CITY OF HOUSTON



PUBLIC WORKS AND ENGINEERING PLANNING & DEVELOPMENT DIVISION

EXECUTIVE SUMMARY

North Pointe Plaza (the Site) is an approximately 7.504 acre commercial property located about 17 miles northwest of downtown Houston, Texas in the northeast corner of the intersection of Gears Road and Veterans Memorial Drive. The Site was undeveloped land through the 1950's. A service station was constructed in the southwest corner of the Site at the intersection of Gears Road and Veterans Memorial Drive in the early 1960's (3060 Gears Road). A dry cleaner facility, Dry Clean USA, was constructed on the east end of the strip center in 2003 (3010 Gears Road). The attached Figure 1 shows the current Site configuration with the former service station and dry cleaner facility, a central parking area, the strip shopping facility that has about ten retail spaces including the dry cleaner facility, and separate restaurant spaces in southeast corner of the Site on Gears Road and the northwest corner of the Site on Veterans Memorial Drive. Potable water to the Site is provided by Harris County Municipal Utility District 33.

The service station, which was never registered with the TCEQ, was demolished and the underground storage tanks removed by 1983. Soil and groundwater beneath the former service station location was evaluated through a Phase II Environmental Site Assessment (ESA) and assigned LPST No. 107584 in 1994. The LPST case was closed in 1998 based on a TCEQ PST Program Plan A Risk Assessment. A self-service car wash, Super Tech Car Wash, was built on the former service station property in 2003. Additional Phase II ESA studies were completed in 2018 and 2019 for the former service station property and the TCEQ issued a No Further Action letter in response to a Release Determination Report prepared by CRG Texas. The work performed by CRG Texas in 2019 included installation of three permanent monitoring wells with soil and groundwater sampling, and analysis for eight RCRA metals, total petroleum hydrocarbons, volatile organic compounds and polynuclear aromatic hydrocarbons. The results obtained showed no chemical concentrations that exceed PST Program Action Levels, TRRP Tier 1 Residential PCLs or Texas Specific Background Concentrations.

City of Houston Rev. Date: 04/30/14 Public Works and Engineering Planning and Development Services Division





Figure 1 - North Pointe Plaza Site Map

City of Houston MSD Program Application 3006 – 3060 Gears Road, Houston, Harris County, 77067 CRG Texas Project Number: 22-147

EXECUTIVE SUMMARY City of Houston MSD Application North Pointe Plaza 3006 – 3060 Gears Road, Houston, Texas 77067

The former dry cleaner facility, constructed in 2003, was registered with the TCEQ (DCR No. 13906) from 2004 to 2020. All dry-cleaning equipment and chemicals were removed when operations were discontinued in 2021. CRG Texas reviewed the results of a Phase II ESA completed for this facility and worked with the Owner to complete a Voluntary Cleanup Program (VCP) application in 2020. The facility was assigned VCP No. 3061 and CRG Texas initiated site assessment activities under the Texas Risk Reduction Program (TRRP). The site assessment results were reported as an Affected Property Assessment Report (APAR) which was accepted by the TCEQ in 2022. Groundwater concentrations of chemicals of concern have been delineated to the groundwater ingestion protective concentration levels (PCLs).

Chemicals of concern for the former dry cleaner facility include perchloroethylene (PCE), cis and trans-1,2-dichloroethylene (DCE), trichloroethylene (TCE) and vinyl chloride (VC) in soil and groundwater. Soil groundwater protection PCL exceedances were found near the dry-cleaning facility foundation. Groundwater ingestion protection PCL exceedances were found south and southeast of the dry-cleaning facility foundation. While there has been some seasonal variation in response to rainfall events, the groundwater contamination plume has shown a general stable to declining trend over the monitoring events completed from March 2019 to March 2023. The following summaries are taken from the March 2023 quarterly groundwater monitoring event:

• The PCE concentration at MW-6 decreased from 0 0.00205 mg/l in December 2022 to <0.000801 mg/l in March 2023. The PCE concentration at MW-5 decreased from 0.0011 mg/l in December 2022 to <0.000801 mg in March 22023. The PCE concentration at MW-2 increased from 0.255 mg/l in December 2022 to 0.296 mg/l in March 2023, which is well above the groundwater ingestion PCL of 0.005</p>

EXECUTIVE SUMMARY City of Houston MSD Application North Pointe Plaza 3006 – 3060 Gears Road, Houston, Texas 77067

mg/l. The PCE concentration at MW-2 is the only PCL exceedance for PCE.

- The TCE concentration at MW-2 remains above the PCL (0.005 mg/l) and increased from 0.198 mg/l in December 2022 to 0.229 mg/l in March 2023. This is the only groundwater ingestion PCL exceedance for TCE.
- The VC concentration at MW-2 increased from 0.0385 mg/l in December 2022 to 0.0469 mg/l in March 2023. The VC concentration at MW-5 decreased from 0.0046 mg/l in December 2022 to <0.000638 in March 2023.
- The cis-1,2 DCE concentration at MW-2 increased from 0.478 mg/l in December 2022 to 0.677 mg/l in March 2023, which exceeds the PCL (0.07 mg/l). The cis-1,2 DCE concentration MW-5 at increased from 0.0111 mg/l in December 2023 to 0.0128 mg/l in March 2023. The MW-2 concentration is the only groundwater ingestion PCL exceedance for cis-1,2 DCE.
- The trans-1,2 DCE concentration at MW-2 at increased from 0.0028 mg/l in December 2023 to 0.0033 mg/l in March 2023, which is less than the PCL (0.1 mg/l). There are no groundwater ingestion PCL exceedances for trans-1,2 DCE.

As noted above, the former dry cleaner facility is currently enrolled in the TCEQ Voluntary Cleanup Program (VCP No. 3016). The Affected Property Assessment Report was approved by the TCEQ on September 8, 2022 and a Response Action Plan (RAP) was submitted to the TCEQ on February 17, 2023. The RAP proposes implementation of a Municipal Setting Designation (MSD) for groundwater beneath the Site. While all soil and groundwater chemical of concern concentrations are less than residential vapor inhalation

EXECUTIVE SUMMARY City of Houston MSD Application North Pointe Plaza 3006 – 3060 Gears Road, Houston, Texas 77067

protection PCLs, the TCEQ required an assessment of vapor intrusion for the former dry cleaner facility which found an exceedance of the risk-based exposure level (RBEL) for PCE for one sub-slab vapor sample collected near the former dry-cleaning equipment location. The vapor mitigation plan includes sealing of the former dry cleaning facility foundation with a vapor barrier sealant.

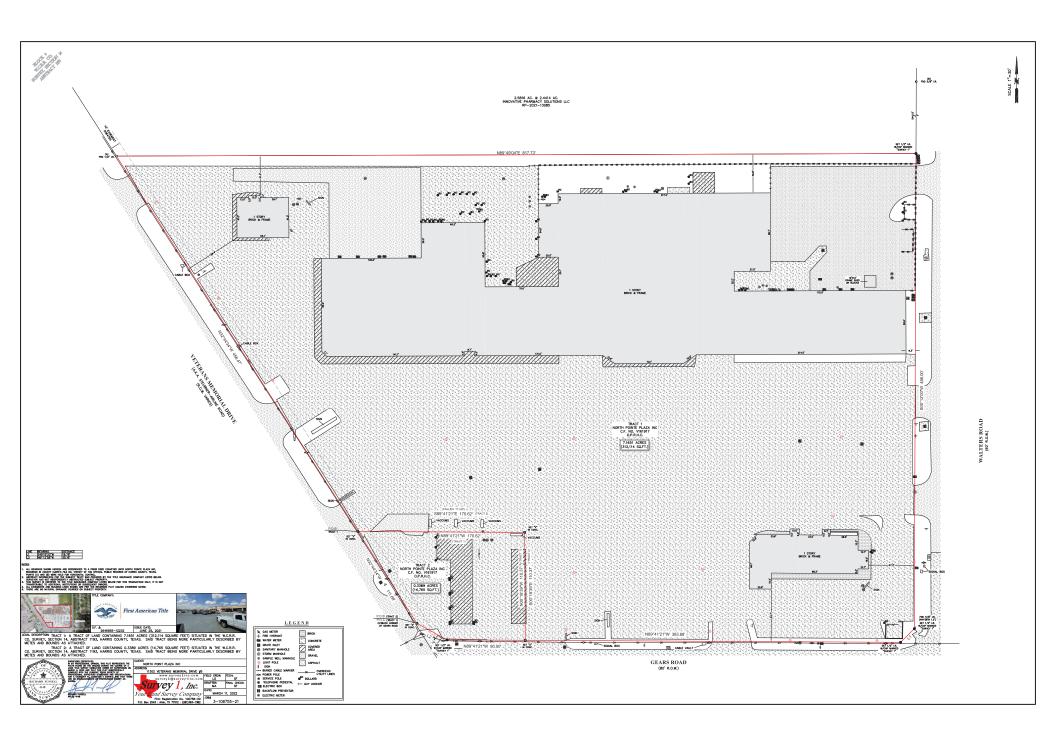
CRG Texas collected additional groundwater data during low-flow groundwater sampling events that include pH, temperature, conductivity, dissolved oxygen, oxidation-reduction potential and turbidity. The dissolved oxygen levels are very low, which supports natural attenuation of the chemicals of concern through reductive dichlorination.

CRG Texas completed a receptor survey and Drinking Water Survey for the Site. The results obtained indicate that there are no sensitive receptors within a 500-foot radius of the Site and no beneficial use of groundwater within a 0.5-mile radius of the Site.

The Owner plans to renovate and redevelop the former dry cleaner facility for commercial use.

City of Houston MSD Application North Pointe Plaza 3006 – 3060 Gears Road, Houston, Texas 77067

Appendix A



TRACT 1
DESCRIPTION OF A TRACT OF LAND CONTAINING
7.1651 ACRES (312,114 SQUARE FEET) SITUATED
IN THE W.C.R.R. CO. SURVEY, SECTION 14, ABSTRACT 1193
HARRIS COUNTY, TEXAS

Being a tract of land containing 7.1651 acres (312,114 square feet), situated in the W.C.R.R. Co. Survey, Section 14, Abstract 1193, Harris County, Texas, being tract 1 described in deed conveyed unto North Pointe Plaza by deed recorded in Clerk's File No. V161917 of the Official Records of Harris County, Texas. Said 7.1651-acre tract being more particularly described by metes and bounds as follows:

COMMENCING at a set "X" in concrete at the north cutback corner of the north right-of-way Gears Road (80.00 feet wide) and northeast right-of-way of Veterans Memorial Drive (variable in width);

THENCE North 32°44'34" West, along the northeast right-of-way line of said Veterans Memorial Drive, a distance of 111.68 feet to a set "X" in concrete for the POINT OF BEGINNING and the most westerly southwest corner of the said tract herein described;

THENCE North 32°44'34" West, along the northeast right-of-way line of said Veterans Memorial Drive, a distance of 456.47 feet to a found 1/2-inch iron rod for the northwest corner of the said tract herein described;

THENCE North 89°49'04" East, a distance of 817.73 feet to a set 1/2-inch iron rod with cap marked "SURVEY 1" in the west right-of-way line of Walters Road (60.00 feet wide) for the northeast corner of the said tract herein described;

THENCE South 00°12'00" West, along the west right-of-way line of said Walters Road a distance of 486.00 feet to a set 1/2-inch iron rod with cap marked "SURVEY 1" to the north cutback corner of the west right-of-way line of said Walters Road and the north right-of-way line said Gears Road;

THENCE South 45°15'20" West, along said cutback, a distance of 19.78 feet to a set 1/2-inch iron rod with cap marked "SURVEY 1" at the west cutback corner of the west right-of-way line of said Walters Road and the north right-of-way line said Gears Road;

THENCE North 89°41'21" West, along the north right-of-way line of said Gears Road, a distance of 383.88 feet to a set "X" in concrete for the most southerly southwest corner of the said tract herein described:

THENCE North 00°18'39" West, a distance of 110.37 feet to a set "X" in concrete for an interior corner of the said tract herein described;

THENCE North 89°41'21" West, a distance of 170.62 feet (called 171.82 feet) to the POINT OF BEGINNING and containing 7.1651 acres (312,114 square feet), more or less.

Note: This metes and bounds description is referenced to a survey drawing prepared by Survey 1, Inc. (Firm Registration No. 100758-00) dated March 11, 2022, job number 3-108755-22. Revised on April 7, 2022



TRACT 2
DESCRIPTION OF A TRACT OF LAND CONTAINING
0.3389 ACRES (14,765 SQUARE FEET) SITUATED
IN THE W.C.R.R. CO. SURVEY, SECTION 14, ABSTRACT 1193
HARRIS COUNTY, TEXAS

Being a tract of land containing 0.3389 acres (14,765 square feet), situated in the W.C.R.R. Co. Survey, Section 14, Abstract 1193, Harris County, Texas, being tract 2 described in deed conveyed unto North Pointe Plaza by deed recorded in Clerk's File No. V161917 of the Official Records of Harris County, Texas. Said 0.3389-acre tract being more particularly described by metes and bounds as follows:

BEGINNING at a set "X" in concrete at the north cutback corner of the north right-of-way Gears Road (80.00 feet wide) and northeast right-of-way of Veterans Memorial Drive (variable in width);

THENCE North 32°44'34" West, along the northeast right-of-way line of said Veterans Memorial Drive, a distance of 111.68 feet to a set "X" in concrete for the northwest corner of the said tract herein described;

THENCE South 89°41'21" East, a distance of 170.62 feet (called 171.82 feet) to a set "X" in concrete for the northeast corner of the said tract herein described;

THENCE South 00°18'39" East, a distance of 110.37 feet to set "X" in concrete in the north right-of-way line of said Gears Road for the southwest corner of the said tract herein described

THENCE North 89°41'21" West, along the north right-of-way line of said Gears Road, a distance of 80.00 feet to a set 1/2-inch iron rod with cap marked "SURVEY 1" at the east cutback corner of the northeast right-of-way line of said Veterans Memorial Drive and the north right-of-way line said Gears Road;

THENCE North 61°12'58" West, along said cutback, a distance of 35.16 feet to the POINT OF BEGINNING and containing 0.3389 acres (14,765 square feet), more or less.

Note: This metes and bounds description is referenced to a survey drawing prepared by Survey 1, Inc. (Firm Registration No. 100758-00) dated March 11, 2022, job number 3-108755-22.





RPLS Roster

Search our roster of Registered Professional Land Surveyors (RPLS).

Names are listed as Last, First Middle and ordered alphabetically by last name. RPLS Search (Enter one or more search values) Additional Rosters: **RPLS Roster** RPLS Number: **LSLS Roster SIT Roster LS Firm Roster** Last Name: First Name: Roster Download: fussell richard **Roster Files** City: County: State: **RPLS** Select o Registration: Texas RPLS registrations are Search 🔎 Clear X renewed on a yearly basis. Only registrations in "Registered" status are valid for active RPLS practice. Page: Matches: 1 1 **FUSSELL, RICHARD RPLS# 4148 JABE** Status Expires Address/Phone/County Firms Granted 12-31-2023 Registered 3-10-1983 4408 Island Drive 10075800 - SURVEY 1. Dickinson TX 77539 INC. PH#:

■: 1917 S. Interstate 35, Austin, TX 78741 Email: info@pels.texas.gov Phone: 512-440-7723
Fax: 512-440-0417

COUNTY: GALVESTON

City of Houston MSD Application North Pointe Plaza 3006 – 3060 Gears Road, Houston, Texas 77067

Appendix B

APPENDIX B
City of Houston MSD Application
North Pointe Plaza
3006 – 3060 Gears Road, Houston, Texas 77067

The attached Appendix B summary table identifies the current (verified in the field on April 20, 2023) uses of the designated property and properties within 500 feet of the designated property boundary which are shown on the attached Figure B-1. Current uses of the designated property are all commercial activities as listed for Figure B-1 location numbers 18, 19, 20 and 21. The former dry cleaner facility is unoccupied, and the car wash constructed at the former service station site has been demolished.

There are over 40 residential properties within the deed restricted neighborhoods of Lincoln Green East and McKamy Meadows within 500 feet east of the designated property (Figure B-1 locations 26 to 39 and 41 to 73). In addition, there is a strip shopping center located to the east (Figure B-1 location 40).

Current uses of properties within 500 feet of the designated property boundary to the north, south and west include the commercial activities identified on Figure B-1. There is one multi-family residential facility located about 1,000 feet southwest of the designated property (Figure B-1 location 1, Champion West Townhomes on the Green).

The Owners and Managers of the designated property plan improve and expand the North Pointe Plaza facility. The anticipated uses of the properties within 500 feet of the designated property boundary are not expected to change soon.

City of Houston MSD Application North Pointe Plaza

3006 – 3060 Gears Road, Houston, Texas 77067

Figure B-1 Location Number	Address	Facility Name	Туре		
1	11201 Veterans Memorial Drive	Champion West Townhomes on the Green	Residential		
2	11415A Veterans Memorial Drive	CarMix	Auto Sales		
2	11415B Veterans Memorial Drive	RB Ford	Auto Sales		
3	11341 Veterans Memorial Drive	Mixed Martial Arts Classes	Class/Hobby		
3	11347 Veterans Memorial Drive	Pho 579 Noodle Soup	Restaurant		
3	11353 Veterans Memorial Drive	Giant \$	Grocery		
3	11363 Veterans Memorial Drive	Vacant	Vacant		
3	11371 Veterans Memorial Drive	Fanny's Hair Salon	Commercial		
3	11375 Veterans Memorial Drive	Labor Source of Texas	Commercial		
3	11379 Veterans Memorial Drive	Arte Mexicano Y mas	Retail		
3	11383 Veterans Memorial Drive	Clinica Medica Familia Hispana	Medical		
3	11387 Veterans Memorial Drive	Amtex Auto Insurance	Insurance		
3	11391 Veterans Memorial Drive	Aventura Dental	Medical		
3	11303 Veterans Memorial Drive	Supermercado El Rancho (grocery)	Grocery		
4	11335 Veterans Memorial Drive	SR Global	Commercial		
4	11331 Veterans Memorial Drive	Beast City Fitness	Gym		
4	11327 Veterans Memorial Drive	NB Nails	Nail Salon		
5	11417 Veterans Memorial Drive	Northchase Family Practice Clinic	Medical		
6	11411 Veterans Memorial Drive	Uptown Beauty Supply	Retail		
7	11399A Veterans Memorial Drive	Centro Dental	Medical		
7	11399B Veterans Memorial Drive	First Choice Family Clinic	Medical		
7	11397 Veterans Memorial Drive	Dac Hung BBQ & Restaurant	Restaurant		
8	11311 Veterans Memorial Drive	Louisiana Fried Chicken & Seafood	Restaurant		
9	11307 Veterans Memorial Drive	Dentist at Lincoln Green	Medical		
10	11245 Veterans Memorial Drive	Cleaners	Dry cleaners		
11	11243A Veterans Memorial Drive	LBJ Creative Ideas Learning Academy	Daycare		
11	11243D Veterans Memorial Drive	Barber Shop	Barber		
11	11243C Veterans Memorial Drive	CV Income Tax Services	Commercial		
11	11243G Veterans Memorial Drive	Los Lagos	Restaurant		
11	11243J Veterans Memorial Drive	Ministerio Familias Para Cristo	Medical		
11	11243H Veterans Memorial Drive	Clinica San Miguel	Medical		
11	11243I Veterans Memorial Drive	Cricket Wireless	Phone Store		

City of Houston MSD Application North Pointe Plaza

3006 – 3060 Gears Road, Houston, Texas 77067

Figure B-1			
Location	Address	Facility Name	Type
Number			
11	11243F Veterans Memorial Drive	Subway	Restaurant
12	11241 Veterans Memorial Drive	Bella Dental	Medical
13	11239 Veterans Memorial Drive	Veterans Auto Center	Auto Repair
14	11470 Veterans Memorial Drive	Chevron Gas Station	Gas Station
15	11404 Veterans Memorial Drive	AJ Auto Parts	Auto Repair
16	11371 Walters Road	Unnamed Self Storage Facility and Residence	Storage
17	11390 Veterans Memorial Drive	Medical Plaza (vacant)	Vacant
18	11380 Veterans Memorial Drive	Hartz Chicken Buffet	Restaurant
19	3010A Gears Road	Vacant (former washateria)	Vacant
19	3010B Gears Road	Vacant (former drycleaner)	Vacant
19	3010C Gears Road	Bambu Desserts & Drinks	Restaurant
19	3010E Gears Road	Tao Ngo Restaurant	Restaurant
19	3020 Gears Road	Thang Hung Food Market	Grocery
19	3030A Gears Road	10 Nails	nail salon
19	3030B2 Gears Road	Vi Travel and Cargo	Commercial
19	3030B1 Gears Road	State Farm Hien Apple	Commercial
19	3030C Gears Road	A-1 Wireless Plus	Phone Store
19	3040 Gears Road	Family Dollar	Retail
19	3050B Gears Road	Beauty Supply	Retail
19	3050E Gears Road	Cash America	Commercial
20	11302 Veterans Memorial Drive	Vacant (Super Tech Car Wash constructed on the Former Service Station Site has been demolished)	Vacant
21	3006 Gears Road	Timmy Chan's	Restaurant
22	11242 Veterans Memorial Drive	Fast Track Food Mart/gas station	Gas Station
22	11242 Veterans Memorial Drive	Spring Premium Detail	Car Wash
23	11240 Veterans Memorial Drive	Popeye's	Restaurant
24	3075 Gears Road	Tai Kee Restaurant	Restaurant
25	11214 Veterans Memorial Drive	Carcineria Mi Favorita #2	Restaurant
25	11212 Veterans Memorial Drive	Thu Salon	Salon
25	11210 A Veterans Memorial Drive	Mystros Barber	Barber
25	11210 B Veterans Memorial Drive	El Borracho Liquor	Liquor Store

Appendix B, Page 2

City of Houston MSD Application North Pointe Plaza

3006 – 3060 Gears Road, Houston, Texas 77067

Figure B-1			
Location	Address	Facility Name	Type
Number		-	
25	11210C Veterans Memorial Drive	Veterans Memorial Drive Chiropractic Clinic	Medical
25	11248 Veterans Memorial Drive	Thai Orchard	Restaurant
25	11238 Veterans Memorial Drive	Miranda's Tire Shop	Tire Shop
25	11232 Veterans Memorial Drive	Hondu Tienda	Retail
25	11230 Veterans Memorial Drive	US Billiards & Sports Bar	Barber
25	11226 Veterans Memorial Drive	J Banquet Hall	Event Hall
25	11220 Veterans Memorial Drive	U&A Automotive Repair	Auto Repair
25	11218 Veterans Memorial Drive	Domino's Pizza	Restaurant
26	11359 Sunfish Lane	Residential	Residential
27	11355 Sunfish Lane	Residential	Residential
28	11351 Sunfish Lane	Residential	Residential
29	11347 Sunfish Lane	Residential	Residential
30	11343 Sunfish Lane	Residential	Residential
31	11339 Sunfish Lane	Residential	Residential
32	11335 Sunfish Lane	Residential	Residential
33	11331 Sunfish Lane	Residential	Residential
34	11327 Sunfish Lane	Residential	Residential
35	11323 Sunfish Lane	Residential	Residential
36	11319 Sunfish Lane	Residential	Residential
37	11315 Sunfish Lane	Residential	Residential
38	11311 Sunfish Lane	Residential	Residential
39	11307 Sunfish Lane	Residential	Residential
40	2944 Gears Road	Colbert Ball Income Tax	Commercial
40	2936 Gears Road	Vidal's Tire Service	Tire Shop
40	2938 Gears Road	Refresqueria Latina	Restaurant
40	2940 Gears Road	Aisha Hair Braiding	Retail
40	2942 Gears Road	Stylos (salon)	Salon
41	11318 Sunfish Lane	Residential	Residential
42	11322 Sunfish Lane	Residential	Residential
43	11330 Sunfish Lane	Residential	Residential
44	11334 Sunfish Lane	Residential	Residential
45	11338 Sunfish Lane	Residential	Residential

City of Houston MSD Application North Pointe Plaza

3006 – 3060 Gears Road, Houston, Texas 77067

Figure B-1 Location	Address	Facility Name	Туре
Number			
46	11342 Sunfish Lane	Residential	Residential
47	11346 Sunfish Lane	Residential	Residential
48	11350 Sunfish Lane	Residential	Residential
49	11354 Sunfish Lane	Residential	Residential
50	11343 Paramount Lane	Residential	Residential
51	11335 Paramount Lane	Residential	Residential
52	11331 Paramount Lane	Residential	Residential
53	11327 Paramount Lane	Residential	Residential
54	11323 Paramount Lane	Residential	Residential
55	11319 Paramount Lane	Residential	Residential
56	11315 Paramount Lane	Residential	Residential
57	11311 Paramount Lane	Residential	Residential
58	11307 Paramount Lane	Residential	Residential
59	11303 Paramount Lane	Residential	Residential
60	2815 Hazyknoll	Residential	Residential
61	2814 Skelton Drive	Residential	Residential
62	2902 Skelton Drive	Residential	Residential
63	2906 Skelton Drive	Residential	Residential
64	2910 Skelton Drive	Residential	Residential
65	2914 Skelton Drive	Residential	Residential
66	12239 Portree Drive	Residential	Residential
67	12235 Portree Drive	Residential	Residential
68	12231 Portree Drive	Residential	Residential
69	12227 Portree Drive	Residential	Residential
70	2907 Skelton Drive	Residential	Residential
71	2903 Skelton Drive	Residential	Residential





Figure B1 - Property Use on the Designated Property and within 500'

City of Houston MSD Program Application 3006 – 3060 Gears Road, Houston, Harris County, 77067 CRG Texas Project Number: 22-147



City of Houston MSD Application North Pointe Plaza 3006 – 3060 Gears Road, Houston, Texas 77067

Appendix C





Figure C1 - North Pointe Plaza - Appendix C

City of Houston MSD Program Application 3006 – 3060 Gears Road, Houston, Harris County, 77067 CRG Texas Project Number: 22-147

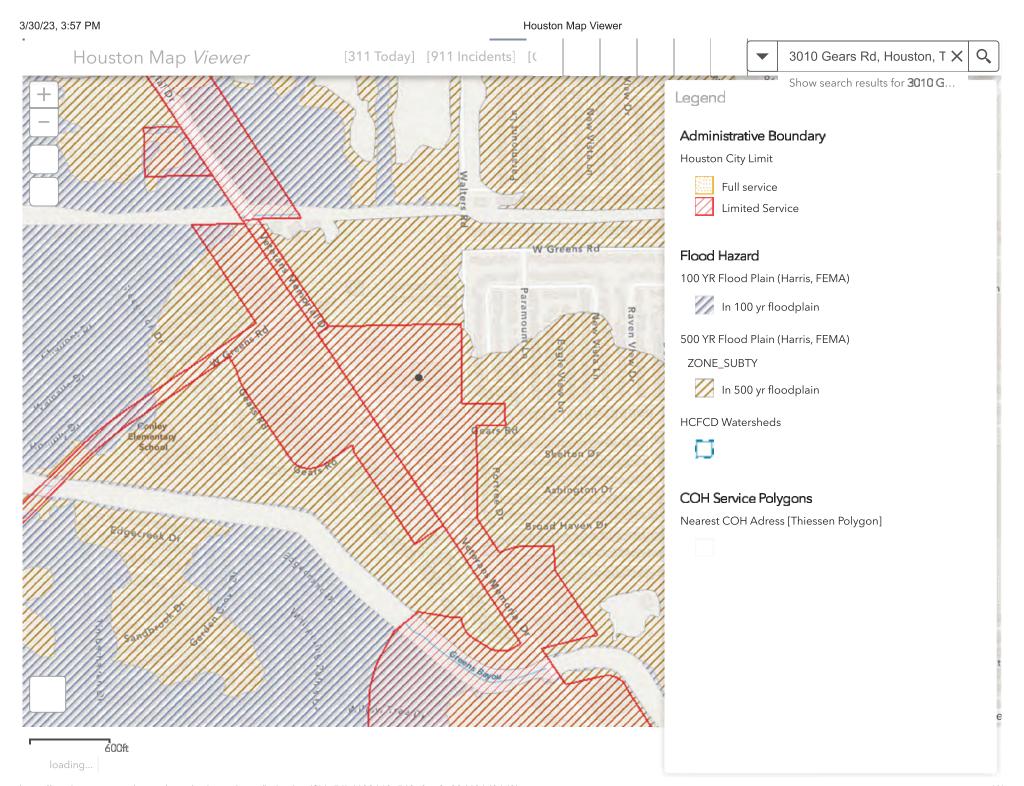






Figure 5A-3 - Groundwater Gradient Map (March 2023)



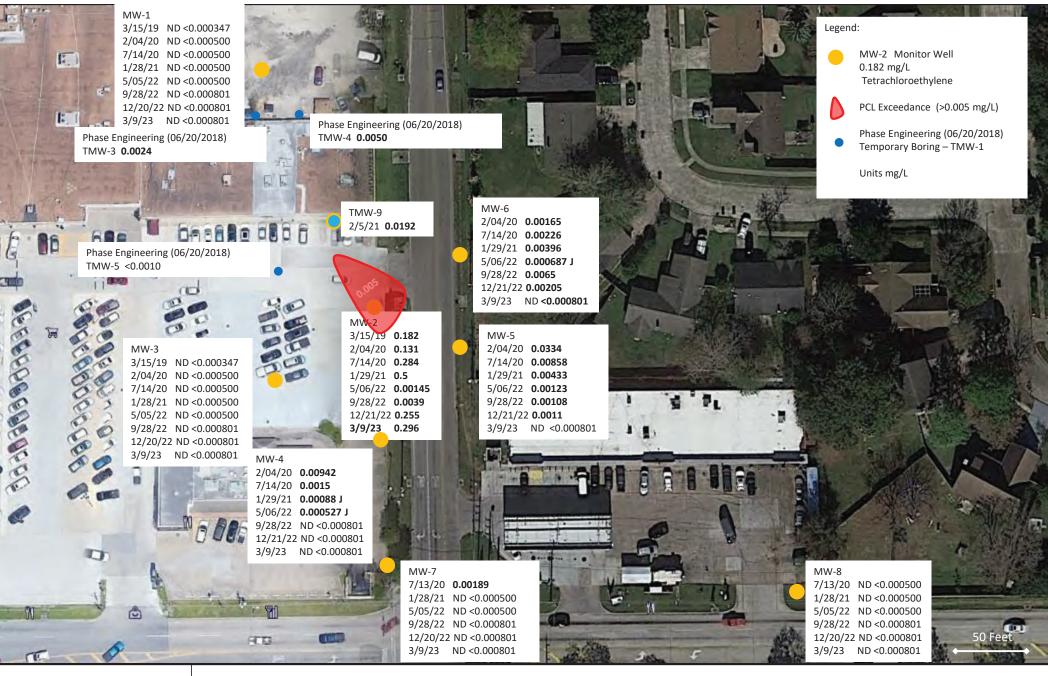




Figure 5B-2 – Groundwater Concentration Map (Tetrachloroethylene) [March 2023]



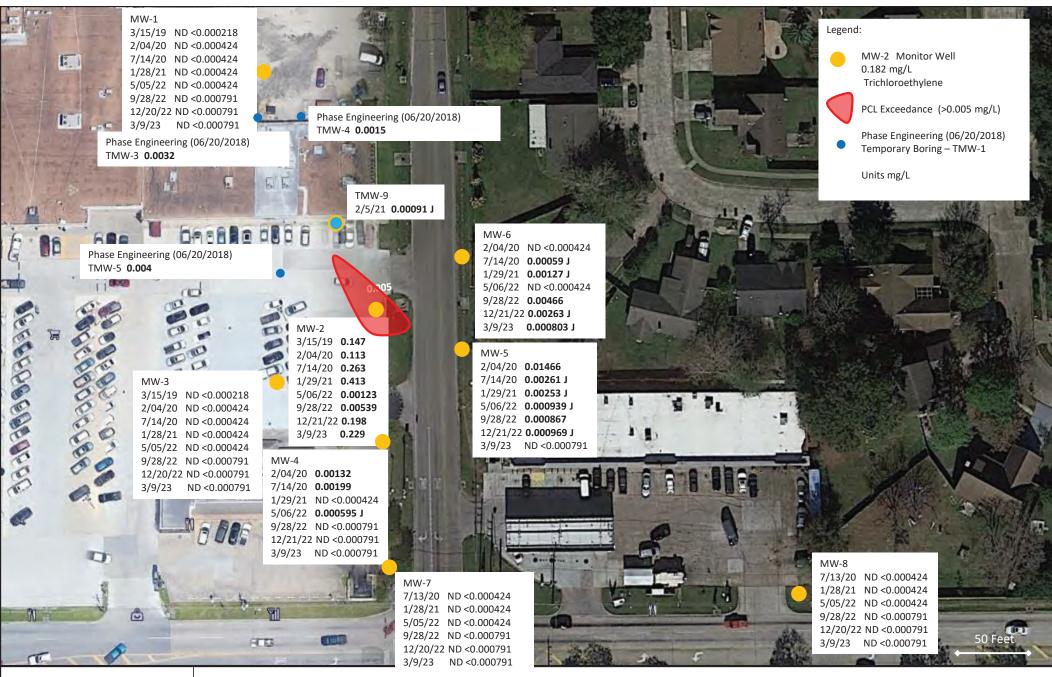




Figure 5B-3 – Groundwater Concentration Map (Trichloroethylene) [March 2023]



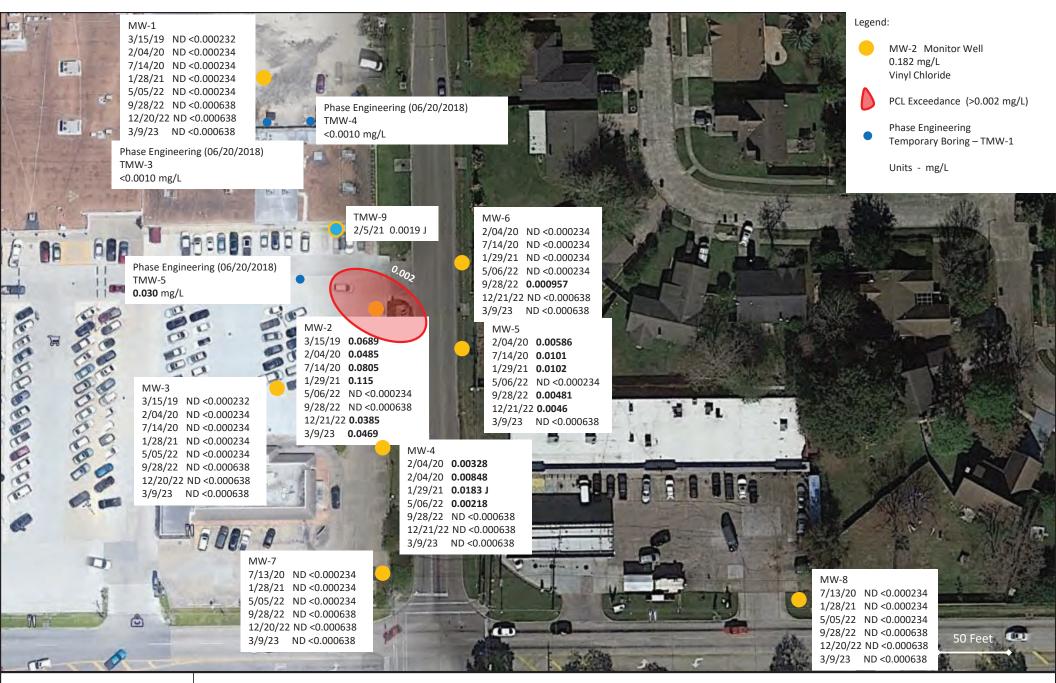




Figure 5B-4 – Groundwater Concentration Map (Vinyl Chloride) [March 2023]







Figure 5B-5 – Groundwater Concentration Map (Dichloroethylene, cis-1,2) [March 2023]



Table 5D. Summary of Groundwater Gauging and Elevation Data North Point Plaza Dry Clean USA Site 3010 Gears Road, Houston, Texas - VCP No. 3061

Monitoring Well ID Number	Date	Total Well Depth (feet)	Top of Casing Elevation ¹	Depth to Water (feet)	Water Column Height (feet)	Depth to NAPL (feet)	NAPL Thickness (feet)	Groundwater Elevation	Comments
	3/8/19	35.00	100.66	3.78	31.22	0.00	0.00	96.88	
MW-1	3/26/19	35.00	100.66	4.60	30.40	0.00	0.00	96.06	
	2/4/20	35.00	100.66	4.89	30.11	0.00	0.00	95.77	
	7/9/20	35.00	100.66	3.16	31.84	0.00	0.00	97.50	
	1/28/21	35.00	100.66	3.61	31.39	0.00	0.00	97.05	
	5/5/22	35.00	100.66	5.36	29.64	0.00	0.00	95.30	
	9/28/22	35.00	100.66	7.25	27.75	0.00	0.00	93.41	
	12/20/22	35.00	100.66	2.65	32.35	0.00	0.00	98.01	
	3/9/23	35.00	100.66	4.27	30.73	0.00	0.00	96.39	
	3/8/19	30.00	100.00	4.99	25.01	0.00	0.00	95.01	
	3/26/19	30.00	100.00	5.60	24.40	0.00	0.00	94.40	
	2/4/20	30.00	100.00	6.35	23.65	0.00	0.00	93.65	
	7/9/20	30.00	100.00	5.95	24.05	0.00	0.00	94.05	
MW-2	1/29/21	30.00	100.00	5.31	24.69	0.00	0.00	94.69	
	5/6/22	30.00	100.00	6.56	23.44	0.00	0.00	93.44	
	9/28/22	30.00	100.00	7.33	22.67	0.00	0.00	92.67	
	12/21/22	30.00	100.00	6.05	23.95	0.00	0.00	93.95	
	3/9/23	30.00	100.00	5.66	24.34	0.00	0.00	94.34	
	3/8/19	25.00	100.36	5.56	19.44	0.00	0.00	94.80	
MW-3	3/26/19	25.00	100.36	6.05	18.95	0.00	0.00	94.31	
	2/4/20	25.00	100.36	6.76	18.24	0.00	0.00	93.60	
	7/9/20	25.00	100.36	5.69	19.31	0.00	0.00	94.67	
	1/28/21	25.00	100.36	5.69	19.31	0.00	0.00	94.67	
	5/5/22	25.00	100.36	7.22	17.78	0.00	0.00	93.14	
	9/28/22	25.00	100.36	9.13	15.87	0.00	0.00	91.23	
	12/20/22	25.00	100.36	6.98	18.02	0.00	0.00	93.38	
	3/9/23	25.00	100.36	6.21	18.79	0.00	0.00	94.15	
	2/4/20	33.00	99.85	6.53	26.47	0.00	0.00	93.32	
	7/9/20	33.00	99.85	6.45	26.55	0.00	0.00	93.40	
	1/29/21	33.00	99.85	5.55	27.45	0.00	0.00	94.30	
MW-4	5/6/22	33.00	99.85	6.87	26.13	0.00	0.00	92.98	
11111 7	9/28/22	33.00	99.85	8.98	24.02	0.00	0.00	90.87	
	12/21/22	33.00	99.85	6.76	26.24	0.00	0.00	93.09	
	3/9/23	33.00	99.85	5.99	27.01	0.00	0.00	93.86	
	2/4/20	36.00	98.61	5.38	30.62	0.00	0.00	93.23	
	7/9/20	36.00	98.61	4.99	31.01	0.00	0.00	93.62	
	1/29/21	36.00	98.61	4.42	31.58	0.00	0.00	94.19	
MW-5	5/6/22	36.00	98.61	5.82	30.18	0.00	0.00	92.79	
	9/28/22	36.00	98.61	7.92	28.08	0.00	0.00	90.69	
	12/21/22	36.00	98.61	5.42	30.58	0.00	0.00	93.19	
	3/9/23	36.00	98.61	4.97	31.03	0.00	0.00	93.64	
	2/4/20	36.00	98.60	4.65	31.35	0.00	0.00	93.95	
	7/9/20	36.00	98.60	4.64	31.36	0.00	0.00	93.96	
	1/29/21	36.00	98.60	3.73	32.27	0.00	0.00	93.96	
MW-6	5/6/22	36.00	98.60	5.50	30.50	0.00	0.00	93.10	
IVIVV-O	9/28/22		1		ł	1		 	
		36.00	98.60	8.67	27.33	0.00	0.00	92.21	
	12/21/22	36.00	98.60	4.54	31.46	0.00	0.00	96.34	
	3/9/23	36.00	98.60	4.29	31.71	0.00	0.00	96.59	

Table 5D. Summary of Groundwater Gauging and Elevation Data North Point Plaza Dry Clean USA Site 3010 Gears Road, Houston, Texas - VCP No. 3061

Monitoring Well ID Number	Date	Total Well Depth (feet)	Top of Casing Elevation ¹	Depth to Water (feet)	Water Column Height (feet)	Depth to NAPL (feet)	NAPL Thickness (feet)	Groundwater Elevation	Comments
	7/9/20	36.00	100.88	8.81	27.19	0.00	0.00	92.07	
	1/28/21	36.00	100.88	7.19	28.81	0.00	0.00	93.69	
MW-7	5/5/22	36.00	100.88	8.36	27.64	0.00	0.00	92.52	
IVIVV-7	9/28/22	36.00	100.88	10.39	25.61	0.00	0.00	90.49	
	12/20/22	36.00	100.88	8.45	27.55	0.00	0.00	92.43	
	3/9/23	36.00	100.88	7.48	28.52	0.00	0.00	93.40	
	7/9/20	36.00	100.13	8.00	28.00	0.00	0.00	92.13	
	1/28/21	36.00	100.13	7.05	28.95	0.00	0.00	93.08	
MW-8	5/5/22	36.00	100.13	8.52	27.48	0.00	0.00	91.61	
IVIVV-8	9/28/22	36.00	100.13	10.65	25.35	0.00	0.00	89.48	
	12/20/22	36.00	100.13	8.42	27.58	0.00	0.00	91.71	
	3/9/23	36.00	100.13	7.59	28.41	0.00	0.00	92.54	

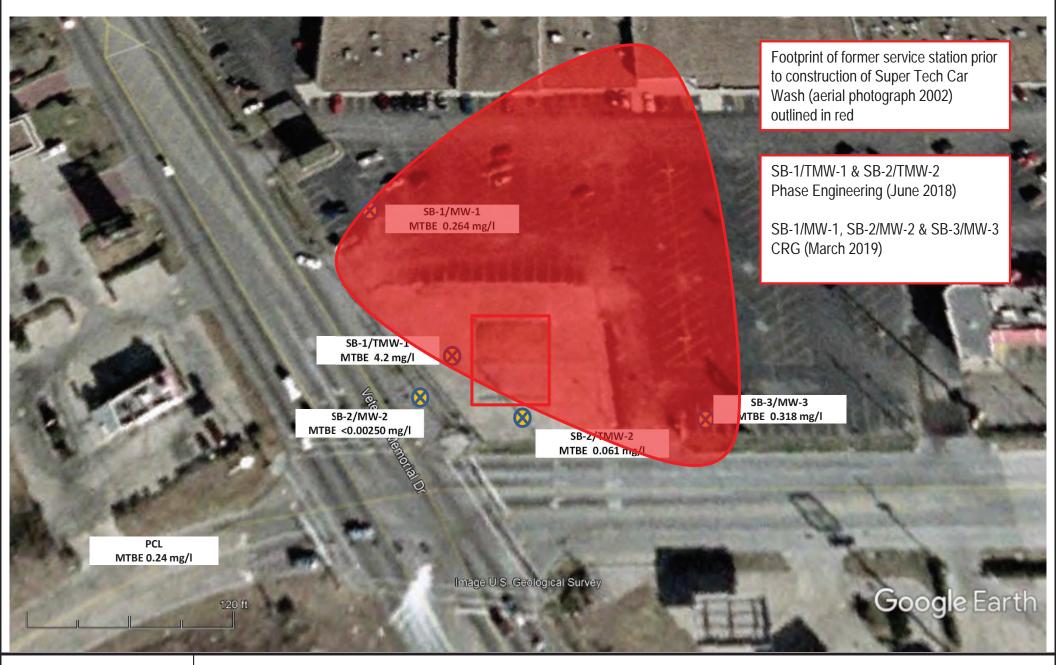




Figure C-2 – Groundwater Concentration Map (MTBE)

Scale Shown in Lower Left Corner Above





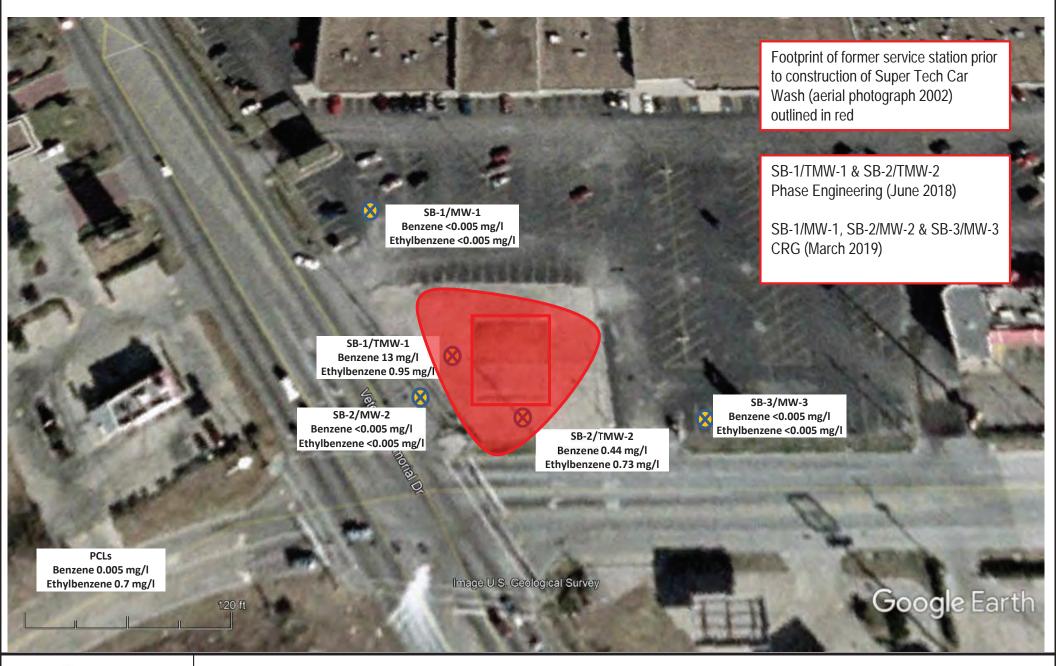




Figure C-3 – Groundwater Concentration Map

Scale Shown in Lower Left Corner Above

(Benzene/Ethylbenzene)

Site Name: Super Tech Car Wash (former service station location)
Location: 11302 Veterans Memorial Drive

City, State: Houston, Texas







Figure C-4 – Groundwater Gradient Map (3/08/19)

Former Service Station, 3060 Gears Road Houston, Harris County, 77067 CRG Texas Project Number: 19-022

TABLE C-1 - GROUNDWATER ELEVATION DATA

Former Service Station, 3060 Gears Road Houston, Harris County, Texas

Monitoring Well ID Number	Date	Total Well Depth (feet)	Top of Casing Elevation	Depth to Groundwater (feet)	Water Column Height (feet)	Depth to NAPL (feet)	NAPL Thickness	Groundwater Elevation	Comments
MW-1	3/8/19	30.00	100.05	3.52	26.48	0.00	0.00	96.53	
	3/26/19	30.00	100.05	4.00	26.00	0.00	0.00	96.05	
MW-2	3/8/19	30.00	100.29	4.86	25.14	0.00	0.00	95.43	
	3/26/19	30.00	100.29	5.30	24.70	0.00	0.00	94.99	
MW-3	3/8/19	30.00	100.00	5.30	24.70	0.00	0.00	94.70	
	3/26/19	30.00	100.00	4.90	25.10	0.00	0.00	95.10	

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Appendix D

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The contaminants of concern (COCs) include chlorinated hydrocarbons for the former dry cleaner facility and gasoline-related hydrocarbons for the former service station facility. The COCs for the former dry cleaner facility include perchloroethylene (PCE or PERC, also known as tetrachloroethylene), which was used as a cleaning solvent at the facility and chemicals produced through the decomposition of PCE: cis and transdichloroethylene (DCE), trichloroethylene (TCE) and vinyl chloride (VC). The COCs for the former service station include benzene, ethylbenzene, and methyl tert-butyl ether (MTBE).

PCL Exceedance Zones

Maps showing the estimated horizontal extent of the groundwater ingestion PCL exceedance zones are presented in Appendix C. There are no exceedances of the non-ingestion PCLs for any of the COCs.

Former Dry Cleaner Facility (VCP No. 3061)

PCE – The groundwater ingestion PCL exceedance zone for PCE (0.005 mg/l) is located around MW-2 as shown in Figure 5B-2 (Appendix C). The maximum PCE concentration observed during the four-year monitoring period, 0.296 mg/l, is less than the non-ingestion (inhalation) PCL of 500 mg/l. PCE is denser than water and may sink to the depth of the confining clay layer at 25' to 30' below ground surface.

TCE – The groundwater ingestion PCL exceedance zone for TCE (0.005 mg/l) is located around MW-2 as shown in Figure 5B-3 (Appendix C). The maximum TCE concentration observed during the four-year monitoring period, 0.413 mg/l, is less than the non-ingestion (inhalation) PCL of 24 mg/L. TCE is denser than water and may sink to the depth of the confining clay layer at 25' to 30' below ground surface.

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VC – The groundwater ingestion PCL exceedance zone for VC (0.002 mg/l) is located around MW-2 as shown in Figure 5B-4 (Appendix C). The maximum VC concentration observed during the four-year monitoring period, 0.0805 mg/l, is less than the non-ingestion (inhalation) PCL of 3.8 mg/l. VC is a gas that is soluble in water and may occur from the depth of the confining clay layer at 25' to 30' below ground surface to the top of the saturated zone at 10' to 15' below ground surface.

DCE – The groundwater ingestion PCL exceedance zone for cis-1,2 DCE (0.07 mg/l) is located around MW-2 as shown in Figure 5B-5 (Appendix C). There is no PCL exceedance zone for trans-1,2 DCE. The maximum cis-1,2 DCE concentration observed during the four-year monitoring period, 1.02 mg/l, is less than the non-ingestion (inhalation) PCL of 1,200 mg/l. DCE is denser than water and may sink to the depth of the confining clay layer at 25' to 30' below ground surface.

Former Service Station (LPST No. 107584 closed 1998)

Benzene – The groundwater ingestion PCL exceedance zone for benzene (0.005 mg/l) is located around the former underground storage pit as shown in Figure C-3 (Appendix C). The maximum benzene concentration observed during the 2018 monitoring event, 13 mg/l, is less than the non-ingestion (inhalation) PCL of 180 mg/l. Benzene floats on and is slightly soluble in water and may occur at the top of the saturated zone at 10' to 15' below ground surface.

Ethylbenzene – The groundwater ingestion PCL exceedance zone for ethylbenzene (0.7 mg/l) is located around the former underground storage pit as shown in Figure C-3 (Appendix C). The maximum ethylbenzene concentration observed during the 2018 monitoring event, 0.95 mg/l, is less than the non-ingestion (inhalation) PCL of 30,000 mg/l. Ethylbenzene floats on and is slightly soluble in water and may occur at the top of the saturated zone at 10' to 15' below ground surface.

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MTBE – The groundwater ingestion PCL exceedance zone for MTBE (0.24 mg/l) is located around the former underground storage pit as shown in Figure C-3 (Appendix C). The maximum MTBE concentration observed during the 2018 monitoring event, 4.2 mg/l, is less than the non-ingestion (inhalation) PCL of 4,000 mg/l. MTBE floats on and is slightly soluble in water and may occur at the top of the saturated zone at 10' to 15' below ground surface.

The discussion above includes a description of the basic geochemical properties of the COCs for the former dry cleaner and former service station facilities. The attached table of Chemical/Physical Properties is excerpted from the April 27, 2018 TCEQ Texas Risk Reduction Program (TRRP) Rule tables. The COCs are all organic chemicals and, except for vinyl chloride (a gas), are liquids. The solubilities and densities for the COCs are discussed above. There are no soil-water partition coefficient values (K_d's, cm³-H₂O/g-Soil) listed for the COCs which indicates each COC would be expected to migrate with groundwater and not be adsorbed on soil particles.

Chemical/Physical Properties

Last Revised: April 27, 2018

Chemical of Concern	CAS	Br _{abg} ((μg/g DW)/ (μg/g soil))			Туре	MW (g/mole)	H_unitless (unitless)	LogK _{oc} (unitless)	LogK _d (unitless)	D _{air} (cm²/s)	D _{wat} (cm ² /s)	Solubility (mg/l)	Vapor_P (mm Hg)	logK _{ow} (unitless)
Benzene	71-43-2	_	-	I	0	7.81E+01	2.27E-01	1.82E+00	_	8.80E-02	9.80E-06	1.77E+03	9.50E+01	1.99E+00
Dichloroethylene, cis-1,2-	156-59-2	_	-	I	0	9.69E+01	1.87E-01	1.46E+00	_	7.35E-02	1.13E-05	4.93E+03	1.75E+02	1.86E+00
Dichloroethylene, trans-1,2	156-60-5	-	-	1	0	9.69E+01	3.90E-01	1.70E+00	-	7.07E-02	1.19E-05	6.30E+03	3.52E+02	2.07E+00
Ethyl benzene	100-41-4	-	-	1	0	1.06E+02	3.28E-01	2.31E+00	-	7.50E-02	7.80E-06	1.69E+02	9.60E+00	3.03E+00
MTBE (methyl tert-butyl ether)	1634-04-4	_	_	I	0	8.81E+01	2.44E-02	1.15E+00	_	7.92E-02	9.41E-05	4.80E+04	2.49E+02	1.43E+00
Tetrachloroethylene	127-18-4	-	_	I	0	1.66E+02	7.65E-01	2.19E+00	_	7.20E-02	8.20E-06	2.00E+02	1.84E+01	2.97E+00
Toluene	108-88-3	-	_	I	0	9.21E+01	2.76E-01	2.15E+00	_	8.70E-02	8.60E-06	5.30E+02	2.82E+01	2.54E+00
Trichloroethylene	79-01-6	-	_	I	0	1.31E+02	4.28E-01	1.97E+00	_	7.90E-02	9.10E-06	1.10E+03	7.20E+01	2.47E+00
Vinyl chloride	75-01-4	_	_	g	0	6.25E+01	3.49E+00	1.04E+00	-	1.06E-01	1.23E-05	2.76E+03	2.80E+03	1.62E+00

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* These compounds are not necessarily of concern from a human health standpoint, therefore calculation of human health-based values is not required. However, aesthetics and ecological criteria would still apply. See table entitled "Compounds for which Calculation of a Human Health PCL is Not Required" available on the TCEQ website at http://www.tceq.texas.gov/remediation/trrp/trrppcls.html.

s - compound solid at @ 20 oC

I - compound liquid at @ 20 oC

g - compound gaseous at @ 20 oC

H' - Dimensionless Henry's Law Constant H' = H x 41.57 @ 20 oC (cm3-H2O/cm3-air)

H - Henry's Law Constant (atm-m3/mole)

MW - Molecular Weight (g/mole)

K_{oc}. Soil organic carbon-water partition coefficient (cm3-H2O/g-Carbon)

K_d soil-water partition coefficient (cm3-H2O/g-Soil)

D_{air} . Diffusion coefficient in air (cm2/s)

D_{wat -} Diffusion coefficient in water (cm2/s)

K_{ow} - Octanol-water partition coefficient (cm3-H2O/cm3-Octanol)

Br_{abg} - Soil-to-above ground plant biotransfer factor (g soil/g plant tissue dry weight)

Br_{bg} Soil-to-below ground plant biotransfer factor (g soil/g plant tissue dry weight)

Type - O: Organic, I: Inorganic, M: Metal, OA: Organic Acids

CE - Not found, Can not estimate

NA/reacts - Not applicable because reacts with water

This table shows the chemical and physical properties used to calculate protective concentration levels. end of worksheet

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Appendix E

APPENDIX E

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Former Dry Cleaner Facility - Soil (all values in mg/kg)

		PCL					
Chemcial of	Maximum	Groundwater					
Concern	Concentration	Protection	Total/Combined	Inhalation			
PCE	0.167	0.05	710	940			
TCE	0.105	0.034	18	31			
VC	0.36	0.022	43	0.36			
cis-1,2 DCE	0.223	0.49	590	920			

Former Dry Cleaner Facility - Groundwater (all values in mg/l)

		PCL		
Chemcial of	Maximum	Groundwater		
Concern	Concentration	Ingestion	Inhalation	
PCE	0.296	0.005	500	
TCE	0.413	0.005	24	
VC	0.0805	0.002	3.8	
cis-1,2 DCE	1.02	0.49	1200	

Former Service Station Facility - Soil (all values in mg/kg)

		PCL				
Chemcial of	Maximum	Groundwater				
Concern	Concentration	Protection	Total/Combined	Inhalation		
Benzene	0.167	0.05	710	940		
Ethylbenzene	0.105	0.034	18	31		
MTBE	0.36	0.022	43	0.36		

Former Service Station Facility - Groundwater (all values in mg/l)

		PCL		
Chemcial of	Maximum	Groundwater		
Concern	Concentration	Ingestion	Inhalation	
Benzene	4.3	0.005	180	
Ethylbenzene	4.2	0.7	30000	
MTBE	0.46	0.24	4000	

PCLs exceeded by maximum concentrations are noted in BOLD.

PCLs not exceeded by maximum concentrations are noted in BOLD.

Without the MSD the former dry cleaner facility exceeds the applicable PCLs.

The former service station is a closed LPST facility. The MSD would not effect the closure status.

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Appendix F

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The COC groundwater plumes have extended to the off-site monitoring wells MW-5 and MW-6 located east of the designated property boundary in the right-of-way of Walters Road, which is owned by the City of Houston. The only interaction CRG Texas has had with the off-site property owners regarding the COC groundwater plumes has been through the City of Houston MSD Program.

The following summarizes groundwater PCL exceedances for the off-site monitoring wells. There have been 7 monitoring events at these wells from 2020 to 2023.

	PCL	Off-Site		COC Concentration
COC	(mg/l)	Well	Date	(mg/l)
PCE	0.005	MW-5	7/14/2020	0.00858
PCE	0.005	MW-6	9/28/2022	0.0065
TCE	0.005	MW-5	2/4/2020	0.01466
VC	0.002	MW-5	2/4/2020	0.00586
VC	0.002	MW-5	7/14/2021	0.0101
VC	0.002	MW-5	1/29/2021	0.0102
VC	0.002	MW-5	9/28/2022	0.00481
VC	0.002	MW-5	12/21/2022	0.0046

There were no off-site well groundwater PCL exceedances observed during the last groundwater monitoring event in March 2023.

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Appendix G

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As described in the Executive Summary, the sources of groundwater contamination for the designated property include an unregistered former service station constructed in the early 1960's and removed by 1983, and a registered former dry cleaner facility constructed in 2003 and removed in 2021.

The former service station was assigned LPST No. 107584 in 1994, which was closed under the TCEQ PST Rules in 1998. Subsequent Phase II ESA studies were completed in 2018 and 2019 for the former service station property and the TCEQ issued a No Further Action letter in response to a Release Determination Report prepared by CRG Texas. No PST-associated activities have been conducted on the site since 1983, and a car wash facility was constructed on the former service station site in 2003.

The former dry cleaner facility, constructed in 2003, was registered with the TCEQ (DCR No. 13906) from 2004 to 2020. All dry-cleaning equipment and chemicals were removed when operations were discontinued in 2021. CRG Texas completed environmental site assessment and groundwater monitoring in accordance with the Texas Risk Reduction Program (TRRP). The site assessment results were reported as an Affected Property Assessment Report (APAR) which was accepted by the TCEQ in 2022. Groundwater concentrations of chemicals of concern have been delineated to the groundwater ingestion protective concentration levels (PCLs).

Chemicals of concern for the former dry cleaner facility include perchloroethylene (PCE), cis and trans-1,2-dichloroethylene (DCE), trichloroethylene (TCE) and vinyl chloride (VC) in soi and groundwater. Soil groundwater protection PCL exceedances were found near the dry-cleaning facility foundation. Groundwater ingestion protection PCL exceedances were found south and southeast of the dry-cleaning facility foundation. While there has been some seasonal variation in response to rainfall events, the groundwater contamination plume has shown a general stable to declining trend over the monitoring events completed from March 2019 to March 2023.

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The following summaries are taken from the March 2023 quarterly groundwater monitoring event:

- The PCE concentration at MW-6 decreased from 0 0.00205 mg/l in December 2022 to <0.000801 mg/l in March 2023. The PCE concentration at MW-5 decreased from 0.0011 mg/l in December 2022 to <0.000801 mg in March 22023. The PCE concentration at MW-2 increased from 0.255 mg/l in December 2022 to 0.296 mg/l in March 2023, which is well above the groundwater ingestion PCL of 0.005 mg/l. The PCE concentration at MW-2 is the only PCL exceedance for PCE.</p>
- The TCE concentration at MW-2 remains above the PCL (0.005 mg/l) and increased from 0.198 mg/l in December 2022 to 0.229 mg/l in March 2023. This is the only groundwater ingestion PCL exceedance for TCE.
- The VC concentration at MW-2 increased from 0.0385 mg/l in December 2022 to 0.0469 mg/l in March 2023. The VC concentration at MW-5 decreased from 0.0046 mg/l in December 2022 to <0.000638 in March 2023.
- The cis-1,2 DCE concentration at MW-2 increased from 0.478 mg/l in December 2022 to 0.677 mg/l in March 2023, which exceeds the PCL (0.07 mg/l). The cis-1,2 DCE concentration MW-5 at increased from 0.0111 mg/l in December 2023 to 0.0128 mg/l in March 2023. The MW-2 concentration is the only groundwater ingestion PCL exceedance for cis-1,2 DCE.

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• The trans-1,2 DCE concentration at MW-2 at increased from 0.0028 mg/l in December 2023 to 0.0033 mg/l in March 2023, which is less than the PCL (0.1 mg/l). There are no groundwater ingestion PCL exceedances for trans-1,2 DCE.

As noted above, the former dry cleaner facility is currently enrolled in the TCEQ Voluntary Cleanup Program (VCP No. 3016). The Affected Property Assessment Report was approved by the TCEQ on September 8, 2022 and a Response Action Plan (RAP) was submitted to the TCEQ on February 17, 2023. The RAP proposes implementation of a Municipal Setting Designation (MSD) for groundwater beneath the Site. While all soil and groundwater chemical of concern concentrations are less than residential vapor inhalation protection PCLs, the TCEQ required an assessment of vapor intrusion for the former dry cleaner facility which found an exceedance of the risk-based exposure level (RBEL) for PCE for one sub-slab vapor sample collected near the former dry-cleaning equipment location. The vapor mitigation plan includes sealing of the former dry cleaning facility foundation with a vapor barrier sealant.

CRG Texas collected additional groundwater data during low-flow groundwater sampling events that include pH, temperature, conductivity, dissolved oxygen, oxidation-reduction potential and turbidity. The dissolved oxygen levels are very low, which supports natural attenuation of the chemicals of concern through reductive dichlorination.

The attached Table 5-D presents the historical record of groundwater COC concentrations for MW-1 to MW-8 for the monitoring period from March 2019 to March 2023. The attached Figures 5B-2 to 5B-5 present the PCL exceedance zones observed for the most recent monitoring event in March 2023, and Figures 5B-6 to 5B-10 present graphic summaries of the historical concentration trends for the five COCs.

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Review of the historical record shows that delineation of the COC concentrations to residential assessment levels has been achieved. While there has been some seasonal variation in response to rainfall events, the groundwater contamination plumes have shown stable to declining trends over the monitoring period.

In addition, the historical record shows that dechlorination of the PCE released through the dry cleaner operations is occurring. The chemical reactions, as depicted below, result in the formation of TCE, DCE and VC.

The concentration VC downgradient of central plume area (MW-2) at MW-5 shows a consistent trend indicative of the degradation of PCE, TCE and DCE that leads to natural attenuation of the groundwater contamination plume associated with the former dry cleaner facility.

	Sample Date		Ground	water Concentration	ns (mg/l)	
Chemical of Concern		cis-1,2 DCE	trans-1,2 DCE	PERC	TCE	VC
Residential Groundwater Ingestion Protection PCL (April 2018 PCL Table)		0.07	0.1	0.005	0.005	0.002
Residential Vapor Inhalation Protection						
PCL (April 2018 PCL Table)		1200	770	500	24	3.8
MW-1	03/15/19	<0.000178	<0.000162	<0.000347	<0.000218	<0.000232
	02/04/20	<0.000174	<0.000256	<0.000500	<0.000424	<0.000234
	07/14/20	<0.000174	<0.000256	<0.000500	<0.000424	<0.000234
	01/28/21	<0.000174	<0.000256	<0.000500	<0.000424	<0.000234
	05/05/22	<0.000174	<0.000256	<0.000500	<0.000424	<0.000234
	09/28/22	<0.000714	<0.000945	<0.000801	<0.000791	<0.000638
	12/21/22	<0.000714	<0.000945	<0.000801	<0.000791	<0.000638
	03/09/23	<0.000714	<0.000945	<0.000801	<0.000791	<0.000638
MW-2	03/15/19	<0.000162	0.00201	0.182	0.147	0.0689
	02/04/20	<0.000256	0.00212	0.131	0.113	0.0485
	07/14/20	<0.000256	0.0042	0.284	0.263	0.0805
	01/28/21	<0.000256	0.00617	0.5	0.413	0.115
	05/05/22	<0.000256	<0.000256	0.00145	0.00123	<0.000234
	09/28/22	<0.000945	<0.000945	0.0039	0.00539	<0.000638
	12/21/22	0.478	0.0028	0.255	0.198	0.0385
	03/09/23	0.677	0.0033	0.296	0.229	0.0469
MW-3	03/15/19	<0.000178	<0.000162	<0.000347	<0.000218	<0.000232
	02/04/20	<0.000174	<0.000256	<0.000500	<0.000424	<0.000234
	07/14/20	<0.000174	<0.000256	<0.000500	<0.000424	<0.000234
	01/28/21	<0.000174	<0.000256	<0.000500	<0.000424	<0.000234
	05/05/22	<0.000174	<0.000256	<0.000500	<0.000424	<0.000234
	09/28/22	<0.000714	<0.000945	<0.000801	<0.000791	<0.000638
	12/21/22	<0.000714	<0.000945	<0.000801	<0.000791	<0.000638
	03/09/23	<0.000714	<0.000945	<0.000801	<0.000791	<0.000638

	Sample Date		Ground	water Concentration	ns (mg/l)	
Chemical of Concern		cis-1,2 DCE	trans-1,2 DCE	PERC	TCE	VC
Residential Groundwater Ingestion Protection PCL (April 2018 PCL Table)		0.07	0.1	0.005	0.005	0.002
Residential Vapor Inhalation Protection						
PCL (April 2018 PCL Table)		1200	770	500	24	3.8
MW-4	02/04/20	0.0039	<0.000256	0.00942	0.00132	0.00328
	07/14/20	0.00776	0.00057	0.0015	0.00199	0.00848
	01/28/21	0.00125	<0.000256	0.00088 J	<0.000424	0.00183 J
	05/05/22	0.00207	<0.000256	0.000527 J	0.000595 J	0.00218
	09/28/22	<0.000714	<0.000945	<0.000801	<0.000791	<0.000638
	12/21/22	<0.000714	<0.000945	<0.000801	<0.000791	<0.000638
	03/09/23	<0.000714	<0.000945	<0.000801	<0.000791	<0.000638
MW-5	02/04/20	0.0487	0.00028	0.0334	0.00466	0.00586
	07/14/20	0.041	0.00026 J	0.00858	0.00261 J	0.0101
	01/28/21	0.0317	<0.000256	0.00433	0.00253 J	0.0102
	05/05/22	0.00699	<0.000256	0.00123	0.000939 J	<0.000234
	09/28/22	0.00963	<0.000945	0.00108	0.000867	0.00481
	12/21/22	0.0111	<0.000945	0.0011	0.000969 J	0.0046
	03/09/23	0.0128	<0.000945	<0.000801	<0.000791	<0.000638
MW-6	02/04/20	0.00151	<0.000256	0.00165	<0.000424	<0.000234
	07/14/20	0.00167	<0.000256	0.00226	0.00059 J	<0.000234
	01/28/21	0.0045	<0.000256	0.00396	0.00127 J	<0.000234
	05/05/22	0.000416 J	<0.000256	0.000687 J	<0.000424	<0.000234
	09/28/22	0.0119	<0.000945	0.0065	0.00466	0.000957
	12/21/22	0.00323	<0.000945	0.00205	0.00263 J	<0.000638
	03/09/23	0.00124	<0.000945	<0.000801	0.00803 J	<0.000638
MW-7	07/13/20	<0.000174	<0.000256	0.00189	<0.000424	<0.000234
	01/28/21	0.00041	<0.000256	<0.000500	<0.000424	<0.000234
	05/05/22	<0.000174	<0.000256	<0.000500	<0.000424	<0.000234

	Sample Date		Groundwater Concentrations (mg/l)				
Chemical of Concern		cis-1,2 DCE	trans-1,2 DCE	PERC	TCE	VC	
Residential Groundwater Ingestion							
Protection PCL (April 2018 PCL Table)		0.07	0.1	0.005	0.005	0.002	
Residential Vapor Inhalation Protection							
PCL (April 2018 PCL Table)		1200	770	500	24	3.8	
MW-7	09/28/22	<0.000714	<0.000945	<0.000801	<0.000791	<0.000638	
	12/21/22	<0.000714	<0.000945	<0.000801	<0.000791	<0.000638	
	03/09/23	<0.000714	<0.000945	<0.000801	<0.000791	<0.000638	
MW-8	07/13/20	<0.000174	<0.000256	<0.000500	<0.000424	<0.000234	
	01/28/21	<0.000174	<0.000256	<0.000500	<0.000424	<0.000234	
	05/05/22	<0.000174	<0.000256	<0.000500	<0.000424	<0.000234	
	09/28/22	<0.000714	<0.000945	<0.000801	<0.000791	<0.000638	
	12/21/22	<0.000714	<0.000945	<0.000801	<0.000791	<0.000638	
	03/09/23	<0.000714	<0.000945	<0.000801	<0.000791	<0.000638	
TMW-9	02/05/21	0.00725	<0.000256	0.0192	0.00091 J	0.0019 J	

Notes:

BOLD	Indicates detected concentration
0.0348	Indicates exceedance of Groundwater Ingestion PCL / RAL
0.0348	Indicates exceedance of Groundwater to Vapor Transfer PCL
"J"	Laboratory Flag - Estimated concentration, detection > SDL & < MQL

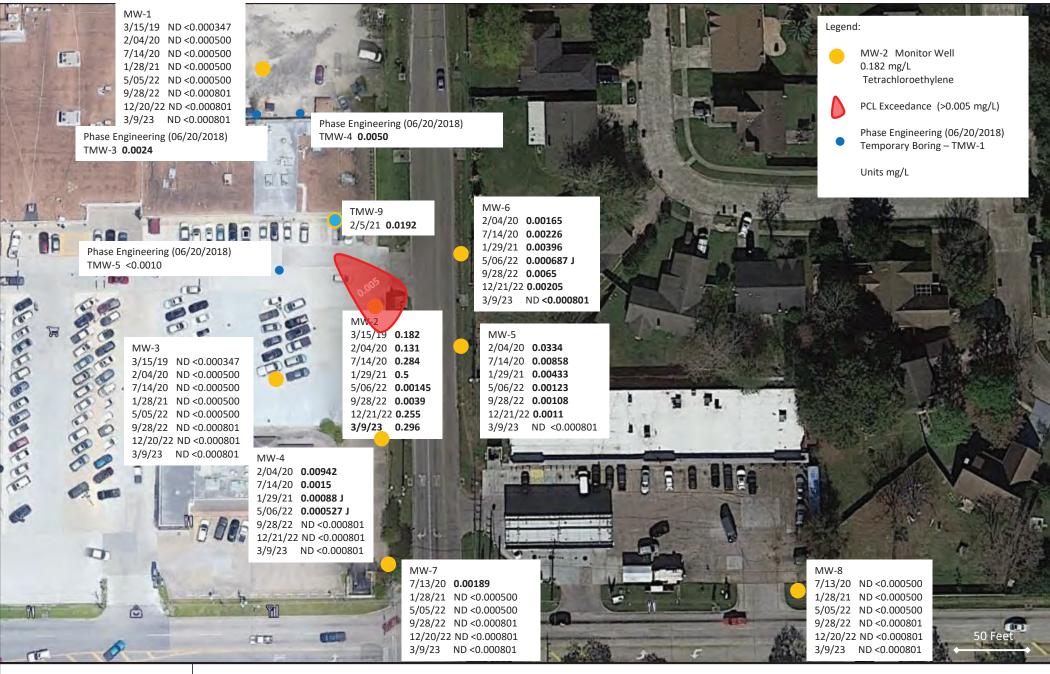




Figure 5B-2 – Groundwater Concentration Map (Tetrachloroethylene) [March 2023]



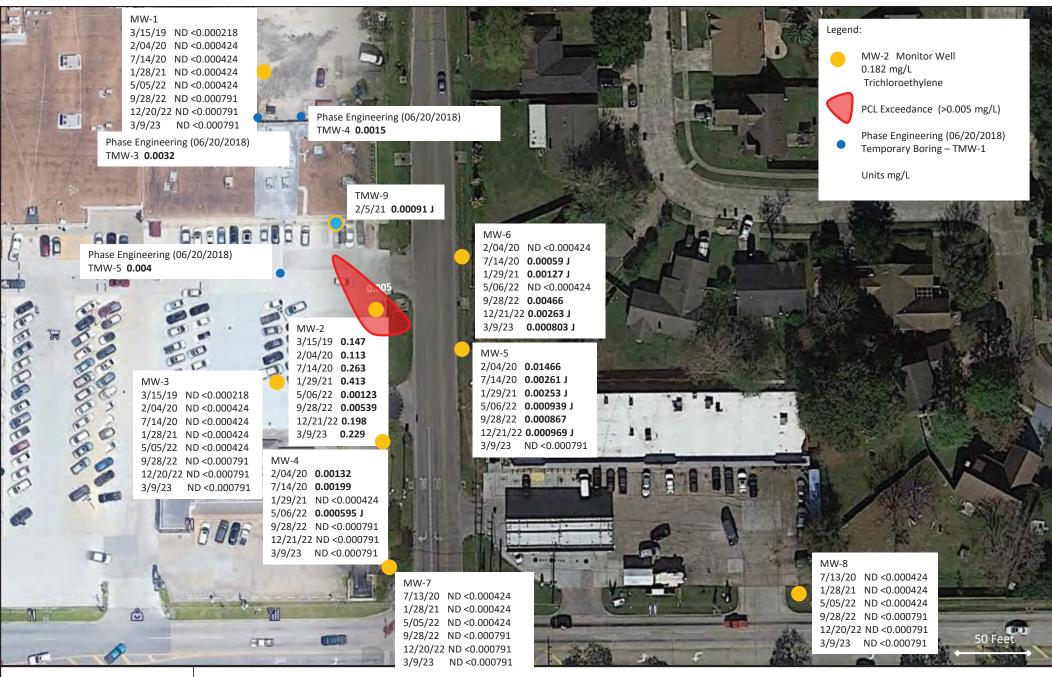




Figure 5B-3 – Groundwater Concentration Map (Trichloroethylene) [March 2023]



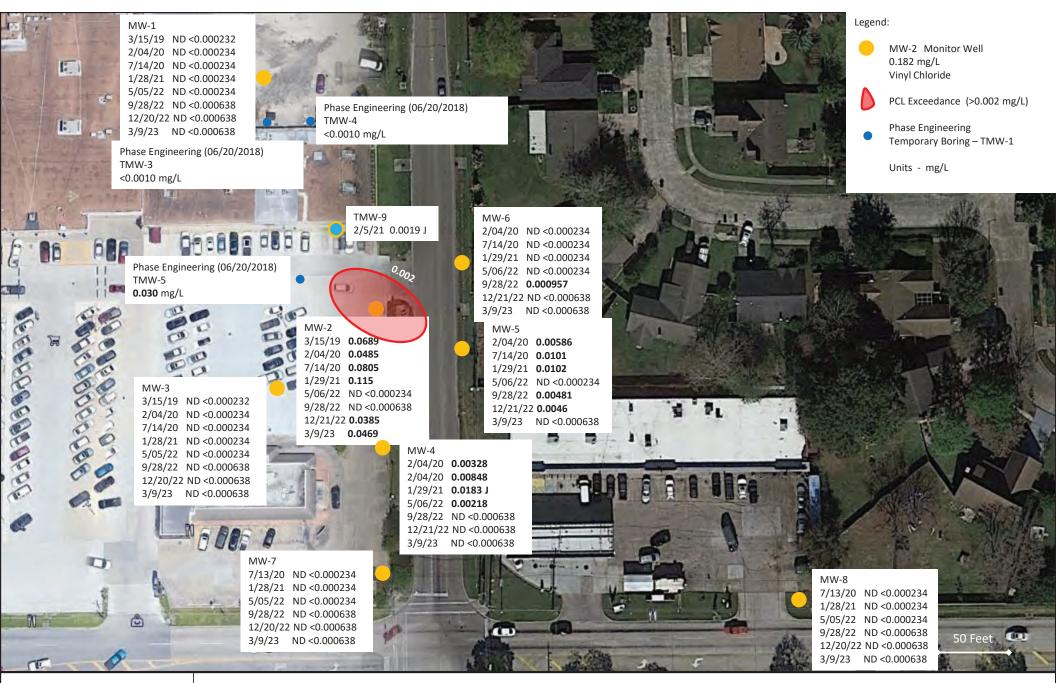




Figure 5B-4 – Groundwater Concentration Map (Vinyl Chloride) [March 2023]







Figure 5B-5 – Groundwater Concentration Map (Dichloroethylene, cis-1,2) [March 2023]



FIGURE 5B-6
Groundwater Concentration Trend for cis-1,2-Dichloroethylene (cis-1,2-DCE)

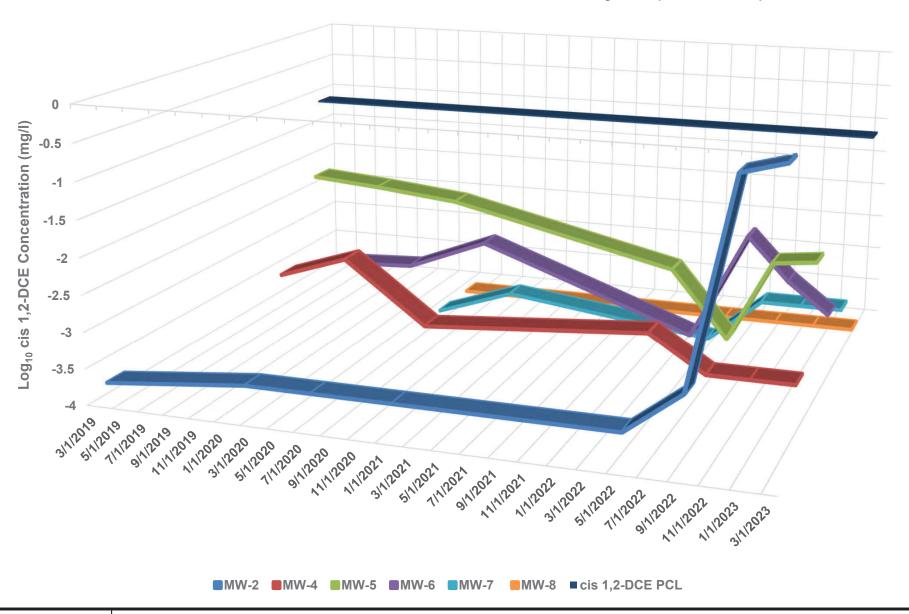




FIGURE 5B-7
Groundwater Concentration Trend for trans-1,2-Dichloroethylene (trans-1,2-DCE)

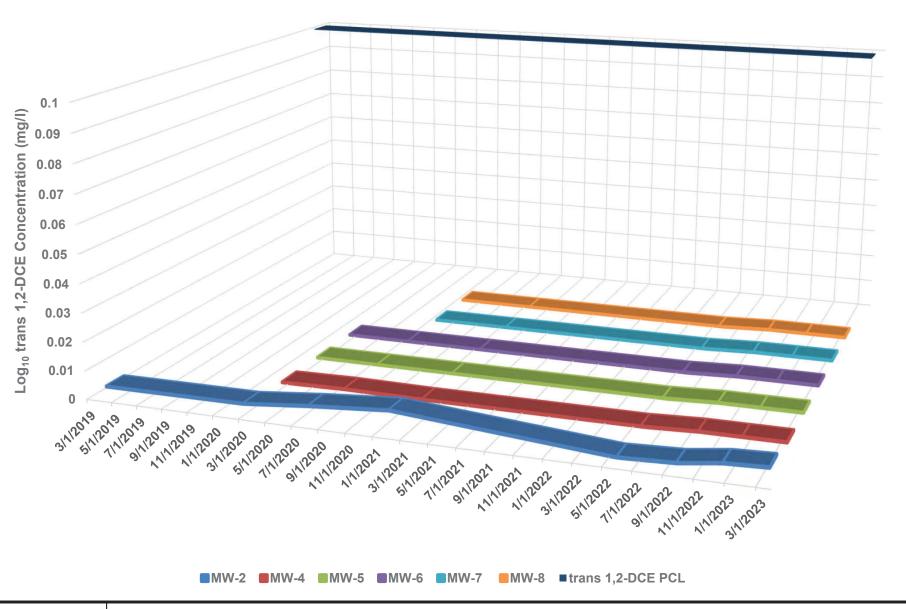




FIGURE 5B-8
Groundwater Concentration Trend for Perchloroethylene (PCE)

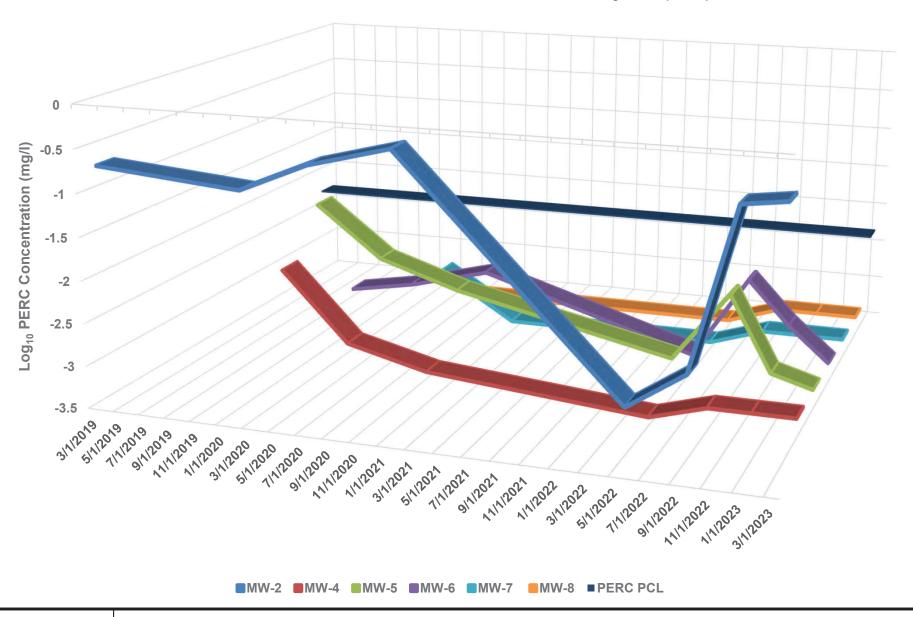




FIGURE 5B-9
Groundwater Concentration Trend for Trichloroethylene (TCE)

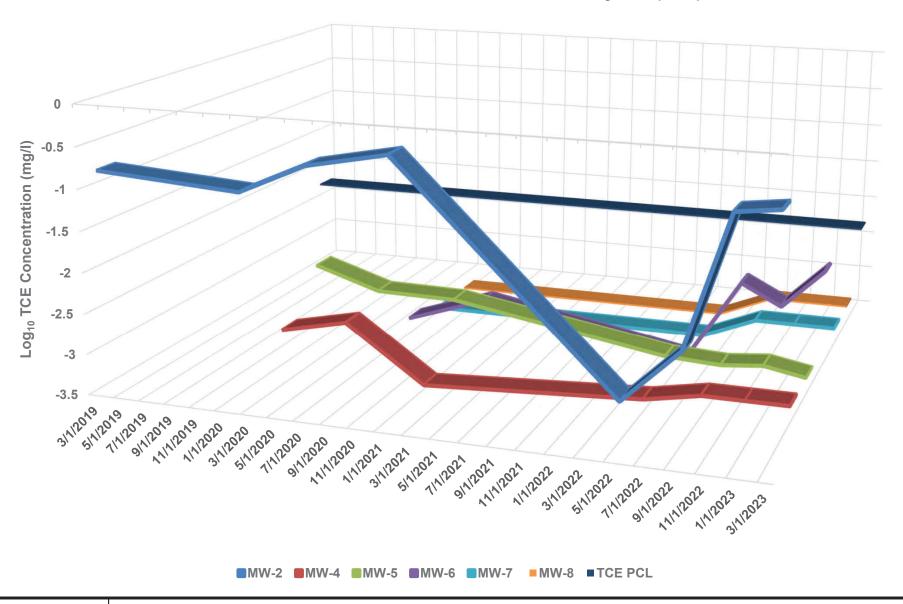
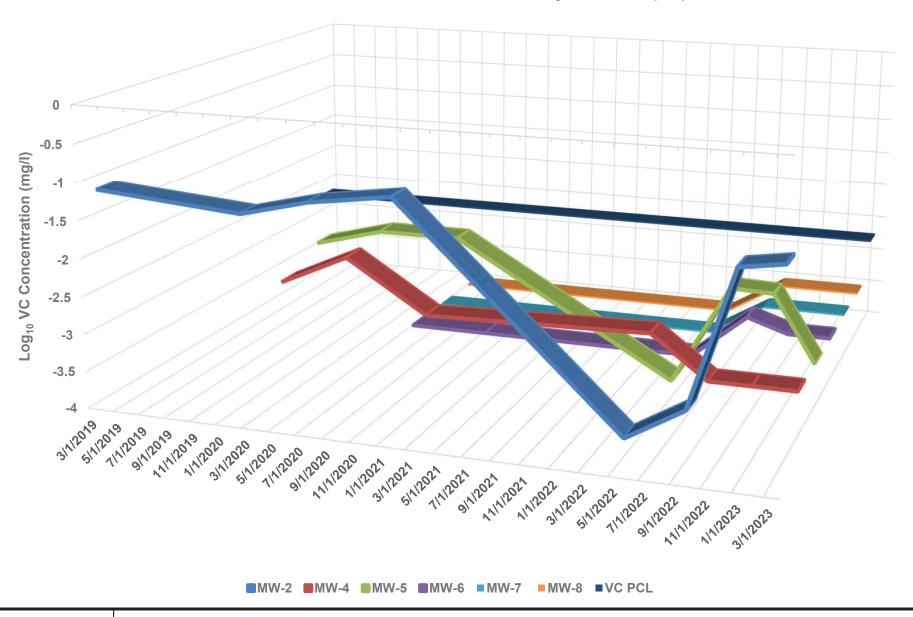




FIGURE 5B-10
Groundwater Concentration Trend for Vinyl Chloride (VC)





City of Houston MSD Application North Pointe Plaza 3006 – 3060 Gears Road, Houston, Texas 77067

Appendix H

APPENDIX H
City of Houston MSD Application
North Pointe Plaza
3006 – 3060 Gears Road, Houston, Texas 77067

The use of a Municipal Setting Designation (MSD) is selected for implementation as an Institutional Control because the groundwater COC concentrations associated with the former dry cleaner facility exceed the TRRP residential assessment without the MSD. The basis for this statement is contained within the historical record of groundwater monitoring as shown in the attached Table 5-D.

	Sample Date		Ground	water Concentration	ns (mg/l)	
Chemical of Concern		cis-1,2 DCE	trans-1,2 DCE	PERC	TCE	VC
Residential Groundwater Ingestion Protection PCL (April 2018 PCL Table)		0.07	0.1	0.005	0.005	0.002
Residential Vapor Inhalation Protection						
PCL (April 2018 PCL Table)		1200	770	500	24	3.8
MW-1	03/15/19	<0.000178	<0.000162	<0.000347	<0.000218	<0.000232
	02/04/20	<0.000174	<0.000256	<0.000500	<0.000424	<0.000234
	07/14/20	<0.000174	<0.000256	<0.000500	<0.000424	<0.000234
	01/28/21	<0.000174	<0.000256	<0.000500	<0.000424	<0.000234
	05/05/22	<0.000174	<0.000256	<0.000500	<0.000424	<0.000234
	09/28/22	<0.000714	<0.000945	<0.000801	<0.000791	<0.000638
	12/21/22	<0.000714	<0.000945	<0.000801	<0.000791	<0.000638
	03/09/23	<0.000714	<0.000945	<0.000801	<0.000791	<0.000638
MW-2	03/15/19	<0.000162	0.00201	0.182	0.147	0.0689
	02/04/20	<0.000256	0.00212	0.131	0.113	0.0485
	07/14/20	<0.000256	0.0042	0.284	0.263	0.0805
	01/28/21	<0.000256	0.00617	0.5	0.413	0.115
	05/05/22	<0.000256	<0.000256	0.00145	0.00123	<0.000234
	09/28/22	<0.000945	<0.000945	0.0039	0.00539	<0.000638
	12/21/22	0.478	0.0028	0.255	0.198	0.0385
	03/09/23	0.677	0.0033	0.296	0.229	0.0469
MW-3	03/15/19	<0.000178	<0.000162	<0.000347	<0.000218	<0.000232
	02/04/20	<0.000174	<0.000256	<0.000500	<0.000424	<0.000234
	07/14/20	<0.000174	<0.000256	<0.000500	<0.000424	<0.000234
	01/28/21	<0.000174	<0.000256	<0.000500	<0.000424	<0.000234
	05/05/22	<0.000174	<0.000256	<0.000500	<0.000424	<0.000234
	09/28/22	<0.000714	<0.000945	<0.000801	<0.000791	<0.000638
	12/21/22	<0.000714	<0.000945	<0.000801	<0.000791	<0.000638
	03/09/23	<0.000714	<0.000945	<0.000801	<0.000791	<0.000638

	Sample Date		Ground	water Concentration	ns (mg/l)	
Chemical of Concern		cis-1,2 DCE	trans-1,2 DCE	PERC	TCE	VC
Residential Groundwater Ingestion Protection PCL (April 2018 PCL Table)		0.07	0.1	0.005	0.005	0.002
Residential Vapor Inhalation Protection						
PCL (April 2018 PCL Table)		1200	770	500	24	3.8
MW-4	02/04/20	0.0039	<0.000256	0.00942	0.00132	0.00328
	07/14/20	0.00776	0.00057	0.0015	0.00199	0.00848
	01/28/21	0.00125	<0.000256	0.00088 J	<0.000424	0.00183 J
	05/05/22	0.00207	<0.000256	0.000527 J	0.000595 J	0.00218
	09/28/22	<0.000714	<0.000945	<0.000801	<0.000791	<0.000638
	12/21/22	<0.000714	<0.000945	<0.000801	<0.000791	<0.000638
	03/09/23	<0.000714	<0.000945	<0.000801	<0.000791	<0.000638
MW-5	02/04/20	0.0487	0.00028	0.0334	0.00466	0.00586
	07/14/20	0.041	0.00026 J	0.00858	0.00261 J	0.0101
	01/28/21	0.0317	<0.000256	0.00433	0.00253 J	0.0102
	05/05/22	0.00699	<0.000256	0.00123	0.000939 J	<0.000234
	09/28/22	0.00963	<0.000945	0.00108	0.000867	0.00481
	12/21/22	0.0111	<0.000945	0.0011	0.000969 J	0.0046
	03/09/23	0.0128	<0.000945	<0.000801	<0.000791	<0.000638
MW-6	02/04/20	0.00151	<0.000256	0.00165	<0.000424	<0.000234
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MW-7	07/13/20	<0.000174	<0.000256	0.00189	<0.000424	<0.000234
	01/28/21	0.00041	<0.000256	<0.000500	<0.000424	<0.000234
	05/05/22	<0.000174	<0.000256	<0.000500	<0.000424	<0.000234

	Sample Date		Groundwater Concentrations (mg/l)				
Chemical of Concern		cis-1,2 DCE	trans-1,2 DCE	PERC	TCE	VC	
Residential Groundwater Ingestion							
Protection PCL (April 2018 PCL Table)		0.07	0.1	0.005	0.005	0.002	
Residential Vapor Inhalation Protection							
PCL (April 2018 PCL Table)		1200	770	500	24	3.8	
MW-7	09/28/22	<0.000714	<0.000945	<0.000801	<0.000791	<0.000638	
	12/21/22	<0.000714	<0.000945	<0.000801	<0.000791	<0.000638	
	03/09/23	<0.000714	<0.000945	<0.000801	<0.000791	<0.000638	
MW-8	07/13/20	<0.000174	<0.000256	<0.000500	<0.000424	<0.000234	
	01/28/21	<0.000174	<0.000256	<0.000500	<0.000424	<0.000234	
	05/05/22	<0.000174	<0.000256	<0.000500	<0.000424	<0.000234	
	09/28/22	<0.000714	<0.000945	<0.000801	<0.000791	<0.000638	
	12/21/22	<0.000714	<0.000945	<0.000801	<0.000791	<0.000638	
	03/09/23	<0.000714	<0.000945	<0.000801	<0.000791	<0.000638	
TMW-9	02/05/21	0.00725	<0.000256	0.0192	0.00091 J	0.0019 J	

Notes:

BOLD	Indicates detected concentration
0.0348	Indicates exceedance of Groundwater Ingestion PCL / RAL
0.0348	Indicates exceedance of Groundwater to Vapor Transfer PCL
"J"	Laboratory Flag - Estimated concentration, detection > SDL & < MQL