InControl Technologies

Environmental Consulting and Engineering

A UES Company

Municipal Setting Designation

Former Pilgrim Cleaners

5210 N Shepherd Dr., Houston, Texas 77091
VCP No. 1788

Prepared For:

Mr. Jon Finger
99 Detering Street, Suite 200
Houston, TX 77007

May 13, 2024

CITY OF HOUSTON

HOUSTON PUBLIC WORKS
HOUSTON WATER DIVISION

Application for Approval of Municipal Setting Designation

APPLICANT INFORMATION

Applicant's Name: NSC Partners, Ltd

☐Individual ☐Private Entity ☐Public Entity ☐Non-Profit Entity ☐Other _____

Address: 99 Detering Street, Suite 200, Houston, TX 77007
(Street) (City) (State) (Zip)

Phone No.: 713-962-9809 Fax No.: _____

Email: jonfinger@fingerinterests.com

Contact Information

Name of Contact: Jonathan Finger

Title: Vice President

Address: 99 Detering Street, Suite 200, Houston, TX 77007
(Street) (City) (State) (Zip)

Phone No.: 713-962-9809 Fax No.: _____

Email: jonfinger@fingerinterests.com

Application Preparation

Application Prepared by: Lauren M. Grawey, PG

Company: InControl Technolgoies

Address: 14731 Pebble Bend Dr, Houston, TX 77068
(Street) (City) (State) (Zip)

Phone No.: 281-580-8892 Fax No.: _____

Email: lgrawey@incontroltech.com

SITE INFORMATION

Site HCAD No(s): 0410500030213 & 0410500030215

Site Name: Former Pilgrim Cleaners

Site Size: 1.2453-acres

Site Address: 5210 N. Shepherd Dr, Houston, TX 77091
(Street) (City) (State) (Zip)

TCEQ Contact: Mr. Robert Anderson

Phone No.: 512-239-4940 Email: robert.anderson@tceq.texas.gov

VCP No.: 1788 SWR No.: _____

EPA Contact: N/A

Phone No.: _____ Email: _____

ID No.: _____

(List all owners – additional sheet is attached, if needed)

Owner: _____

Owner Address: _____
(Street) (City) (State) (Zip)

Name of Contact: _____

Title: _____

Organization: _____

Phone No.: _____ Fax No.: _____

Email: _____

Owner: _____

Owner Address: _____
(Street) (City) (State) (Zip)

Name of Contact: _____

Title: _____

Organization: _____

Phone No.: _____ Fax No.: _____

Email: _____

Owner: _____

Owner Address: _____
(Street) (City) (State) (Zip)

City of Houston
Municipal Setting Designations (MSD) – Sampling Requirements after MSD Approval Executive Order 1-72 (EO 1-72)
Acknowledgement Form

NSC Partners, Ltd. **("MSD Applicant")** has filed or is filing an application for a City of Houston Municipal Setting Designation (MSD). The MSD Applicant acknowledges and understands that such MSD application, whether previously filed or being filed at this time, was not approved prior to June 5, 2023, and is therefore subject to **City of Houston Executive Order 1-72 ("EO 1-72") - "MUNICIPAL SETTING DESIGNATIONS – Sampling Requirements after MSD Approval", effective as of June 5, 2023** (copy attached)**.**

In accordance with the Code of Ordinance of the City of Houston, Texas, Article XIII ("Municipal Setting Designations), Sec. 47-762d)(24) and EO 1-72, the MSD Applicant acknowledges and agrees to abide by the requirements established in EO 1-72 as set forth below:

1. On and after June 5, 2023 (the effective date of **EO 1-72**), an MSD Applicant whose MSD application is approved ("**Approved MSD Applicant**") is subject to the following additional requirements:
    a. An Approved MSD Applicant shall continue to conduct sampling in accordance with a TCEQ, EPA, or comparable remediation program that is effective at the time an MSD application is approved by the City.
2. An Approved MSD Applicant shall notify the City within 30 days after receiving notice that the sampling required by a TCEQ or EPA or comparable remediation program is discontinued or terminated within the first four years after the date of approval of an MSD.

3. If sampling is discontinued, as identified above, an **Approved MSD Applicant will thereafter be subject to the sampling requirements set forth below**:

    a. If the site of the approved MSD is not subject to any continuing sampling requirements under a TCEQ, EPA, or comparable remediation program, then an Approved MSD Applicant shall conduct and report to the City and TCEQ the results of sampling for COCs identified during the MSD application process on the following schedule:

        i. Four years after the date of MSD approval by the TCEQ, and

        ii. Seven years after the date of MSD approval by the TCEQ.

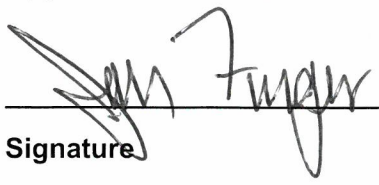
    b. An Approved MSD Applicant shall comply with any additional response action(s) required by TCEQ, EPA, or a comparable remediation program that is based on or arises because of the sampling conducted pursuant to subparagraph 3.a. above.

Fill out all information below and submit this form with your application packet.

ACKNOWLEDGED, AGREED TO AND ACCEPTED

MSD APPLICANT

Application Number



Signature

4/17/24

Date

Jonathan Finger

Print Name

NSC Partners, Ltd

Company Name

713-962-9809

Phone Number

jonfinger@fingerinterests.com

Email Address

For more information about the MSD program please visit
https://www.houstonpublicworks.org/municipal-settings-designation

Questions about the MSD Program should be referred to:
E-Mail: mailto:brownfields@houstontx.gov **msd@houstontx.gov or 832.394.8976**

ITEM	COH Use Only
Executive Summary	
Label "Appendix A" Provide a legal description of the boundaries of the designated property, including metes and bounds, and a copy of the deed for the property. A professional surveyor currently registered with the Texas Board of Professional Surveying must certify that all property descriptions with metes and bounds are accurate.	
Label "Appendix B" A description of the current use, and, to the extent known, the anticipated use(s), of the designated property and properties within 500 feet of the boundary of the designated property.	
Label "Appendix C" A site map showing: **Label & address each separately, i.e., a, b, c, d, e, f, g** a. The location of the designated property. b. The topography of the designated property as indicated on publicly available sources, which must note the watershed including the nearest surface water body and whether the designated property is located in a floodplain or floodway, as those terms are defined in Chapter 19 of the Code of Ordinances. c. The detected area of groundwater contamination. d. The location of all soil sampling locations and all groundwater monitoring wells. e. Groundwater gradients, to the extent known, and direction of groundwater flow. f. The ingestion protective concentration level exceedence zone for each contaminant of concern, to the extent known. g. Depth to groundwater for each affected zone.	
Label "Appendix D" List each contaminant of concern within the designated groundwater then describe: A description of the ingestion protective concentration level exceedence zone and the non-ingestion protective concentration level exceedence zone, including a specification of the horizontal area and the minimum and maximum depth below ground surface. The level of contamination, the ingestion protective concentration level, and the non-ingestion protective concentration level, all expressed as mg/L units. Its basic geochemical properties (e.g., whether the contaminant of concern migrates with groundwater, floats or is soluble in water).	
Label "Appendix E" A table and **graph** displaying the following information for each contaminant of concern, to the extent known: The maximum concentration level for soil and groundwater, the ingestion protective concentration level, and the non-ingestion protective concentration level, all expressed as mg/kg for soils and mg/L for groundwater. The critical protective concentration level without the municipal setting designation, highlighting any exceedences.	

ITEM	COH Use Only
Label "Appendix F" If the plume extends beyond the limits of property owners listed in this application, list the owners of the additional property beneath which the plume(s) extend(s), and a summary of interactions with those property owners about the plume(s) and this MSD application. Please Note: You are not required under this item to notify affected property owners, only to provide a summary or who affected property owners are, and if there have been any communications. "No contact" can be an acceptable answer.	
Label "Appendix G" A statement that the plume of contamination is stable (i.e., no change) or contracting and delineated, with the basis for that statement. Please include historical sampling data.	
Label "Appendix H" A statement as to whether contamination on and off the designated property without a Municipal Setting Designation will exceed a residential assessment level as defined in the Texas Risk Reduction Program or analogous residential level set by EPA, if known, and the basis for that statement.	
Label "Appendix I" A statement as to whether contamination on and off the designated property with a Municipal Setting Designation will exceed a residential assessment level as defined in the Texas Risk Reduction Program or analogous residential level set by EPA, if known, and the basis for that statement.	
Label "Appendix J" Identification of the points of origin of the contamination, to the extent known. Please list the Potentially Responsible Party (RPR), if unknown, state unknown. (**applications without the RPR listed will be deemed incomplete**)	
Label "Appendix K" Environmental regulatory actions, litigation, and plume identification. **Label & address each separately, i.e., a, b, c, d** a. A description of any environmental regulatory actions that have been taken within the past five years in connection with the designated property, to the extent known. b. A description of any litigation that has taken place within the past five years in connection with the designated property, to the extent known. c. A statement as to whether there are any other remediation activities by the applicant, or any other party or agency, which are not listed in the application. d. A statement as to which contamination plume and groundwater zone the applicant is including in the MSD.	
Label "Appendix L" A listing of all existing state or EPA registrations, permits, and identification numbers that applies to the designated property.	

ITEM	COH Use Only
Label "Appendix M" Provide evidence that the designated property is currently or has previously been under the oversight of the TCEQ or the United States Environmental Protection Agency, as required by the Texas Health and Safety Code §361.8065(c)(2)(A), and a description of the status of the designated property in the program (the program application number is sufficient evidence). Also, include the state or federal cleanup project manager's name. Please note, the City of Houston does not accept (consider?) sites enrolled in the Innocent Owner/Operator Program due to the lack of state/federal oversight.	
Label "Appendix N" A summary of any environmental site assessment reports filed with the TCEQ regarding any site investigations or response actions that are planned, ongoing or completed related to the designated property.	
Label "Appendix O" A statement as to whether any public drinking water supply system exists that satisfies the requirements of Chapter 341 of the Texas Health and Safety Code and that supplies or is capable of supplying drinking water to the designated property and property within one-half mile of the designated property and the identity of each supply system. Please include a map of available water lines within one-half mile found at https://geogimsprod.houstontx.gov/Html5Viewer/index.html?viewer=geolink-public	
Label "Appendix P" The name and address of each owner or operator of a water well registered or permitted by the state or the Houston-Galveston Subsidence District that is located within five miles of the boundary of the designated property, along with a map showing the location of each well and, to the extent known, a notation of whether each well is used for potable water. Well logs must be included in the electronic copy of the application but should not be included in the hard copies. (An accompanying electronic excel file with mailing information should be included with your application.) **Add Super Neighborhoods & council members in the district to the mailing list.**	
Label "Appendix Q" The name and address of each retail public utility, as defined in section 13.002 of the Texas Water Code that owns or operates a groundwater supply well within five miles of the boundary of the designated property.	
Label "Appendix R" A listing of each municipality, other than the City of Houston, with a corporate limit within one-half mile of the boundary of the designated property.	
Label "Appendix S" A listing of each municipality, other than the City of Houston, that owns or operates a groundwater supply well within five miles of the boundary of the designated property.	
Label "Appendix T" A listing of owners of real property within 2,500 ft. of the boundary of the designated property as indicated by the most recent appraisal district records. Please Note: This requirement may include real property outside the City of Houston. Be sure to include ALL properties in the 2,500 ft. boundary. (An accompanying electronic excel file with mailing information should be included with your application.)	

ITEM	COH Use Only
Label "Appendix U" Form U-2012-01 **signed and sealed** by a licensed professional engineer or licensed professional geoscientist authorized to practice in the State of Texas with expertise in environmental remediation. (Form U-2012-01 can be found at https://www.houstonpublicworks.org/municipal-settings-designation under the "Forms" section on the homepage.) Signing and sealing Form U-2012-01 certifies: a. The contaminants of concern from sources on the designated property or migrating from or through the designated property more likely than not [do exceed] OR [do not exceed] a non-ingestion protective concentration level on property beyond the boundaries of the designated property. (select the appropriate statement) b. All requirements of Section 47-762 of the Houston Code of Ordinances have been met, including demonstration that the groundwater contamination plume has been fully delineated and is stable or contracting in size.	
Label "Appendix V" If the licensed professional engineer or professional geoscientist determines that contaminants of concern from sources on the designated property are migrating from or through the designated property more than likely do not exceed a non-ingestion protective concentration level on property beyond the boundary of the designated property, then the applicant must: a. Specify the name and address of the owner of each property. b. Send a copy of the application to the owner of the property with the notice of the public meeting. c. Provide documentation that the designated property has been included in a state or federal program that requires that the entire non-ingestion protective concentration level exceedence zone be addressed to the satisfaction of the agency administering the program, along with documentation of the estimated time period in which it is to be addressed. An example of such a program is the Texas Voluntary Cleanup Program (section 361.501 of the Texas Health and Safety Code, as may be amended from time to time). d. Provide documentation upon completion of the state or federal program showing that the non-ingestion protective concentration level exceedences have been addressed to the satisfaction of the agency administering the program.	
Label "Appendix W" Form W-2012-01 **certified/signed** by the applicant and any authorized representatives of the applicant(s) listed in the application. (Form W-2012-01 is attached to the end of this application and can also be found at https://www.houstonpublicworks.org/municipal-settings-designation under the "Forms" section on the homepage.)	
Label "Appendix X" Form X-2012-01 signed by the property owner or authorized agent (if an authorized agent, you must provide the legal authorization instrument). (Form W-2012-01 is attached to the end of this application and can also be found at https://www.houstonpublicworks.org/municipal-settings-designation under the "Forms" section on the homepage.	
Label "Appendix Y" A pdf file of the application, Excel spreadsheet of water well owners and property owners for mailing notices, and the pdf file of the well log report.	

List of Abbreviations

bgs	below ground surface
cis-1,2-DCE	cis-1,2-Dichloroethene (or cis-1,2-Dichloroethylene)
CHC	Chlorinated Hydrocarbon(s)
COC	Contaminant of Concern
DCE	Dichloroethene (or Dichloroethylene)
ESA	Environmental Site Assessment
EPA	U.S. Environmental Protection Agency
ft	feet
GW	Groundwater
GWBU	Groundwater bearing unit
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
MSD	Municipal Setting Designation
NAPL	Non-aqueous Phase Liquids
PCE	Tetrachloroethene (or Tetrachloroethylene)
PCL	Protective Concentration Level
PCLE	Protective Concentration Level Exceedance
ppm	parts per million
TCE	Trichloroethene (or Trichloroethylene)
trans-1,2-DCE	trans-1,2-Dichloroethene (or trans-1,2-dichloroethylene)
TCEQ	Texas Commission on Environmental Quality
TRRP	Texas Risk Reduction Program
VC	Vinyl Chloride
VCP	Voluntary Cleanup Program
VOC	Volatile Organic Compound

CITY OF HOUSTON

PUBLIC WORKS AND ENGINEERING
PLANNING & DEVELOPMENT DIVISION

EXECUTIVE SUMMARY

Project Overview

InControl Technologies LLC was retained by NSC Partners Ltd. (Property Owner), to provide environmental consulting services at the Former Pilgrim Cleaners facility located at 5210 N. Shepherd Dr, Houston, Harris County, Texas. The subject property (the Site) consists of two parcels totaling 1.2453-acres of land located north of downtown Houston, Harris County, Texas (**Figure Ca**). Based on a review of the available data, the eastern parcel (Tract 19A) has been utilized as a parking area from 1985 to present, and the western parcel (Tract 19A-2A) operated as a drycleaning facility from approximately 1970 to 2021. The property is currently undeveloped. The surrounding area is a mix of residential and light commercial businesses (**Figure B1**).

The Site is located within the White Oak Bayou Watershed (**Figure Cb-1**) and is located primarily outside the 0.2% annual chance (500 year) floodplain (**Figure Cb-2**).

Monitoring wells are installed into the first and second groundwater bearing units (GWBUs) at the subject property. Volatile organic compound (VOC) Protective Concentration Level Exceedance (PCLE) zones were identified in groundwater in both GWBUs beneath the subject property. The PCLE zones are depicted on **Figure Cc-1** through **Figure Cc-5**.

Historical Environmental Condition

A review of Google Earth aerial images indicates that the drycleaning facility on the western parcel was demolished between September 2021 and January 2022. Currently, the subject property consists of a partially overgrown asphalt parking area on the eastern parcel and a remnant slab-on-grade concrete foundation on the western parcel. A partially erect security fence separates Tracts 19A and 19A-2A. Beginning in 1997 through the early to mid-2000s, multiple soil and groundwater samples were collected from the site. The soil sample locations and groundwater monitoring well locations are depicted on **Figure Cd-1 and Cd-2**. Soil and groundwater samples were analyzed by EPA Method 8260 for VOCs. The results were compared to the most conservative Tier 1 PCLs (**Table E1** and **Table E2**). Tetrachloroethene (PCE) and its degradation products (trichloroethene [TCE], cis-1,2-dichloroethene [cis-1,2-DCE] and vinyl chloride [VC]) were identified in the shallow groundwater bearing unit (GWBU) in excess of health-based regulatory limits.

PCE was commonly used as a dry-cleaning solvent and was reportedly used on the subject property beginning in the early 1970's. The subject property was enrolled in the Texas Commission on Environmental Quality (TCEQ) Voluntary Cleanup Program (VCP) on March 15, 2005, and an Affected Property Assessment Report (APAR) was submitted to the TCEQ on May 20, 2005. Additional Affected Property Assessment (APA) activities were performed in 2008 and 2009, in response to TCEQ comments. The APA activities included vertical delineation of the chlorinated solvent constituents into the second GWBU. Based on a review of available information, seven shallow monitoring wells (MW- 01 through MW-07) and six deeper monitoring wells (MW-01D through MW-06D) were installed on the subject property within the first and second GWBU's. The shallow zone wells are installed to depths of approximately 20 feet below ground surface (ft bgs) and the deeper zone wells are installed to depths of approximately 50 ft bgs.

In November 2023, InControl Technologies took over this project for the applicant and conducted a groundwater monitoring and sampling event in which MW-01, MW-02, MW-04, MW-05, and MW-01D through MW-06D were monitored and sampled for a target list of volatile organic compounds associated with former dry cleaner sites. A second site-wide sampling event was conducted in February 2024. Monitoring wells MW-04 and MW-06 were not located during the November 2023 or February 2024 sampling events.

The area of affected groundwater has been laterally and vertically delineated to the extent possible and the plume appears to be stable. Chlorinated hydrocarbons were present in groundwater at concentrations greater than the applicable Tier 1 Residential $^{GW}GW_{Ing}$ PCLs in both the first and second GWBUs. The PCLE zones are depicted in **Figures Cc-1 to Cc-5**. The direction of groundwater flow in the first GWBU is toward the northeast (**Figure Ce-1**). The direction of groundwater flow in the second GWBU is toward the southeast (**Figure Ce-2**).

Sixteen (16) water well records were identified within a ½-mile radius of the proposed Municipal Setting Designation (MSD) boundary. The nearest active domestic or public supply well is located approximately 0.17-miles from the subject property in a cross-gradient direction. The nearest active public supply well is located 0.44-miles east of the site in a cross-gradient direction. Within a 5-mile radius of the proposed MSD boundary, typical completion depths are greater than 100-ft bgs with the median completion depth of 345-ft bgs.

Little White Oak Bayou is located approximately 3250-feet due east of the proposed MSD boundary. Little White Oak Bayou is not threatened by the groundwater plume due to the distance from the site (**Figure Cb-1**).

Appendix A

Provide a legal description of the boundaries of the designated property, including metes and bounds, and a copy of the deed for the property. A professional surveyor currently registered with the Texas Board of Professional Surveying must certify that all property descriptions with metes and bounds are accurate.

The legal description plus a metes and bounds description for the designated property is included in this section. Also included is a copy of the deed for the property. The proposed Municipal Setting Designation (MSD) boundary encompasses 1.2453-acres.

Figure A depicts the proposed MSD boundary.

County: Harris
Project: N. Shepherd
Job No.: 245532
M&B No.: 24-260

FIELD NOTES FOR 1.2453 ACRES

Being a tract containing 1.2453 acres of land located in the S.W. Allen Survey, A-94, in the City of Houston, Harris County, Texas. Said 1.2453 acres being those call 0.9957 and 0.2496 acre tracts of land recorded in the name of NSC Partners, Ltd. under Harris County Clerk's File (H.C.C.F.) No. Y138675. Said 1.2453 acres being more particularly described by metes and bounds as follows:

NOTE: BEARINGS ARE REFERENCED TO THE SOUTH LINE OF CONSOLIDATED PUBLIC SAFETY FACILITY, A SUBDIVISION RECORDED IN FILM CODE NO. 464026 OF THE HARRIS COUNTY MAP RECORDS (H.C.M.R.):

COMMENCING at the lower northwest corner of Restricted Reserve "A", in Block 1 of said Consolidated Public Safety Facility and the south end of a cutback at the southeast intersection of West Donovan Street and North Shepherd Drive;

THENCE, with the east Right-of-Way (R.O.W.) line of said North Shepherd Drive and west line of said Consolidated Public Safety Facility and a call 0.2496 acre tract of land recorded in the name of Dong Nguyen and Kim Nguyen under H.C.C.F. No. 20120580408, South 02 degrees 46 minutes 51 seconds East, a distance of 542.54 feet to the **POINT OF BEGINNING** and common westerly corner between said 0.2496 acre Nguyen tract and aforesaid 0.2496 acre NSC tract;

THENCE, with the common line between said 0.2496 acre tracts, North 87 degrees 42 minutes 09 seconds East, a distance of 150.00 feet to the common easterly corner between said 0.2496 acre tracts and being on the west line of aforesaid 0.9957 acre tract;

THENCE, with the common line between said 0.2496 acre Nguyen tract and said 0.9957 acre tract, North 02 degrees 46 minutes 51 seconds West, a distance of 72.50 feet to the common northerly corner between said 0.2496 acre Nguyen tract and said 0.9957 acre tract and being on the upper south line of aforesaid Consolidated Public Safety Facility;

THENCE, with the common lines between said 0.9957 acre tract and said Consolidated Public Safety Facility, the following two (2) courses:

1.) North 87 degrees 42 minutes 09 seconds East, a distance of 285.53 feet to the northeast corner of said 0.9957 acre tract;

2.) South 03 degrees 20 minutes 18 seconds East, a distance of 155.02 feet to the southeast corner of said 0.9957 acre tract, the lower southwest corner of said Consolidated Public Safety Facility and being on the north line of Hohldale Addition, a subdivision recorded in Volume 13, Page 17 of the H.C.M.R.;

THENCE, with the common line between said 0.9957 acre tract and said Hohldale Addition, South 87 degrees 42 minutes 09 seconds West, a distance of 187.04 feet to the lower southwest corner of said 0.9957 acre tract;

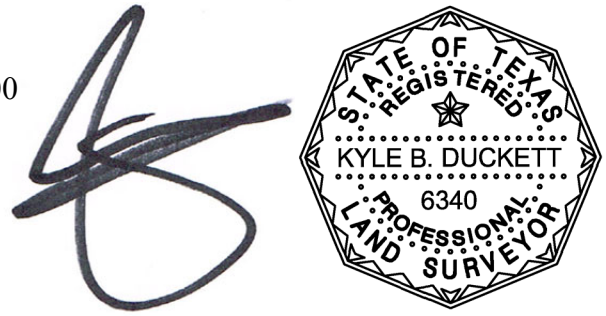
THENCE, North 02 degrees 46 minutes 51 seconds West, a distance of 10.00 feet to a re-entrant corner on the southerly line of said 0.9957 acre tract;

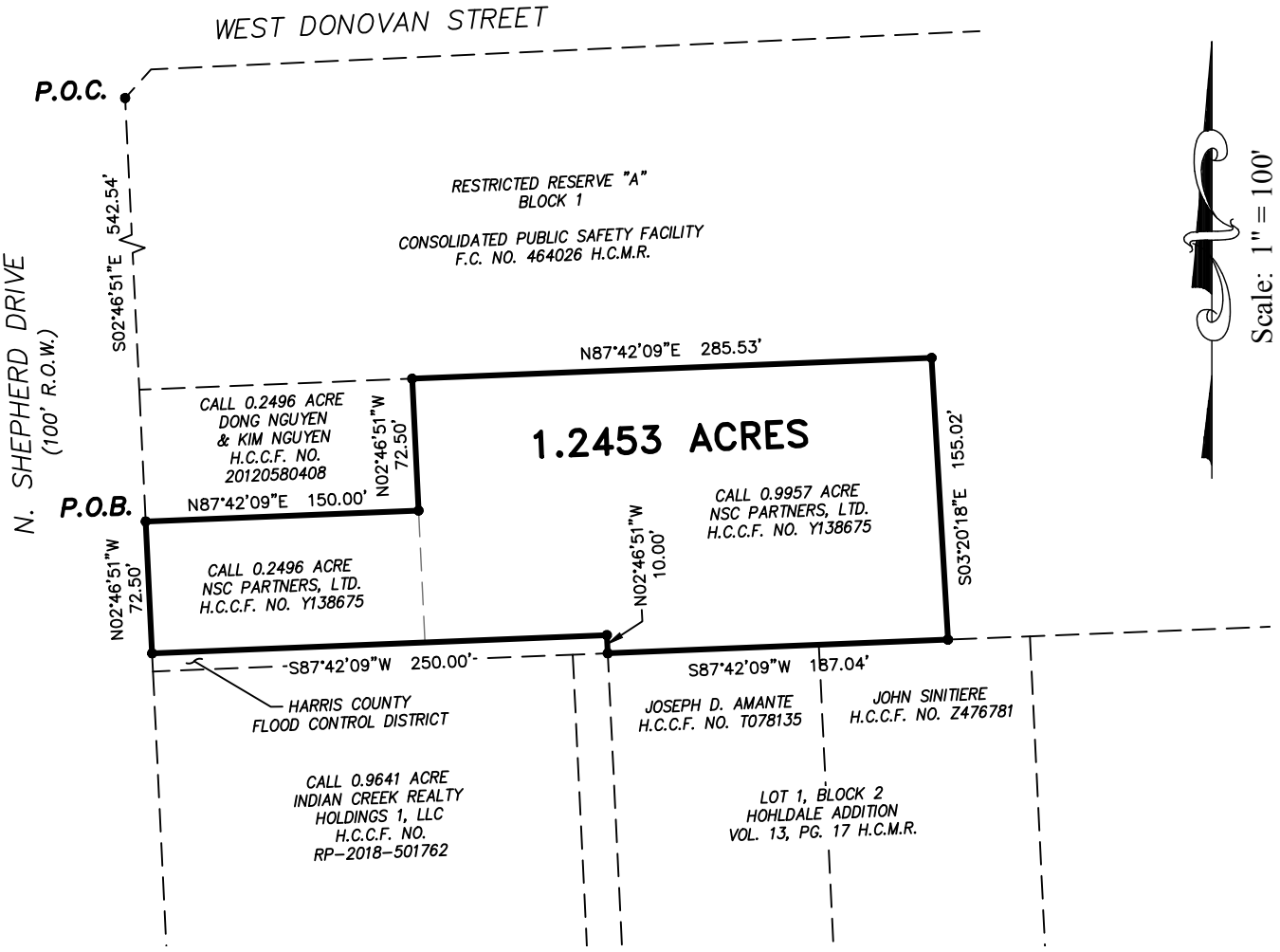
THENCE, with the upper south line of said 0.9957 acre tract and south line of aforesaid 0.2496 NSC tract, South 87 degrees 42 minutes 09 seconds West, a distance of 250.00 feet to the southwest corner of said 0.2496 acre NSC tract and being on the aforesaid east R.O.W. line of North Shepherd Drive;

THENCE, with the common line between said 0.2496 NSC tract and said North Shepherd Drive, North 02 degrees 46 minutes 51 seconds West, a distance of 72.50 feet to the **POINT OF BEGINNING** and containing 1.2453 acres of land, more or less.

THIS DESCRIPTION WAS PREPARED BASED ON MAPPING THE DEEDS AND PLATS AS DESCRIBED HEREIN; DOES NOT REFLECT THE RESULTS OF AN ON THE GROUND SURVEY; AND IS NOT TO BE USED TO CONVEY OR ESTABLISH INTERESTS IN REAL PROPERTY. SEE VOLUNTARY CLEANUP PROGRAM BOUNDARY EXHIBIT PREPARED OF EVEN DATE HEREWITH.

GBI Partners
TBPELS Firm #10130300
Ph: 281.499.4539
May 07, 2024





LEGEND

F.C. NO.	FILM CODE NUMBER
H.C.C.F.	HARRIS COUNTY CLERKS FILE
H.C.D.R.	HARRIS COUNTY DEED RECORDS
H.C.M.R.	HARRIS COUNTY MAP RECORDS
PG.	PAGE
P.O.B.	POINT OF BEGINNING
P.O.C.	POINT OF COMMENCING
R.O.W.	RIGHT-OF-WAY
VOL.	VOLUME

NOTES:
1.) ALL BOUNDARY INFORMATION IS SHOWN BASED ON MAPPING THE DESCRIPTIONS OF RECORD AS DESCRIBED HEREIN; DOES NOT REFLECT THE RESULTS OF AN ON THE GROUND SURVEY; AND IS NOT TO BE USED TO CONVEY OR ESTABLISH INTERESTS IN REAL PROPERTY.
2.) EXCEPT AS SHOWN, ALL IMPROVEMENTS, EASEMENTS, BUILDING LINES, RESTRICTIONS AND RIGHTS-OF-WAY HAVE BEEN INTENTIONALLY OMITTED FROM THIS EXHIBIT PER REQUEST OF THE CLIENT.
3.) SEE SEPARATE METES AND BOUNDS PREPARED OF EVEN DATE HEREWITH.
4.) BEARINGS ARE REFERENCED TO THE SOUTH LINE OF CONSOLIDATED PUBLIC SAFETY FACILITY, A SUBDIVISION RECORDED IN FILM CODE NO. 464026 OF THE HARRIS COUNTY MAP RECORDS.

I CERTIFY THAT THIS PLAT REPRESENTS THE LIMITS OF A PROPOSED VOLUNTARY CLEANUP PROGRAM BASED ON RECORD BOUNDARY INFORMATION IN H.C.C.F. NO. Y138675.

GBI PARTNERS

STATE OF TEXAS
REGISTERED
KYLE B. DUCKETT
6340
PROFESSIONAL
LAND SURVEYOR

KYLE B. DUCKETT
REGISTERED PROFESSIONAL LAND SURVEYOR
TEXAS REGISTRATION NO. 6340

VOLUNTARY CLEANUP PROGRAM BOUNDARY EXHIBIT

1.2453 ACRES OF LAND BEING THOSE CALL 0.9957 AND 0.2496 ACRE TRACTS OF LAND RECORDED IN THE NAME OF NSC PARTNERS, LTD. UNDER H.C.C.F. NO. Y138675 LOCATED IN THE S.W. ALLEN SURVEY, A-94, CITY OF HOUSTON, HARRIS COUNTY, TEXAS.

GBI PARTNERS
LAND SURVEYING CONSULTANTS
4724 VISTA ROAD
PASADENA, TX 77505
PHONE: 281-499-4539
TBPELS FIRM #10130300
GBISurvey@GBISurvey.com
www.GBISurvey.com

SCALE: 1"= 100'	CREW CHIEF: N/A	DATE: 5/7/2024
JOB NO. 245532	FIELD BOOK: N/A	DWG.: 24-260EX

R:\Data\2024\055-245532\DWG\24-260EX.dwg

Y138675
12/20/04 100670422 $28.00

WD
28
A

Notice of Confidentiality Rights: If you are a natural person, you may remove or strike any of the following information from this instrument before it is filed for record in the public records: Your social security number or your driver's license number.

SPECIAL WARRANTY DEED

THE STATE OF TEXAS §
§ KNOW ALL MEN BY THESE PRESENTS:
COUNTY OF HARRIS §

THAT, Marvy A. Finger, individually, Jerry E. Finger, individually, and Linda K. Finger, Marvy A. Finger and Morrie K. Abramson, as Independent Co-Executors and Co-Trustees of trusts created under the Will of Ronald J. Finger, Deceased probated under Cause No. 310331 of the Probate Court of Harris County, Texas (herein collectively referred to as "Grantor"), for and in consideration of the sum of Ten Dollars ($10.00) in hand paid to Grantor by NSC Partners, Ltd. a Texas limited partnership (hereinafter referred to as "Grantee"), whose mailing address is 99 Detering, Suite 200, Houston, Texas 77007, and other good and valuable consideration, the receipt and sufficiency of which consideration are hereby acknowledged, has GRANTED, SOLD and CONVEYED and by these presents does GRANT, SELL and CONVEY unto Grantee the two tracts of real property located in Harris County, being a 0.9957 acre tract as more particularly described on **Exhibit "A"** attached hereto and a 0.2496 acre tract as more particularly described on **Exhibit "B"** attached hereto, each of which exhibits is incorporated herein and made a part hereof for all purposes, together with: (a) all buildings and other improvements owned by Grantor affixed thereto; and, (b) all and singular any rights and appurtenances of Grantor pertaining thereto, (which two tracts

of real property together with any and all of such related improvements, rights and appurtenances being herein collectively referred to as the "Property").

For the same consideration recited above, Grantor hereby bargains, sells, and transfers, without warranty, express or implied, all rights, title, and interest, if any, of Grantor in (i) strips or gores, if any, between the Property and abutting or immediately adjacent properties; (ii) any land lying in or under the bed of any street, alley, road, access way, or right-of-way, opened or proposed, in front of, at the side of, or adjoining the Property, to the centerline thereof; and, (iii) all easements in or upon the Property.

TO HAVE AND TO HOLD the Property, together with all and singular the rights and appurtenances thereto in anywise belonging, unto Grantee, and Grantee's successors and assigns forever, subject to the matters herein stated; and Grantor does hereby bind itself and its heirs, executors, legal representatives, successors and assigns to WARRANT AND FOREVER DEFEND all and singular the Property unto Grantee, and Grantee's successors and assigns, against every person whomsoever lawfully claiming or to claim the same or any part thereof by through, or under Grantor but not otherwise; provided that this conveyance and the warranty of Grantor herein contained are subject to: (a) any and all liens, encumbrances, rights of way, easements, leases, or other matters affecting title to the Property, (b) any and all matters of record in the Harris County, Texas to the full extent same are valid and pertain to the Property, and (c) any and all matters that would be shown on a current plat of survey of the Property.

All ad valorem taxes and assessments for the Property for the year in which this deed is executed have been paid or prorated by the parties hereto as of the effective date of this deed, and

Grantee hereby expressly assumes liability for the payment of any such taxes and assessments that have not been paid and for all such taxes and assessments for subsequent years.

Executed and effective as of the 2nd day of December, 2004.

GRANTOR:

Marvy A. Finger, individually, and as Independent Co-Executor and Co-Trustee of trusts created under the Will of Ronald J. Finger, Deceased probated under Cause No. 310331 of the Probate Court of Harris County, Texas

Jerry E. Finger, individually

Linda K. Finger, as Independent Co-Executor and Co-Trustee of trusts created under the Will of Ronald J. Finger, Deceased probated under Cause No. 310331 of the Probate Court of Harris County, Texas

Morrie K. Abramson, as Independent Co-Executors and Co-Trustees of trusts created under the Will of Ronald J. Finger, Deceased probated under Cause No. 310331 of the Probate Court of Harris County, Texas

592-12-1976

THE STATE OF TEXAS §
§
COUNTY OF HARRIS §

This instrument was acknowledged before me on the 9th day of December, 2004, by Marvy A. Finger, individually, and as Independent Co-Executor and Co-Trustee of trusts created under the Will of Ronald J. Finger, Deceased probated under Cause No. 310331 of the Probate Court of Harris County, Texas.

HAYLEY ELLEN DELUCA
MY COMMISSION EXPIRES
June 17, 2006

Hayley Ellen DeLuca
Notary Public, State of Texas

THE STATE OF TEXAS §
§
COUNTY OF HARRIS §

This instrument was acknowledged before me on the 8th day of Dec., 2004, by Jerry E. Finger, individually.

PATRICIA W. THOMAS
Notary Public, State of Texas
My Commission Expires
03-28-05

Patricia W. Thomas
Notary Public, State of Texas

THE STATE OF TEXAS §
§
COUNTY OF HARRIS §

This instrument was acknowledged before me on the 14th day of December, 2004, by Linda K. Finger, as Independent Co-Executor and Co-Trustee of trusts created under the Will of Ronald J. Finger, Deceased probated under Cause No. 310331 of the Probate Court of Harris County, Texas.

HAYLEY ELLEN DELUCA
MY COMMISSION EXPIRES
June 17, 2006

Hayley Ellen DeLuca
Notary Public, State of Texas

THE STATE OF TEXAS §
§
COUNTY OF HARRIS §

This instrument was acknowledged before me on the 10th day of December, 2004 by Morrie K. Abramson, as Independent Co-Executors and Co-Trustees of trusts created under the Will of Ronald J. Finger, Deceased probated under Cause No. 310331 of the Probate Court of Harris County, Texas.

D. CHARLENE FLOYD
Notary Public, State of Texas
My Commission Expires 01-14-2008

Charlene Floyd
Notary Public, State of Texas

AFTER RECORDING, RETURN TO:
Dunham F. Jewett
Crady, Jewett & McCulley, L.L.P.
2727 Allen Parkway, Suite 1700
Houston, Texas 77019

EXHIBIT "A"

Being a tract or parcel containing 0.9957 acre (43,373 square feet) of land situated in the S.W. Allen Survey, Abstract Number 94, Harris County, Texas; being a portion of that certain Tract 1 as conveyed by deed to Marvy A. Finger, Ronald J. Finger and Jerry Finger recorded under Harris County Clerk's File (H.C.C.F.) Numbers H776891 and H776892, Harris County, Texas; being out of and a portion of a called 12.16 acre tract as recorded in Volume 1749, Page 41 of the Harris County Deed Records; said 0.9957 acre tract being more particularly described as follows (bearings are referenced to the bearing base reflected in the above described deeds):

COMMENCING for reference at an "X" in a concrete culvert found in the south right-of-way (R.O.W.) line of West Donovan Street (40-foot wide as monumented), marking the northwest corner of Donovan Village, a subdivision of record in Volume 138, Page 35, of the Harris County Map Records (H.C.M.R.) and marking the northeast corner of said Tract 1;

THENCE, SOUTH, with the east line of said Tract 1 and the west line of said Donovan Village, at 650.00 feet passing the southwest corner of said Donovan Village, continuing in all, a distance of 655.00 feet to a point in the north line of Hohldale Addition a subdivision of record in Volume 13 Page 17, H.C.M.R., and being the southeast corner of said Tract 1, from which a found 3/8-inch iron rod bears South 36°33' West, 0.42 feet and a found 1/2-inch iron rod bears South 20° 45' West, 0.64 feet;

THENCE, North 89°31'00" West, with the south line of said Tract 1 and the north line of said Hohldale Addition, a distance of 374.96 feet to a 5/8-inch iron rod with cap set marking the southeast corner and POINT OF BEGINNING of the herein described tract;

THENCE, North 89°31'00" West, continuing with the south line of said Tract 1 and the north line of said Hohldale Addition, a distance of 187.04 feet to the northwest corner of said Hohldale Addition and an angle point in the south line of said Tract 1, from which a found 1/2-inch iron rod bears South 87°41' West, 0.32 feet;

THENCE, NORTH, continuing with the south line of said Tract 1, a distance of 10.00 feet to a PK nail with shiner set marking an angle point in the south line of said Tract 1, from which a found railroad spike bears South 55°55' West, 0.24 feet;

THENCE, North 89°31'00" West, continuing with the south line of said Tract 1, a distance of 100.00 feet to the southeast corner of a tract conveyed to Hart's Take Home, Inc. recorded under H.C.C.F. Number 8886669 and to the most southerly southwest corner of said Tract 1 and the southwest corner of the herein described tract, from which a found 1/2-inch iron rod bears North 79°19' West, 0.24 feet;

THENCE, NORTH, with the east line of said Hart's Take Home, Inc. tract and the east line of a tract conveyed to Morris N. Harper et. ux. recorded under H.C.C.F. Number K979895 and along a southerly west line of said Tract 1, a distance of 145.00 feet to a railroad spike found marking the northeast corner of said Morris N. Harper et. ux. Tract, marking an interior corner of said Tract 1 and marking the northwest corner of the herein described tract;

THENCE, South 89°31'00" East, a distance of 285.53 feet to a PK nail with shiner set marking the northeast corner of the herein described tract;

THENCE, South 00°33'27" East, a distance of 155.02 feet to the POINT OF BEGINNING and containing 0.9957 acre (43,373 square feet) of land. This description is based on the Land Title Survey and plat made by Terra Surveying Company, Inc., dated May, 2000, Project Number 0494-0001-S.

FILED FOR RECORD
8:00 AM

DEC 20 2004

County Clerk, Harris County, Texas

EXHIBIT "B"

METES AND BOUNDS DESCRIPTION
0.2496 ACRE (10,573 SQUARE FEET)
S.W. ALLEN SURVEY, ABSTRACT NUMBER 94
HARRIS COUNTY, TEXAS

Being a tract or parcel containing 0.2496 acre (10,573 square feet) of land situated in the S.W. Allen Survey, Abstract Number 94, Harris County, Texas; being a portion of that certain called 12.16 acre tract conveyed to Hyman E. Finger, Aaron L. Finger and Sam P. Finger as recorded in Volume 1749, Page 41, Harris County Deed Record (H.C.D.R.), Harris County, Texas; said 0.2496 acre tract being more particularly described as follows (bearings are referenced to the bearing base reflected in the above described deed):

COMMENCING for reference at the intersection of the south right-of-way (R.O.W.) line of West Donovan Street (40 feet wide) and the east R.O.W. line of North Shepherd Drive (100 feet wide) and the northwest corner of said 12.16 acre tract;

THENCE, SOUTH, with the said east R.O.W. line of North Shepherd Drive, at 117.04 feet passing a 5/8-inch iron rod found marking the westerly northwest corner of a tract of land referred to as Tract I as recorded under Harris County Clerk's File (H.C.C.F.) Number H776891 and H776892, at 495.04 feet passing a 5/8-inch iron rod found marking the northwest corner of a called 0.2496 acre tract as recorded under H.C.C.F. Number K979895, continuing, in all, 567.54 feet to a 5/8-inch iron rod found marking the southwest corner of said 0.2496 acre tract, said iron rod marking the northwest corner and POINT OF BEGINNING of the herein described tract;

THENCE, South 89°31'00" East, departing said East R.O.W. line, with the south line of said Harper tract, a distance of 150.00 feet to the southeast corner of said Harper Tract and the northeast corner of the herein described tract, from which a found railroad spike bears North 23°24' West. 0.53 feet;

THENCE, SOUTH, a distance of 72.50 feet to a point in the south line of said 12.16 acre tract and the north line of a tract conveyed to Hinds Investors II, Ltd., as recorded under H.C.C.F. Number S665092 for the southeast corner of the herein described tract, from which a found ½-inch iron rod bears North 79°19' West, 0.24 feet;

THENCE, North 89°31'00" West, (called West), with the south line of said 12.16 acre tract and the north line of said Hinds Tract, a distance of 150.00 feet a 5/8-inch iron rod with plastic cap set in the east R.O.W. line of North Shepherd Drive and marking the southwest corner of said 12.16 acre tract and the herein described tract;

THENCE, NORTH, with said east R.O.W. line of North Shepherd drive a distance of 72.50 feet to the POINT OF BEGINNING and containing 0.2496 acre (10,873 square feet) of land. This description is based on the Standard Land Survey and plat made by Terra Surveying Company, Inc., dated October 12, 1998, TSC Project Number 0494-9801-S.

ANY PROVISION HEREIN WHICH RESTRICTS THE SALE, RENTAL, OR USE OF THE DESCRIBED REAL PROPERTY BECAUSE OF COLOR OR RACE IS INVALID AND UNENFORCEABLE UNDER FEDERAL LAW.

THE STATE OF TEXAS
COUNTY OF HARRIS

I hereby certify that this instrument was FILED in File Number Sequence on the date and at the time stamped hereon by me; and was duly RECORDED, in the Official Public Records of Real Property of Harris County, Texas on

DEC 20 2004

COUNTY CLERK
HARRIS COUNTY, TEXAS

LEGEND

- Property Boundary
- Former Dry Cleaner

N

0 80 160

Approximate Scale (feet)

InControl Technologies
14731 Pebble Bend Drive
Houston, Texas 77068
(281) 580-8892 FAX (281) 580-8853

MSD Boundary Map

SITE: Former Pilgrim Cleaners			PM: LMG
LOCATION: 5210 N Shepherd Dr. Houston, Texas 77091			CHECKED: CP
DETAILED: 1/30/2024	DESIGNED: LMG	PROJECT NO: E23091-101	FIGURE: A

Appendix B

A description of the current use, and, to the extent known, the anticipated use(s), of the designated property and properties within 500 feet of the boundary of the designated property.

The proposed MSD area is 1.2453-acres of land located north of downtown Houston, Harris County, Texas. The affected property is in a residential and light commercial land use area of Houston (**Figure B**). **Figure B** provides a description of the surrounding land use within 500-feet of the site.

The tract is undeveloped. The surrounding land use is described as:

- North – the Houston Emergency Center;
- East – parking lot for the Houston Emergency Center followed by residential homes;
- South – a mix of both light commercial properties and residential homes;
- West – N Shepherd Dr followed by the St. Piux X football field and a Church's Chicken restaurant.

LEGEND

Property Boundary

N

0 200 400

Approximate Scale (feet)

InControl Technologies
14731 Pebble Bend Drive
Houston, Texas 77068
(281) 580-8892 FAX (281) 580-8853

Surrounding Property Use Map

SITE: Former Pilgrim Cleaners			PM: LMG
LOCATION: 5210 N Shepherd Dr. Houston, Texas 77091			CHECKED: CP
DETAILED: 1/30/2024	DESIGNED: LMG	PROJECT NO: E23091-101	FIGURE: B

Appendix C

A site map showing: **Label & address each separately, i.e., a, b, c, d, e, f, g**

a. The location of the designated property.
b. The topography of the designated property as indicated on publicly available sources, which must note the watershed including the nearest surface water body and whether the designated property is located in a floodplain or floodway, as those terms are defined in Chapter 19 of the Code of Ordinances.
c. The detected area of groundwater contamination.
d. The location of all soil sampling locations and all groundwater monitoring wells.
e. Groundwater gradients, to the extent known, and direction of groundwater flow.
f. The ingestion protective concentration level exceedence zone for each contaminant of concern, to the extent known.
g. Depth to groundwater for each affected zone.

The following is a listing of figures included in **Appendix C**.

Figure Ca – Topographic Map
Figure Cb-1 – Watershed Map
Figure Cb-2 – Flood Plain Map
Figure Cc-1 – PCE Concentrations in 1st Groundwater Bearing Unit (February 2024)
Figure Cc-2 – TCE Concentrations in 1st Groundwater Bearing Unit (February 2024)
Figure Cc-3 – PCE Concentrations in 2nd Groundwater Bearing Unit (February 2024)
Figure Cc-4 – TCE Concentrations in 2nd Groundwater Bearing Unit (February 2024)
Figure Cc-5 – VC Concentrations in 2nd Groundwater Bearing Unit (February 2024)
Figure Cd-1 – Soil Boring Location Map
Figure Cd-2 – Groundwater Monitoring Well Location Map
Figure Ce-1 – 1st Groundwater Bearing Unit Gradient Map (February 2024)
Figure Ce-2 – 2nd Groundwater Bearing Unit Gradient Map (February 2024)

The Site is located within the White Oak Bayou Watershed (**Figure Cb-1**) and is located outside the 0.2% annual chance (500 year) floodplain (**Figure Cb-2**).

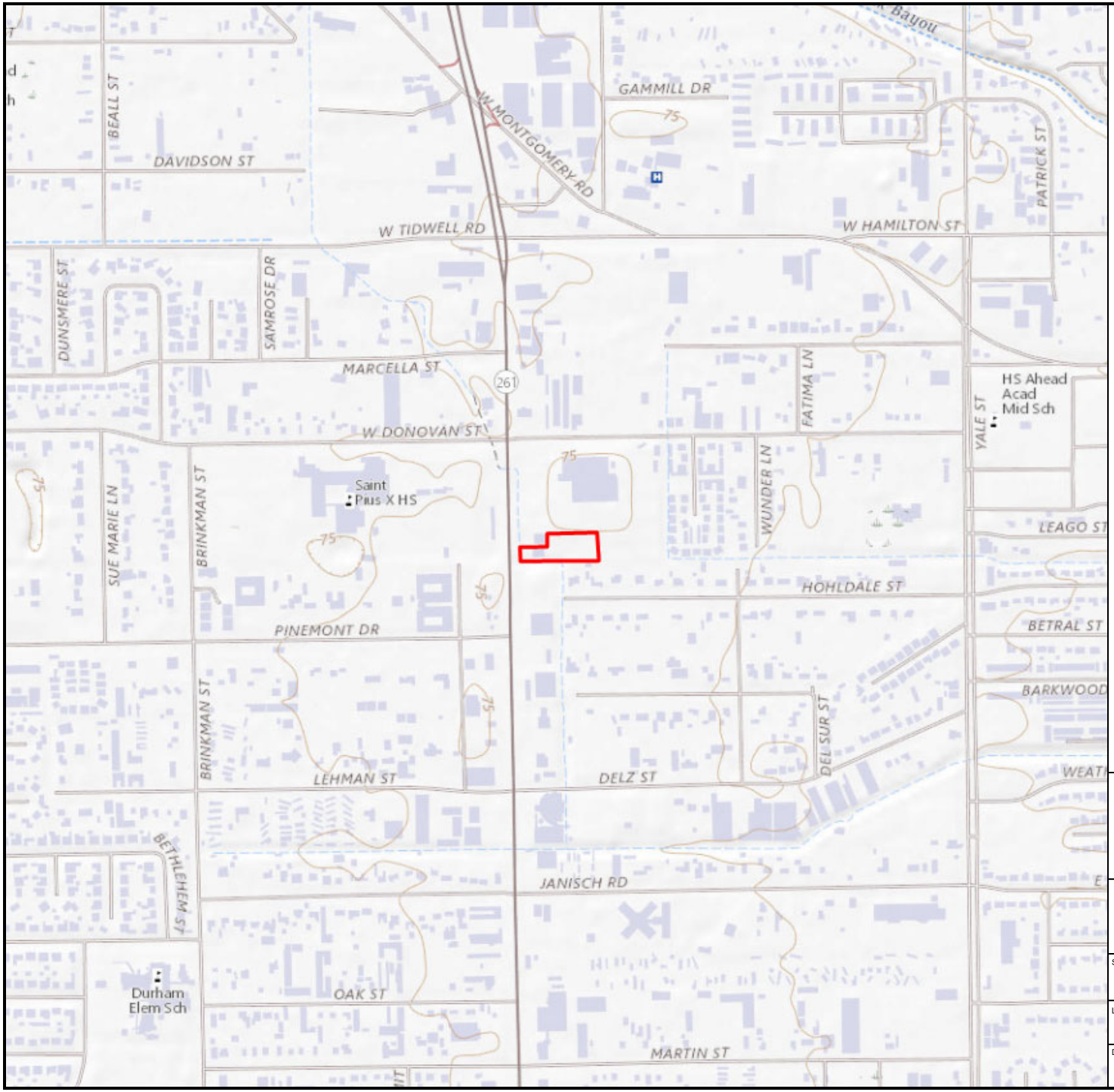
The primary chemicals of concern (COCs) in both groundwater bearing units are chlorinated hydrocarbons. Tetrachloroethene (PCE) is present in the 1st groundwater bearing unit (GWBU) PCE and trichloroethene (TCE) are present in the 1st and 2nd GWBUs (**Figures Cc-1 through Cc-5**).

Figures Cc-1 through **Cc-5** depict the entire groundwater PCLE zones during the most recent sampling event (February 2024). **Figure Cd-1** and **Figure Cd-2** depict the locations of the soil and groundwater samples, respectively. The direction of groundwater flow in the 1st GWBU is to the southwest at a gradient

of 0.008 ft/ft (**Figure Ce-1**). The direction of groundwater flow in the 2nd GWBU is to the northwest at a gradient of 0.002 ft/ft (**Figure Ce-2**).

The first groundwater bearing unit is comprised of sand and is encountered at a depth of approximately 12-feet below ground surface (ft bgs) during drilling. The base of the first groundwater bearing unit is encountered at a depth of approximately 20-ft bgs and is underlain by a clay. The average static depth to groundwater in the 1st zone monitoring wells is 6-ft bgs.

The second groundwater bearing unit is comprised of clayey sand and is encountered at a depth of approximately 40-feet below ground surface (ft bgs) during drilling. The base of the second groundwater bearing unit is encountered at a depth of approximately 50-ft bgs and is underlain by a clay. The average static depth to groundwater in the 2nd zone monitoring wells is 7.25-ft bgs.



LEGEND

Property Boundary

N

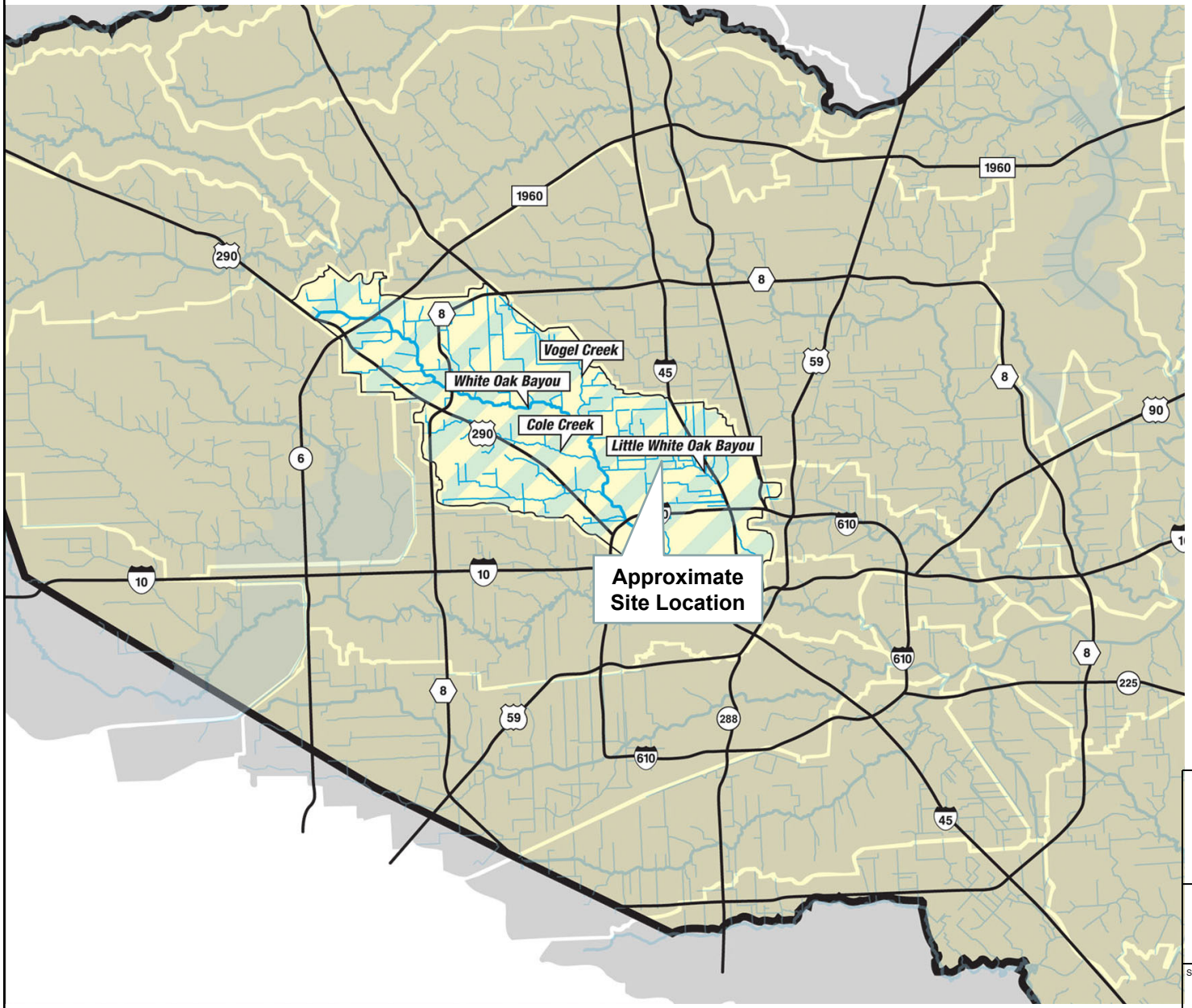
0 800 1600

Approximate Scale (feet)

InControl Technologies
14731 Pebble Bend Drive
Houston, Texas 77068
(281) 580-8892 FAX (281) 580-8853

Houston Heights Quadrangle Map

SITE: Former Pilgrim Cleaners			PM: LMG
LOCATION: 5210 N Shepherd Dr, Houston, TX 77091			CHECKED: CP
DETAILED: 1/30/2024	DESIGNED: NB	PROJECT NO: E23091-101	FIGURE: Ca

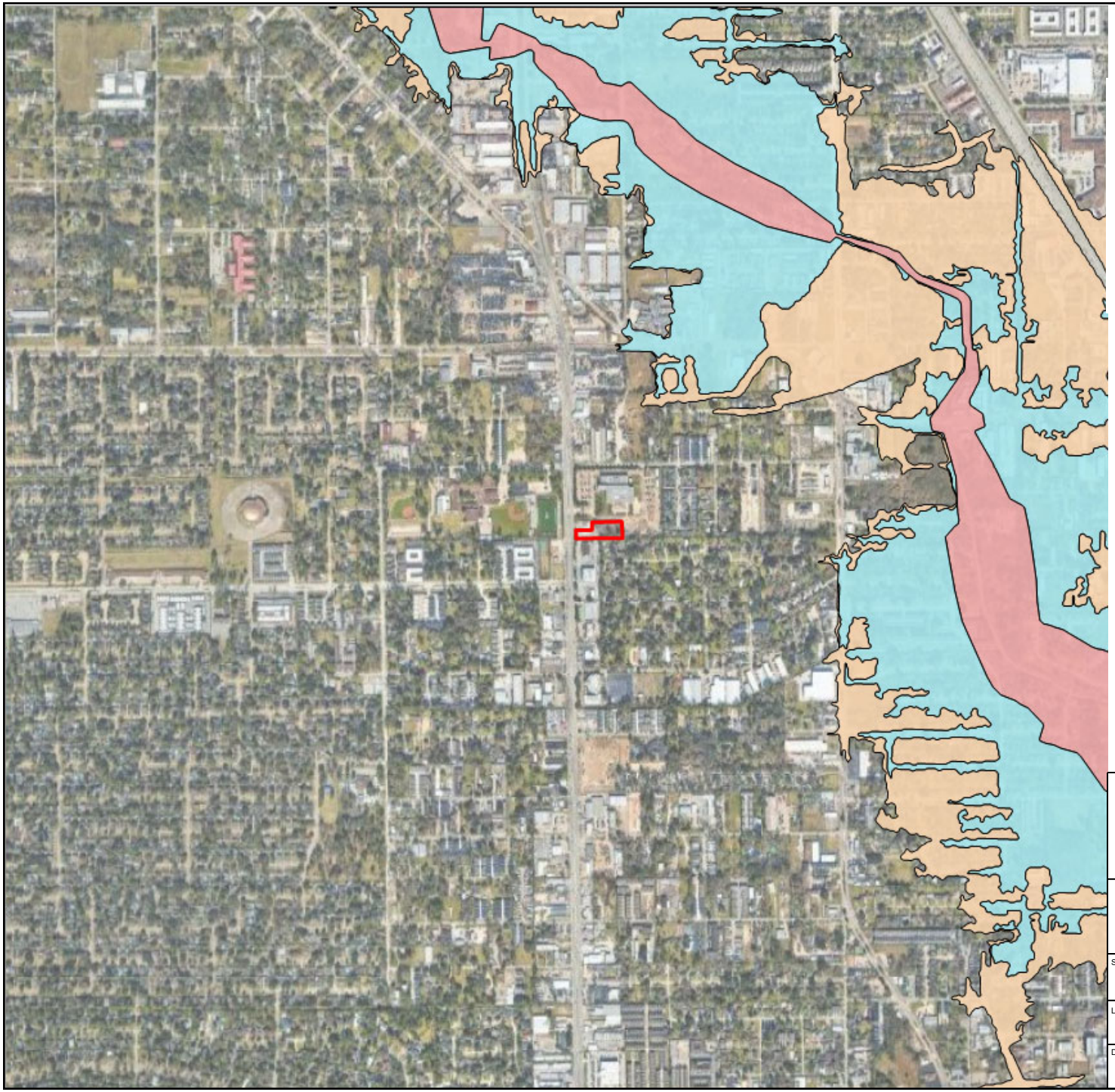


Source: Harris County Flood Control District

InControl Technologies
14731 Pebble Bend Drive
Houston, Texas 77068
(281) 580-8892 FAX (281) 580-8853

White Oak Bayou Watershed Map

SITE: **Former Pilgrim Cleaners**			PM: LMG
LOCATION: 5210 N Shepherd Dr. Houston, Texas 77091			CHECKED: CP
DETAILED: 1/30/2024	DESIGNED: LMG	PROJECT NO: E23091-101	FIGURE: **Cb-1**



LEGEND

Property Boundary

Flood Hazard Zones

- 1% Annual Chance Flood Hazard
- Regulatory Floodway
- Special Floodway
- Area of Undetermined Flood Hazard
- 0.2% Annual Chance Flood Hazard
- Future Conditions 1% Annual Chance Flood Hazard
- Area with Reduced Risk Due to Levee

InControl Technologies
14731 Pebble Bend Drive
Houston, Texas 77068
(281) 580-8892 FAX (281) 580-8853

Floodplain Map
FIRM Panel 48201C0660M
Effective 6/19/2014

SITE: Former Pilgrim Cleaners			PM: LMG
LOCATION: 5210 N Shepherd Dr. Houston, Texas 77091			CHECKED: CP
DETAILED: 1/30/2024	DESIGNED: LMG	PROJECT NO: E23091-101	FIGURE: **Cb-2**

LEGEND:

- Property Boundary
- Monitoring Well Location
- Abandoned Monitoring Well
- Former Pilgrim Cleaners
- PCL Exceedance Zone (0.005 mg/L)
- Unknown Concentration Delineation

STATE OF TEXAS
LAUREN M. GRAWEY
GEOLOGY
11620
LICENSED
PROFESSIONAL GEOSCIENTIST

5/13/2024

N

0 80 160

Approximate Scale (feet)

InControl Technologies
14731 Pebble Bend Drive
Houston, Texas 77068
(281) 580-8892 FAX (281) 580-8853

PCE Concentrations in 1st Groundwater Bearing Unit February 2024

SITE: Former Pilgrim Cleaners			PM: LMG
LOCATION: 5210 N Shepherd Dr. Houston, TX 77091			CHECKED:
DETAILED: 2/27/2024	DESIGNED: HP	PROJECT NO: E23091-101	FIGURE: Cc-1

LEGEND:

- Property Boundary
- Monitoring Well Location
- Abandoned Monitoring Well
- Former Pilgrim Cleaners
- PCL Exceedance Zone (0.005 mg/L)

STATE OF TEXAS
LAUREN M. GRAWEY
GEOLOGY
11620
LICENSED
PROFESSIONAL GEOSCIENTIST

5/13/2024

N

0 80 160

Approximate Scale (feet)

InControl Technologies
14731 Pebble Bend Drive
Houston, Texas 77068
(281) 580-8892 FAX (281) 580-8853

TCE Concentrations in 1st Groundwater Bearing Unit February 2024

SITE: Former Pilgrim Cleaners			PM: LMG
LOCATION: 5210 N Shepherd Dr. Houston, TX 77091			CHECKED:
DETAILED: 2/27/2024	DESIGNED: HP	PROJECT NO: E23091-101	FIGURE: Cc-2

LEGEND:

- Property Boundary
- Monitoring Well Location
- Former Pilgrim Cleaners
- PCL Exceedance Zone (0.005 mg/L)

STATE OF TEXAS
LAUREN M. GRAWEY
GEOLOGY
11620
LICENSED
PROFESSIONAL GEOSCIENTIST

5/13/2024

N

0 80 160

Approximate Scale (feet)

InControl Technologies
14731 Pebble Bend Drive
Houston, Texas 77068
(281) 580-8892 FAX (281) 580-8853

PCE Concentrations in 2nd Groundwater Bearing Unit February 2024

SITE: Former Pilgrim Cleaners			PM: LMG
LOCATION: 5210 N Shepherd Dr. Houston, TX 77091			CHECKED:
DETAILED: 2/27/2024	DESIGNED: HP	PROJECT NO: E23091-101	FIGURE: Cc-3

LEGEND:

- Property Boundary
- Monitoring Well Location
- Former Pilgrim Cleaners
- PCL Exceedance Zone (0.005 mg/L)

STATE OF TEXAS
LAUREN M. GRAWEY
GEOLOGY
11620
LICENSED
PROFESSIONAL GEOSCIENTIST

5/13/2024

N

0 80 160

Approximate Scale (feet)

InControl Technologies
14731 Pebble Bend Drive
Houston, Texas 77068
(281) 580-8892 FAX (281) 580-8853

TCE Concentrations in 2nd Groundwater Bearing Unit February 2024

SITE: Former Pilgrim Cleaners			PM: LMG
LOCATION: 5210 N Shepherd Dr. Houston, TX 77091			CHECKED:
DETAILED: 2/27/2024	DESIGNED: HP	PROJECT NO: E23091-101	FIGURE: Cc-4

LEGEND:

- Property Boundary
- Monitoring Well Location
- Former Pilgrim Cleaners
- PCL Exceedance Zone (0.002 mg/L)

STATE OF TEXAS
LAUREN M. GRAWEY
GEOLOGY
11620
LICENSED
PROFESSIONAL GEOSCIENTIST

5/13/2024

N

0 80 160

Approximate Scale (feet)

InControl Technologies
14731 Pebble Bend Drive
Houston, Texas 77068
(281) 580-8892 FAX (281) 580-8853

VC Concentrations in 2nd Groundwater Bearing Unit February 2024

SITE: Former Pilgrim Cleaners			PM: LMG
LOCATION: 5210 N Shepherd Dr. Houston, TX 77091			CHECKED:
DETAILED: 2/27/2024	DESIGNED: HP	PROJECT NO: E23091-101	FIGURE: Cc-5

LEGEND

- Property Boundary
- Soil Boring/Temp Mon Well
- Missing Permanent Mon Well
- Existing Permanent Mon Well
- PCE Plume
- TCE Plume

STATE OF TEXAS
LAUREN M. GRAWEY
GEOLOGY
11620
LICENSED
PROFESSIONAL GEOSCIENTIST

5/13/2024

N

0 80 160

Approximate Scale (feet)

InControl Technologies
14731 Pebble Bend Drive
Houston, Texas 77068
(281) 580-8892 FAX (281) 580-8853

Soil Boring Location Map

SITE: **Former Pilgrim Cleaners**			PM: LMG
LOCATION: 5210 N Shepherd Dr. Houston, Texas 77091			CHECKED: CP
DETAILED: Date	DESIGNED: LMG	PROJECT NO: E23091-101	FIGURE: **Cd-1**

LEGEND:

- Property Boundary
- Temporary Monitoring Well
- Monitoring Well Location
- Abandoned Monitoring Well

N

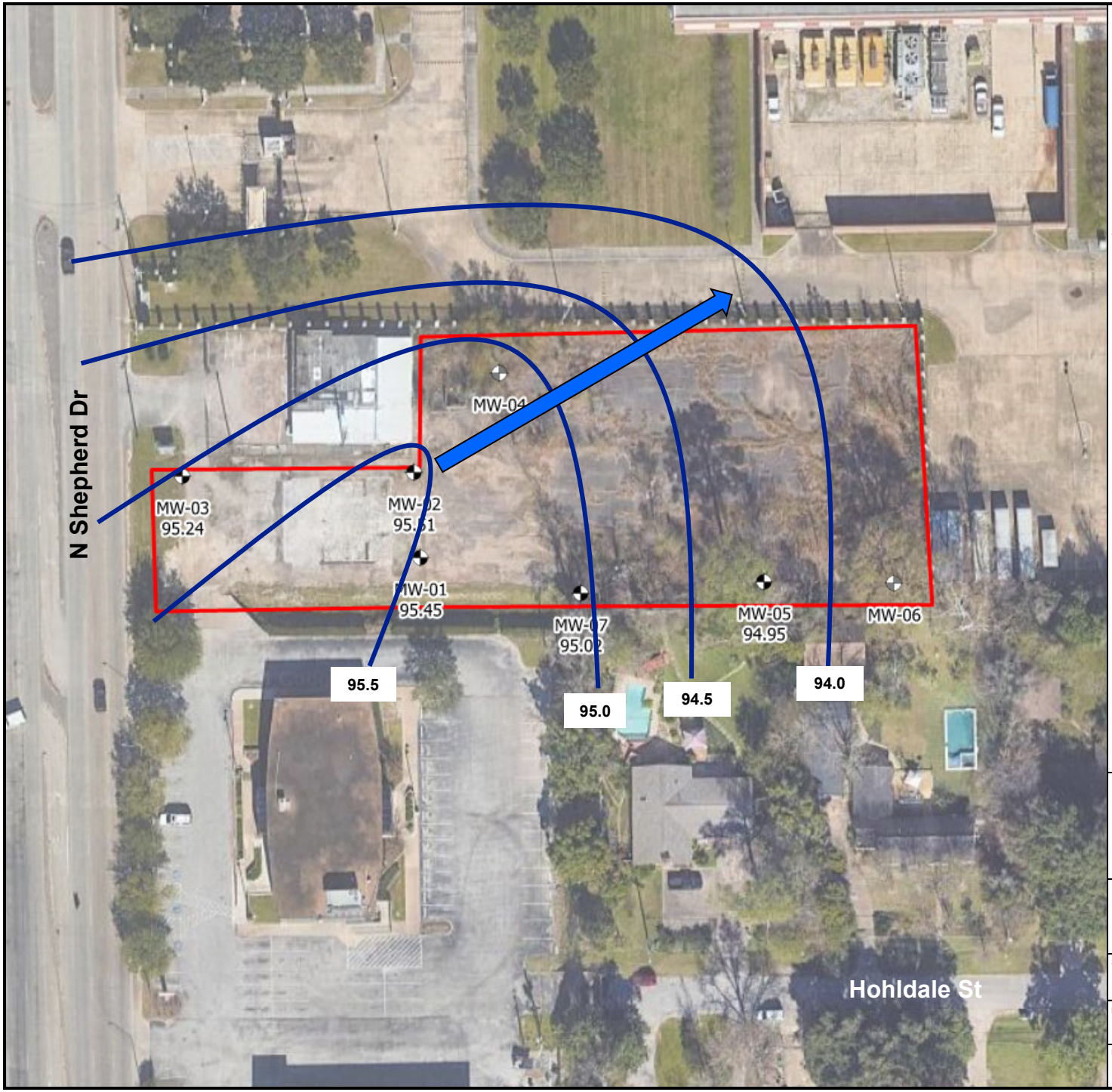
0 80 160

Approximate Scale (feet)

InControl Technologies
14731 Pebble Bend Drive
Houston, Texas 77068
(281) 580-8892 FAX (281) 580-8853

Monitoring Well Location Map

SITE: Former Pilgrim Cleaners			PM: LMG
LOCATION: 5210 N Shepherd Dr. Houston, Texas 77091			CHECKED: LMG
DETAILED: 12/7/2023	DESIGNED: NB	PROJECT NO: E23091-101	FIGURE: **Cd-2**



LEGEND:

- Property Boundary
- Monitoring Well Location
- Abandoned Monitoring Well
- Groundwater Gradient Contour
- Direction of Groundwater Flow

STATE OF TEXAS
LAUREN M. GRAWEY
GEOLOGY
11620
LICENSED
PROFESSIONAL GEOSCIENTIST

5/13/2024

N

0 80 160

Approximate Scale (feet)

InControl Technologies
14731 Pebble Bend Drive
Houston, Texas 77068
(281) 580-8892 FAX (281) 580-8853

1st Groundwater Bearing Unit Gradient Map February 2024

SITE: Former Pilgrim Cleaners			PM: LMG
LOCATION: 5210 N Shepherd Dr. Houston, TX 77091			CHECKED:
DETAILED: 2/27/2024	DESIGNED: HP	PROJECT NO: E23091-101	FIGURE: Ce-1

LEGEND:

- Property Boundary
- Monitoring Well Location
- Groundwater Gradient Contour
- Direction of Groundwater Flow

STATE OF TEXAS
LAUREN M. GRAWEY
GEOLOGY
11620
LICENSED
PROFESSIONAL GEOSCIENTIST

5/13/2024

N

0 80 160

Approximate Scale (feet)

InControl Technologies
14731 Pebble Bend Drive
Houston, Texas 77068
(281) 580-8892 FAX (281) 580-8853

2nd Groundwater Bearing Unit Gradient Map February 2024

SITE: Former Pilgrim Cleaners			PM: LMG
LOCATION: 5210 N Shepherd Dr. Houston, TX 77091			CHECKED:
DETAILED: 2/27/2024	DESIGNED: HP	PROJECT NO: E23091-101	FIGURE: Ce-2

Appendix D

List each contaminant of concern within the designated groundwater then describe:

A description of the ingestion protective concentration level exceedence zone and the non-ingestion protective concentration level exceedence zone, including a specification of the horizontal area and the minimum and maximum depth below ground surface.

The level of contamination, the ingestion protective concentration level, and the non-ingestion protective concentration level, all expressed as mg/L units.

Its basic geochemical properties (e.g., whether the contaminant of concern migrates with groundwater, floats or is soluble in water).

Protective Concentration Level Exceedence (PCLE) Zone – Monitoring wells are installed into the first and second groundwater bearing units (GWBUs) at the subject property. A review of recent groundwater sampling data indicates that in the first GWBU, one monitoring well (MW-01) exceeds the Tier 1 Residential $^{GW}GW_{Ing}$ PCL of 0.005 mg/L for tetrachloroethene (PCE) and trichloroethene (TCE) (**Table E2**). In the second GWBU, monitoring wells MW-01D, MW-04D, and MW-05D exceed the Tier 1 Residential $^{GW}GW_{Ing}$ PCL of 0.005 mg/L for tetrachloroethene (PCE) and trichloroethene (TCE). Monitoring well MW-05D also exceeds the Tier 1 Residential $^{GW}GW_{Ing}$ PCL of 0.002 mg/L for vinyl chloride (VC) (**Table E2**).

The PCLE zones are depicted on **Figure Cc-1** through **Figure Cc-5** and are discussed in more detail in **Appendix G**. The area of affected groundwater has been laterally and vertically delineated to the extent possible and the plume appears to be stable. The current overall Protective Concentration Level Exceedance (PCLE) zone is approximately 290 -feet long by 30-ft wide. A comparison of the groundwater sampling results with applicable non-ingestion PCLs ($^{Air}GW_{Inh\text{-}V}$) indicates that none of the groundwater samples reported a COC concentration above the $^{Air}GW_{Inh\text{-}V}$ PCL. Therefore, based on the recent groundwater monitoring results, there is no non-ingestion protective concentration level exceedance zone within the proposed MSD boundary.

Two soil samples report concentrations that exceed a Tier 1 Residential $^{GW}Soil_{Ing}$ PCL. Sample MW-01 (9-10) reported an exceedance of TCE (PCL = 0.034 mg/kg) and sample MW-02 (14-16) reported an exceedance of PCE (PCL = 0.05 mg/kg) (**Table E1**). These soil exceedances are not considered valid soil samples because they were collected from either the vadose zone or the transmissive zone. These soil samples were influenced by the groundwater contamination and are not indicative of a true soil PCLE zone. The soil PCLE zones are depicted on **Figure Cd-1**.

A comparison of the groundwater sampling results with applicable non-ingestion protective concentration levels ($^{Air}GW_{Inh\text{-}V}$) indicates that none of the groundwater samples reported any COC above a $^{Air}GW_{Inh\text{-}V}$ PCL. Therefore, based on the recent groundwater monitoring results, besides the $^{GW}GW_{Ing}$ exceedances, there are no other protective concentration level exceedance zones within the proposed MSD boundary.

The first groundwater bearing unit is comprised of sand and is encountered at a depth of approximately 12-feet below ground surface (ft bgs) during drilling. The base of the first groundwater bearing unit is encountered at a depth of approximately 20-ft bgs and is underlain by a clay. The average static depth to groundwater in the 1st zone monitoring wells is 6-ft bgs.

The second groundwater bearing unit is comprised of clayey sand and is encountered at a depth of approximately 40-feet below ground surface (ft bgs) during drilling. The base of the second groundwater bearing unit is encountered at a depth of approximately 50-ft bgs and is underlain by a clay. The average static depth to groundwater in the 2nd zone monitoring wells is 7.25-ft bgs.

COC: Tetrachloroethene (PCE)	
Maximum Concentration from analytical data	0.76 mg/L (TSP-4; January 1999)
Ingestion-Based PCL (Residential $^{GW}GW_{Ing}$)	0.005 mg/L
Ingestion-Based PCLE Zone (approximate)	Length: 30 ft Width: 300 ft Vertical Extent: 50 ft below ground surface (bgs)
Non-Ingestion-Based PCL ($^{Air}GW_{Inh-V}$)	500 mg/L
Non-Ingestion-Based PCLE Zone	NONE
Geochemical/ Physical Properties	
Molecular Weight	131.39
Specific Gravity	1.463
Solubility in Water	soluble
Groundwater Migration	along groundwater gradient

COC: Trichloroethene	
Maximum Concentration from analytical data	0.246 mg/L (TSW-1; December 1997)
Ingestion-Based PCL (Residential $^{GW}GW_{Ing}$)	0.005 mg/L
Ingestion-Based PCLE Zone (approximate)	Length: 30 ft Width: 300 ft Vertical Extent: 50 ft below ground surface (bgs)
Non-Ingestion-Based PCL ($^{Air}GW_{Inh-V}$)	24 mg/L
Non-Ingestion-Based PCLE Zone	NONE
Geochemical/ Physical Properties	
Molecular Weight	131.4
Specific Gravity	1.46
Solubility in Water	soluble
Groundwater Migration	along groundwater gradient

COC: Vinyl Chloride	
Maximum Concentration from analytical data	0.13 mg/L (MW-13; July 2015)
Ingestion-Based PCL (Residential $^{GW}GW_{Ing}$)	0.002 mg/L
Ingestion-Based PCLE Zone (approximate)	Length: 40 ft Width: 50 ft Vertical Extent: 55 ft below ground surface (bgs)
Non-Ingestion-Based PCL ($^{Air}GW_{Inh-V}$)	3.8 mg/L
Non-Ingestion-Based PCLE Zone	NONE
Geochemical/ Physical Properties	
Molecular Weight	62.5
Specific Gravity	0.9106
Solubility in Water	2763 mg/L @ 25°C
Groundwater Migration	along groundwater gradient

Appendix E

A table displaying the following information for each contaminant of concern, to the extent known:

a. The maximum concentration level for soil and groundwater, the ingestion protective concentration level, and the non-ingestion protective concentration level, all expressed as mg/L units.
b. The critical protective concentration level without the municipal setting designation, highlighting any exceedences.

Appendix E contains tables summarizing the concentration levels for the primary chemicals of concern in soil and groundwater. The tables include the concentration level, the ingestion protective concentration limits ($^{GW}Soil_{Ing}$ for soil and $^{GW}GW_{Ing}$ for groundwater), the non-ingestion protective concentration limits for soil ($^{Tot}Soil_{Comb}$ and $^{Air}Soil_{Inh\text{-}V}$) and groundwater ($^{Air}GW_{Inh\text{-}V}$), the critical protective concentration limits assuming no MSD is in place ($^{GW}Soil_{Ing}$ for soil and $^{GW}GW_{Ing}$ for groundwater), and the critical PCLs assuming that an MSD is in place ($^{Tot}Soil_{Comb}$ for soil and $^{Air}GW_{Inh\text{-}V}$ for groundwater). The following is a list of the tables in **Appendix E**.

Table E1 Volatile Organic Compounds (VOCs) in Soil

Table E2 Volatile Organic Compounds (VOCs) in Groundwater

Table E1
Summary of Volatile Organic Compounds in Soil
Former Pilgrim Cleaners
5210 N Shepherd Dr, Houston, Texas 77091
VCP No. 1788

Sample ID	Depth	Date	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl chloride	1,1-Dichloroethene	Acetone	Methylene chloride
	(ft)		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Residential	$^{Tot}Soil_{Comb}$		710	18	140	590	3.7	2300	66000	1600
Residential	$^{GW}Soil_{Ing}$		**0.05**	**0.034**	**0.25**	**0.49**	**0.022**	**0.05**	**43**	**0.013**
TSW-1	11.5-12	12/31/1997	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-	<0.01
TSW-2	14.5-15	12/31/1997	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-	<0.01
TSP-3	14-15	1/12/1999	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	-	<0.01
TSP-4	12-13	1/12/1999	<0.005	<0.005	**0.02**	<0.005	<0.005	<0.005	-	<0.02
TSP-5	18-18.5	1/12/1999	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-	<0.02
TSP-6	12-13	1/12/1999	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-	<0.02
TSP-7	15.5-16.5	1/12/1999	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-	<0.02
TSP-8	17.5-18.5	1/12/1999	**0.043**	**0.016**	**0.026**	<0.005	<0.005	<0.005	-	<0.02
MW-01	9-10	12/9/1998	<0.005	**0.086**	**0.005**	<0.005	<0.005	<0.005	-	<0.02
	14-15	12/9/1998	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-	<0.02
MW-02	14-16	12/9/1998	**0.051**	**0.021**	**0.057**	<0.005	<0.005	<0.005	-	<0.02
	18-20	12/9/1998	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-	<0.02
MW-03	20-21	12/14/2004	<0.0055	<0.0055	<0.0055	<0.0055	<0.0022	<0.0055	<0.028	<0.011
MW-04	13-14	12/14/2004	<0.0045	<0.0045	<0.0045	<0.0045	<0.0018	<0.0045	<0.023	<0.0091
	19.5-20	12/14/2004	**0.0021 J**	<0.0047	<0.0047	<0.0047	<0.0019	<0.0047	<0.023	<0.0093
MW-05	13-13.5	12/14/2004	<0.0044	<0.0044	<0.0044	<0.0044	<0.0018	<0.0044	<0.022	<0.0088
	18.3-19.3	12/14/2004	**0.0018 J**	**0.0012 J**	**0.0039 J**	<0.0046	<0.0018	<0.0046	<0.023	<0.0091

Table E1
Summary of Volatile Organic Compounds in Soil
Former Pilgrim Cleaners
5210 N Shepherd Dr, Houston, Texas 77091
VCP No. 1788

Sample ID	Depth	Date	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl chloride	1,1-Dichloroethene	Acetone	Methylene chloride
	(ft)		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Residential	$^{Tot}Soil_{Comb}$		710	18	140	590	3.7	2300	66000	1600
Residential	$^{GW}Soil_{Ing}$		**0.05**	**0.034**	**0.25**	**0.49**	**0.022**	**0.05**	**43**	**0.013**
MW-06	10.8-11.3	12/14/2004	<0.0045	<0.0045	<0.0045	<0.0045	<0.0018	<0.0045	**0.0038 J**	**0.002 J**
	18.7-19.2	12/14/2004	**0.0016 J**	**0.00081 J**	<0.0042	<0.0042	<0.0017	<0.0042	<0.021	<0.0084

Notes: Exceeds TRRP Tier 1 $^{GW}Soil_{Ing}$ PCL

<: Analyte was not detected at or above the reported sample detection limit

J: Analyte was detected at the concentration less than the method detection limit

PCL: Protective Concentration Level (updated as of May 2023)

Table E2
Summary of Volatile Organic Compounds in Groundwater
Former Pilgrim Cleaners
5210 N Shepherd Dr, Houston, Texas 77091
VCP No. 1788

Sample ID	Date	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl chloride	1,1-Dichloroethene
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Residential	$^{GW}GW_{Ing}$	**0.005**	**0.005**	**0.07**	**0.1**	**0.002**	**0.007**
Residential	$^{Air}GW_{Inh-V}$	500	24	1200	770	3.8	1700
Temporary Groundwater Montioring Wells							
TSW-1	12/31/1997	**0.747**	**0.246**	**0.565**	<0.025	<0.025	<0.025
TSW-2	12/31/1997	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
TSP-3	1/12/1999	**0.007**	**0.006**	**0.01**	<0.005	<0.005	<0.005
TSP-4	1/12/1999	**0.76**	**0.23**	**0.4**	<0.005	**0.02**	<0.005
TSP-5	1/12/1999	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
TSP-6	1/12/1999	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
TSP-7	1/12/1999	**0.006**	<0.005	<0.005	<0.005	<0.005	<0.005
TSP-8	1/12/1999	**0.109**	**0.084**	**0.214**	<0.005	**0.016**	<0.005
TSP-9	2/17/1999	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
TSP-10	2/17/1999	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
TSP-11	2/17/1999	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
TSP-12	2/17/1999	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
TSP-13	2/17/1999	**0.043**	**0.031**	**0.168**	<0.005	**0.018**	<0.005
TSP-14	2/17/1999	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
TSP-15	3/10/1999	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
TSP-16	3/10/1999	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
BA-TSP-17	3/7/2005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005
BA-TSP-18	3/7/2005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005
BA-TSP-19	3/7/2005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005
First Groundwater Bearing Unit							
MW-01	12/14/1998	**0.013**	<0.005	<0.005	<0.005	<0.005	<0.005
	12/27/2004	**0.09**	**0.071**	**0.28**	**0.0015 J**	**0.016**	<0.005
	11/20/2023	**0.0064**	**0.0042 J**	**0.0025 J**	<0.0004	<0.0004	<0.0005
	2/19/2024	**0.0084**	**0.0067**	**0.0073**	<0.0004	<0.0004	<0.0005
MW-02	12/14/1998	**0.072**	**0.033**	**0.077**	<0.005	<0.002	<0.005
	12/27/2004	**0.0042 J**	**0.0026 J**	**0.034**	<0.005	<0.002	<0.005
	3/29/2023	<0.0002	<0.0003	<0.0002	<0.001	<0.0002	<0.001
	11/20/2023	<0.0006	<0.0005	<0.0006	<0.0004	<0.0004	<0.0005
	2/19/2024	<0.0006	<0.0005	<0.0006	<0.0004	<0.0004	<0.0005
MW-03	12/21/2004	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005
	11/20/2023	<0.0006	<0.0005	<0.0006	<0.0004	<0.0004	<0.0005
	2/19/2024	<0.0006	<0.0005	<0.0006	<0.0004	<0.0004	<0.0005
MW-04	12/21/2004	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005

Table E2
Summary of Volatile Organic Compounds in Groundwater
Former Pilgrim Cleaners
5210 N Shepherd Dr, Houston, Texas 77091
VCP No. 1788

Sample ID	Date	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl chloride	1,1-Dichloroethene
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Residential	$^{GW}GW_{Ing}$	**0.005**	**0.005**	**0.07**	**0.1**	**0.002**	**0.007**
Residential	$^{Air}GW_{Inh-V}$	500	24	1200	770	3.8	1700
MW-05	12/21/2004	**0.0047 J**	**0.0041 J**	**0.013**	<0.005	<0.002	<0.005
	11/20/2023	**0.0019 J**	**0.0018 J**	**0.0022 J**	<0.0004	<0.0004	<0.0005
	2/20/2024	**0.0014 J**	**0.0018 J**	**0.0039 J**	<0.0004	<0.0004	<0.0005
MW-06	12/21/2004	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005
MW-07	11/20/2023	<0.0006	<0.0005	<0.0006	<0.0004	<0.0004	<0.0005
	2/20/2024	<0.0006	<0.0005	<0.0006	<0.0004	<0.0004	<0.0005
Second Groundwater Bearing Unit							
MW-01D	11/6/2006	**0.28**	**0.17**	**0.14**	-	**0.0072**	-
	10/16/2008	**0.07**	**0.045**	**0.052**	-	**0.0014**	-
	2/9/2009	**0.1**	**0.063**	**0.063**	-	**0.0021**	-
	11/30/2009	**0.079**	**0.049**	**0.05**	-	**0.0018**	-
	3/29/2023	**0.015**	**0.012**	**0.016**	<0.001	<0.0002	<0.001
	11/20/2023	**0.012**	**0.011**	**0.011**	<0.0004	<0.0004	<0.0005
	2/19/2024	**0.018**	**0.015**	**0.018**	<0.0004	**0.00041 J**	<0.0005
MW-02D	11/20/2023	<0.0006	<0.0005	**0.0006 J**	<0.0004	<0.0004	<0.0005
	2/20/2024	<0.0006	<0.0005	<0.0006	<0.0004	<0.0004	<0.0005
MW-03D	11/20/2023	<0.0006	<0.0005	<0.0006	<0.0004	<0.0004	<0.0005
	2/19/2024	<0.0006	<0.0005	<0.0006	<0.0004	<0.0004	<0.0005
MW-04D	2/9/2009	**0.16**	**0.058**	**0.043**	-	**0.0026**	-
	11/30/2009	**0.25**	**0.13**	**0.1**	-	**0.0057**	-
	3/29/2023	**0.092**	**0.071**	**0.05**	<0.001	**0.0032**	<0.001
	11/20/2023	**0.088**	**0.069**	**0.042**	**0.00063 J**	**0.0019 J**	<0.0005
	2/20/2024	**0.055**	**0.046**	**0.033**	<0.0004	**0.0014 J**	<0.0005
MW-05D	11/30/2009	**0.16**	**0.095**	**0.28**	-	**0.023**	-
	3/29/2023	**0.027**	**0.031**	**0.053**	<0.001	**0.0025**	<0.001
	11/20/2023	**0.017**	**0.023**	**0.038**	<0.0004	**0.0017 J**	<0.0005
	2/20/2024	**0.027**	**0.033**	**0.064**	**0.00088 J**	**0.0032**	<0.0005
MW-06D	8/13/2010	<0.0006	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	3/29/2023	<0.0003	<0.0003	<0.0002	<0.001	<0.0002	<0.001
	11/20/2023	<0.0006	<0.0005	<0.0006	<0.0004	<0.0004	<0.0005
	2/20/2024	<0.0006	<0.0005	<0.0006	<0.0004	<0.0004	<0.0005

Notes: Exceeds TRRP Tier 1 $^{GW}GW_{Ing}$ PCL

<: Analyte was not detected at or above the reported sample detection limit

J: Analyte was detected at the concentration less than the method detection limit

PCL: Protective Concentration Level (updated as of May 2023)

Appendix F

If the plume extends beyond the limits of property owners listed in this application, list the owners of the additional property beneath which the plume(s) extend(s), and a summary of the interactions with those property owners about the plume(s) and this MSD application. *Please Note: You are not required under this item to notify affected property owners, only to provide a summary of who affected property owners are, and if there have been any communications. "No contact" can be an acceptable answer.*

Temporary monitoring well TSP-13 reported four chlorinated solvents above a $^{GW}GW_{Ing}$ PCL when it was sampled in 1999. This temporary monitoring well was installed in the first groundwater bearing unit (GWBU). Permanent monitoring well MW-5 was installed adjacent to TSP-13 but has never reported any chlorinated solvent compound above a $^{GW}GW_{Ing}$ PCL. Temporary monitoring wells installed in the first GWBU on the Bank of America property immediately south of the subject property did not report any chlorinated solvents above a laboratory detection limit. Groundwater flows to the northeast in the first GWBU.

Permanent monitoring wells MW-01D, MW-04D, and MW-05D report one or more chlorinated solvents at concentrations that exceed a $^{GW}GW_{Ing}$ PCL. Groundwater flows to the southeast in the second GWBU. The plume may possibly extend onto one or more offsite property in the second GWBU. The potentially impacted properties are listed below (**Figure F**). No contact has been made with these property owners.

Property ID	Property owner name	Physical property address, city, zip	Property owner mailing address, city, state, zip
1	Indian Creek Realty Holdings I LLC	5200 N Shepherd Dr, Houston, TX 77091	5200 N Shepherd Dr, Houston, TX 77091
2	Joseph D Amante	518 Hohldale St, Houston, TX 77091	518 Hohldale St, Houston, TX 77091
3	John E Sinitiere	514 Hohldale St, Houston, TX 77091	514 Hohldale St, Houston, TX 77091

LEGEND

Property Boundary

N

0 80 160

Approximate Scale (feet)

InControl Technologies
14731 Pebble Bend Drive
Houston, Texas 77068
(281) 580-8892 FAX (281) 580-8853

Notification Map

SITE: **Former Pilgrim Cleaners**			PM: LMG
LOCATION: 5210 N Shepherd Dr. Houston, Texas 77091			CHECKED: CP
DETAILED: 4/16/2024	DESIGNED: LMG	PROJECT NO: E23091-101	FIGURE: **F**

Appendix G

A statement that the plume of contamination is stable (i.e., no change) or contracting and delineated, with the basis for that statement. Please include historical sampling data.

Shallow groundwater has been affected by chlorinated hydrocarbons including tetrachloroethene, trichloroethene, and vinyl chloride. These chemicals are believed to be associated with the operations of the former onsite Pilgrim Cleaners that operated from 1970 to 2021. These chemicals tend to move rapidly in the sub-surface environment and quickly reach equilibrium as long as there is no ongoing contributing mass source.

The lateral extent of groundwater impact in the both the first and second groundwater bearing units has been delineated to the most practical extent possible and according to the most recent groundwater data, the plume appears to be decreasing to stable (**Table E2**).

In summary, the groundwater data collected to date indicates that the area of affected groundwater is stable.

Mann-Kendall Test for Statistical Trend

InControl Technologies conducted a statistical trend analysis to determine if chemicals of concern were increasing, decreasing or remaining stable over time. The primary chemicals of concern include tetrachloroethene and trichloroethene. InControl Technologies used the Mann-Kendall Statistical Test for Trends to conduct the trend analysis. The statistical analysis was conducted using QualStat 6.0, a commercially available software package.

The purpose of the Mann-Kendall test is to statistically assess if there is a monotonic upward or downward trend of the variable of interest over time. A monotonic upward (downward) trend means that the variable consistently increases (decreases) through time, but the trend may or may not be linear. The Mann-Kendall test is used in place of a parametric linear regression analysis since the criteria for this test are generally violated with temporal environmental data. The regression analysis requires that the residuals from the fitted regression line be normally distributed; an assumption not required by the Mann-Kendall test since the Mann-Kendall test is a non-parametric or distribution-free statistical test.

Assumptions

The following assumptions underlie the Mann-Kendall test:

- When no trend is present, the measurements (observations or data) obtained over time are independent and identically distributed. The assumption of independence means that the observations are not serially correlated over time.
- The observations obtained over time are representative of the true conditions at the various sampling times.

- The sample collection, handling, and measurement methods provide unbiased and representative observations of the underlying populations over time.

There is no requirement that the measurements be normally distributed or that the trend, if present, is linear. The Mann-Kendall test can be computed if there are missing values and values below the sample detection limit. The assumption of independence requires that the time between samples be sufficiently large so that there is no correlation between measurements collected at different times.

Calculations

The Mann-Kendall Statistical test tests whether to reject the null hypothesis (H_o) and accept the alternative hypothesis (H_a), where:

- Ho: No monotonic trend
- Ha: Monotonic trend is present

The Mann-Kendall test is conducted as follows:

1. List the data in the order in which they were collected over time, x_1, x_2, … , x_n, which denote the measurements obtained at times 1, 2, … , n, respectively.

2. Determine the sign of all n(n-1)/2 possible differences $x_j - x_k$, where j>k. These differences are $x_2 - x_1$, $x_3 - x_1$, … , $x_n - x_1$, $x_3 - x_2$, $x_4 - x_2$, … , $x_n - x_2$, … , $x_n - x_{n-2}$, $x_n - x_{n-1}$.

3. Let sgn ($x_j - x_k$,) be the indicator function that takes on the value s 1, 0, or -1 according to the sign of $x_j - x_k$, that is:

Error! Bookmark not defined. $$\operatorname{sgn}(x_j - x_k)\begin{cases} 1 & if \quad x_j - x_k > 0 \\ 0 & if \quad x_j - x_k = 0 \\ -1 & if \quad x_j - x_k < 0 \end{cases}$$

4. Compute the statistic S = $\sum_{k-1}^{n-1}\sum_{j-k+1}^{n}\operatorname{sgn}(x_j - x_k)$ which is the number of positive differences minus the number of negative differences. If **S** is a positive number, observations obtained later in time tend to be larger than observations made earlier. If **S** is a negative number, then observations made later in time tend to be smaller than observations made earlier.

5. Compute the variance of **S** as follows:

$$Var(S) = \frac{1}{18}\left[n(n-1)(2n+5) - \sum_{p-1}^{g} t_p(t_p - 1)((2t_p + 5) \right]$$

Where g is the number of tied groups and t_p is the number of observations in the p^{th} group. When there are ties in the data due to equal values or non-detects, Var(S) is adjusted by the tie correction method described in Helsel (2005, p. 191) and included in the formula above.

6. Compute the Mann-Kendall test statistic, Z_{MK}, as follows:

$$Z_{MK}\begin{cases}\dfrac{s-1}{\sqrt{Var(S)}} & if \quad S>0\\ 0 \quad if & S=0\\ \dfrac{S+1}{\sqrt{Var(S)}} & if \quad S<0\end{cases}$$

A positive (negative) value of Z_{MK} indicates that the data tend to increase (decrease) with time. To determine if a trend exists at the Type I error rate α, where $0 < \alpha < 0.5$. (Note that α is the tolerable probability that the Mann Kendall test will falsely reject the null hypothesis.), then the Ho is rejected and the Ha is accepted if $Z_{MK} > Z_{1-\alpha}$, where $Z_{1-\alpha}$ is the 100(1-α) percentile of the standard normal distribution. Following standard TRRP Guidance, InControl Technologies used an α of 0.05. If the calculated probability (p) is less than 0.05, the Ho hypothesis (no monotonic trend) is rejected in favor of the Ha hypothesis (a monotonic trend exists in the data. The following sections discuss the results of the Mann-Kendall Statistical Analysis on a well by well basis.

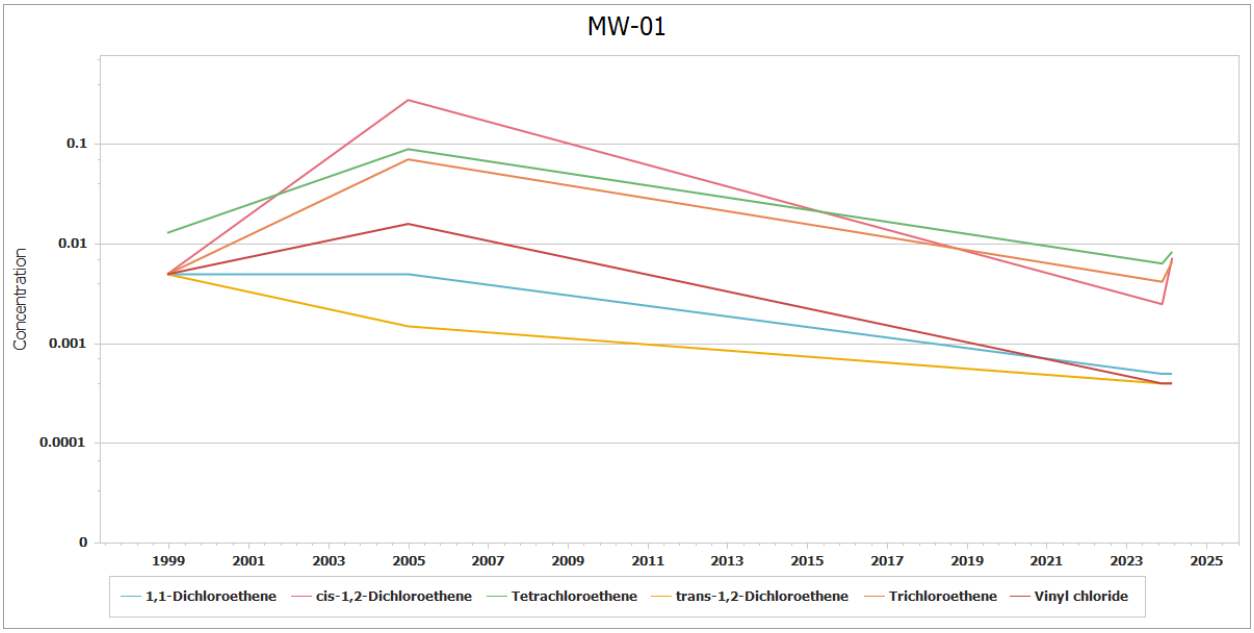
Results from Statistical Trend Analysis

A Statistical Trend Analysis was conducted for each well reporting a chemical of concern above the Tier 1 Residential Protective Concentration Level. Only chemicals with historically detected concentrations exceeding the target PCL within a given well are discussed. Compounds that are below the Tier 1 Residential PCL are not discussed.

First Groundwater Bearing Unit: Monitoring Well MW-01

Several compounds exceeded the Tier 1 Residential PCL for groundwater ingestion during the monitoring history for MW-01. The following table shows the results for the Mann-Kendall Statistical Test for Trends for all groundwater monitoring data since the well was first installed.

Start Date: 12/14/1998, End Date: 2/19/2024



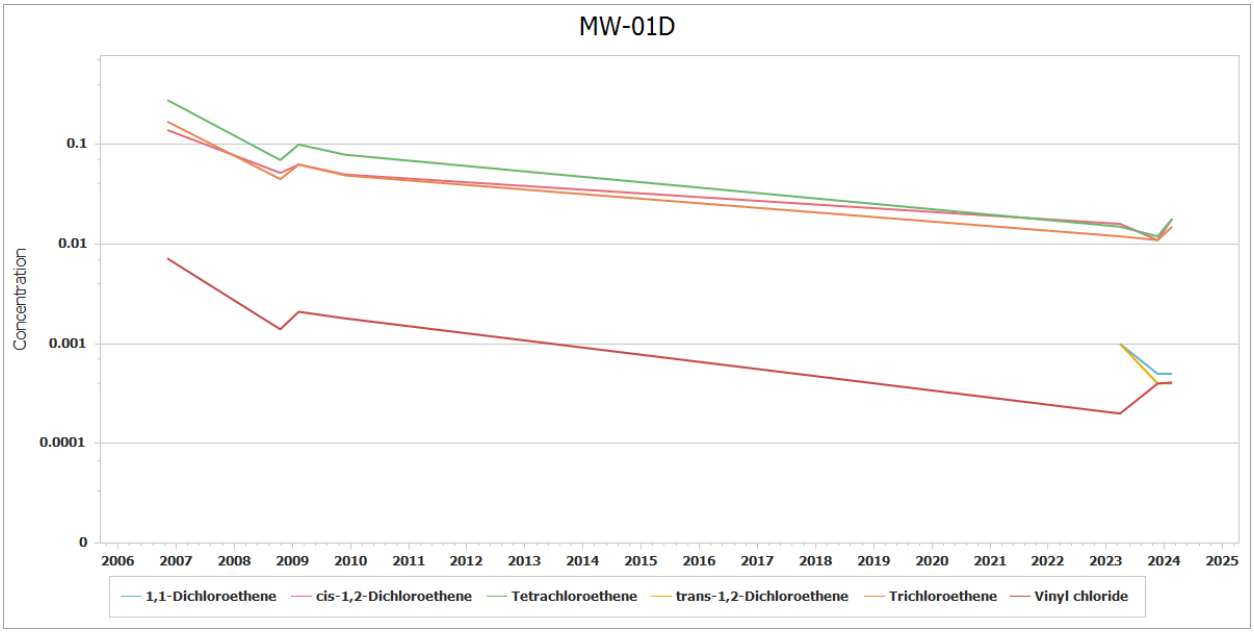
Parameter	Trend	Count	S	S Variance	S Prob	Z Value
1,1-Dichloroethene	No Trend	4	-4	6.6667	12.26	-1.1619
cis-1,2-Dichloroethene	No Trend	4	0	8.6667	50.00	0.0000
Tetrachloroethene	No Trend	4	-2	8.6667	36.70	-0.3397
trans-1,2-Dichloroethene	No Trend	4	-5	7.6667	7.43	-1.4446
Trichloroethene	No Trend	4	0	8.6667	50.00	0.0000
Vinyl chloride	No Trend	4	-3	7.6667	23.51	-0.7223

This monitoring well has been sampled four times since its installation in 1998. Tetrachloroethene (PCE) and trichloroethene (TCE) are the only compounds that currently exceed a Tier 1 Residential $^{GW}GW_{Ing}$ PCL. All of the compounds of concern report a stable trend (i.e. “no trend”). Between the 2004 and 2023 sampling events, concentrations of all detected compounds decreased an order of magnitude. Concentrations remain stable between the 2023 and 2024 sampling events.

Second Groundwater Bearing Unit: Monitoring Well MW-01D

Several compounds exceeded the Tier 1 Residential PCL for groundwater ingestion during the monitoring history for MW-01D. The following table shows the results for the Mann-Kendall Statistical Test for Trends for all groundwater monitoring data since the well was first installed.

Start Date: 11/6/2006, End Date: 2/19/2024



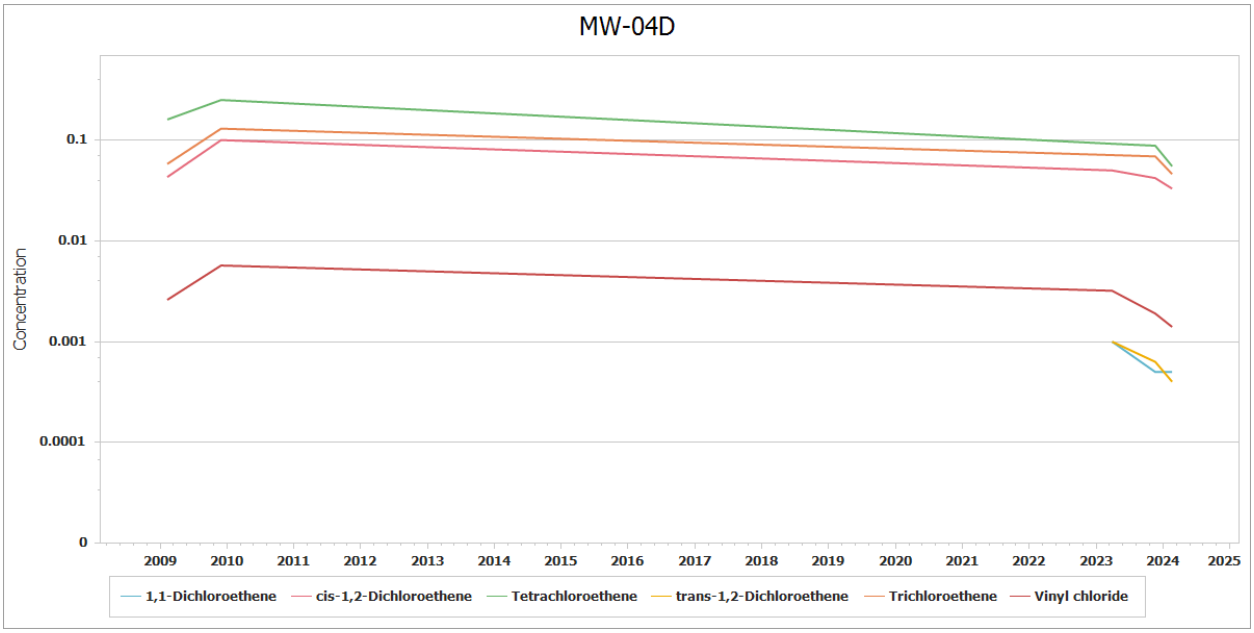
Parameter	Trend	Count	S	S Variance	S Prob	Z Value
1,1-Dichloroethene	No Trend	3	-2	2.6667	27.01	-0.6124
cis-1,2-Dichloroethene	Decreasing	7	-15	44.3333	1.77	-2.1026
Tetrachloroethene	Decreasing	7	-13	44.3333	3.58	-1.8023
trans-1,2-Dichloroethene	No Trend	3	-2	2.6667	27.01	-0.6124
Trichloroethene	Decreasing	7	-13	44.3333	3.58	-1.8023
Vinyl chloride	No Trend	7	-11	44.3333	6.66	-1.5019

This monitoring well has been sampled seven times since its installation in 2006. Tetrachloroethene (PCE) and trichloroethene (TCE) are the only compounds that currently exceed a Tier 1 Residential $^{GW}GW_{Ing}$ PCL. 1,1-dichloroethene, trans,-1,2-dichloroethene, and vinyl chloride report no trend in concentration (i.e. stable). Cis-1,2-dichloroethene, PCE, and TCE report decreasing concentration trends. Over the last three sampling events, all compounds have reported stable concentrations with only minor fluctuations.

Second Groundwater Bearing Unit: Monitoring Well MW-04D

Several compounds exceeded the Tier 1 Residential PCL for groundwater ingestion during the monitoring history for MW-04D. The following table shows the results for the Mann-Kendall Statistical Test for Trends for all groundwater monitoring data since the well was first installed.

Start Date: 2/9/2009, End Date: 2/20/2024



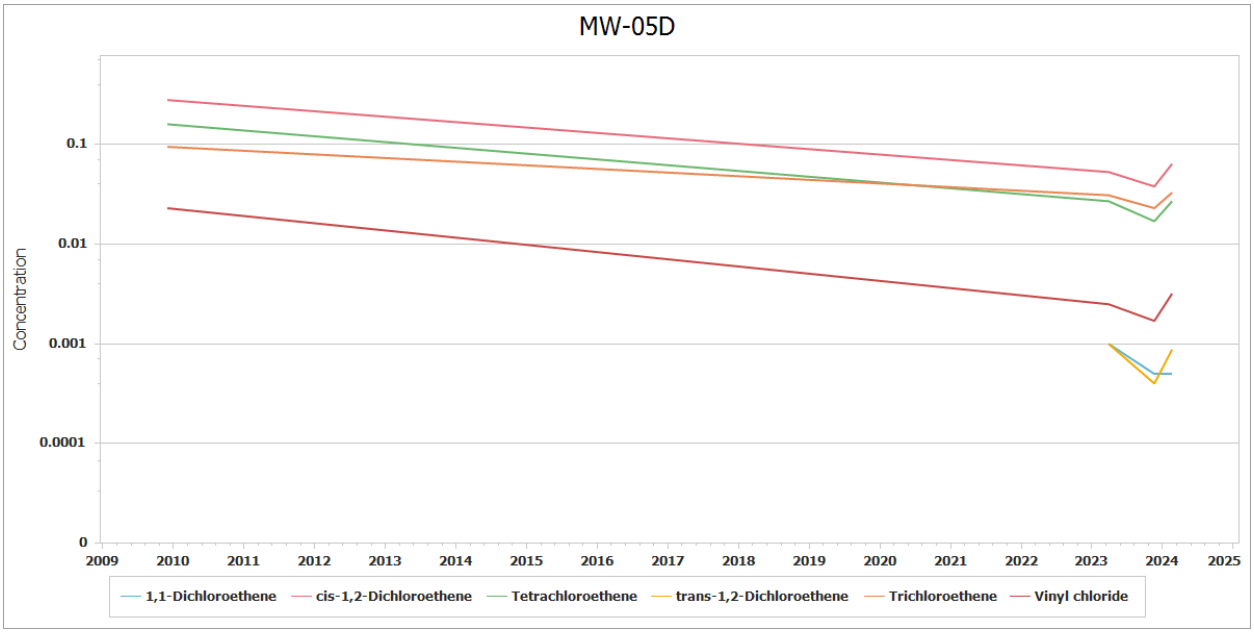
Parameter	Trend	Count	S	S Variance	S Prob	Z Value
1,1-Dichloroethene	No Trend	3	-2	2.6667	27.01	-0.6124
cis-1,2-Dichloroethene	No Trend	5	-6	16.6667	11.03	-1.2247
Tetrachloroethene	Decreasing	5	-8	16.6667	4.32	-1.7146
trans-1,2-Dichloroethene	No Trend	3	-3	3.6667	14.81	-1.0445
Trichloroethene	No Trend	5	-4	16.6667	23.12	-0.7348
Vinyl chloride	No Trend	5	-6	16.6667	11.03	-1.2247

This monitoring well has been sampled five times since its installation in 2009. Tetrachloroethene (PCE) and trichloroethene (TCE) are the only compounds that currently exceed a Tier 1 Residential $^{GW}GW_{Ing}$ PCL. PCE reports a decreasing concentration trend. All remaining compounds report no trend in concentration. Over the last three sampling events, all compounds have reported stable to decreasing concentrations.

Second Groundwater Bearing Unit: Monitoring Well MW-05D

Several compounds exceeded the Tier 1 Residential PCL for groundwater ingestion during the monitoring history for MW-05D. The following table shows the results for the Mann-Kendall Statistical Test for Trends for all groundwater monitoring data since the well was first installed.

Start Date: 11/30/2009, End Date: 2/20/2024



Parameter	Trend	Count	S	S Variance	S Prob	Z Value
1,1-Dichloroethene	No Trend	3	-2	2.6667	27.01	-0.6124
cis-1,2-Dichloroethene	No Trend	4	-2	8.6667	36.70	-0.3397
Tetrachloroethene	No Trend	4	-3	7.6667	23.51	-0.7223
trans-1,2-Dichloroethene	No Trend	3	-1	3.6667	50.00	0.0000
Trichloroethene	No Trend	4	-2	8.6667	36.70	-0.3397
Vinyl chloride	No Trend	4	-2	8.6667	36.70	-0.3397

This monitoring well has been sampled four times since its installation in 2009. Tetrachloroethene (PCE), trichloroethene (TCE), and vinyl chloride are the only compounds that currently exceed a Tier 1 Residential $^{GW}GW_{Ing}$ PCL. All of the compounds report stable concentration trends. Over the last three sampling events, all compounds have reported stable concentrations with only minor fluctuations.

Conclusions

Based on a review of the available data, the eastern parcel has been utilized as a parking area from 1985 to present, and the western parcel operated as a drycleaning facility from approximately 1970 to 2021. It is unknown how long perchloroethylene was used as a dry cleaning solvent on the subject property.

While consistent groundwater monitoring was not conducted across the site over the past twenty-six years, the concentrations of compounds of concern have continued to decline over time and are continuing to degrade, given the presence of daughter compounds such as cis-1,2-dichloroethene and vinyl chloride. Therefore, InControl Technologies has concluded that the overall plume is stable to decreasing in both groundwater bearing units.

Appendix H

A statement as to whether contamination on and off the designated property without a Municipal Setting Designation will exceed a residential assessment level as defined in the Texas Risk Reduction Program or analogous residential level set by EPA, if known, and the basis for that statement.

On the Designated Property

As described in **Appendix D**, several VOCs (tetrachloroethene, trichloroethene, and vinyl chloride) are reported at concentrations that exceed the TRRP Tier 1 Residential Assessment Levels without a municipal setting designation ($^{GW}GW_{Ing}$) (**Figure C3a-e**, **Table E2**). A review of the most recent groundwater sampling data (February 2024) within the proposed MSD boundary confirms these findings.

Off the Designated Property

There are no offsite monitoring wells installed in the first groundwater bearing unit. One monitoring well, MW-06D, was installed in the second groundwater bearing unit along Hohldale Street, located south of the subject property. This monitoring well does not report concentrations of any compounds of concern above a laboratory detection limit (**Figures C3c through C3e**).