of monitoring well 1-MW-2.

Although not regulated as a COC under current TCEQ PST Program rules (30 TAC 334), groundwater sampling and monitoring activities performed to date in the vicinity of the designated property's Shell Station have revealed the current TPH C6-C12 and C12-C35 groundwater ingestion PCLE zones are delineated in up-gradient and down-gradient directions

by first GWBU monitoring wells 1-MW-4, 1-MW-3, 1-MW-17, and 1-MW-16 and the current TPH C12-C28 groundwater ingestion PCLE zone is delineated in up-gradient and down-gradient directions by first GWBU monitoring wells 1-MW-4, 1-MW-3, and 1-MW-1. Based on these results, the current aerial extent of the TPH C6-C12 and C12-C35 groundwater ingestion PCLE zones is estimated to be approximately 3,320 square feet and the current aerial extent of the TPH C12-C28 groundwater ingestion PCLE zone is estimated to be approximately 3,320 square feet. The vertical extent of the TPH groundwater ingestion PCLE zones is most likely confined to the designated property's uppermost GWBU.

The current maximum TPH C6-C12, C12-C28, and C12-C35 concentrations detected in the groundwater of the first GWBU are 25 mg/L, 1.5 mg/L, and 1.5 mg/L, respectively. All of these current maximum TPH concentrations were detected at monitoring well 1-MW-2 and all are well above their applicable TRRP groundwater ingestion PCLs (TRRP Tier 1 residential  $^{GW}GW_{ing}$  PCLs) of 0.98 mg/L. No concentrations of TPH have been detected in the groundwater in excess of TPH's applicable TRRP non-ingestion groundwater PCLs (the TRRP Tier 1 residential  $^{Air}GW_{inh-v}$  PCL for a 0.5-Acre Source Area) of 1,800 mg/L for TPH in the C6-C12 hydrocarbon range and 7,500 mg/L for TPH in the C12-C28, and C12-C35 hydrocarbon ranges. As such, no MTBE non-ingestion PCLE zones occur in groundwater at the designated property.

#### Naphthalene

The most recent groundwater monitoring data indicate a naphthalene groundwater ingestion PCLE zone occurs in the first GWBU in the area of the designated property's Shell Station. Specifically, the current naphthalene groundwater ingestion PCLE zone has been identified in the area of monitoring well 1-MW-2.

Delineation of the lateral extent of the naphthalene groundwater ingestion PCLE zone has not been performed to date as formal delineation of its lateral extent is not required under the TCEQ PST Program. Although not required under current TCEQ PST Program rules (30 TAC 334), groundwater sampling and monitoring activities performed to date in the vicinity of the designated property's Shell Station indicate the current naphthalene groundwater ingestion PCLE zone is most likely delineated in up-gradient and down-gradient directions by first GWBU monitoring wells 1-MW-3, 1-MW-4, 1-MW-16, and 1-MW-17. This conclusion is based on recent groundwater sampling and analysis results for nearby monitoring wells 1-MW-3, 1-MW-4, 1-MW-16, and 1-MW-17 which indicate no detectable concentrations of TPH in the same hydrocarbon range (C12-C35) as naphthalene in the groundwater surrounding monitoring well 1-MW-2. Like the other petroleum hydrocarbons detected in the vicinity of the designated property's Shell Station, naphthalene's vertical extent is most likely confined to the designated property's uppermost GWBU due to the COC's relatively high solubility and low density with respect to water.

The current maximum naphthalene concentration detected in the groundwater of the first GWBU at monitoring well 1-MW-2 is 0.70 mg/L. This current naphthalene concentration is slightly above naphthalene's applicable TRRP groundwater ingestion PCL (TRRP Tier 1 residential  $^{GW}GW_{ing}$  PCL) of 0.49 mg/L and does not exceed naphthalene's applicable TRRP non-ingestion

groundwater PCL (the TRRP Tier 1 residential <sup>Air</sup>GW<sub>Inh-V</sub> PCL for a 0.5-Acre Source Area) of 320 mg/L.

### **Geochemical Properties of COCs in Designated Soil and Groundwater**

The COCs (PCE; TCE; trans-1,2-DCE; cis-1,2-DCE; and VC) detected in the soil in the vicinity of the designated property's El Dorado Cleaners and the COCs (PCE; TCE; 1,1-DCE; trans-1,2-DCE; cis-1,2-DCE; and VC) detected in the soil and the groundwater of the first and second GWBUs in the vicinity of the designated property's Former Your Valet Cleaners are chlorinated ethenes which result from historical, on-site, chlorinated solvent dry cleaning operations. The chlorinated ethene COCs present in the soil and/or groundwater in the vicinity of the designated property's Former Your Valet Cleaners and El Dorado Cleaners occur in the dissolved-phase and no direct evidence of non-aqueous phase liquids (NAPLs) has been observed or detected. Due to their high densities, NAPLs comprised of chlorinated ethenes are generally referred to as dense NAPLs or DNAPLs. DNAPL-phase COCs have a tendency to migrate vertically and "sink" in GWBUs. Typically, dissolved-phase chlorinated ethenes preferentially migrate with groundwater flow. However, DNAPLs, when present, can migrate along the dip of geologic contacts counter to groundwater flow. Monitoring wells installed at the subject property fully penetrate the GWBU, but no DNAPL-phase COCs have been observed.

Generally, chlorinated ethenes such as those detected in the soil and/or groundwater in the vicinity of the designated property's Former Your Valet Cleaners and El Dorado Cleaners are colorless liquids at room temperature. In addition, they are relatively volatile, have higher densities than water, relatively low viscosities, relatively low solubilities, and relatively low explosive limits.

The COCs (TPH, BTEX, MTBE, and naphthalene) detected in the soil and/or groundwater of the first GWBU in the vicinity of the designated property's Shell Station are petroleum hydrocarbons which result from an historic release of petroleum products from an underground product pipe that has subsequently been replaced. The COCs are present in the soil and/or groundwater of the first GWBU in the dissolved-phase and no direct evidence of NAPLs has been observed or detected. NAPLs comprised of petroleum hydrocarbon constituents are generally referred to as light NAPLs or LNAPLs due to their low density relative to water. In groundwater, LNAPLs, as well as dissolved-phase petroleum hydrocarbons, generally tend to migrate in the direction of groundwater flow.

Generally, the petroleum hydrocarbon constituents that are present in the soil and groundwater of the uppermost GWBU in the area of the designated property's Shell Station are characterized as being liquids at room temperature. In addition, they are volatile or semi-volatile, aromatic, and less dense than water.

## Appendix E – COCs in Designated Groundwater

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As previously discussed and documented in **Appendix D**, groundwater sampling and analysis activities performed to date in the southwestern portion of the designated property indicate the groundwater of the first and second GWBUs in the vicinity of the designated property's Former Your Valet Cleaners currently contain detectable concentrations of six chlorinated ethene COCs (PCE; TCE; 1,1-DCE; trans-1,2-DCE; cis-1,2-DCE; and VC). In addition, groundwater sampling and analysis activities performed to date in the south-central portion of the designated property indicate the groundwater of the first GWBU in the vicinity of the designated property's Shell Station currently contains detectable concentrations of seven petroleum hydrocarbon COCs (BTEX, MTBE, TPH, and naphthalene). A brief summary discussion regarding the chlorinated ethene and petroleum hydrocarbon COCs that are currently present in the groundwater of the designated property's first and second GWBUs follows. A more detailed discussion of the COCs and their associated groundwater PCLE zones is provided in **Appendix D**. Maps showing the current locations and concentrations of COCs in the designated property's groundwater are provided in **Appendix B** and summary tables of all groundwater sampling and analysis results obtained for the designated property are provided in **Appendix E** as **Tables E.1** and **E.2**.

### **Chlorinated Ethenes**

Groundwater sampling and analysis activities performed to date indicate the groundwater of the first and second GWBUs in the southwestern portion of the designated property, near the designated property's Former Your Valet Cleaners, currently contains detectable concentrations of six chlorinated ethene COCs (PCE; TCE; 1,1-DCE; trans-1,2-DCE; cis-1,2-DCE; and VC). The six chlorinated ethene COCs result from historical, on-site dry cleaning operations previously conducted in the southwest suite of the designated property's west shopping center from approximately 1979 through 1996. The chlorinated ethenes occur in the dissolved-phase in both GWBUs in the southwestern portion of the designated property and no direct or indirect evidence of NAPLs has been observed or detected.

Of the six chlorinated ethene COCs detected in the first and second GWBUs in the southwestern portion of the designated property, four (PCE; TCE; cis-1,2 DCE; and VC) are currently present in the first and second GWBUs in excess of the COCs' applicable TRRP groundwater ingestion PCLs (TRRP Tier 1 residential <sup>GW</sup>GW<sub>ing</sub> PCLs). The maximum concentrations for all four of these COCs in both GWBUs have currently (and historically) been detected in first GWBU monitoring well 1-MW-7 and second GWBU monitoring well 2-MW-1. In addition, historical groundwater sampling and monitoring data indicate the COCs' associated TRRP groundwater ingestion PCLE zones (in both GWBUs) are stable and vertically and laterally delineated.

No concentrations of any chlorinated ethenes have been detected in the groundwater in the southwestern portion of the designated property in excess of applicable TRRP non-ingestion PCLs. As such, no TRRP non-ingestion groundwater PCLE zones exist in connection with the designated property's southwestern chlorinated ethene plumes.

### **Petroleum Hydrocarbons**

Groundwater sampling and analysis activities performed to date indicate the groundwater of the first GWBU in the south-central portion of the designated property, near the designated property's Shell Station, currently contains detectable concentrations of seven petroleum hydrocarbon COCs (BTEX, MTBE, TPH, and naphthalene). The seven petroleum hydrocarbon COCs reportedly resulted from an historical release of petroleum product from a previously removed and replaced underground product pipe associated with the Shell Station facility's currently active underground PST system. The petroleum hydrocarbon COCs present in the groundwater of the first GWBU in the south-central portion of the designated property occur in the dissolved-phase and no direct or indirect evidence of NAPLs has been observed or detected.

Of the seven petroleum hydrocarbon COCs detected in the first GWBU in the south-central portion of the designated property, five (benzene, ethylbenzene, MTBE, TPH, and naphthalene) are currently present in excess of the COCs' applicable TRRP groundwater ingestion PCLs (TRRP Tier 1 residential <sup>GW</sup>GW<sub>ing</sub> PCLs). The maximum concentrations for all five of these petroleum hydrocarbon COCs have currently (and historically) been detected in monitoring well 1-MW-2. Groundwater monitoring activities performed to date indicate all five of the COCs' TRRP groundwater ingestion PCLE zones appear to be stable and delineated within the confines of the designated property and its uppermost GWBU.

No concentrations of any petroleum hydrocarbon COCs have been detected in groundwater in the south-central portion of the designated property in excess of any applicable TRRP non-ingestion PCLs. As such, no TRRP non-ingestion groundwater PCLE zones exist in connection with the designated property's petroleum hydrocarbon plume.

**TABLE E.1  
SOIL DATA SUMMARY  
FONDREN SOUTHWEST SHOPPING CENTER  
FONDREN ROAD AND WEST BELLFORT AVENUE  
HOUSTON, HARRIS COUNTY, TEXAS**

Sample ID/Boring #	Date Sampled	Sample Depth (ft.-bgs)	VOCs									PAHs	BTEX/MTBE					TPH							
			1,1-Dichloroethene		cis-1,2-Dichloroethene		Tetrachloroethene		trans-1,2-Dichloroethene		Trichloroethene		Vinyl chloride		PAHs (suite of 16)	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE (Methyl tert-Butyl ether)	C6-C12	C12-C28	C28-C35	C12-C35	
			Method 8260 mg/Kg	Method 8260 mg/Kg	Method 1312/8260 mg/L	Method 8260 mg/Kg	Method 1312/8260 mg/L	Method 8260 mg/Kg	Method 1312/8260 mg/L	Method 8260 mg/Kg	Method 1312/8260 mg/L	Method 8260 mg/Kg	Method 1312/8260 mg/L	Method 8270 mg/Kg											Method 8021B mg/Kg
<i>Former Your Valet Cleaners</i>																									
SB-2	1/11/07	2-4	< 0.0012	< 0.00096	--	< 0.00072	-	< 0.0012	< 0.00072	-	< 0.00072	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		14-15	< 0.0012	< 0.00094	--	< 0.00071	-	< 0.0012	< 0.00071	-	< 0.00071	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SB-3	1/11/07	0-2	< 0.0012	< 0.00093	--	< 0.00070	-	< 0.0012	< 0.00070	-	< 0.00070	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		14-15	< 0.0012	<b>0.0028 J</b>	--	< 0.00073	-	< 0.0012	< 0.00073	-	< 0.00073	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SB-4	1/11/07	10-12	< 0.0012	<b>0.13</b>	--	<b>0.036</b>	-	< 0.0012	<b>0.010</b>	-	< 0.00071	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		14-15	<b>0.0030 J</b>	<b>0.13</b>	--	<b>0.062</b>	-	<b>0.0019 J</b>	<b>0.14</b>	-	<b>0.10</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SB-5	1/11/07	2-4	< 0.0012	<b>0.24</b>	--	<b>0.0057 J</b>	-	<b>0.0025 J</b>	< 0.00074	-	<b>0.10</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		14-15	< 0.0012	<b>0.034</b>	--	< 0.00073	-	< 0.0012	< 0.00073	-	<b>0.0092</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SB-6	2/22/07	10-12	<b>0.013</b>	<b>4.1</b>	--	<b>0.40</b>	-	<b>0.025</b>	<b>0.10</b>	-	<b>0.66</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		18-20	< 0.0011	< 0.00092	--	< 0.00069	-	< 0.0011	< 0.00069	-	< 0.00069	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SB-7	2/22/07	10-12	<b>0.0033 J</b>	<b>0.16</b>	--	<b>0.0041 J</b>	-	< 0.0012	<b>0.0098</b>	-	<b>0.024</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		18-19.5	< 0.0012	<b>0.010</b>	--	< 0.00070	-	< 0.0012	< 0.00070	-	< 0.00070	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SB-8	2/22/07	8-10	< 0.0011	<b>0.085</b>	--	< 0.00068	-	< 0.0011	<b>0.0029 J</b>	-	<b>0.0038</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		18-20	< 0.0012	< 0.00093	--	< 0.00070	-	< 0.0012	< 0.00070	-	< 0.00070	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SB-9	2/22/07	0-2	< 0.0012	<b>0.050</b>	--	<b>0.12</b>	-	< 0.0012	<b>0.0078</b>	-	< 0.00073	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		18-19.5	< 0.0012	<b>0.27</b>	--	<b>0.028</b>	-	< 0.0012	<b>0.027</b>	-	<b>0.013</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SB-10	2/22/07	10-12	< 0.0012	<b>0.22</b>	--	<b>0.020</b>	-	< 0.0012	<b>0.030</b>	-	<b>0.020</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		18-20	< 0.0012	<b>0.20</b>	--	<b>0.0070</b>	-	< 0.0012	<b>0.011</b>	-	<b>0.0093</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SB-11	2/14/08	0-2	< 0.0012	< 0.00097	--	< 0.00073	-	< 0.0012	< 0.00073	-	< 0.00073	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		6-8	< 0.0012	<b>0.0022 J</b>	--	< 0.00072	-	< 0.0012	< 0.00072	-	< 0.00072	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SB-12	2/14/08	0-2	< 0.0012	<b>0.0019 J</b>	--	<b>0.031</b>	-	< 0.0012	<b>0.0023 J</b>	-	< 0.00071	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		8-10	< 0.0012	<b>0.23</b>	--	<b>0.0036 J</b>	-	< 0.0012	<b>0.0026 J</b>	-	<b>0.0032</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		14-16	< 0.0011	<b>0.089</b>	--	< 0.00067	-	< 0.0011	< 0.00067	-	< 0.00067	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SB-13	2/14/08	0-2	< 0.0012	< 0.00094	--	<b>0.0021 J</b>	-	< 0.0012	< 0.00070	-	< 0.00070	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		10-12	<b>0.0047 (J)</b>	<b>9.1</b>	--	<b>0.14</b>	-	<b>0.023</b>	<b>0.79</b>	-	<b>0.25</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		14-16	< 0.0012	<b>0.069</b>	--	<b>0.0089</b>	-	< 0.0012	<b>0.0084</b>	-	< 0.00070	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SB-14	2/14/08	2-4	< 0.0012	<b>0.0010 J</b>	--	< 0.00075	-	< 0.0012	< 0.00075	-	< 0.00075	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		10-12	< 0.0013	<b>0.0028 J</b>	--	< 0.00077	-	< 0.0013	< 0.00077	-	< 0.00077	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		14-16	< 0.0012	<b>0.0021 J</b>	--	< 0.00070	-	< 0.0012	< 0.00070	-	< 0.00070	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SB-15	2/14/08	2-4	< 0.0013	< 0.0010	--	< 0.00077	-	< 0.0013	< 0.00077	-	< 0.00077	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		8-10	< 0.0013	<b>0.028</b>	--	< 0.00077	-	< 0.0013	< 0.00077	-	<b>0.011</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SB-16	5/14/2009	8-10	< 0.0010	< 0.00078	--	<b>0.0039 J</b>	-	< 0.00065	<b>0.0013 J</b>	-	< 0.0013	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SB-17	5/14/2009	2-4	< 0.0010	< 0.00076	--	< 0.00076	-	< 0.00063	< 0.00063	-	< 0.0013	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		10-12	< 0.00094	< 0.00070	--	< 0.00070	-	< 0.00059	< 0.00059	-	< 0.0012	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**TABLE E.1  
SOIL DATA SUMMARY  
FONDREN SOUTHWEST SHOPPING CENTER  
FONDREN ROAD AND WEST BELLFORT AVENUE  
HOUSTON, HARRIS COUNTY, TEXAS**

Sample ID/Boring #	Date Sampled	Sample Depth (ft-bgs)	VOCs									PAHs	BTEX/MTBE					TPH						
			1,1-Dichloroethene		cis-1,2-Dichloroethene		Tetrachloroethene		trans-1,2-Dichloroethene		Trichloroethene		Vinyl chloride		PAHs (suite of 16)	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE (Methyl tert-Butyl ether)	C6-C12	C12-C28	C28-C35	C12-C35
			Method 8260 mg/Kg	Method 8260 mg/Kg	Method 1312/8260 mg/L	Method 8260 mg/Kg	Method 1312/8260 mg/L	Method 8260 mg/Kg	Method 1312/8260 mg/L	Method 8260 mg/Kg	Method 1312/8260 mg/L	Method 8260 mg/Kg	Method 1312/8260 mg/L	Method 8270 mg/Kg	Method 8021B mg/Kg	Method TX1005 mg/Kg	Method TX1005 mg/Kg	Method TX1005 mg/Kg	Method TX1005 mg/Kg					
<i>Former Your Valet Cleaners</i>																								
1-MW-5	7/31/06	35-37.5	<0.0012	<0.00094	-	<0.00071	-	<0.0012	<0.00071	-	<0.00071	-	-	-	-	-	-	-	-	-	-	-	-	-
		37.5-40	<0.0013	<0.0010	-	<0.00075	-	<0.0013	<0.00075	-	<0.00075	-	-	-	-	-	-	-	-	-	-	-	-	-
1-MW-6	7/28/06	35-37.5	<0.0012	<0.00095	-	<0.00071	-	<0.0012	<0.00071	-	<0.00071	-	-	-	-	-	-	-	-	-	-	-	-	-
		37.5-40	<0.0012	<0.00097	-	<0.00072	-	<0.0012	<0.00072	-	<0.00072	-	-	-	-	-	-	-	-	-	-	-	-	-
1-MW-7	7/28/06	32.5-35	<0.0012	<0.00093	-	<b>0.011</b>	-	<0.0012	<0.00070	-	<0.00070	-	-	-	-	-	-	-	-	-	-	-	-	-
		37.5-40	<0.0012	<0.00095	-	<b>0.0011 J</b>	-	<0.0012	<0.00071	-	<0.00071	-	-	-	-	-	-	-	-	-	-	-	-	-
1-MW-8	12/5/06	7.5-10	<0.0012	<0.00098	-	<0.00073	-	<0.0012	<0.00073	-	<0.00073	-	-	-	-	-	-	-	-	-	-	-	-	-
		10-12.5	<0.0013	<0.0010	-	<0.00075	-	<0.0013	<0.00075	-	<0.00075	-	-	-	-	-	-	-	-	-	-	-	-	-
		37.5-40	<0.0013	<0.0010	-	<0.00077	-	<0.0013	<0.00077	-	<0.00077	-	-	-	-	-	-	-	-	-	-	-	-	-
1-MW-9	11/29/06	27.5-30	<0.0012	<0.00098	-	<0.00073	-	<0.0012	<0.00073	-	<0.00073	-	-	-	-	-	-	-	-	-	-	-	-	-
		40-42.5	<0.0013	<0.0010	-	<0.00079	-	<0.0013	<0.00079	-	<0.00079	-	-	-	-	-	-	-	-	-	-	-	-	-
		42.5-45	<0.0013	<0.0010	-	<0.00076	-	<0.0013	<0.00076	-	<0.00076	-	-	-	-	-	-	-	-	-	-	-	-	-
1-MW-10	12/4/06	2.5-5	<0.0012	<0.00093	-	<0.00070	-	<0.0012	<0.00070	-	<0.00070	-	-	-	-	-	-	-	-	-	-	-	-	-
		5-7.5	<0.0012	<0.00096	-	<0.00072	-	<0.0012	<0.00072	-	<0.00072	-	-	-	-	-	-	-	-	-	-	-	-	-
		27.5-30	<0.0014	<0.0011	-	<0.00081	-	<0.0014	<0.00081	-	<0.00081	-	-	-	-	-	-	-	-	-	-	-	-	-
1-MW-14	1/30/2008	35-37.5	<0.0011	<0.00089	-	<0.00067	-	<0.0011	<0.00067	-	<0.00067	-	-	-	-	-	-	-	-	-	-	-	-	-
		37.5-40	<0.0012	<0.00096	-	<0.00072	-	<0.0012	<0.00072	-	<0.00072	-	-	-	-	-	-	-	-	-	-	-	-	-
1-MW-15	1/30/2008	35-37.5	<0.0012	<0.00096	-	<0.00072	-	<0.0012	<0.00072	-	<0.00072	-	-	-	-	-	-	-	-	-	-	-	-	-
		37.5-40	<0.0012	<0.00096	-	<0.00072	-	<0.0012	<0.00072	-	<0.00072	-	-	-	-	-	-	-	-	-	-	-	-	-
2-MW-1	12/4/06	42-43	<0.0013	<0.0010	-	<b>0.16</b>	-	<0.0013	<0.00076	-	<0.00076	-	-	-	-	-	-	-	-	-	-	-	-	-
		67.5-70	<0.0012	<0.00098	-	<0.00073	-	<0.0012	<0.00073	-	<0.00073	-	-	-	-	-	-	-	-	-	-	-	-	-
2-MW-2	3/8/07	51.5-54	<0.0012	<0.00099	-	<0.00074	-	<0.0012	<0.00074	-	<0.00074	-	-	-	-	-	-	-	-	-	-	-	-	-
		54-56.5	<0.0012	<0.00099	-	<0.00074	-	<0.0012	<0.00074	-	<0.00074	-	-	-	-	-	-	-	-	-	-	-	-	-
		56.5-59	<0.0012	<0.00094	-	<0.00070	-	<0.0012	<0.00070	-	<0.00070	-	-	-	-	-	-	-	-	-	-	-	-	-
2-MW-3	3/7/07	36.5-39	<0.0012	<0.00096	-	<0.00072	-	<0.0012	<0.00072	-	<0.00072	-	-	-	-	-	-	-	-	-	-	-	-	-
		46.5-48.5	<0.0012	<0.00094	-	<0.00070	-	<0.0012	<0.00070	-	<0.00070	-	-	-	-	-	-	-	-	-	-	-	-	-
		51.5-52	<0.0012	<0.00099	-	<0.00074	-	<0.0012	<0.00074	-	<0.00074	-	-	-	-	-	-	-	-	-	-	-	-	-
2-MW-4	2/4/2008	45-47.5	<0.0012	<0.00096	-	<0.00072	-	<0.0012	<0.00072	-	<0.00072	-	-	-	-	-	-	-	-	-	-	-	-	-
		47.5-50	<0.0012	<0.00099	-	<0.00074	-	<0.0012	<0.00074	-	<0.00074	-	-	-	-	-	-	-	-	-	-	-	-	-
2-MW-5	2/4/2008	45-47.5	<0.0013	<0.0010	-	<0.00077	-	<0.0013	<0.00077	-	<0.00077	-	-	-	-	-	-	-	-	-	-	-	-	-
		47.5-50	<0.0013	<0.0010	-	<0.00077	-	<0.0013	<0.00077	-	<0.00077	-	-	-	-	-	-	-	-	-	-	-	-	-
2-MW-6	10/23/2008	60-62.5	<0.00098	<0.00074	-	<0.00074	-	<0.00062	<0.00062	-	<0.0012	-	-	-	-	-	-	-	-	-	-	-	-	-

**TABLE E.1  
SOIL DATA SUMMARY  
FONDREN SOUTHWEST SHOPPING CENTER  
FONDREN ROAD AND WEST BELLFORT AVENUE  
HOUSTON, HARRIS COUNTY, TEXAS**

Sample ID/Boring #	Date Sampled	Sample Depth (ft-bgs)	VOCs									PAHs	BTEX/MTBE					TPH					
			1,1-Dichloroethene		cis-1,2-Dichloroethene		Tetrachloroethene		trans-1,2-Dichloroethene		Trichloroethene	Vinyl chloride	PAHs (suite of 16)	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE (Methyl tert-Butyl ether)	C6-C12	C12-C28	C28-C35	C12-C35	
			Method 8260 mg/Kg	Method 8260 mg/Kg	Method 1312/8260 mg/L	Method 8260 mg/Kg	Method 1312/8260 mg/L	Method 8260 mg/Kg	Method 8260 mg/Kg	Method 1312/8260 mg/L	Method 8260 mg/Kg	Method 1312/8260 mg/L	Method 8270 mg/Kg	Method 8021B mg/Kg	Method 8021B mg/Kg	Method 8021B mg/Kg	Method 8021B mg/Kg	Method 8021B mg/Kg	Method TX1005 mg/Kg	Method TX1005 mg/Kg	Method TX1005 mg/Kg	Method TX1005 mg/Kg	
<i>Former Your Valet Cleaners</i>																							
3-MW-1	3/2/07	10-12	< 0.0012	<b>0.0024 J</b>	-	< 0.00072	-	< 0.0012	< 0.00072	-	< 0.00072	-	-	-	-	-	-	-	-	-	-	-	
		32.5-35	< 0.0012	< 0.00098	-	< 0.00073	-	< 0.0012	< 0.00073	-	< 0.00073	-	-	-	-	-	-	-	-	-	-	-	-
		37.5-38.5	< 0.0012	< 0.00097	-	< 0.00072	-	< 0.0012	< 0.00072	-	< 0.00072	-	-	-	-	-	-	-	-	-	-	-	-
	3/9/07	44-46.5	< 0.0012	< 0.00097	-	< 0.00072	-	< 0.0012	< 0.00072	-	< 0.00072	-	-	-	-	-	-	-	-	-	-	-	-
		46.5-49	< 0.0013	< 0.0010	-	< 0.00075	-	< 0.0013	< 0.00075	-	< 0.00075	-	-	-	-	-	-	-	-	-	-	-	-
		51.5-54	< 0.0012	< 0.00095	-	< 0.00071	-	< 0.0012	< 0.00071	-	< 0.00071	-	-	-	-	-	-	-	-	-	-	-	-
	3/15/07	66.5-68.5	< 0.0012	< 0.00097	-	< 0.00073	-	< 0.0012	< 0.00073	-	< 0.00073	-	-	-	-	-	-	-	-	-	-	-	-
		89-90	< 0.0013	< 0.0010	-	< 0.00076	-	< 0.0013	< 0.00076	-	< 0.00076	-	-	-	-	-	-	-	-	-	-	-	-
		100-101	< 0.0013	< 0.0010	-	< 0.00076	-	< 0.0013	< 0.00076	-	< 0.00076	-	-	-	-	-	-	-	-	-	-	-	-
<i>El Dorado Cleaners</i>																							
B-1	6/21/2006	1.5-2	< 0.0046	< 0.0046	-	< 0.0046	-	< 0.0046	< 0.0046	-	<b>0.13</b>	-	-	-	-	-	-	-	-	-	-	-	
B-2	6/21/2006	19.5-20	< 0.0042	<b>1.2</b>	-	<b>4.0</b>	-	<b>0.0049</b>	<b>0.16</b>	-	<b>0.11</b>	-	-	-	-	-	-	-	-	-	-	-	
B-3	6/21/2006	19.5-20	< 0.0043	< 0.0043	-	< 0.0043	-	< 0.0043	< 0.0043	-	< 0.0087	-	-	-	-	-	-	-	-	-	-	-	
SB1E	2/22/2007	8-10	< 0.0012	<b>0.0062 J</b>	-	<b>0.0046 J</b>	-	< 0.0012	< 0.00075	-	< 0.00075	-	-	-	-	-	-	-	-	-	-	-	
		18-20	< 0.0012	<b>0.068</b>	-	<b>0.42</b>	-	< 0.0012	<b>0.0079</b>	-	<b>0.048</b>	-	-	-	-	-	-	-	-	-	-	-	
SB2E	2/22/2007	10-12	< 0.0013	<b>0.06</b>	-	<b>0.013</b>	-	< 0.0013	<b>0.0022 J</b>	-	< 0.00076	-	-	-	-	-	-	-	-	-	-	-	
		18-20	< 0.0012	<b>0.055</b>	-	<b>0.050</b>	-	< 0.0012	<b>0.0024 J</b>	-	< 0.00073	-	-	-	-	-	-	-	-	-	-	-	
SB-3E	5/14/2009	6-8	-	<b>0.17</b>	-	<b>0.28</b>	-	-	<b>0.12</b>	-	<b>0.014</b>	-	-	-	-	-	-	-	-	-	-	-	
		10-12	-	<0.00060	0.036	<b>0.081</b>	<b>0.018</b>	-	<b>0.10</b>	<b>0.01</b>	<b>0.0018 J</b>	<b>0.0011 J</b>	-	-	-	-	-	-	-	-	-	-	
		12-14	-	<b>0.15</b>	<b>0.063</b>	<b>0.098</b>	<b>0.032</b>	-	<b>0.029</b>	<b>0.015</b>	<0.0010	<b>0.0028 J</b>	-	-	-	-	-	-	-	-	-	-	
		14-16	-	<b>0.38</b>	<b>0.027</b>	<b>0.39</b>	<b>0.012</b>	-	<b>0.11</b>	<b>0.0045 J</b>	<b>0.12</b>	<0.00060	-	-	-	-	-	-	-	-	-	-	
SB-4E	5/14/2009	10-12	-	<b>0.16</b>	<b>0.15</b>	<b>0.025 J</b>	<b>0.024</b>	-	<b>0.16</b>	<b>0.018</b>	<b>0.02</b>	<b>0.012</b>	-	-	-	-	-	-	-	-	-	-	
		12-14	-	<b>1.0</b>	<b>0.2</b>	<b>0.12</b>	<b>0.061</b>	-	<b>0.098</b>	<b>0.026</b>	<b>0.0045</b>	<b>0.027</b>	-	-	-	-	-	-	-	-	-	-	
		16-18	-	<b>0.82</b>	<b>0.076</b>	<b>0.96</b>	<b>0.08</b>	-	<b>0.097</b>	<b>0.0088</b>	<b>0.054</b>	<b>0.014</b>	-	-	-	-	-	-	-	-	-	-	
1-MW-11	11/28/2006	27.5-30	< 0.0012	< 0.00099	-	< 0.00074	-	< 0.0012	< 0.00074	-	< 0.00074	-	-	-	-	-	-	-	-	-	-	-	
		32.5-35	< 0.0012	< 0.00097	-	< 0.00073	-	< 0.0012	< 0.00073	-	< 0.00073	-	-	-	-	-	-	-	-	-	-	-	
		35-37	< 0.0013	< 0.0010	-	< 0.00076	-	< 0.0013	< 0.00076	-	< 0.00076	-	-	-	-	-	-	-	-	-	-	-	
1-MW-12	11/28/2006	20-22.5	< 0.0012	< 0.00097	-	< 0.00073	-	< 0.0012	< 0.00073	-	< 0.00073	-	-	-	-	-	-	-	-	-	-	-	
		27.5-30	< 0.0012	< 0.00098	-	< 0.00073	-	< 0.0012	< 0.00073	-	< 0.00073	-	-	-	-	-	-	-	-	-	-	-	
1-MW-13	11/29/2006	42.5-45	< 0.0012	< 0.00097	-	< 0.00072	-	< 0.0012	< 0.00072	-	< 0.00072	-	-	-	-	-	-	-	-	-	-	-	
		2.5-5	< 0.0013	< 0.0010	-	< 0.00077	-	< 0.0013	< 0.00077	-	< 0.00077	-	-	-	-	-	-	-	-	-	-	-	
1-MW-18m	7/20/2009	5-7.5	< 0.0013	<b>0.0049 J</b>	-	< 0.00075	-	< 0.0013	<b>0.0019 J</b>	-	< 0.00075	-	-	-	-	-	-	-	-	-	-	-	
		42.5-45	< 0.0014	< 0.0011	-	< 0.00082	-	< 0.0014	< 0.00082	-	< 0.00082	-	-	-	-	-	-	-	-	-	-	-	

**TABLE E.1  
SOIL DATA SUMMARY  
FONDREN SOUTHWEST SHOPPING CENTER  
FONDREN ROAD AND WEST BELLFORT AVENUE  
HOUSTON, HARRIS COUNTY, TEXAS**

Sample ID/Boring #	Date Sampled	Sample Depth (ft-bgs)	VOCs										PAHs	BTEX/MTBE					TPH						
			1,1-Dichloroethene		cis-1,2-Dichloroethene			Tetrachloroethene		trans-1,2-Dichloroethene		Trichloroethene		Vinyl chloride		PAHs (suite of 16)	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE (Methyl tert-Butyl ether)	C6-C12	C12-C28	C28-C36	C12-C36
			Method 8260 mg/Kg	Method 8260 mg/Kg	Method 1312/8260 mg/L	Method 8260 mg/Kg	Method 1312/8260 mg/L	Method 8260 mg/Kg	Method 8260 mg/Kg	Method 1312/8260 mg/L	Method 8260 mg/Kg	Method 1312/8260 mg/L	Method 8270 mg/Kg	Method 8021B mg/Kg	Method TX1005 mg/Kg	Method TX1005 mg/Kg	Method TX1005 mg/Kg	Method TX1005 mg/Kg							
<b>Shell Station</b>																									
1-MW-1	7/27/2006	22.5-25	-	-	-	-	-	-	-	-	-	-	-	< 0.00038	< 0.00038	< 0.00038	< 0.0013	<b>5.8</b>	< 20	< 20	< 20	< 20			
		25-27.5	-	-	-	-	-	-	-	-	-	-	-	-	<b>0.011</b>	<b>0.0053</b>	<b>0.0054</b>	<b>0.0069</b>	<b>5.1</b>	< 20	< 20	< 20	< 20		
1-MW-2	7/27/2006	15-17.5	-	-	-	-	-	-	-	-	-	-	-	<b>2.2</b>	<b>23</b>	<b>14</b>	<b>40</b>	<b>22</b>	< 20	< 20	< 20	< 20			
		22.5-25	-	-	-	-	-	-	-	-	-	-	-	-	<b>5.6</b>	<b>47</b>	<b>29</b>	<b>85</b>	<b>95</b>	<b>55 J</b>	< 19	< 19	< 19	< 19	
1-MW-3	7/27/2006	17.5-20	-	-	-	-	-	-	-	-	-	-	-	< 0.00034	<b>0.00072 J</b>	<b>0.0023</b>	<b>0.011</b>	<b>0.0025 J</b>	< 18	< 18	< 18	< 18			
		22.5-25	-	-	-	-	-	-	-	-	-	-	-	-	<b>0.48</b>	<b>1.6</b>	<b>2.2</b>	<b>5.3</b>	<b>1.6</b>	< 18	< 18	< 18	< 18		
1-MW-4	7/27/2006	22.5-25	-	-	-	-	-	-	-	-	-	-	-	< 0.00036	< 0.00036	< 0.00036	< 0.0012	< 0.0018	< 19	< 19	< 19	< 19			
		27.5-30	-	-	-	-	-	-	-	-	-	-	-	-	< 0.00036	<b>0.00072 J</b>	< 0.00036	< 0.0012	<b>0.31</b>	< 19	< 19	< 19	< 19		
1-MW-17	7/20/2009	15-17.5	-	-	-	-	-	-	-	-	-	-	-	< 0.00020	<b>0.0034</b>	<b>0.00040 J</b>	<b>0.0021 J</b>	< 0.0013	< 16	< 16	< 16	< 16			
		22.5-25	-	-	-	-	-	-	-	-	-	-	-	-	< 0.00020	< 0.00040	< 0.00030	< 0.00050	<b>0.012</b>	< 16	< 16	< 16	< 16		
SB-18	7/20/2009	1-2	-	-	-	-	-	-	-	-	-	-	-	<b>0.012</b>	<b>0.0034</b>	<b>0.050</b>	<b>0.072</b>	<b>0.046</b>	< 16	< 16	< 16	< 16			
		2-5	-	-	-	-	-	-	-	-	-	-	-	-	<b>0.019</b>	<b>0.0031</b>	<b>0.0083</b>	<b>0.0041</b>	<b>0.029</b>	< 16	< 16	< 16	< 16		
<b>Former Target Automotive Repair Shop</b>																									
SB-01	7/31/2006	8-10	<0.0012	<0.00095		<0.00071		<0.0012	<0.00071		<0.00071	<SQL	-	-	-	-	-	<19	<19	<19	<19				
<b>Regulatory Standards</b>																									
TRRP TIER 1 Ingestion PCL for Surface and Subsurface Soil (Residential <sup>GW</sup> Soil <sub>ing</sub> PCL) in mg/kg			0.05	0.25	--	0.05	--	0.49	0.034	--	0.022	--	--	0.026	8.2	7.6	120	0.26	65	200	200	200			
TRRP TIER 1 Residential Groundwater PCLs ( <sup>GW</sup> GW <sub>ing</sub> )			--	--	0.070	--	0.0050	--	--	0.0050	--	0.0020	--	--	--	--	--	--	--	--	--	--			
TRRP TIER 1 Non-Ingestion PCL for Surface Soil (Residential <sup>Tot</sup> Soil <sub>comb</sub> PCL) in mg/kg			2,300	770	--	100	--	590	120	--	3.7	--	--	66	5,900	5,300	6,000	800	1,600	2,300	2,300	2,300			
TRRP TIER 1 Non-Ingestion PCL for Subsurface Soil (Residential <sup>Air</sup> Soil <sub>inh-v</sub> PCL) in mg/kg			5,200	12,000	--	940	--	920	150	--	42	--	--	160	63,000	15,000	9,400	1,400	3,100	15,000	15,000	15,000			

**Notes:**

- \*- indicates Not Analyzed.
- indicates Not Applicable or no TRRP Tier 1 PCL.
- (J) indicates the analyte is an estimated value between the laboratory reporting limit (RL) and method quantitation limit (MQL).
- <0.00060\* indicates the analyte was not detected by the laboratory at or above the specified SQL.
- \*BTEX/MTBE\* indicates benzene, toluene, ethylbenzene, xylenes, and methyl tert-butyl ether.
- \*TPH\* indicates total petroleum hydrocarbons.
- \*VOCs\* indicates volatile organic compounds.
- \*PAHs\* indicates polycyclic aromatic hydrocarbons.
- Concentrations in bold exhibit a concentration in excess of the laboratory sample quantitation limit (SQL).
- Concentrations in bold and highlighted yellow exceed the applicable TRRP Tier 1 Ingestion PCL for Surface and Subsurface Soil (Tier 1 Residential <sup>GW</sup>Soil<sub>ing</sub> PCL).
- Concentrations in bold and highlighted green exceed the applicable TRRP Tier 1 Non-Ingestion PCL for Surface Soil (Tier 1 Residential <sup>Tot</sup>Soil<sub>comb</sub> PCL for 0.5-Acre Source Area) or Subsurface Soil (Tier 1 Residential <sup>Air</sup>Soil<sub>inh-v</sub> PCL for 0.5-Acre Source Area).
- TRRP Tier 1 Ingestion and Non-Ingestion PCLs for Surface Soil and Subsurface Soil taken from 30 TAC Chapter 350; Table 1: Tier 1 Residential Soil PCLs; dated March 25, 2009.

**TABLE E.2  
GROUNDWATER DATA SUMMARY  
FONDREN SOUTHWEST SHOPPING CENTER  
FONDREN ROAD AND WEST BELLFORT AVENUE  
HOUSTON, HARRIS COUNTY, TEXAS**

Sample ID	Sample Date	VOCs						PAHs	BTEX / MTBE					TPH			
		1,1-Dichloroethene	cis-1,2-Dichloroethene	Tetrachloroethene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl chloride	Naphthalene	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE (Methyl tert-Butyl ether)	C6-C12	C12-C28	C28-C35	C12-C35
		Method 8260B mg/L	Method 8260B mg/L	Method 8260B mg/L	Method 8260B mg/L	Method 8260B mg/L	Method 8260B mg/L	Method 8270 mg/L	Method 8021B mg/L	Method 8021B mg/L	Method 8021B mg/L	Method 8021B mg/L	Method 8021B mg/L	Method TX1005 mg/L	Method TX1005 mg/L	Method TX1005 mg/L	Method TX1005 mg/L
<i>Former Your Valet Cleaners</i>																	
1-MW-5	8/1/2006	< 0.00060	< 0.00050	< 0.00050	< 0.00060	< 0.00070	< 0.00060	-	-	-	-	-	-	-	-	-	-
	1/3/2007	< 0.00060	< 0.00050	< 0.00050	< 0.00060	< 0.00070	< 0.00060	-	-	-	-	-	-	-	-	-	-
	3/19/2007	< 0.00060	< 0.00050	< 0.00050	< 0.00060	< 0.00070	< 0.00060	-	-	-	-	-	-	-	-	-	-
	12/20/2007	< 0.00060	< 0.00050	< 0.00050	< 0.00060	< 0.00070	< 0.00060	-	-	-	-	-	-	-	-	-	-
	6/10/2008	< 0.00050	< 0.00050	< 0.00050	< 0.00060	< 0.00050	< 0.00050	-	-	-	-	-	-	-	-	-	-
	9/10/2008	< 0.00050	< 0.00050	< 0.00060	< 0.00050	< 0.00050	< 0.00050	-	-	-	-	-	-	-	-	-	-
	12/11/2008	< 0.00050	< 0.00050	< 0.00060	< 0.00050	< 0.00050	< 0.00050	-	-	-	-	-	-	-	-	-	-
	6/16/2009	< 0.00050	< 0.00050	< 0.00060	< 0.00050	< 0.00050	< 0.00050	-	-	-	-	-	-	-	-	-	-
	9/15/2009	< 0.00050	< 0.00050	< 0.00060	< 0.00050	< 0.00050	< 0.00050	-	-	-	-	-	-	-	-	-	-
1-MW-6	8/1/2006	< 0.00060	< 0.00050	<b>0.022</b>	< 0.00060	< 0.00070	< 0.00060	-	-	-	-	-	-	-	-	-	-
	12/28/2006	< 0.00060	<b>0.0020 (J)</b>	<b>0.018</b>	< 0.00060	< 0.00070	< 0.00060	-	-	-	-	-	-	-	-	-	-
	3/19/2007	< 0.00060	<b>0.0061</b>	<b>0.022</b>	< 0.00060	<b>0.0033</b>	< 0.00060	-	-	-	-	-	-	-	-	-	-
	12/27/2007	< 0.00060	<b>0.0059</b>	<b>0.041</b>	<b>0.00076 (J)</b>	<b>0.0038</b>	< 0.00060	-	-	-	-	-	-	-	-	-	-
	3/27/2008	< 0.00060	<b>0.011</b>	<b>0.019</b>	<b>0.0017 (J)</b>	<b>0.0053</b>	<b>0.00098 (J)</b>	-	-	-	-	-	-	-	-	-	-
	6/11/2008	< 0.00050	<b>0.02</b>	<b>0.014</b>	<b>0.0034 (J)</b>	<b>0.0063</b>	<b>0.0025</b>	-	-	-	-	-	-	-	-	-	-
	9/11/2008	< 0.00050	<b>0.02</b>	<b>0.03</b>	<b>0.0028 (J)</b>	<b>0.0059</b>	< 0.00050	-	-	-	-	-	-	-	-	-	-
	12/12/2008	< 0.00050	<b>0.029</b>	<b>0.034</b>	<b>0.0037 (J)</b>	<b>0.0077</b>	<b>0.0039</b>	-	-	-	-	-	-	-	-	-	-
	3/10/2009	< 0.00050	<b>0.021</b>	<b>0.04</b>	<b>0.0028 (J)</b>	<b>0.0058</b>	<b>0.003</b>	-	-	-	-	-	-	-	-	-	-
	6/17/2009	< 0.00050	<b>0.024</b>	<b>0.032</b>	<b>0.0022 (J)</b>	<b>0.0056</b>	<b>0.003</b>	-	-	-	-	-	-	-	-	-	-
9/16/2009	< 0.00050	<b>0.038</b>	<b>0.024</b>	<b>0.0039 (J)</b>	<b>0.0075</b>	<b>0.0048</b>	-	-	-	-	-	-	-	-	-	-	
1-MW-7	8/1/2006	< 0.00060	<b>0.023</b>	<b>4.7</b>	< 0.00060	<b>0.033</b>	<b>0.0064</b>	-	-	-	-	-	-	-	-	-	-
	1/4/2007	< 0.00060	<b>0.031</b>	<b>5.4</b>	< 0.00060	<b>0.039</b>	<b>0.0054</b>	-	-	-	-	-	-	-	-	-	-
	3/19/2007	<b>0.0034 (J)</b>	<b>3.5</b>	<b>7.3</b>	<b>0.014</b>	<b>0.36</b>	<b>0.57</b>	-	-	-	-	-	-	-	-	-	-
	12/20/2007	<b>0.0018 (J)</b>	<b>1.2</b>	<b>4.7</b>	<b>0.0075</b>	<b>0.15</b>	<b>0.25</b>	-	-	-	-	-	-	-	-	-	-
	3/27/2008	<b>0.0035 (J)</b>	<b>2.3</b>	<b>5.2</b>	<b>0.012</b>	<b>0.22</b>	<b>0.44</b>	-	-	-	-	-	-	-	-	-	-
	6/11/2008	<b>0.0041 (J)</b>	<b>2.4</b>	<b>5.1</b>	<b>0.016</b>	<b>0.26</b>	<b>0.39</b>	-	-	-	-	-	-	-	-	-	-
	9/18/2008	<b>0.0051</b>	<b>3.6</b>	<b>4.2</b>	<b>0.02</b>	<b>0.28</b>	<b>0.59</b>	-	-	-	-	-	-	-	-	-	-
	12/12/2008	<b>0.0065</b>	<b>5.0</b>	<b>4.9</b>	<b>0.026</b>	<b>0.36</b>	<b>0.74</b>	-	-	-	-	-	-	-	-	-	-
	3/10/2009	<b>0.0059</b>	<b>4.7</b>	<b>5.2</b>	<b>0.02</b>	<b>0.36</b>	<b>0.91</b>	-	-	-	-	-	-	-	-	-	-
	6/17/2009	<b>0.0045 (J)</b>	<b>3.8</b>	<b>4.0</b>	<b>0.019</b>	<b>0.25</b>	<b>0.55</b>	-	-	-	-	-	-	-	-	-	-
9/16/2009	<b>0.0052</b>	<b>3.9</b>	<b>4.3</b>	<b>0.017</b>	<b>0.24</b>	<b>0.47</b>	-	-	-	-	-	-	-	-	-	-	
1-MW-8	1/3/2007	< 0.00060	< 0.00050	< 0.00050	< 0.00060	< 0.00070	< 0.00060	-	-	-	-	-	-	-	-	-	-
	3/19/2007	< 0.00060	< 0.00050	< 0.00050	< 0.00060	< 0.00070	< 0.00060	-	-	-	-	-	-	-	-	-	-
	12/27/2007	< 0.00060	< 0.00050	<b>0.0036 (J)</b>	< 0.00060	< 0.00070	< 0.00060	-	-	-	-	-	-	-	-	-	-
	6/10/2008	< 0.00050	< 0.00050	< 0.00060	< 0.00050	< 0.00050	< 0.00050	-	-	-	-	-	-	-	-	-	-
	9/11/2008	< 0.00050	< 0.00050	< 0.00060	< 0.00050	< 0.00050	< 0.00050	-	-	-	-	-	-	-	-	-	-
	12/9/2008	< 0.00050	< 0.00050	< 0.00060	< 0.00050	< 0.00050	< 0.00050	-	-	-	-	-	-	-	-	-	-
	6/16/2009	< 0.00050	< 0.00050	< 0.00060	< 0.00050	< 0.00050	< 0.00050	-	-	-	-	-	-	-	-	-	-
1-MW-9	1/4/2007	< 0.00060	< 0.00050	< 0.00050	< 0.00060	< 0.00070	< 0.00060	-	-	-	-	-	-	-	-	-	-
	3/20/2007	< 0.00060	< 0.00050	< 0.00050	< 0.00060	< 0.00070	< 0.00060	-	-	-	-	-	-	-	-	-	-
	12/27/2007	< 0.00060	< 0.00050	<b>0.0024 (J)</b>	< 0.00060	< 0.00070	< 0.00060	-	-	-	-	-	-	-	-	-	-
	3/26/2008	< 0.00060	< 0.00050	< 0.00050	< 0.00060	< 0.00070	< 0.00060	-	-	-	-	-	-	-	-	-	-
	6/10/2008	< 0.00050	< 0.00050	< 0.00060	< 0.00050	< 0.00050	< 0.00050	-	-	-	-	-	-	-	-	-	-
	9/10/2008	< 0.00050	< 0.00050	< 0.00060	< 0.00050	< 0.00050	< 0.00050	-	-	-	-	-	-	-	-	-	-
	12/11/2008	< 0.00050	< 0.00050	< 0.00060	< 0.00050	< 0.00050	< 0.00050	-	-	-	-	-	-	-	-	-	-
	3/9/2009	< 0.00050	< 0.00050	< 0.00060	< 0.00050	< 0.00050	< 0.00050	-	-	-	-	-	-	-	-	-	-
	6/16/2009	< 0.00050	< 0.00050	< 0.00060	< 0.00050	< 0.00050	< 0.00050	-	-	-	-	-	-	-	-	-	-
	9/14/2009	< 0.00050	< 0.00050	< 0.00060	< 0.00050	< 0.00050	< 0.00050	-	-	-	-	-	-	-	-	-	-

**TABLE E.2  
GROUNDWATER DATA SUMMARY  
FONDREN SOUTHWEST SHOPPING CENTER  
FONDREN ROAD AND WEST BELLFORT AVENUE  
HOUSTON, HARRIS COUNTY, TEXAS**

Sample ID	Sample Date	VOCs						PAHs	BTEX / MTBE					TPH			
		1,1-Dichloroethene	cis-1,2-Dichloroethene	Tetrachloroethene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl chloride	Naphthalene	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE (Methyl tert-Butyl ether)	C6-C12	C12-C28	C28-C35	C12-C35
		Method 8260B mg/L	Method 8260B mg/L	Method 8260B mg/L	Method 8260B mg/L	Method 8260B mg/L	Method 8260B mg/L	Method 8270 mg/L	Method 8021B mg/L	Method 8021B mg/L	Method 8021B mg/L	Method 8021B mg/L	Method 8021B mg/L	Method TX1005 mg/L	Method TX1005 mg/L	Method TX1005 mg/L	Method TX1005 mg/L
<i>Former Your Valet Cleaners</i>																	
1-MW-10	12/28/2006	< 0.00060	< 0.00050	< 0.00050	< 0.00060	< 0.00070	< 0.00060	-	-	-	-	-	-	-	-	-	-
	3/20/2007	< 0.00060	< 0.00050	< 0.00050	< 0.00060	< 0.00070	< 0.00060	-	-	-	-	-	-	-	-	-	-
	12/26/2007	< 0.00060	< 0.00050	<b>0.0031 J</b>	<b>0.029</b>	< 0.00060	<b>0.00093 J</b>	< 0.00060	-	-	-	-	-	-	-	-	-
	3/26/2008	< 0.00060	< 0.00050	< 0.00050	< 0.00060	< 0.00070	< 0.00060	-	-	-	-	-	-	-	-	-	-
	6/9/2008	< 0.00050	< 0.00050	< 0.00060	< 0.00050	< 0.00050	< 0.00050	-	-	-	-	-	-	-	-	-	-
	9/9/2008	< 0.00050	< 0.00050	< 0.00060	< 0.00050	< 0.00050	< 0.00050	-	-	-	-	-	-	-	-	-	-
	6/16/2009	< 0.00050	< 0.00050	< 0.00060	< 0.00050	< 0.00050	< 0.00050	-	-	-	-	-	-	-	-	-	-
1-MW-14	2/7/2008	< 0.00060	< 0.00050	< 0.00050	< 0.00060	< 0.00070	< 0.00060	-	-	-	-	-	-	-	-	-	-
	3/26/2008	< 0.00060	< 0.00050	< 0.00050	< 0.00060	< 0.00070	< 0.00060	-	-	-	-	-	-	-	-	-	-
	6/10/2008	< 0.00050	< 0.00050	< 0.00060	< 0.00050	< 0.00050	< 0.00050	-	-	-	-	-	-	-	-	-	-
	9/10/2008	< 0.00050	< 0.00050	< 0.00060	< 0.00050	< 0.00050	< 0.00050	-	-	-	-	-	-	-	-	-	-
	6/16/2009	< 0.00050	< 0.00050	< 0.00060	< 0.00050	< 0.00050	< 0.00050	-	-	-	-	-	-	-	-	-	-
1-MW-15	2/7/2008	< 0.00060	< 0.00050	<b>0.46</b>	< 0.00060	<b>0.0041 (J)</b>	< 0.00060	-	-	-	-	-	-	-	-	-	-
	3/27/2008	< 0.00060	<b>0.00051 (J)</b>	<b>0.49</b>	< 0.00060	<b>0.0050</b>	< 0.00060	-	-	-	-	-	-	-	-	-	-
	6/12/2008	< 0.00050	<b>0.00056 (J)</b>	<b>0.61</b>	< 0.00050	<b>0.0059</b>	< 0.00050	-	-	-	-	-	-	-	-	-	-
	9/11/2008	< 0.00050	<b>0.0006 (J)</b>	<b>0.64</b>	< 0.00050	<b>0.0061</b>	< 0.00050	-	-	-	-	-	-	-	-	-	-
	12/11/2008	< 0.00050	<b>0.00081 (J)</b>	<b>0.74</b>	< 0.00050	<b>0.0073</b>	< 0.00050	-	-	-	-	-	-	-	-	-	-
	3/10/2009	< 0.00050	< 0.00050	<b>0.88</b>	< 0.00050	<b>0.0080</b>	< 0.00050	-	-	-	-	-	-	-	-	-	-
	6/17/2009	< 0.00050	<b>0.00064 (J)</b>	<b>0.83</b>	< 0.00050	<b>0.0088</b>	< 0.00050	-	-	-	-	-	-	-	-	-	-
2-MW-1	1/4/2007	<b>0.0021 (J)</b>	<b>1.7</b>	<b>5.3</b>	<b>0.0088</b>	<b>0.17</b>	<b>0.27</b>	-	-	-	-	-	-	-	-	-	-
	3/19/2007	< 0.00060	<b>0.038</b>	<b>6.6</b>	< 0.00060	<b>0.047</b>	<b>0.0075</b>	-	-	-	-	-	-	-	-	-	-
	12/26/2007	<b>0.0052</b>	<b>4.4</b>	<b>7.0</b>	<b>0.022</b>	<b>0.45</b>	<b>0.77</b>	-	-	-	-	-	-	-	-	-	-
	3/28/2008	<b>0.0053</b>	<b>3.9</b>	<b>7.9</b>	<b>0.019</b>	<b>0.53</b>	<b>0.64</b>	-	-	-	-	-	-	-	-	-	-
	6/11/2008	<b>0.0039 (J)</b>	<b>2.6</b>	<b>5.3</b>	<b>0.016</b>	<b>0.28</b>	<b>0.39</b>	-	-	-	-	-	-	-	-	-	-
	9/18/2008	<b>0.0035 (J)</b>	<b>2.4</b>	<b>4.4</b>	<b>0.013</b>	<b>0.22</b>	<b>0.39</b>	-	-	-	-	-	-	-	-	-	-
	12/12/2008	<b>0.0043 (J)</b>	<b>3.7</b>	<b>4.0</b>	<b>0.016</b>	<b>0.29</b>	<b>0.50</b>	-	-	-	-	-	-	-	-	-	-
	3/10/2009	<b>0.0062</b>	<b>5.0</b>	<b>4.9</b>	<b>0.02</b>	<b>0.38</b>	<b>0.85</b>	-	-	-	-	-	-	-	-	-	-
	6/19/2009	<b>0.0065</b>	<b>4.2</b>	<b>4.7</b>	<b>0.026</b>	<b>0.39</b>	<b>0.70</b>	-	-	-	-	-	-	-	-	-	-
	9/16/2009	<b>0.0061</b>	<b>3.8</b>	<b>5.7</b>	<b>0.021</b>	<b>0.41</b>	<b>0.54</b>	-	-	-	-	-	-	-	-	-	-
2-MW-2	3/21/2007	< 0.00060	<b>0.0012 (J)</b>	<b>0.0013 (J)</b>	< 0.00060	< 0.00070	< 0.00060	-	-	-	-	-	-	-	-	-	-
	1/2/2008	< 0.00060	<b>0.0012 (J)</b>	<b>0.0022 (J)</b>	< 0.00060	<b>0.00077 (J)</b>	< 0.00060	-	-	-	-	-	-	-	-	-	-
	3/28/2008	< 0.00060	<b>0.0017 (J)</b>	<b>0.0020 (J)</b>	< 0.00060	<b>0.00077 (J)</b>	< 0.00060	-	-	-	-	-	-	-	-	-	-
	6/16/2008	< 0.00050	<b>0.0013 (J)</b>	<b>0.0015 (J)</b>	< 0.00050	<b>0.00061 (J)</b>	< 0.00050	-	-	-	-	-	-	-	-	-	-
	9/19/2008	< 0.00050	< 0.00050	<b>0.0011 (J)</b>	< 0.00050	<b>0.00064 (J)</b>	< 0.00050	-	-	-	-	-	-	-	-	-	-
	12/11/2008	< 0.00050	< 0.00050	<b>0.0011 (J)</b>	< 0.00050	< 0.00050	< 0.00050	-	-	-	-	-	-	-	-	-	-
	3/9/2009	< 0.00050	< 0.00050	< 0.00060	< 0.00050	< 0.00050	< 0.00050	-	-	-	-	-	-	-	-	-	-
	6/18/2009	< 0.00050	< 0.00050	<b>0.0020 (J)</b>	< 0.00050	< 0.00050	< 0.00050	-	-	-	-	-	-	-	-	-	-
	9/15/2009	< 0.00050	< 0.00050	<b>0.0011 (J)</b>	< 0.00050	<b>0.00054 (J)</b>	< 0.00050	-	-	-	-	-	-	-	-	-	-
2-MW-3	3/21/2007	< 0.00060	< 0.00050	< 0.00050	< 0.00060	< 0.00070	< 0.00060	-	-	-	-	-	-	-	-	-	-
	1/2/2008	< 0.00060	< 0.00050	< 0.00050	< 0.00060	< 0.00070	< 0.00060	-	-	-	-	-	-	-	-	-	-
	3/26/2008	< 0.00060	< 0.00050	< 0.00050	< 0.00060	< 0.00070	< 0.00060	-	-	-	-	-	-	-	-	-	-
	6/9/2008	< 0.00050	< 0.00050	< 0.00060	< 0.00050	< 0.00050	< 0.00050	-	-	-	-	-	-	-	-	-	-
	9/9/2008	< 0.00050	< 0.00050	< 0.00060	< 0.00050	< 0.00050	< 0.00050	-	-	-	-	-	-	-	-	-	-
	12/9/2008	< 0.00050	< 0.00050	< 0.00060	< 0.00050	< 0.00050	< 0.00050	-	-	-	-	-	-	-	-	-	-
	6/16/2009	< 0.00050	< 0.00050	< 0.00060	< 0.00050	< 0.00050	< 0.00050	-	-	-	-	-	-	-	-	-	-

**TABLE E.2  
GROUNDWATER DATA SUMMARY  
FONDREN SOUTHWEST SHOPPING CENTER  
FONDREN ROAD AND WEST BELLFORT AVENUE  
HOUSTON, HARRIS COUNTY, TEXAS**

Sample ID	Sample Date	VOCs						PAHs	BTEX / MTBE					TPH			
		1,1-Dichloroethene	cis-1,2-Dichloroethene	Tetrachloroethene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl chloride	Naphthalene	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE (Methyl tert-Butyl ether)	C6-C12	C12-C28	C28-C35	C12-C35
		Method 8260B mg/L	Method 8260B mg/L	Method 8260B mg/L	Method 8260B mg/L	Method 8260B mg/L	Method 8260B mg/L	Method 8270 mg/L	Method 8021B mg/L	Method 8021B mg/L	Method 8021B mg/L	Method 8021B mg/L	Method 8021B mg/L	Method TX1005 mg/L	Method TX1005 mg/L	Method TX1005 mg/L	Method TX1005 mg/L
<i>Former Your Valet Cleaners</i>																	
2-MW-4	2/7/2008	< 0.00060	< 0.00050	< 0.00050	< 0.00060	< 0.00070	< 0.00060	-	-	-	-	-	-	-	-	-	-
	3/26/2008	< 0.00060	< 0.00050	< 0.00050	< 0.00060	< 0.00070	< 0.00060	-	-	-	-	-	-	-	-	-	-
	6/10/2008	< 0.00050	< 0.00050	< 0.00060	< 0.00050	< 0.00050	< 0.00050	-	-	-	-	-	-	-	-	-	-
	9/10/2008	< 0.00050	< 0.00050	< 0.00060	< 0.00050	< 0.00050	< 0.00050	-	-	-	-	-	-	-	-	-	-
	12/10/2008	< 0.00050	< 0.00050	< 0.00060	< 0.00050	< 0.00050	< 0.00050	-	-	-	-	-	-	-	-	-	-
	6/16/2009	< 0.00050	< 0.00050	< 0.00060	< 0.00050	< 0.00050	< 0.00050	-	-	-	-	-	-	-	-	-	-
2-MW-5	2/7/2008	< 0.00060	<b>0.0044</b>	<b>0.33</b>	< 0.00060	<b>0.0091</b>	< 0.00060	-	-	-	-	-	-	-	-	-	-
	3/27/2008	< 0.00060	<b>0.0043</b>	<b>0.37</b>	< 0.00060	<b>0.0097</b>	< 0.00060	-	-	-	-	-	-	-	-	-	-
	6/11/2008	< 0.00050	<b>0.0033</b>	<b>0.45</b>	< 0.00050	<b>0.010</b>	< 0.00050	-	-	-	-	-	-	-	-	-	-
	9/11/2008	< 0.00050	<b>0.0029</b>	<b>0.47</b>	< 0.00050	<b>0.010</b>	< 0.00050	-	-	-	-	-	-	-	-	-	-
	12/11/2008	< 0.00050	<b>0.0043</b>	<b>0.43</b>	< 0.00050	<b>0.068</b>	< 0.00050	-	-	-	-	-	-	-	-	-	-
	3/10/2009	< 0.00050	<b>0.0072</b>	<b>0.56</b>	< 0.00050	<b>0.064</b>	< 0.00050	-	-	-	-	-	-	-	-	-	-
	6/18/2009	< 0.00050	<b>0.0053</b>	<b>0.55</b>	< 0.00050	<b>0.018</b>	< 0.00050	-	-	-	-	-	-	-	-	-	-
	9/16/2009	< 0.00050	<b>0.0067</b>	<b>0.58</b>	< 0.00050	<b>0.036</b>	< 0.00050	-	-	-	-	-	-	-	-	-	-
	11/11/2008	< 0.00050	< 0.00050	< 0.00060	< 0.00050	< 0.00050	< 0.00050	-	-	-	-	-	-	-	-	-	-
2-MW-6	3/11/2009	< 0.00050	< 0.00050	< 0.00060	< 0.00050	< 0.00050	< 0.00050	-	-	-	-	-	-	-	-	-	-
	6/18/2009	< 0.00050	< 0.00050	<b>0.0013 (J)</b>	< 0.00050	< 0.00050	< 0.00050	-	-	-	-	-	-	-	-	-	-
	9/15/2009	< 0.00050	< 0.00050	< 0.00060	< 0.00050	< 0.00050	< 0.00050	-	-	-	-	-	-	-	-	-	-
3-MW-1	3/12/2009	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00070	< 0.00050	-	-	-	-	-	-	-	-	-	-
	3/13/2009	< 0.00050	< 0.00050	<b>0.00053 (J)</b>	< 0.00050	< 0.00070	< 0.00050	-	-	-	-	-	-	-	-	-	-
	3/14/2009	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00070	< 0.00050	-	-	-	-	-	-	-	-	-	-
	3/15/2009	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00070	< 0.00050	-	-	-	-	-	-	-	-	-	-
<i>El Dorado Cleaners</i>																	
1-MW-11	12/28/06	< 0.00060	< 0.00050	< 0.00050	< 0.00060	< 0.00070	< 0.00060	-	< 0.00060	< 0.00050	< 0.00050	< 0.0010	< 0.00050	-	-	-	-
	3/20/07	< 0.00060	< 0.00050	< 0.00050	< 0.00060	< 0.00070	< 0.00060	-	< 0.00060	< 0.00050	< 0.00050	< 0.0010	< 0.00050	-	-	-	-
	6/21/07	< 0.00060	< 0.00050	< 0.00050	< 0.00060	< 0.00070	< 0.00060	-	< 0.00060	< 0.00050	< 0.00050	< 0.0010	< 0.00050	-	-	-	-
	12/27/07	< 0.00060	< 0.00050	<b>0.0027 (J)</b>	< 0.00060	< 0.00070	< 0.00060	-	< 0.00060	< 0.00050	< 0.00050	< 0.0010	< 0.00050	-	-	-	-
	3/26/08	< 0.00050	< 0.00050	< 0.00050	< 0.00060	< 0.00070	< 0.00060	-	-	-	-	-	-	-	-	-	-
	6/9/08	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00060	-	< 0.00050	< 0.00050	< 0.00050	< 0.0010	< 0.00050	-	-	-	-
	9/9/08	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00060	-	< 0.00050	< 0.00050	< 0.00050	< 0.0010	< 0.00050	-	-	-	-
	12/9/08	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00060	-	< 0.00050	< 0.00050	< 0.00050	< 0.0010	< 0.00050	-	-	-	-
	6/16/09	< 0.00050	< 0.00050	< 0.00060	< 0.00050	< 0.00050	< 0.00050	-	< 0.00050	< 0.00050	< 0.00050	< 0.0010	< 0.00050	-	-	-	-
1-MW-12	12/27/06	< 0.00060	< 0.00050	< 0.00050	< 0.00060	< 0.00070	< 0.00060	-	< 0.00060	< 0.00050	< 0.00050	< 0.0010	< 0.00050	-	-	-	-
	3/20/07	< 0.00060	< 0.00050	< 0.00050	< 0.00060	< 0.00070	< 0.00060	-	< 0.00060	< 0.00050	< 0.00050	< 0.0010	< 0.00050	-	-	-	-
	6/21/07	< 0.00060	< 0.00050	< 0.00050	< 0.00060	< 0.00070	< 0.00060	-	< 0.00060	< 0.00050	< 0.00050	< 0.0010	< 0.00050	-	-	-	-
	12/28/07	< 0.00060	< 0.00050	<b>0.00098 (J)</b>	< 0.00060	< 0.00070	< 0.00060	-	-	-	-	-	<b>0.0025 (J)</b>	-	-	-	-
	3/25/08	< 0.00050	< 0.00050	< 0.00050	< 0.00060	< 0.00070	< 0.00060	-	-	-	-	-	-	-	-	-	-
	6/9/08	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00060	-	-	-	-	-	-	-	-	-	-
	9/9/08	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00060	-	-	-	-	-	-	-	-	-	-
	12/8/08	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00060	-	-	-	-	-	-	-	-	-	-
	6/15/09	< 0.00050	< 0.00050	< 0.00060	< 0.00050	< 0.00050	< 0.00050	-	< 0.00050	< 0.00050	< 0.00050	< 0.0010	< 0.00050	-	-	-	-
1-MW-13	12/27/06	< 0.00060	< 0.00050	< 0.00050	< 0.00060	< 0.00070	< 0.00060	-	< 0.00060	< 0.00050	< 0.00050	< 0.0010	< 0.00050	-	-	-	-
	3/20/07	< 0.00060	< 0.00050	< 0.00050	< 0.00060	< 0.00070	< 0.00060	-	< 0.00060	< 0.00050	< 0.00050	< 0.0010	< 0.00050	-	-	-	-
	6/21/07	< 0.00060	< 0.00050	< 0.00050	< 0.00060	< 0.00070	< 0.00060	-	< 0.00060	< 0.00050	< 0.00050	< 0.0010	< 0.00050	-	-	-	-
	12/28/07	< 0.00060	< 0.00050	<b>0.0011 (J)</b>	< 0.00060	< 0.00070	< 0.00060	-	-	-	-	-	< 0.00050	-	-	-	-
	3/25/08	< 0.00060	< 0.00050	< 0.00050	< 0.00060	< 0.00070	< 0.00060	-	-	-	-	-	-	-	-	-	-
	6/9/08	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00060	-	-	-	-	-	-	-	-	-	-
	9/9/08	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00060	-	-	-	-	-	-	-	-	-	-
	12/8/08	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00060	-	-	-	-	-	-	-	-	-	-
	6/15/09	< 0.00050	< 0.00050	< 0.00060	< 0.00050	< 0.00050	< 0.00050	-	< 0.00050	< 0.00050	< 0.00050	< 0.0010	< 0.00050	-	-	-	-

**TABLE E.2  
GROUNDWATER DATA SUMMARY  
FONDREN SOUTHWEST SHOPPING CENTER  
FONDREN ROAD AND WEST BELLFORT AVENUE  
HOUSTON, HARRIS COUNTY, TEXAS**

Sample ID	Sample Date	VOCs						PAHs	BTEX / MTBE					TPH			
		1,1-Dichloroethene	cis-1,2-Dichloroethene	Tetrachloroethene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl chloride	Naphthalene	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE (Methyl tert-Butyl ether)	C6-C12	C12-C28	C28-C35	C12-C35
		Method 8260B mg/L	Method 8260B mg/L	Method 8260B mg/L	Method 8260B mg/L	Method 8260B mg/L	Method 8260B mg/L	Method 8270 mg/L	Method 8021B mg/L	Method TX1005 mg/L	Method TX1005 mg/L	Method TX1005 mg/L	Method TX1005 mg/L				
<b>Shell Station</b>																	
1-MW-1	7/31/2006	-	-	-	-	-	-	-	<b>4.0</b>	<b>1.9</b>	<b>1.4</b>	<b>2.4</b>	<b>330</b>	<b>21</b>	<b>1.2</b>	< 0.20	<b>1.2</b>
	3/18/2009	-	-	-	-	-	-	-	<b>2.5</b>	<b>0.15</b>	<b>2.9</b>	<b>1.3</b>	<b>32</b>	<b>2.6</b>	< 0.19	< 0.19	< 0.19
	7/29/2009	-	-	-	-	-	-	-	<b>1.9</b>	<b>0.10</b>	<b>2.2</b>	<b>1.0</b>	<b>13</b>	<b>0.72</b>	< 0.19	< 0.19	<b>0.72</b>
1-MW-2	7/31/2006	-	-	-	-	-	-	-	<b>8.9</b>	<b>18</b>	<b>3.7</b>	<b>10</b>	<b>400</b>	<b>56</b>	<b>2.7</b>	< 0.20	<b>2.7</b>
	3/18/2009	-	-	-	-	-	-	-	<b>1.6</b>	<b>0.31</b>	<b>1.8</b>	<b>1.7</b>	<b>26</b>	<b>2.4</b>	< 0.19	< 0.19	< 0.19
	7/29/2009	-	-	-	-	-	-	<b>0.70</b>	<b>3.0</b>	<b>0.32</b>	<b>2.9</b>	<b>2.6</b>	<b>22</b>	<b>25</b>	<b>1.5</b>	< 0.19	<b>1.5</b>
1-MW-3	7/31/2006	-	-	-	-	-	-	-	<b>0.044</b>	<b>0.19</b>	<b>0.037</b>	<b>0.13</b>	<b>1.8</b>	<b>0.71</b>	< 0.20	< 0.20	< 0.20
	3/18/2009	-	-	-	-	-	-	-	<b>0.017</b>	<b>0.0037</b>	<b>0.0025</b>	<b>0.0049</b>	<b>0.041</b>	< 0.18	< 0.18	< 0.18	< 0.18
	7/29/2009	-	-	-	-	-	-	-	<b>0.0026</b>	<b>0.00054 J</b>	<b>0.0020</b>	<b>0.00083 J</b>	<b>0.022</b>	< 0.19	< 0.19	< 0.19	< 0.19
1-MW-4	7/31/2006	-	-	-	-	-	-	-	<b>0.0025</b>	<b>0.0031</b>	<b>0.0031</b>	<b>0.0093</b>	<b>0.035</b>	< 0.20	< 0.20	< 0.20	< 0.20
	3/18/2009	-	-	-	-	-	-	-	< 0.00020	< 0.00020	< 0.00020	< 0.00070	<b>0.061</b>	< 0.19	< 0.19	< 0.19	< 0.19
	7/28/2009	-	-	-	-	-	-	-	< 0.00020	< 0.00020	< 0.00020	< 0.00070	<b>0.037</b>	< 0.19	< 0.19	< 0.19	< 0.19
1-MW-16	2/28/2007	-	-	-	-	-	-	-	< 0.0010	< 0.0010	< 0.0010	< 0.0020	<b>0.0301</b>	< 4.37	< 4.37	< 4.37	< 4.37
	3/18/2009	-	-	-	-	-	-	-	< 0.00020	< 0.00020	< 0.00020	< 0.00070	<b>0.21</b>	< 0.19	< 0.19	< 0.19	< 0.19
	7/28/2009	-	-	-	-	-	-	-	< 0.00020	< 0.00020	< 0.00020	< 0.00070	<b>0.30</b>	< 0.20	< 0.20	< 0.20	< 0.20
1-MW-17	7/28/2009	-	-	-	-	-	-	-	<b>0.16</b>	<b>0.0026</b>	<b>0.039</b>	<b>0.0036</b>	<b>11</b>	<b>0.94</b>	< 0.20	< 0.20	< 0.20
<b>Regulatory Standards</b>																	
TRRP Tier 1 Ingestion PCL for Groundwater (Residential <sup>GW</sup> GW <sub>ing</sub> PCL) in mg/L		<b>0.007</b>	<b>0.07</b>	<b>0.005</b>	<b>0.1</b>	<b>0.005</b>	<b>0.002</b>	<b>0.49</b>	<b>0.005</b>	<b>1.0</b>	<b>0.7</b>	<b>10</b>	<b>0.24</b>	<b>0.98</b>	<b>0.98</b>	<b>0.98</b>	<b>0.98</b>
TRRP Tier 1 Non-Ingestion PCL for Groundwater (Residential <sup>GW</sup> GW <sub>inh-v</sub> PCL) in mg/L		<b>1,700</b>	<b>16,000</b>	<b>500</b>	<b>770</b>	<b>120</b>	<b>3.8</b>	<b>320</b>	<b>180</b>	<b>64,000</b>	<b>16,000</b>	<b>10,000</b>	<b>4,000</b>	<b>1,800</b>	<b>7,500</b>	<b>7,500</b>	<b>7,500</b>

Notes:  
 "-" indicates Not Analyzed.  
 "--" indicates Not Applicable or no TRRP Tier 1 PCL.  
 "(J)" indicates the analyte is an estimated value between the laboratory reporting limit (RL) and method detection limit (MDL).  
 "<0.00060" indicates the analyte was not detected by the laboratory at or above the specified RL.  
 "BTEX/MTBE" indicates benzene, toluene, ethylbenzene, xylenes, and methyl tert-butyl ether.  
 "TPH" indicates total petroleum hydrocarbons.  
 "VOCs" indicates volatile organic compounds.  
 "PAHs" indicates polycyclic aromatic hydrocarbons.  
 Concentrations in bold exhibit a concentration in excess of the laboratory sample quantitation limit (SQL).  
 Concentrations in bold and highlighted yellow exceed the applicable TRRP Tier 1 Ingestion PCL for Groundwater (Tier 1 Residential <sup>GW</sup>GW<sub>ing</sub> PCL).  
 Concentrations in bold and highlighted green exceed the applicable TRRP Tier 1 Non-Ingestion PCL for Groundwater (Tier 1 Residential <sup>GW</sup>GW<sub>inh-v</sub> PCL for 0.5-Acre Source Area).  
 TRRP Tier 1 Ingestion and Non-Ingestion PCLs for Groundwater taken from 30 TAC Chapter 350; Table 3: Tier 1 Groundwater PCLs Residential and Commercial/Industrial; dated March 25, 2009).

## Appendix F – Summary of Soil and Groundwater Data

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As previously discussed and detailed in **Appendix D** and **Appendix E**, soil and groundwater sampling and analysis activities performed to date have revealed detectable concentrations of tetrachloroethene (PCE); trichloroethylene (TCE); cis-1,2-dichloroethene (cis-1,2-DCE); trans-1,2-dichloroethene (trans-1,2-DCE); and vinyl chloride (VC) present in the soil in the immediate vicinity of the designated property's El Dorado Cleaners and detectable concentrations of PCE; TCE; 1,1-dichloroethene (1,1-DCE); trans-1,2-DCE; cis-1,2-DCE; and VC present in the soil and the groundwater of the first and second GWBUs in the vicinity of the designated property's Former Your Valet Cleaners. In addition, soil and groundwater sampling and analysis activities performed to date in the south-central portion of the designated property have revealed detectable concentrations of total petroleum hydrocarbons (TPH); benzene, toluene, ethylbenzene, and xylenes (BTEX); methyl tert-butyl ether (MTBE); and naphthalene present in the soil and/or groundwater of the first GWBU in the vicinity of the designated property's Shell Station. Summary tables showing the maximum concentrations of COCs detected in soil and groundwater in the vicinity of the designated property since assessment activities began at the designated property in 2006 are provided in **Tables F.1** and **F.2**. Included with the maximum COC concentrations in **Tables F.1** and **F.2** are the COC's applicable TRRP PCLs for both ingestion and non-ingestion exposure pathways.

As indicated in **Tables F.1** and **F.2**, several COCs in soil and groundwater at the designated property currently exceed their respective TRRP ingestion PCLs (the critical TRRP PCLs without an MSD). These COCs are highlighted in yellow. However, no COCs currently exceed their respective TRRP non-ingestion PCLs (critical TRRP PCLs with an MSD).

Complete summaries of all soil and groundwater sampling and analysis results obtained for samples collected from the designated property since 2006 are provided in **Tables E.1** and **E.2** in **Appendix E**. The locations of all soil and groundwater sampling points are presented on **Figures B.8A**, **B.8B**, and **B.8C** in **Appendix B**.

**TABLE F.1**  
**SUMMARY OF MAXIMUM SOIL CONCENTRATIONS**  
**MUNICIPAL SETTING DESIGNATION APPLICATION**  
**FONDREN SOUTHWEST VILLAGE SHOPPING CENTER**  
**FONDREN ROAD AND WEST BELLFORT AVENUE**  
**HOUSTON, HARRIS COUNTY, TEXAS**  
**VCP No. 1964**

CHEMICAL OF CONCERN	AREA OF DESIGNATED PROPERTY	MAXIMUM SOIL CONCENTRATION				CRITICAL TRRP TIER 1 RESIDENTIAL SOIL PROTECTIVE CONCENTRATION LEVEL		
		Sample ID	Sample Depth	Sample Date	Detected Concentration (mg/kg)	Ingestion PCL (Without MSD)	Non-Ingestion PCL (With MSD)	
							<sup>GW</sup> Soil <sub>ing</sub> (mg/kg)	<sup>Tot</sup> Soil <sub>Comb</sub> (mg/kg)
Tetrachloroethene	Former Your Valet Cleaners	SB-6	10-12	02/22/07	0.40	0.05	100	940
	El Dorado Cleaners	B-2	19.5-20	6/21/06	4.0			
Trichloroethene	Former Your Valet Cleaners	SB-13	10-12	02/14/08	0.79	0.034	120	150
	El Dorado Cleaners	B-2	19.5-20	6/21/06	0.16			
		SB-4E	10-12	5/14/09	0.16			
1,1-Dichloroethene	Former Your Valet Cleaners	SB-6	10-12	2/22/07	0.013	0.05	2,300	5,200
cis-1,2-Dichloroethene	Former Your Valet Cleaners	SB-13	10-12	02/14/08	9.1	0.25	770	12,000
	El Dorado Cleaners	B-2	19.5-20	6/21/06	1.2			
trans-1,2-Dichloroethene	Former Your Valet Cleaners	SB-6	10-12	2/22/07	0.025	0.49	590	920
	El Dorado Cleaners	B-2	19.5-20	6/21/06	0.0049			
Vinyl Chloride	Former Your Valet Cleaners	SB-6	10'-12'	02/22/07	0.66	0.022	3.7	42
	El Dorado Cleaners	B-1	1.5-2	6/21/06	0.13			
Benzene	Timewise Shell #2801	1-MW-2	22.5-25	7/27/06	5.6	0.026	66	160
Toluene	Timewise Shell #2801	1-MW-2	22.5-25	7/27/06	47	8.2	5,900	63,000
Ethylbenzene	Timewise Shell #2801	1-MW-2	22.5-25	7/27/06	29	7.6	5,300	15,000
Xylenes	Timewise Shell #2801	1-MW-2	22.5-25	7/27/06	85	120	6,000	9,400
Methyl tert-butyl ether	Timewise Shell #2801	1-MW-2	22.5-25	7/27/06	95	0.26	800	1,400
TPH (C6-C12)	Timewise Shell #2801	1-MW-2	22.5-25	7/27/06	55 J	65	1,600	3,100

**NOTE:**

COCs highlighted in yellow exceed the critical TRRP Tier 1 Residential Soil PCL (applicable TRRP Tier 1 Residential Soil Ingestion PCL) without an MSD; but do not exceed the critical TRRP Tier 1 Residential Soil PCL (applicable TRRP Tier 1 Residential Soil Non-Ingestion PCL) with an MSD.

**TABLE F.2**  
**SUMMARY OF MAXIMUM GROUNDWATER CONCENTRATIONS**  
**MUNICIPAL SETTING DESIGNATION APPLICATION**  
**FONDREN SOUTHWEST VILLAGE SHOPPING CENTER**  
**FONDREN ROAD AND WEST BELLFORT AVENUE**  
**HOUSTON, HARRIS COUNTY, TEXAS**  
**VCP No. 1964**

CHEMICAL OF CONCERN	AREA OF DESIGNATED PROPERTY	GROUNDWATER-BEARING UNIT	CURRENT MAXIMUM GROUNDWATER CONCENTRATION			CRITICAL TRRP TIER 1 RESIDENTIAL GROUNDWATER PROTECTIVE CONCENTRATION LEVEL	
			Sample ID	Sample Date	Detected Concentration (mg/kg)	Ingestion PCL (Without MSD)	Non-Ingestion PCL (With MSD)
						<sup>GW</sup> GW <sub>ing</sub> (mg/L)	<sup>Air</sup> GW <sub>Inh-V</sub> (mg/L)
Tetrachloroethene	Former Your Valet Cleaners	First	1-MW-7	9/16/09	4.3	0.005	500
		Second	2-MW-1	9/16/09	5.7		
Trichloroethene	Former Your Valet Cleaners	First	1-MW-7	9/16/09	0.24	0.005	120
		Second	2-MW-1	9/16/09	0.41		
1,1-Dichloroethene	Former Your Valet Cleaners	First	1-MW-7	9/16/09	0.0052	0.007	1,700
		Second	2-MW-1	9/16/09	0.0061		
cis-1,2-Dichloroethene	Former Your Valet Cleaners	First	1-MW-7	9/16/09	3.9	0.07	16,000
		Second	2-MW-1	9/16/09	3.8		
trans-1,2-Dichloroethene	Former Your Valet Cleaners	First	1-MW-7	9/16/09	0.017	0.1	770
		Second	2-MW-1	9/16/09	0.021		
Vinyl Chloride	Former Your Valet Cleaners	First	1-MW-7	9/16/09	0.47	0.002	3.8
		Second	2-MW-1	9/16/09	0.54		
Benzene	Timewise Shell #2801	First	1-MW-2	7/29/09	3.0	0.005	180
Toluene	Timewise Shell #2801	First	1-MW-2	7/29/09	0.32	1.0	64,000
Ethylbenzene	Timewise Shell #2801	First	1-MW-2	7/29/09	2.9	0.7	16,000
Xylenes	Timewise Shell #2801	First	1-MW-2	7/29/09	2.6	10	10,000
Methyl tert-butyl ether	Timewise Shell #2801	First	1-MW-2	7/29/09	22	0.24	4,000
TPH (C6-C12)	Timewise Shell #2801	First	1-MW-2	7/29/09	25	0.98	1,800
TPH (C12-C28)	Timewise Shell #2801	First	1-MW-2	7/29/09	1.5	0.98	7,500
TPH (C12-C35)	Timewise Shell #2801	First	1-MW-2	7/29/09	1.5	0.98	7,500
Naphthalene	Timewise Shell #2801	First	1-MW-2	7/29/09	0.70	0.49	320

**NOTE:**

COCs highlighted in yellow exceed the critical TRRP Tier 1 Residential Groundwater PCL (applicable TRRP Tier 1 Residential Groundwater Ingestion PCL ) without an MSD; but do not exceed the critical TRRP Tier 1 Residential Groundwater PCL (applicable TRRP Tier 1 Residential Groundwater Non-Ingestion PCL) with an MSD.

## Appendix G – Plume Stability

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Soil and groundwater assessments and monitoring activities performed to date in the area of the designated property's El Dorado Cleaners, Former Your Valet Cleaners, and Shell Station have identified three contaminant plumes at the designated property. Two of these contaminant plumes, located in the area of the designated property's Former Your Valet Cleaners and Shell Station, have impacted groundwater in the designated property's first and/or second GWBUs. The third contaminant plume, located in the immediate vicinity of the designated property's El Dorado Cleaners, is a soil contaminant plume associated with native, unsaturated, vadose zone clay soils located above the first GWBU. The following sections provide discussions regarding the stability of each of the designated property's three contaminant plumes.

### El Dorado Cleaners Chlorinated Ethene Plume

Assessment activities performed to date in the vicinity of the designated property's El Dorado Cleaners have revealed a chlorinated ethene plume in soil immediately east of the El Dorado Cleaners tenant suite. Recent soil assessment results obtained from sampling conducted in May 2009 indicate the current soil contaminant plume continues to contain concentrations of PCE, TCE, cis-1,2-DCE, and VC in excess of TRRP groundwater-protective PCLs (TRRP Tier 1 Residential <sup>GW</sup>Soil<sub>ing</sub> PCLs) with little change in concentration or occurrence since initial assessments in the area began in June 2006.

The results of soil and groundwater assessment activities performed to date indicate the current chlorinated ethene soil plume in the area of the designated property's El Dorado Cleaners is likely confined laterally to the area immediately east of the El Dorado Cleaners tenant suite. Vertically, the assessment results indicate the chlorinated ethene soil plume extends from approximate depths of 2.0 ft-bgs to at least 20 ft-bgs but not deeper than approximately 27.5 ft-bgs, the approximate depth of occurrence of the first GWBU in the area.

In May 2009, synthetic precipitation leaching procedure (SPLP) analytical results were obtained from soil samples determined to contain elevated concentrations of PCE, TCE, cis-1,2-DCE, and VC from the area of the El Dorado Cleaners soil contaminant plume. The SPLP results revealed the chlorinated ethene COCs within the soil contaminant plume are leachable at concentrations that would exceed their respective TRRP groundwater ingestion PCLs (TRRP Tier 1 Residential <sup>GW</sup>GW<sub>ing</sub> PCLs). However, the SPLP results did not suggest that any of the potentially leachable concentrations of chlorinated ethenes would exceed any of the COCs' respective TRRP non-ingestion groundwater PCLs (TRRP Tier 1 Residential <sup>Air</sup>GW<sub>Inh-V</sub> PCLs). The May 2009 SPLP soil analytical results are provided in **Table E.1** in **Appendix E**.

Although the SPLP soil sampling results obtained in May 2009 indicate the chlorinated ethenes in soil in the El Dorado Cleaners soil contaminant plume could leach to groundwater above TRRP groundwater ingestion PCLs, groundwater sampling and analysis results obtained to date from monitoring wells installed in the immediate vicinity of the soil contaminant plume have not yet provided an indication that the shallow groundwater in the area of the designated property's El Dorado Cleaners has been adversely affected by chlorinated ethenes. However, based on

the SPLP results, it is anticipated that the chlorinated ethenes detected in the soil contaminant plume in the immediate vicinity of the designated property's El Dorado Cleaners may leach into the designated property's uppermost GWBU in the future.

The chlorinated solvent dry cleaning operations that were conducted at the El Dorado Cleaners prior to 2005 resulted in the soil contaminant plume initially identified in the area in June 2006. Since its initial identification and delineation in 2006, soil assessments in the soil contaminant plume have revealed little apparent change to soil COC concentrations or distribution. In addition, no groundwater impacts have been observed in the immediate area of the soil contaminant plume since groundwater monitoring in the area began in December 2006. Given no new sources of chlorinated ethene COCs exist in the area today, given the results of assessment activities to date indicate the magnitude and extent of the chlorinated ethene COCs remain apparently unchanged, and given no impacts to shallow groundwater have been observed to date, it appears that the chlorinated ethene soil plume identified in the immediate vicinity of the designated property's El Dorado Cleaners is stable and not likely to increase in either magnitude or lateral or vertical extent in the future.

#### **Former Your Valet Cleaners Chlorinated Ethene Plume**

Assessment activities performed to date in the vicinity of the designated property's Former Your Valet Cleaners have revealed a chlorinated ethene plume that has adversely impacted groundwater of the first and second GWBUs in the area of the Former Your Valet Cleaners' previous tenant suite. The soil and groundwater sampling results obtained from soil borings and monitoring wells installed in the area of the Former Your Valet Cleaners indicate PCE, TCE, cis-1,2-DCE, and VC are present in the soil and the groundwater of the first and second GWBUs in excess of the COCs' respective TRRP soil and groundwater ingestion PCLs (TRRP Tier 1 Residential <sup>GW</sup>Soil<sub>ing</sub> <sup>GW</sup>GW<sub>ing</sub> PCLs). These COCs in soil and groundwater result from previous chlorinated solvent dry cleaning operations conducted in the southwest tenant suite of designated property's western shopping center prior to 1997.

The occurrence of natural attenuation parameters, COC degradation products, and consistent COC sampling results in perimeter monitoring wells can indicate stability of a chlorinated ethene plume. As discussed in Environmental Protection Agency (EPA) publication No. 600/R-98/128, "Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents in Ground Water" (Table 2.3), the range in concentration of oxygen, oxidation-reduction potential (ORP), pH, and chlorinated ethene COCs can be used to evaluate whether natural attenuation of COCs derived from chlorinated solvents is occurring. Using this EPA publication as a guide, the different characteristics of the designated property's Former Your Valet Cleaners chlorinated ethene plume are discussed below to demonstrate that the plume in the vicinity of the designated property's Former Your Valet Cleaners is both fully delineated and stable.

Monitoring wells installed in the source area of the chlorinated ethene plume include first GWBU monitoring well 1-MW-7 and second GWBU monitoring well 2-MW-1. The perimeter monitoring wells of the groundwater plume include first GWBU monitoring well 1-MW-14 and second GWBU monitoring well 2-MW-4 to the east, first GWBU monitoring well 1-MW-5 and second

GWBU monitoring well 2-MW-6 to the south, first GWBU monitoring well 1-MW-8 to the west, and first GWBU monitoring well 1-MW-9 and second GWBU monitoring well 2-MW-2 to the north. Analytical testing results obtained from quarterly groundwater monitoring conducted from August 2006 through September 2009 indicate that the first GWBU and second GWBU chlorinated ethene groundwater plumes in the area of the designated property's Former Your Valet Cleaners have been horizontally delineated to the residential assessment level. In addition, a monitoring well installed in the third GWBU (3-MW-1) in the source area of the chlorinated ethene plume, to vertically delineate the plume, reported no detections of chlorinated ethene COCs above the laboratory's sample detection limits (SDLs) over three quarterly groundwater monitoring events.

The chlorinated ethene COCs associated with the designated property's Former Your Valet Cleaners plume begin with PCE as the parent compound. PCE degrades in a one-to-one relationship (i.e., one molecule of PCE degrades to one molecule of TCE which degrades to one molecule of cis-1,2 DCE (primarily) which degrades to one molecule of VC).

PCE concentrations have decreased over time in monitoring wells 1-MW-7 and 2-MW-1 while concentrations of cis-1,2 DCE have increased. Concentration trends for TCE and VC have remained relatively stable compared to PCE and cis-1,2 DCE. Chlorinated ethene constituent concentrations versus time in source area monitoring wells 1-MW-7 and 2-MW-1 are presented as **Graphs G.1** and **G.2**, respectively. These series of trends indicate that:

- PCE degradation is occurring faster than PCE is being desorbed from the soil;
- The degradation process is moving relatively quickly from PCE to cis-1,2 DCE, since TCE concentrations have remained at about 3% to 7% of PCE concentrations with no significant upward change in TCE concentrations;

It is typical for chlorinated ethene plumes to grow to a certain size where the rate of degradation within the plume approximates the rate of contaminant desorption from the soil in the source area. This is evident in the overall trend of concentrations of chlorinated ethenes in second GWBU monitoring well 2-MW-2, (located on the edge of the plume) which have been relatively stable at lower concentrations since monitoring began; indicating natural attenuation is occurring at approximately the same rate as the contaminant concentrations are migrating into the area. **Graph G.3** displays chlorinated ethene constituent concentrations versus time in second GWBU perimeter monitoring well 2-MW-2. None of the detected chlorinated ethene constituent concentrations detected in monitoring well 2-MW-2 have exceeded their respective PCLs. First GWBU perimeter monitoring well 1-MW-9 has shown no detections of COCs above the laboratory's SDLs.

Based on comparisons of the most recent groundwater monitoring data with historical data, elevated chlorinated ethene concentrations have remained present in the same monitoring wells over the monitored period. The perimeter monitoring wells that have historically been below laboratory SDLs, have remained below SDLs. An exception is monitoring well 2-MW-2, with PCE, TCE, and cis-1,2-DCE detected below the laboratory's MQL.

Selected natural attenuation parameters such as ORP are monitored in the field during groundwater sample collection to verify the occurrence of natural attenuation of the plume by physical, chemical, or biological processes. ORP measurements that are less than about 50 millivolts (mV) indicate that reducing conditions are likely present, measurements that are less than about -50 mV indicate that reductive dechlorination is possible, and measurements that are less than about -100 mV indicate that reductive dechlorination is likely to occur.

During the four quarterly 2008 monitoring events, ORP measurements collected from monitoring wells located hydraulically up-gradient or outside the chlorinated ethene plumes averaged 83.4 mV. ORP measurements collected from monitoring wells located within the chlorinated ethene plumes averaged -17.2 mV. Of the 49 ORP measurements in 2008, 3 were less than -100 mV. These three measurements were from wells located within the plume, two were located near the source area (1-MW-6 and 1-MW-7) and one was located down-gradient of the source area (2-MW-5).

Comparing the ORP relationship between monitoring wells located within the chlorinated ethene plumes and the monitoring wells located outside the chlorinated ethene plumes, it is likely that reductive dechlorination is occurring within the plume. This is evident in **Graphs G.4** and **G.5**, which show ORP measurements in first and second GWBU monitoring wells along the plume axis for the September 2008 and December 2008 monitoring events, respectively. Monitoring wells with elevated chlorinated ethene concentrations generally exhibit lower ORP measurements, demonstrating that reductive dechlorination is likely occurring.

Other natural attenuation parameters monitored in the field include pH and dissolved oxygen concentration (DO). The pH measurements from the 2008 quarterly sampling events ranged from 6.13 to 7.78 with a median pH of 6.75 and mean of 6.80. Of the 47 pH measurements, all were in the range of 6.0 to 8.0 which is consistent with the optimal range for reductive dechlorination.

The DO concentrations ranged from 0.04 mg/L to 5.46 mg/L with a median of 0.46 mg/L and mean of 1.22 mg/L. Of the 39 DO measurements, 30 measurements were less than 1.0 mg/L. A DO value below 1.0 mg/L is considered anoxic and conducive for dechlorination. The average DO concentrations within the plume in the second GWBU were less than those outside the plume (0.82 mg/L compared to 2.16 mg/L). Therefore, the DO results indicate that the conditions in the second GWBU are favorable for natural attenuation to occur. The average DO concentrations within the first GWBU were similarly anoxic regardless of sample location (0.99 mg/L within the plume, 0.50 mg/L outside).

In summary, based on the groundwater sampling results from August 2006 to December 2008, the chlorinated ethene plumes in the vicinity of the designated property's Former Your Valet Cleaners are stable and delineated within the boundaries of the designated property. Natural attenuation parameters indicate that natural attenuation is occurring. Analytical results from monitoring wells within the plume show that PCE concentrations are decreasing.

### **Shell Station Petroleum Hydrocarbon Plume**

Assessment activities performed to date in the vicinity of the designated property's Shell Station have revealed a petroleum hydrocarbon plume that has adversely impacted groundwater of the first GWBU in the area of the Shell Station facility. The soil and groundwater sampling results obtained from soil borings and monitoring wells installed in the area of the designated property's Shell Station indicate benzene, ethylbenzene, MTBE, TPH, and naphthalene are present in the soil and/or groundwater of the first GWBU in excess of the COCs' respective TRRP soil and/or groundwater ingestion PCLs (TRRP Tier 1 Residential <sup>GW</sup>Soil<sub>ing</sub> and <sup>GW</sup>GW<sub>ing</sub> PCLs). These COCs reportedly resulted from an historical release of petroleum product to the subsurface from an underground product pipe, which has since been replaced, associated with the Shell Station facility's currently active underground PST system. No indications of an ongoing petroleum product release have been reported or identified in the area of the designated property's Shell Station.

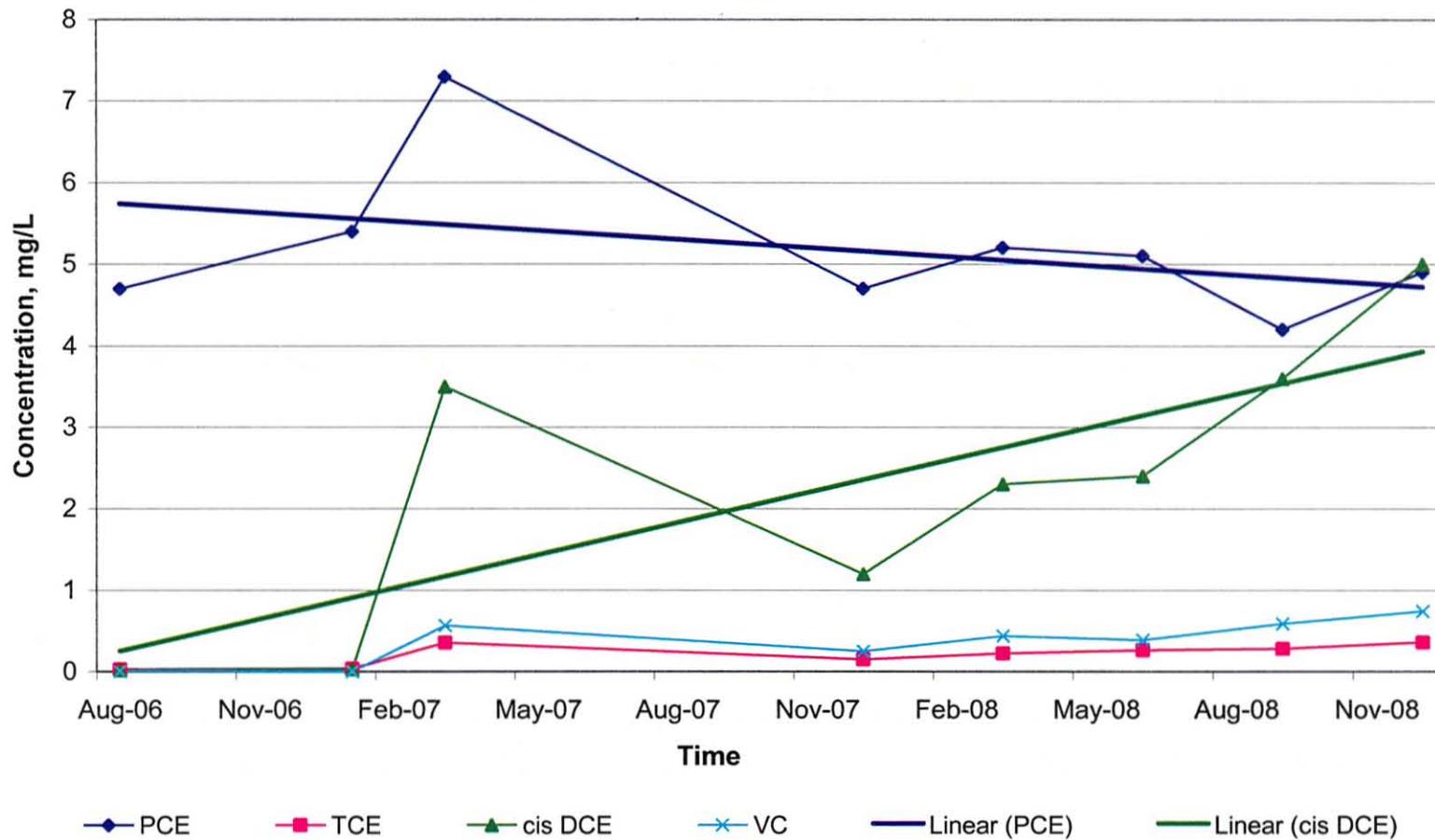
Assessment activities performed to date have revealed the current petroleum hydrocarbon plume in the area of the designated property's Shell Station is loosely delineated on the designated property by up-gradient monitoring wells 1-MW-3 and 1-MW-4 (Shell Station) and surrounding monitoring wells 1-MW-10, 1-MW-14, and 1-MW-5 (Former Your Valet Cleaners) and monitoring well 1-MW-11 (El Dorado Cleaners). Based on the types of COCs associated with the Shell Station contaminant plume (petroleum hydrocarbons), the vertical extent of the petroleum hydrocarbon COC plume is most likely confined to the area within and above the designated property's first GWBU.

Groundwater monitoring and sampling activities to date show the highest concentrations of petroleum hydrocarbon COCs consistently occur in source area monitoring well 1-MW-2 and decrease in concentration with distance away from this source area monitoring well. Review of the historical groundwater sampling and analysis results obtained from three monitoring events conducted between July 2006 and July 2009 show an overall decreasing trend in contaminant concentrations over time for all affected monitoring wells installed in and around the contaminant plume except monitoring well 1-MW-16. In this perimeter monitoring well, MTBE, the only COC detected at this well location, has slightly increased in concentration over the monitored period.

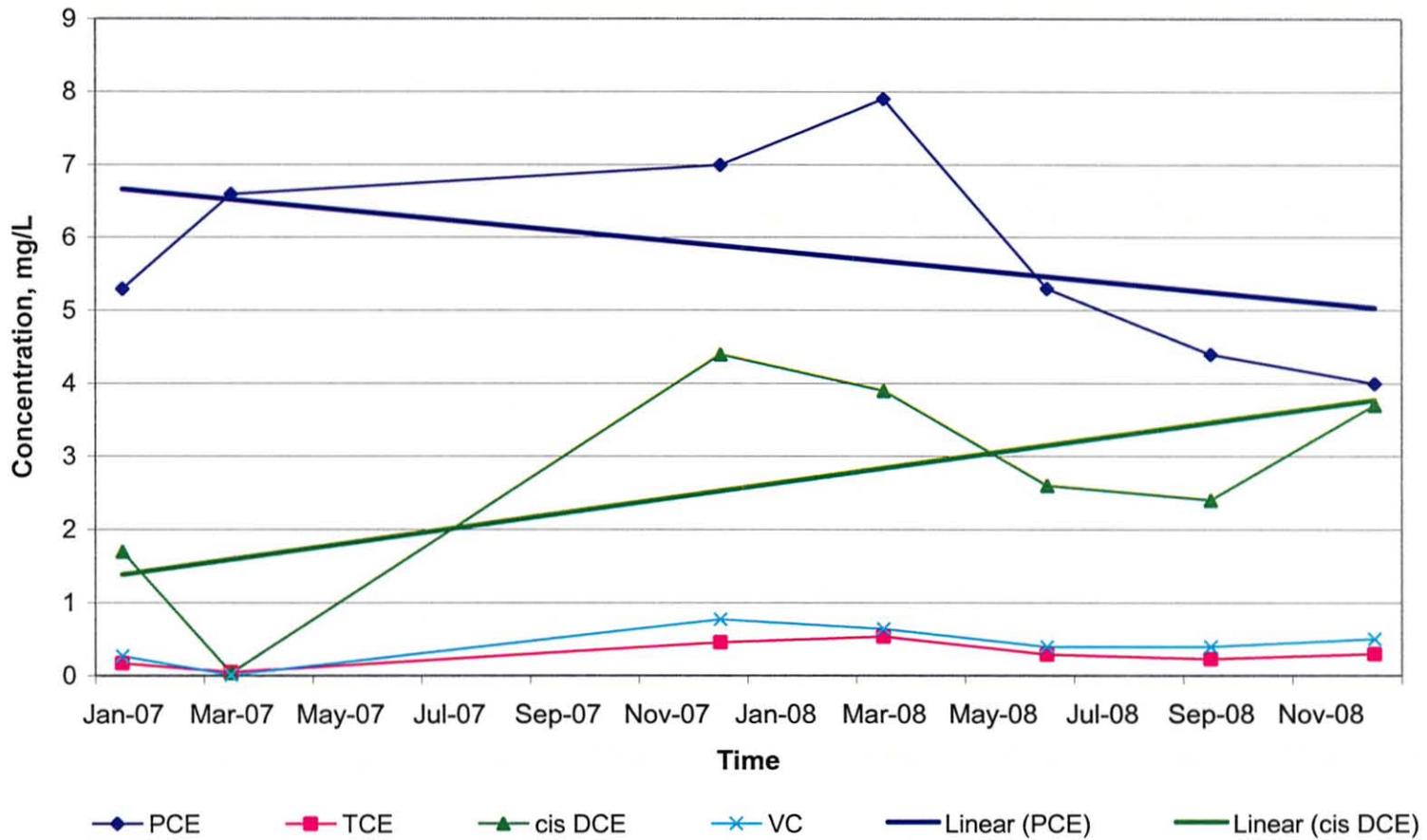
Overall, the groundwater monitoring data indicate the source of the petroleum release has apparently been removed as COC concentrations in the source area show a consistent decreasing trend over time. The concentration of MTBE has decreased at the Shell Station from 400 mg/L (July 2006) to 22 mg/L (July 2009) in monitoring well 1-MW-2 and from 330 mg/L (July 2006) to 13 mg/L (July 2009) in monitoring well 1-MW-1. Although the groundwater monitoring data to date indicate that at least the MTBE portion of the hydrocarbon plume may be continuing to expand along the plume's down-gradient and peripheral edges, it is highly unlikely that the plume will expand beyond the down-gradient limits of the designated property at concentrations that exceed any applicable TRRP Tier 1 residential ingestion or non-ingestion PCLs. This conclusion is based on the results of groundwater monitoring at monitoring wells 1-MW-11, 1-MW-12, and 1-MW-13, located near El Dorado Cleaners. Analytical results from

eight groundwater sampling events collected at monitoring wells 1-MW-11, 1-MW-12, and 1-MW-13 do not indicate detectable concentrations of BTEX or MTBE in these wells. During the December 2007 groundwater sampling event, a detection of MTBE between the laboratory reporting limit and the method quantitation limit was detected in monitoring well 1-MW-12; however, SKA believes this to be anomalous, as monitoring well 1-MW-12 is located downgradient of monitoring well 1-MW-11 and MTBE was not detected in monitoring well 1-MW-11. Additionally, the concentration of MTBE shows a decreasing trend from the source area downgradient within the monitoring wells located on the Shell Station, from 22 mg/L in monitoring well 1-MW-2 to 11 mg/L in monitoring well 1-MW-17. From monitoring well 1-MW-1 to 1-MW-17 (a distance of approximately 60 feet) the concentration of benzene drops 50%. The concentration of MTBE is not detectable in monitoring well 1-MW-11, located approximately 450 feet downgradient of monitoring well 1-MW-17. Therefore, SKA does not believe that the COCs from the Shell Station will extend beyond the designated property at concentrations exceeding any applicable TRRP Tier 1 residential ingestion or non-ingestion PCLs.

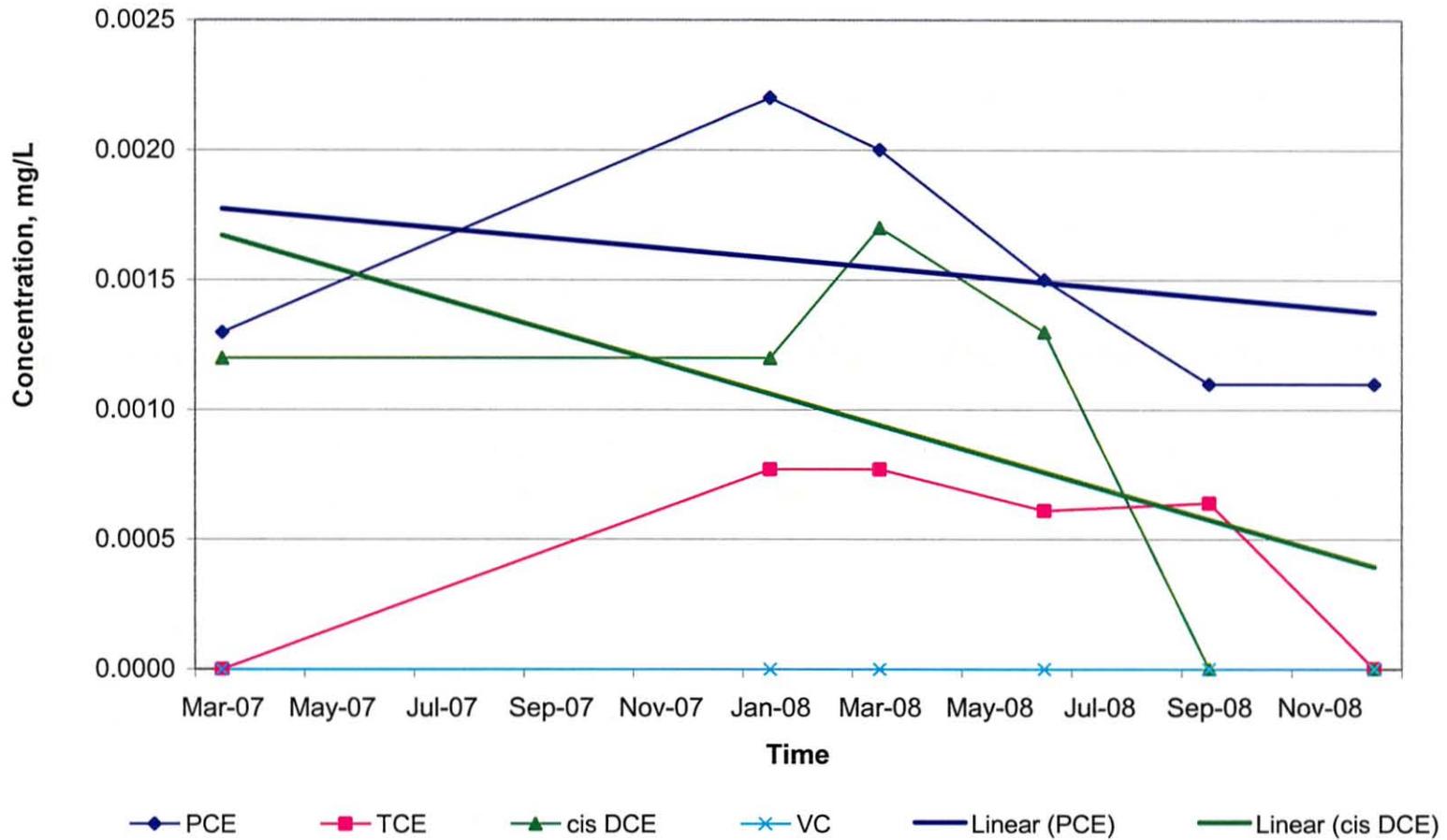
**GRAPH G.1**  
**1-MW-7 CHLORINATED ETHENE CONSTITUENT CONCENTRATIONS**  
**CITY OF HOUSTON MUNICIPAL SETTING DESIGNATION APPLICATION**  
**FONDREN ROAD AND WEST BELLFORT AVENUE**  
**HOUSTON, HARRIS COUNTY, TEXAS**  
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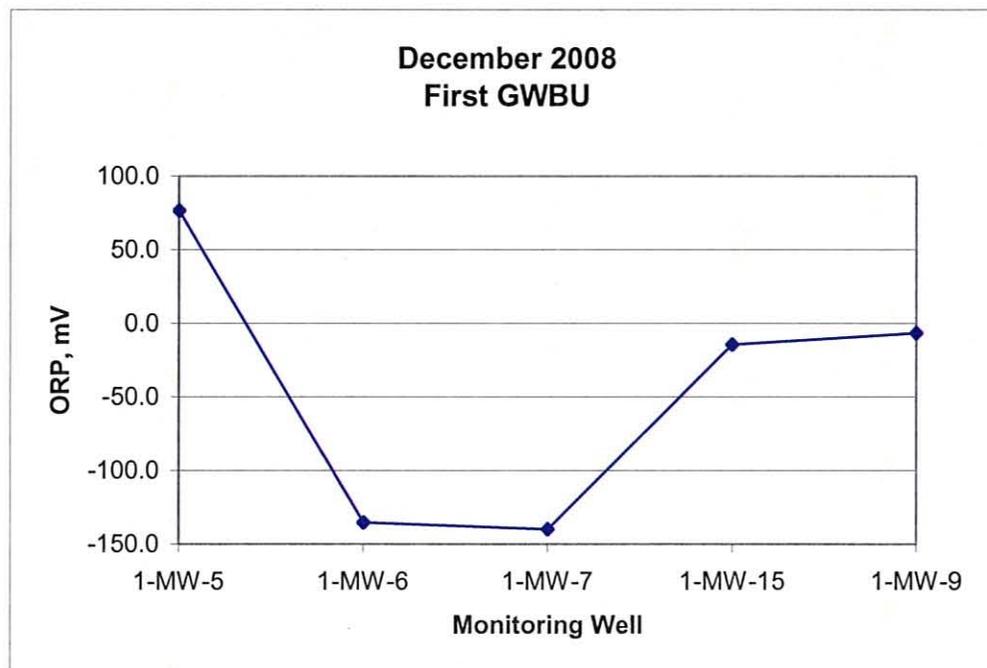
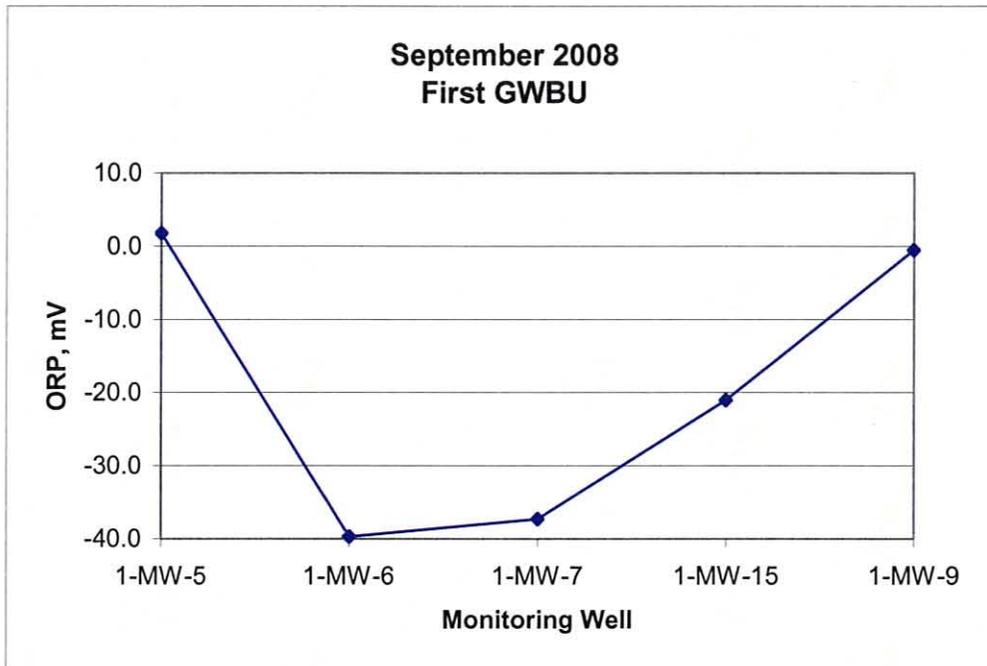
**GRAPH G.2**  
**2-MW-1 CHLORINATED ETHENE CONSTITUENT CONCENTRATIONS**  
**CITY OF HOUSTON MUNICIPAL SETTING DESIGNATION APPLICATION**  
**FONDREN ROAD AND WEST BELLFORT AVENUE**  
**HOUSTON, HARRIS COUNTY, TEXAS**  
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**GRAPH G.3**  
**2-MW-2 CHLORINATED ETHENE CONSTITUENT CONCENTRATIONS**  
**CITY OF HOUSTON MUNICIPAL SETTING DESIGNATION APPLICATION**  
**FONDREN ROAD AND WEST BELLFORT AVENUE**  
**HOUSTON, HARRIS COUNTY, TEXAS**  
**VCP No. 1964**



**GRAPH G.4**  
**OXIDATION REDUCTION POTENTIAL (ORP) CONCENTRATIONS**  
**ALONG THE LONGITUDINAL AXIS OF THE PLUME**  
**FONDREN SOUTHWEST VILLAGE SHOPPING CENTER**  
**FONDREN ROAD AND WEST BELLFORT AVENUE**  
**HOUSTON, HARRIS COUNTY, TEXAS**  
**VCP NO. 1964**



**GRAPH G.5**  
**OXIDATION REDUCTION POTENTIAL (ORP) CONCENTRATIONS**  
**ALONG THE LONGITUDINAL AXIS OF THE PLUME**  
**FONDREN SOUTHWEST VILLAGE SHOPPING CENTER**  
**FONDREN ROAD AND WEST BELLFORT AVENUE**  
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