

STATE OF CALIFORNIA  
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LOS ANGELES REGION  
320 West 4<sup>th</sup> Street, Suite 200, Los Angeles, California 90013

FACT SHEET  
WASTE DISCHARGE REQUIREMENTS  
FOR  
FREMONT CLEANERS, OXNARD

**HYDROGEN RELEASE COMPOUND INJECTION**

ORDER NO. R4-2007-0019 (Series No. 091)  
CI-9521, FILE NO. 09-072

**FACILITY ADDRESS**

690 North Ventura Road  
Oxnard, CA 93035  
Latitude 34° 12' 33.11" N  
Longitude 119° 11' 34.84" W

**FACILITY CONTACT MAILING ADDRESS**

Dr. George Kallins, MD  
BGN Fremont Square, LP  
15747 South Woodruff Avenue  
Bellflower, CA 90706

**PROJECT DESCRIPTION:**

The land and multi-tenant shopping center are owned by BGN Fremont Square, LP. Fremont Cleaners occupies a unit in the shopping center (Figures 1 and 2). The Fremont Cleaners unit measures approximately 38 feet by 52 feet. Dry cleaner operations started in the 1980s and ceased in 2008. The unit is presently vacant.

A perchloroethene (PCE) release was discovered during an environmental investigation in 1998, related to property financing. Soil and groundwater investigations have been conducted at the site since 1998. Results of the investigations indicate that the dry cleaning operations at the site have impacted the subsurface soil and groundwater with volatile organic compounds (VOCs). The primary contaminants of concern are PCE and trichloroethene (TCE). Soil consists of interbedded sandy silts and clays to approximately 35 feet below ground surface (bgs). Sand is present from 35 to at least 50 feet bgs. Groundwater typically occurs at approximately 10 feet bgs, with flow generally to the northwest (Figure 3). PCE is primarily present above 28 feet bgs. The most recent groundwater data (March 2009) indicates that PCE is present at concentrations up to 10,084 micrograms per liter ( $\mu\text{g/L}$ ) and TCE is present at concentrations up to 816  $\mu\text{g/L}$ . (Figures 4 and 5).

VOCs in the soil and shallow saturated zone near the source area have been continuously remediated via a dual-phase extraction system since 2004. The system simultaneously extracts dissolved-phase VOCs from groundwater and vapor-phase VOCs from soil. Approximately 68 pounds of volatile organic compounds (VOCs) have been recovered by the dual-phase system during this time. Pumped groundwater is treated and discharged to the Oxnard sanitary sewer, under permit. Soil vapors are also destroyed under permit via catalytic oxidation.

While VOC concentrations in groundwater were significantly reduced by dual-phase operation from 2005 to 2007, groundwater VOC concentrations have stabilized or rebounded (Figure 4). It

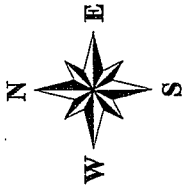
is evident that the dual-phase extraction system is no longer a cost-effective means of VOC remediation at the site.

**VOLUME AND DESCRIPTION OF DISCHARGE/INJECTION:**

Approximately 30,000 pounds of HRC-Advanced (HRC-A) emulsion/water solution at a concentration of 9.1% by volume will be injected into the proposed 48 injection points from a starting depth of 20 feet bgs up to 10 feet bgs near the identified source area (Figure 5). HRC-A has been demonstrated to support reductive (anaerobic) dechlorination of chlorinated VOCs in the subsurface. The interval for injection was selected based on the distribution of contaminants. The maximum rate of injection will vary from 2 to 5 gallons per minute at a pressure of approximately 200 pounds per square inch. The injection process is expected to be completed within approximately 1 week. It is expected that in-situ VOC dechlorination processes will continue for approximately one year following the proposed injection, during which time sufficient data (monthly and quarterly) will be collected to determine the effectiveness of the injection.

Any potential adverse water quality impacts that may result will be localized, of short-term duration, and will not impact any existing or prospective uses of groundwater. Groundwater quality will be monitored to verify that there are no long-term adverse impacts to water quality.

General Notes



\* ADAPTED FROM THOMAS BROS.  
CALIFORNIA ROAD ATLAS PG. 176

Project Details

Name  
Freemantle Cleaners

Address  
690 Ventura Blvd.  
Oxnard, CA

Number  
5796

Figure Details

SITE LOCATION MAP

Figure #  
Figure 1

Revise Date  
October 5, 2007

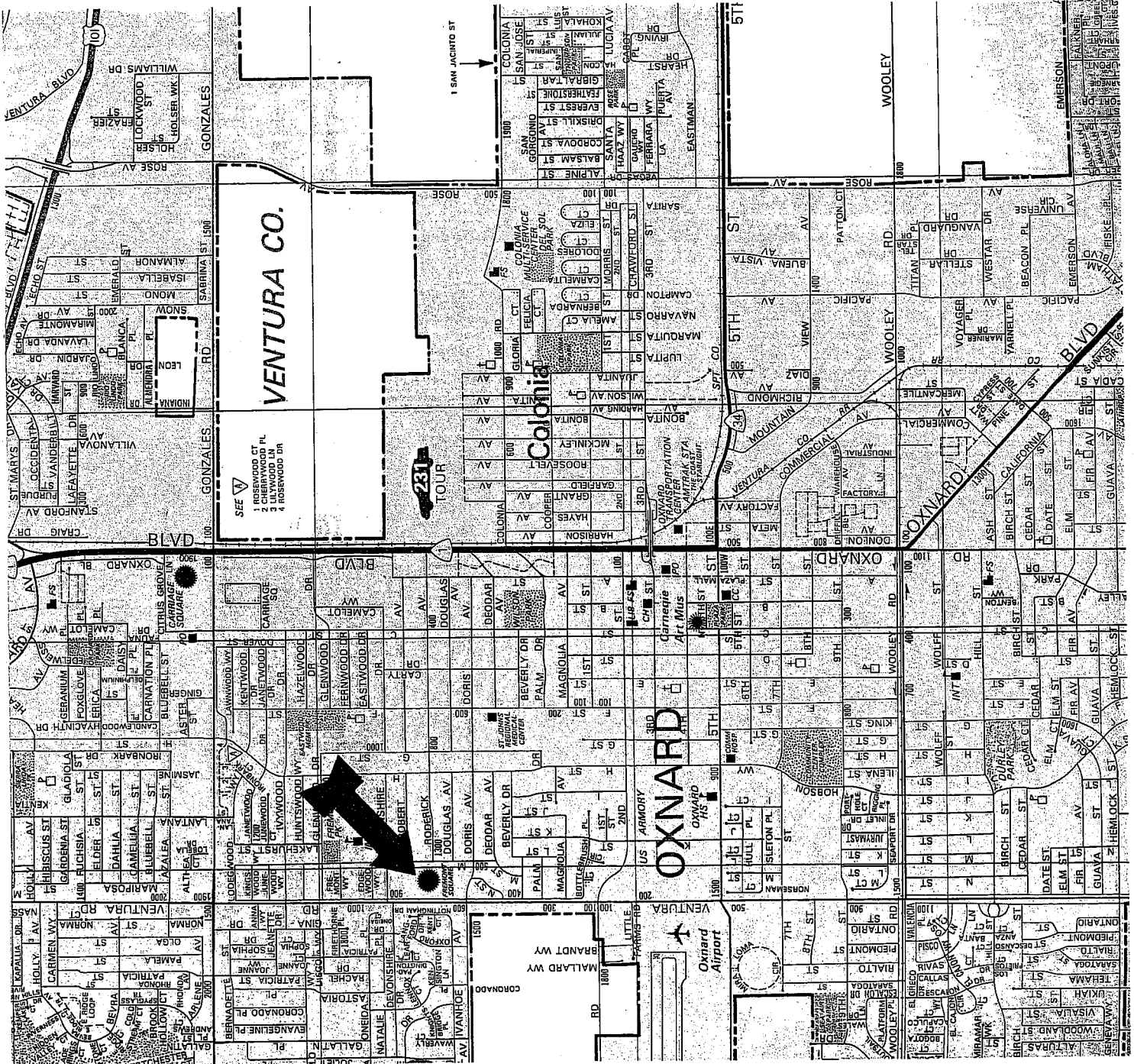
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Approximate Scale  
1" = 2,400'

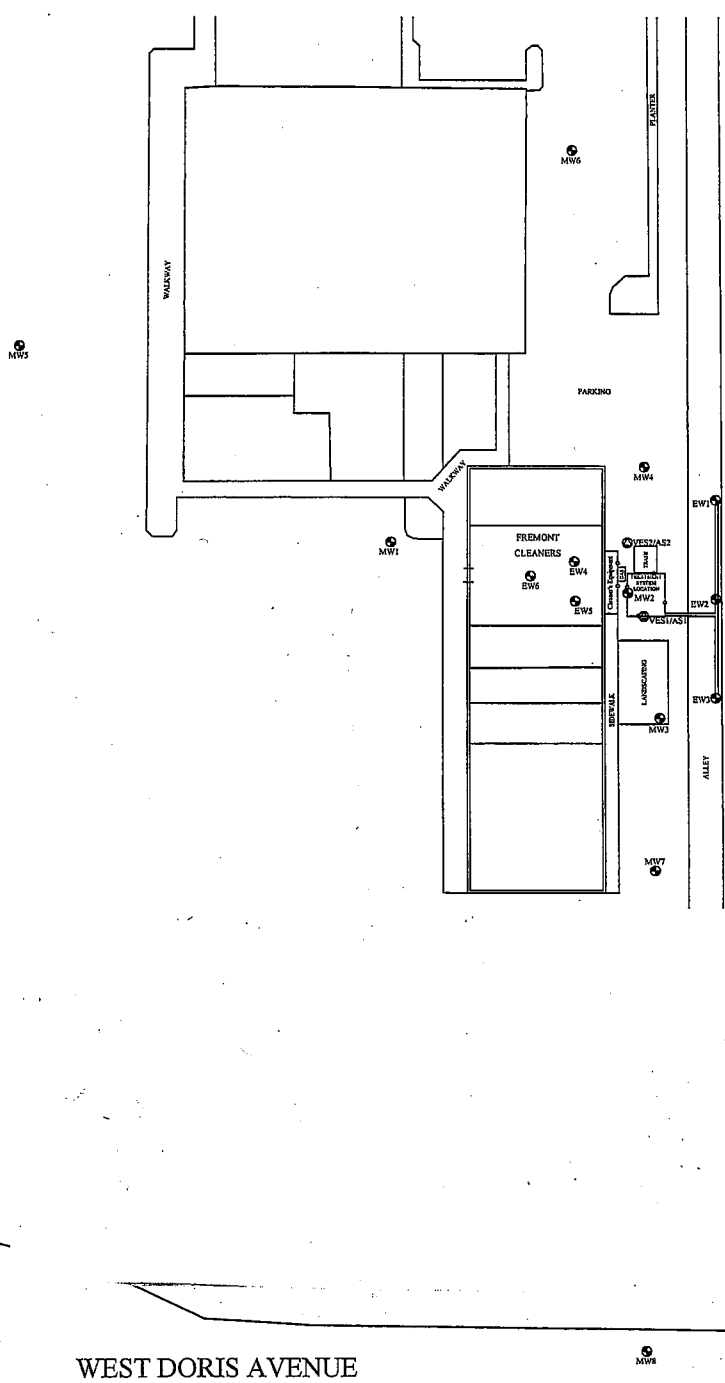
Company Information

Address  
520 West 1st Street  
Folsom, CA 95780

Telephone  
(714) 750-5597

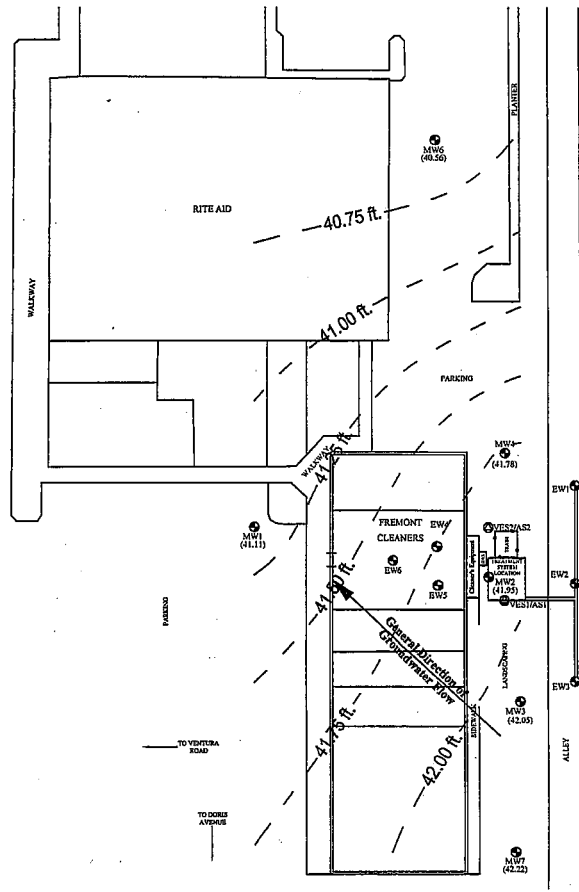
Fax  
(714) 750-6476





WEST DORIS AVENUE

Project Details		Figure Details	General Notes
Name Freemont Cleaners		SHE PLOT PLAN WITH	<ul style="list-style-type: none"> <li> - Groundwater Monitoring Well Location</li> <li> - Vapor Extraction/ Air Sparge Well Location</li> <li> - Extraction Well Location</li> </ul>
Address 690 Ventura Road, Oxnard, CA			
Number 5796			
Company Information		Figure # Figure 2	
Address 520 West 1st Street, Tustin, CA		Revise Date March 17, 2009	
Telephone (714) 730-5397			Scale 1" = 50'
Fax (714) 730-6476		Approximate Scale	



WEST DORIS AVENUE

**Project Details**

Name  
Freemont Cleaners

Address  
690 Ventura Road, Oxnard, CA

Number  
5796

**Company Information**

Address  
520 West 1st Street, Tustin, CA

Telephone  
(714) 730-5397

Fax  
(714) 730-6476



**Figure Details**

SITE PLOT PLAN WITH GROUNDWATER ELEVATION CONTOUR

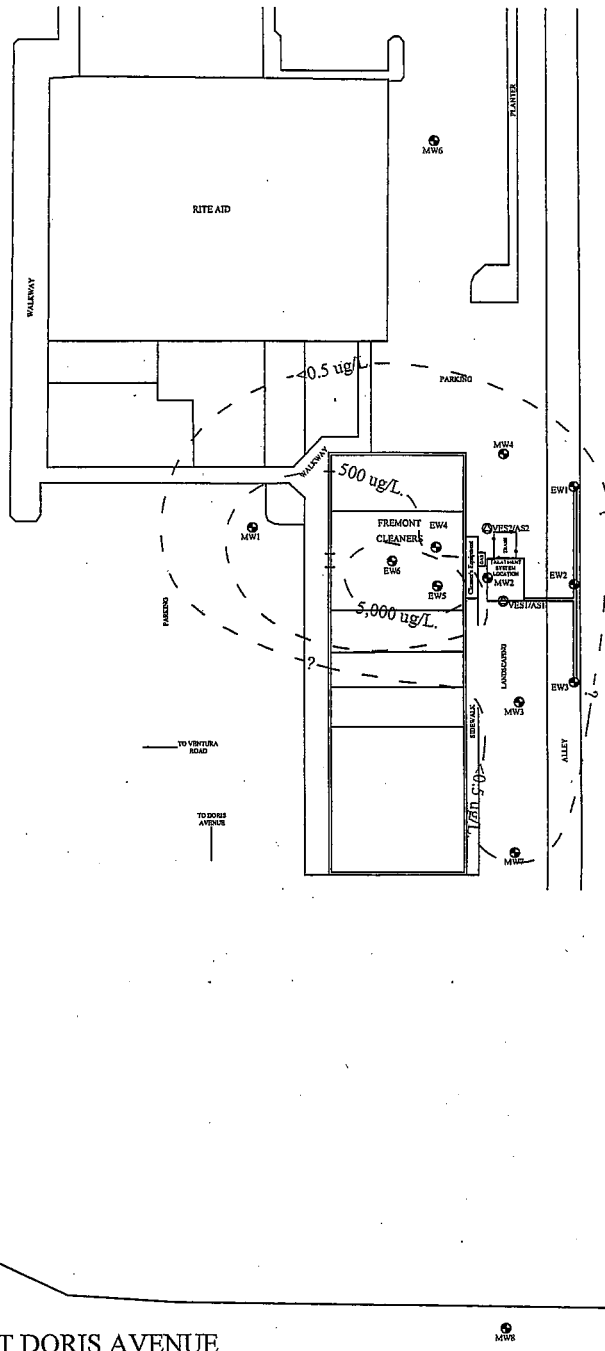
Figure #  
Figure 3

Revise Date  
March 17, 2009

Scale  
0' 50' 1" = 50'  
Approximate Scale

**General Notes**

- MW1 - Groundwater Monitoring Well Location
- VIEW/AS1 - Vapor Extraction/ Air Sparging Well Location
- EW1 - Extraction Well Location
- - - Groundwater Elevation Contour In Feet (ft)
- (42.45) - Groundwater Elevation In Feet (ft)
- (NG) - Well Not Cased



WEST DORIS AVENUE

**Project Details**

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Freemont Cleaners

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690 Ventura Road, Oxnard, CA

Number  
5796

**Company Information**

Address  
520 West 1st Street, Tustin, CA

Telephone  
(714) 730-5397

Fax  
(714) 730-6476



**Figure Details**

SITE PLOT PLAN WITH GROUNDWATER PCE CONCENTRATION CONTOURS

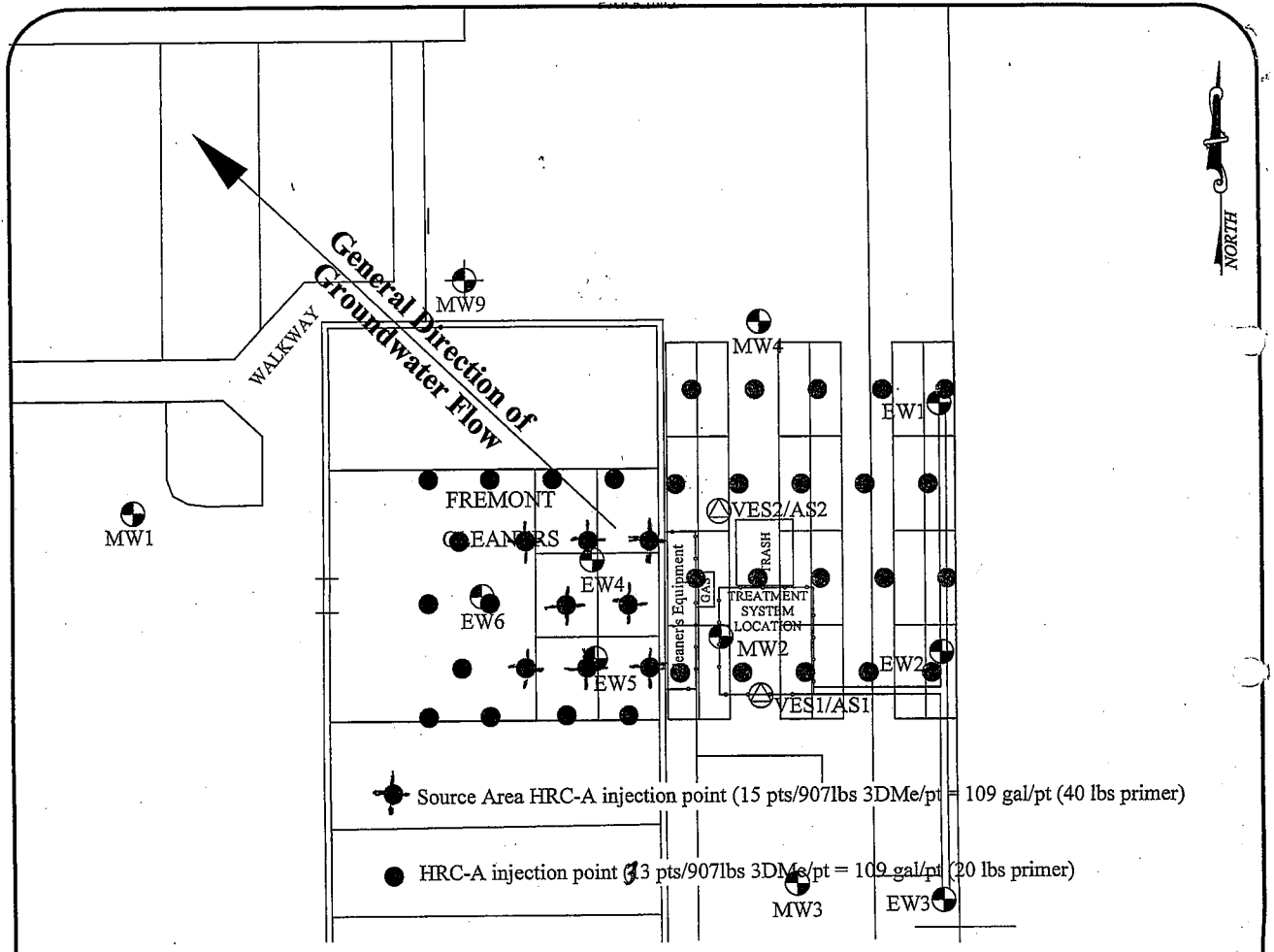
Figure #  
Figure 4

Revise Date...  
March 17, 2009

0' 50' Scale  
1" = 50'  
Approximate Scale

**General Notes**

- MW1 - Groundwater Monitoring Well Location
- VEW1/AS1 - Vapor Extraction/ Air Sparge Well Location
- EW1 - Extraction Well Location
- - - Groundwater PCE Concentration Contour in Micrograms per Liter (ug/L)
- (211.16) - Groundwater PCE Concentration Micrograms per Liter (ug/L)
- (NS) - Well Not Sampled



GROUNDWATER RESULTS					
Sample ID	Sample Date	PCE	TCE	cis-1,2 DCE	trans-1,2 DCE
MW1	3/10/2009	652.5	281.3	36.5	<2.5
MW2		278.1	128.3	726.9	7.8
MW3		26.6	1.9	9.2	<0.5
MW4		209.8	26.1	92.2	<2.5
MW5		<0.5	<0.5	<0.5	<0.5
MW6		<0.5	<0.5	<0.5	<0.5
MW7		142.5	5.7	<0.5	<0.5
MW8		Well Not Sampled.			
EW1		107.2	17.8	5.5	<0.5
EW2		161.7	23.2	2.3	<0.5
EW3		29.6	19.7	5.3	<0.5
EW4		174.9	11.9	9.7	<0.5
EW5		10,084.2	816.2	83.9	<25
EW6		Well Not Sampled.			

Project Details	
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Number	5796
Company Information	
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Telephone	(714) 730-5397
Fax	(714) 730-6476


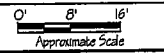


Figure Details	
SITE PLOT PLAN WITH PROPOSED HRC-A INJECTION LOCATIONS AND DOWNGRADIENT WELL MW9	
Figure #	Figure 5
Revise Date	May 2009
	

- | General Notes |   |
|---------------|---|
|               | -HRC-A Injection Point (Cross Gradient - East)  |
|               | - HRC-A Injection Point (Source Zone)           |
|               | - HRC-A Injection Point (Cross Gradient - West) |
|               | - Groundwater Monitoring Well Location          |
|               | - Vapor Extraction/ Air Sparge Well Location    |
|               | - Extraction Well Location                      |
|               | - Proposed Downgradient Groundwater Well        |