

## CITY OF HOUSTON



## PUBLIC WORKS AND ENGINEERING PLANNING & DEVELOPMENT DIVISION

### EXECUTIVE SUMMARY

#### *Project Overview*

InControl Technologies, Inc. was retained by L-K Industries to provide environmental consulting services at their facility located at 6952 Lawndale St., Houston, Harris County, Texas. The subject property (the Site) consists of one large warehouse building and several smaller outbuildings totaling 2.8567-acres of land located southeast of downtown Houston, Harris County, Texas (**Figure C1**). The surrounding area is a mix of residential and commercial development (**Figure B**).

The subject property is located in the Brays Bayou watershed (**Figure C2**) and the property is not located within the 100-year floodplain (**Figure C3**).

A volatile organic compound (VOC) Protective Concentration Level (PCL) Exceedance (PCLE) zone was identified at the subject property. The PCLE zones are depicted on **Figure C4-1** through **Figure C4-3**.

#### *Historical Environmental Condition*

L-K Industries is a manufacturer of centrifuges for oil testing equipment. They began operations in the 1960's and continue to make this equipment today. Several mechanical lathes and other machinery were used in the machining and forming process. They were located in the machine shop area in the northern portion of the Machine Warehouse. Metal shavings and minor oil staining from what appeared to be hydraulic fluid were observed in the vicinity of the metal milling machines. A Glass Shop was added later to make test tubes and glass hydrometers to be used with the centrifuges. The glass shop is located in the central east portion of the Shipping Warehouse. L-K applies wax to the small glass components prior to the etching of the glass with hydrofluoric acid. Trichloroethylene (TCE) is used in a vapor degreaser to remove the wax from the glass vials after they were etched. Historically, the solvent removal process was modified to help minimize the potential for incidental spills and releases. The vapor degreaser holds approximately 20 gallons of TCE solvent. Virgin solvent is stored in a 55-gallon drum. When needed, the TCE is transferred from the 55-gallon drum to the vapor degreaser. A drain used for the disposal of spent TCE was located on the southern wall of the Glass Shop. The outflow discharged to a 55-gallon drum located to the adjacent south of the Glass Shop. The TCE containing drum was not located within secondary containment.

Environmental Science and Engineering Partners, LLC (ESE) conducted a Phase II Investigation on the property in January 2015. Eight soil borings (TMW-01 through TMW-08) were advanced to groundwater

at a depth of 20- to 30-ft bgs. The borings were then converted to temporary groundwater monitoring wells. Samples were analyzed for volatile organic compounds (VOCs) by EPA Method 8260 and total petroleum hydrocarbons (TPH) by Texas Method 1005. In addition, one sample from TMW-02, TMW-03, and TMW-08 were also analyzed for RCRA Metals by EPA Method 6020/7471. Trichloroethene (TCE), cis-1,2-dichloroethene (cis-1,2-DCE), and vinyl chloride (VC) were detected above a PCL in at least one soil sample. TPH was not detected above a PCL in any of the samples. Lead was detected above a PCL in all three of the samples. Mercury was detected in TMW-02 above a PCL.

Based on the findings from the investigation, InControl Technologies recommended that the site enroll in the Texas Voluntary Cleanup Program (VCP). An application was submitted and the site was entered into the program on March 20, 2015 as VCP Number 2733. Since enrolling in the VCP, InControl Technologies completed additional site assessment activities to complete the affected property assessment requirements defined in 30TAC 350.

InControl Technologies installed six permanent groundwater monitoring wells (MW-1 through MW-6) on March 23-24, 2015. These wells were installed into the first groundwater bearing unit (GWBU). The first site-wide groundwater sampling event was conducted on March 24, 2015. Five of the six monitoring wells reported chemicals of concern (COCs) above a PCL. The monitoring well network is depicted on **Figure A**.

In May/July 2015, InControl Technologies advanced nine shallow soil borings (SB-1 through SB-9), installed one supplemental groundwater monitoring well, and conducted a site-wide sampling event. MW-7 was installed into the first groundwater bearing unit (GWBU) to serve as a downgradient monitoring well.

On August 26, 2015, fourteen shallow soil borings (SB-10 through SB-23) were advanced on the subject property in areas where the TCEQ requested additional investigations. On August 27, 2015, InControl Technologies mobilized to the site to install one groundwater monitoring well (MW-8) into the first GWBU. Monitoring well MW-8 was installed in the open field to the east of the warehouse building to serve as a lateral delineation point in groundwater.

On November 13, 2015, five surface soil samples were collected on the northern portion of the property at the request of the TCEQ. The samples were analyzed for RCRA Metals and/or TPH. No COCs were detected above a Tier 1 PCL. In addition, three Cone Penetrometer Test (CPT) borings were advanced across the subject property to identify the thickness of the lower confining layer. The results of the borings confirmed a stiff clay at approximately 50-ft bgs across the site.

On February 24, 2016, one additional groundwater monitoring well (MW-9) was installed into the first GWBU. This well was installed on the southernmost property boundary to serve as the downgradient delineation well. In addition, four hand auger borings were advanced to a terminal depth of 10-ft bgs inside the warehouse on the eastern side of the building to delineate the VOCs in soil.

InControl Technologies' drinking water well survey identified four (4) water wells within a ½-mile radius of the proposed MSD boundary (**Appendix P**). Map ID #1 is located at Force, Inc. This well is listed as a monitoring well completed to a depth of 23.5-ft bgs and would not be used for potable water. Map ID #2,

#3, and #4 are irrigation wells located at Forest Park Lawndale Cemetery. These wells are used for irrigation purposes only. This was confirmed during communications with Forest Park personnel.

Brays Bayou is located approximately 0.44-miles west (cross gradient) of the proposed MSD boundary. Due to the distance from this water body to the proposed MSD area, the bayou is not directly threatened by natural movement of the affected groundwater identified on the site (**Figure C2**).

## 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.

---

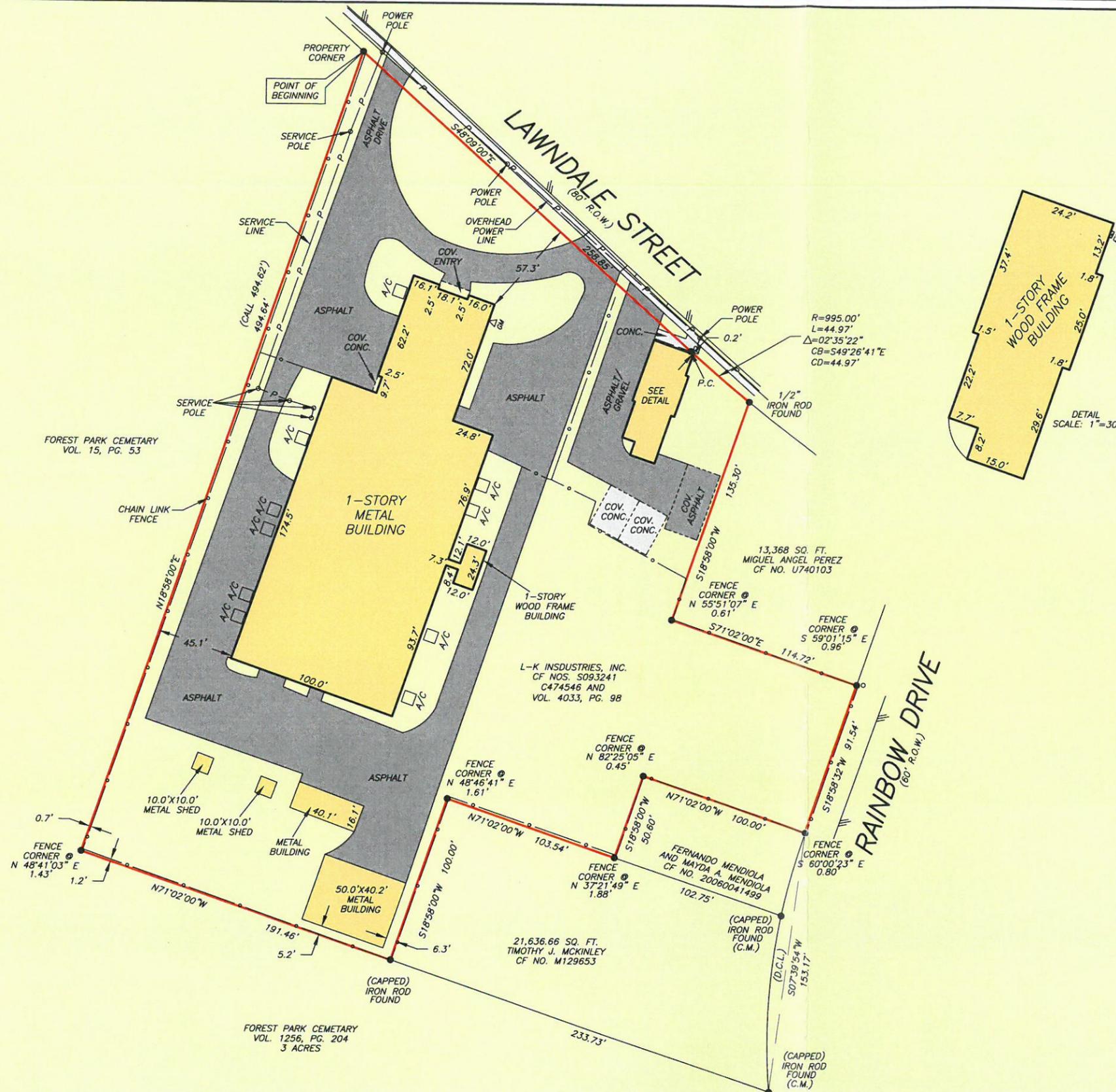
The legal description including a metes and bounds description, a copy of the deed for the designated property, and a plat map are included in this section.

**Figure A** is the proposed MSD boundary at the L-K Industries property located at 6952 Lawndale St.

GF NO. 15001264 OLD REPUBLIC TITLE  
 ADDRESS: 6952 LAWDALE STREET  
 HOUSTON, TEXAS 77023  
 BORROWER: TXE REALTY, LLC

**2.8567 ACRES**  
**SITUATED IN THE JACOB**  
**THOMAS SURVEY, A-74**  
**HARRIS COUNTY, TEXAS**  
 (SEE ATTACHED METES AND BOUNDS DESCRIPTION)

SCALE: 1" = 70'



THIS PROPERTY DOES NOT LIE WITHIN THE  
 100 YEAR FLOOD PLAIN AS PER FIRM  
 PANEL NO. 48201C 0885 L  
 MAP REVISION: 06/18/2007  
 ZONE X  
 BASED ONLY ON VISUAL EXAMINATION OF MAPS.  
 INACCURACIES OF FEMA MAPS PREVENT EXACT  
 DETERMINATION WITHOUT DETAILED FIELD STUDY.

A SUBSURFACE INVESTIGATION  
 WAS BEYOND THE SCOPE OF THIS SURVEY

D.C.L. = DIRECTIONAL CONTROL LINE  
 RECORD BEARING: CF NO. S093241 H.C.D.R.

DRAWN BY: MM

I HEREBY CERTIFY THAT THIS SURVEY WAS MADE  
 ON THE GROUND, THAT THIS PLAT CORRECTLY  
 REPRESENTS THE FACTS FOUND AT THE  
 TIME OF SURVEY AND THAT THERE ARE NO  
 ENCROACHMENTS APPARENT ON THE GROUND,  
 EXCEPT AS SHOWN HEREON. THIS SURVEY IS  
 CERTIFIED FOR THIS TRANSACTION ONLY AND  
 ABSTRACTING PROVIDED IN THE ABOVE  
 REFERENCED TITLE COMMITMENT WAS RELIED  
 UPON IN PREPARATION OF THIS SURVEY.

GEORGE GALE  
 PROFESSIONAL LAND SURVEYOR  
 NO. 4678  
 JOB NO. 15-02418  
 MARCH 30, 2015  
 REVISED: APRIL 09, 2015 (REMOVE NAME)



PAM LONGLEY  
 713-626-9220



**PRECISION**  
 surveyors

281-496-1586 FAX 281-496-1867 210-829-4941 FAX 210-829-1555  
 950 THREADNEEDLE STREET SUITE 150 HOUSTON, TEXAS 77079 1777 NE LOOP 410 SUITE 600 SAN ANTONIO, TEXAS 78217  
 FIRM NO. 10063700

STATE OF TEXAS           §  
                                  §  
                                  §  
                                  §  
                                  §  
COUNTY OF HARRIS       §

Metes & Bounds Description

A tract of land containing 2.8567 Acres situated in the Jacob Thomas Survey, Abstract 74, Harris County Texas, being the remainder of a tract recorded in the name of L-K Industries, Inc. under Harris County Clerk's File (H.C.C.F.) No. S093241, C474546 and Volume 4033, Page 98 of the Harris County Deed Records (H.C.D.R.) all being out of a tract recorded in the name of the Japanese Nursery Company in Volume 969, Page 97 of the H.C.D.R. and being more particularly described by metes and bounds as follows: (bearings based on said (H.C.C.F.) No. S093241)

BEGINNING at a point on a southerly right-of-way line of Lawndale Street (80 Feet wide) being the most northerly northeast corner of Forest Park Cemetery and being the northwesterly corner of this tract;

THENCE, with said southerly right-of-way line of Lawndale Street the following two (2) courses:

1. SOUTH 48° 09' 00" EAST, a distance of 258.85 Feet to a point at a corner of this tract;
2. in southeasterly direction with the arc of a curve to the left having a radius of 995.00 Feet, and arc length of 44.97 Feet, a central angle of 02° 35' 22" and a chord bearing of SOUTH 49° 26' 41" EAST, and a chord distance of 44.97 Feet to a 1/2 Inch iron rod found at the most northerly northeasterly corner of this tract;

THENCE, with the lines of a tract recorded in the name of Miguel Angel Perez under H.C.C.F. No. U740103 the following two (2) courses:

1. SOUTH 18° 58' 00" WEST, a distance of 135.30 Feet to a point at an interior corner of this tract from which a fence corner bears North 55° 51' 07" East a distance of 0.61 Feet;
1. SOUTH 71° 02' 00" EAST, a distance of 114.72 Feet to a point on the westerly right-of-way line of Rainbow Avenue (60 Feet wide) being the most southerly northeasterly corner of this tract from which a fence corner bears South 59° 01' 15" East a distance of 0.95 Feet;

THENCE, SOUTH 18° 58' 32" WEST, with said westerly right-of-way line of said Rainbow Avenue, a distance of 91.54 Feet to a point at the most easterly southeast corner of this tract from which a fence corner bears South 60° 00' 23" East a distance of 0.80 Feet;

THENCE, with the lines of a tract recorded in the name of Fernando Mendiola and Mayda A. Mendiola under H.C.C.F. No. 20060041499 the following two (2) courses:

1. NORTH 71° 02' 00" WEST, a distance of 100.00 Feet to a point at an interior corner of this tract from which a fence corner bears North 82° 25' 05" East a distance of 0.45 Feet;
2. SOUTH 18° 58' 00" WEST, a distance of 50.60 Feet to a point at a reentrant corner of this tract from which a fence corner bears North 37° 21' 49" East a distance of 1.88 Feet;

THENCE, with the lines of a tract recorded in the name of Timothy J. McKinley under H.C.C.F. No. M129653 the following two (2) courses:

1. NORTH 71° 02' 00" WEST, a distance of 103.54 Feet to a point at an interior corner of this tract from which a fence corner bears North 48° 46' 41" East a distance of 1.61 Feet;
2. SOUTH 18° 58' 00" WEST, a distance of 100.00 Feet to an iron rod found at the most westerly southeast corner of this tract;

THENCE, NORTH 71° 02' 00" WEST, with a north line of a tract recorded in the name of the aforementioned Forest Park Cemetery in Volume 1256, Page 204 of the H.C.D.R., a distance of 191.46 Feet to a point at the southwesterly corner of this tract from which a fence corner bears North 48° 41' 03" East a distance of 1.43 Feet;

THENCE, NORTH 18° 58' 00" EAST, with a west line of a tract recorded in the name of said Forest Park Cemetery in Volume 15, Page 53 of the Harris County Map Records, a distance of

494.64 Feet (called 494.62 Feet) to the POINT OF BEGINNING and containing 2.8567 Acres of land.

(See attached drawing)

George J. Gale  
Registered Professional Land Surveyor  
No. 4678  
Job No. 15-02418gg  
April 9, 2015



WD  
ETC  
J

NOTICE OF CONFIDENTIALITY RIGHTS; IF YOU ARE A NATURAL PERSON, YOU MAY REMOVE OR STRIKE ANY OR ALL OF THE FOLLOWING INFORMATION FROM ANY INSTRUMENT THAT TRANSFERS AN INTEREST IN REAL PROPERTY BEFORE IT IS FILED FOR RECORD IN THE PUBLIC RECORDS: YOUR SOCIAL SECURITY NUMBER OR YOUR DRIVER'S LICENSE NUMBER.

SPECIAL WARRANTY DEED WITH VENDOR'S LIEN

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

THAT, L-K INDUSTRIES, INC., a Texas corporation (formerly named L-K PUMP VALVE COMPANY, a Texas corporation) (hereinafter called "Grantor", whether one or more), for and in consideration of the sum of TEN AND 00/100th DOLLARS (\$10.00) cash and other good and valuable consideration in hand paid by TXE REALTY, LLC, a Delaware limited liability company (hereinafter called "Grantee", whether one or more), whose address for mailing purposes is 6952 Lawndale Street, Houston, Texas, 77023, the receipt and sufficiency of which are hereby acknowledged and confessed, and the further consideration of the sum of NINE HUNDRED TWENTY-FIVE THOUSAND AND NO/100th DOLLARS (\$925,000.00) paid by INTEGRITY BANK, SSB, a Texas Savings Bank ("Beneficiary") at the special instance and request of Grantee, the receipt of which is hereby acknowledged and confessed, and as evidence of such advancement and additional consideration, TXE CAPITAL LLC, a Delaware limited liability company, has executed a promissory note of even date herewith (the "Note") in the original principal sum of FIVE MILLION AND NO/100th DOLLARS (\$5,000,000.00) payable to the order of Beneficiary, which Note is secured by the Vendor's Lien herein reserved and is additionally secured by a Deed of Trust of even date herewith, executed by Grantee herein to CHARLES M. NEFF, JR., Trustee for the benefit of Beneficiary; has GRANTED, SOLD and CONVEYED, and by these presents does GRANT, SELL, and CONVEY, unto Grantee all that certain lot, tract or parcel of land, together with all improvements thereon, described as follows:

1EE

ASG  
1EE  
2OR

ER 068-31-0741

A tract of land containing 2.8567 Acres situated in the Jacob Thomas Survey, Abstract 74, Harris County, Texas, being the remainder of a tract recorded in the name of L-K Industries under Harris County Clerk's File (H.C.C.F) No. S093241, C474546 and Volume 4033, Page 98 of the Harris County Deed Records (H.C.D.R.) all being out of a tract recorded in the name of the Japanese Nursery Company in Volume 969, Page 97 of the H.C.D.R. and being more particularly described by metes and bounds on Exhibit "A" attached hereto and incorporated herein,

HOLD:  
OLD REPUBLIC NATIONAL  
TITLE INSURANCE COMPANY  
E. LONGLEY  
GF# 15001264

ER 068-31-0742

TO HAVE AND TO HOLD the above described property, together with all and singular the rights and appurtenances thereto in anywise belonging unto Grantee, Grantee's heirs, legal and personal representatives and assigns forever; and Grantor does hereby bind Grantor, Grantor's heirs, legal representatives, successors and assigns, to warrant and forever defend, all and singular, the said property unto Grantee, Grantee's heirs, legal and personal representatives 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.

But it is expressly agreed and stipulated that the Vendor's Lien is retained against the above described property, premises and improvements, until the above described Note, and all interest thereon, is fully paid according to its face, tenor, effect and reading, when this deed shall become absolute. In consideration of the payment of the sum evidenced by the Note, Grantor hereby transfers, sets over, assigns and conveys unto Beneficiary and its assigns, the vendor's lien and superior title herein retained and reserved against the property herein conveyed, in the same manner and to the same extent as if the Note had been executed in Grantor's favor and by Grantor assigned to Beneficiary, without recourse.

This conveyance is made and accepted expressly subject to all restrictions, covenants, conditions, easements, agreements, assessments, maintenance charges, leases, grants or reservations, previously conveyed or reserved mineral and royalty interests, if any, shown of record in the hereinabove mentioned County and State as of the date hereof, and is further made subject to all zoning laws, regulations and ordinances of municipal and other governmental authorities, if any, but only to the extent they are still in effect and relate to the hereinabove described property.

Executed the date notarized below, but to be effective as of the 14<sup>th</sup> day of April, 2015.

L-K INDUSTRIES, INC. (formerly Named L-K Pump Valve Company), a Texas corporation

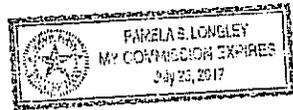
By *Kennon H. Huggins*  
Kennon H. Huggins, President

2OR

STATE OF TEXAS §

COUNTY OF HARRIS §

The foregoing instrument was acknowledged before me on the 15<sup>th</sup> day of April, 2015 by Kennon H. Huggins as President on behalf of L-K INDUSTRIES, INC. (formerly Named L-K Pump Valve Company), a Texas corporation.



*Pamela S. Longley*  
NOTARY PUBLIC IN AND FOR  
THE STATE OF TEXAS

EXHIBIT "A"

Property Description

BEGINNING at a point on a southerly right-of-way line of Lawndale Street (80 Feet wide) being the most northerly northeast corner of Forest Park Cemetery and being the northwesterly corner of this tract;

D

THENCE, with said southerly right-of-way line of Lawndale Street the following two (2) courses:

1. SOUTH 48° 09' 00" EAST, a distance of 258.85 Feet to a point at a corner of this tract;
2. in southeasterly direction with the arc of a curve to the left having a radius of 995.00 Feet, and arc length of 44.97 Feet, a central angle of 02° 35' 22" and a chord bearing of SOUTH 49° 26' 41" EAST, and a chord distance of 44.97 Feet to a 1/2 Inch iron rod found at the most northerly northeasterly corner of this tract;

THENCE, with the lines of a tract recorded in the name of Miguel Angel Perez under H.C.C.F. No. U740103 the following two (2) courses:

1. SOUTH 18° 58' 00" WEST, a distance of 135.30 Feet to a point at an interior corner of this tract from which a fence corner bears North 55° 51' 07" East a distance of 0.61 Feet;
1. SOUTH 71° 02' 00" EAST, a distance of 114.72 Feet to a point on the westerly right-of-way line of Rainbow Avenue (60 Feet wide) being the most southerly northeasterly corner of this tract from which a fence corner bears South 59° 01' 15" East a distance of 0.95 Feet;

THENCE, SOUTH 18° 58' 32" WEST, with said westerly right-of-way line of said Rainbow Avenue, a distance of 91.54 Feet to a point at the most easterly southeast corner of this tract from which a fence corner bears South 60° 00' 23" East a distance of 0.80 Feet;

THENCE, with the lines of a tract recorded in the name of Fernando Mendiola and Mayda A. Mendiola under H.C.C.F. No. 26060041499 the following two (2) courses:

1. NORTH 71° 02' 00" WEST, a distance of 106.00 Feet to a point at an interior corner of this tract from which a fence corner bears North 82° 25' 05" East a distance of 0.45 Feet;
2. SOUTH 18° 58' 00" WEST, a distance of 50.60 Feet to a point at a reentrant corner of this tract from which a fence corner bears North 37° 21' 49" East a distance of 1.86 Feet;

THENCE, with the lines of a tract recorded in the name of Timothy J. McKinley under H.C.C.F. No. M129653 the following two (2) courses:

1. NORTH 71° 02' 00" WEST, a distance of 103.54 Feet to a point at an interior corner of this tract from which a fence corner bears North 48° 46' 41" East a distance of 1.61 Feet;
2. SOUTH 18° 58' 00" WEST, a distance of 100.00 Feet to an iron rod found at the most westerly southeast corner of this tract;

THENCE, NORTH 71° 02' 00" WEST, with a north line of a tract recorded in the name of the aforementioned Forest Park Cemetery in Volume 1256, Page 204 of the H.C.D.R., a distance of 191.46 Feet to a point at the southwesterly corner of this tract from which a fence corner bears North 48° 41' 03" East a distance of 1.43 Feet;

THENCE, NORTH 18° 58' 06" EAST, with a west line of a tract recorded in the name of said Forest Park Cemetery in Volume 15, Page 53 of the Harris County Map Records, a distance of 494.64 Feet (called 494.62 Feet) to the POINT OF BEGINNING and containing 2.8567 Acres of land.

ER 068-31-0743

ER 068-31-0744

20150160794  
# Pages 4  
04/20/2015 11:23 AM  
e-Filed & e-Recorded in the  
Official Public Records of  
HARRIS COUNTY  
STAN STANART  
COUNTY CLERK  
Fees \$24.00

RECORDERS MEMORANDUM

This instrument was received and recorded electronically and any blackouts, additions or changes were present at the time the instrument was filed and recorded.

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.



*Stan Stanart*

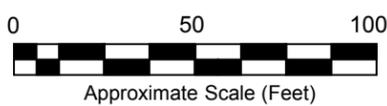
COUNTY CLERK  
HARRIS COUNTY, TEXAS



**LEGEND**

-  Proposed MSD Boundary
-  Groundwater Monitoring Well

Date of Aerial: 4/8/2014



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

**Proposed MSD Boundary Map**

CLIENT:	L-K Industries	PM:	MFM
LOCATION:	6952 Lawndale St. Houston, Texas 77023		CHECKED:
DETAILED:	DESIGNED:	PROJECT NO:	FIGURE:
2/3/16	LMG	821-101	<b>A</b>

## 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 a 2.8567-acre tract of land with two occupants, the L-K Industries facility and Caesar's Paint and Body Shop.

The property is located southeast of downtown Houston, Harris County, Texas and within the City of Houston limits. The affected property is located in a mix of residential and commercial development (**Figure B**). **Figure B** provides a description of the surrounding land use within 500-feet of the site.

The current and future use of the subject property is expected to remain commercial.

- North – residential development;
- East – a mix of residential and commercial development;
- South –residential development/Forest Park Lawndale Cemetery;
- West – Forest Park Lawndale Cemetery.



**LEGEND**

-  Property Boundary
-  500-ft Boundary



Date of Aerial: 7/31/2015

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

**Surrounding Land Use Map  
 500-ft Boundary**

CLIENT:	L-K Industries	PM:	MFM
LOCATION:	6952 Lawndale St. Houston, Texas 77023		CHECKED:
DETAILED:	DESIGNED:	PROJECT NO:	FIGURE:
2/3/16	LMG	821-101	<b>B</b>

## Appendix C

A site map showing:

- 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 C1 – Topographic Map

Figure C2 – Watershed Map

Figure C3 – Flood Plain Map

Figure C4-1 – PCE Concentrations in Groundwater (January/March 2016)

Figure C4-2 – TCE Concentrations in Groundwater (January/March 2016)

Figure C4-3 – Cis-1,2-DCE Concentrations in Groundwater (January/March 2016)

Figure C5 – Soil Boring Location Map

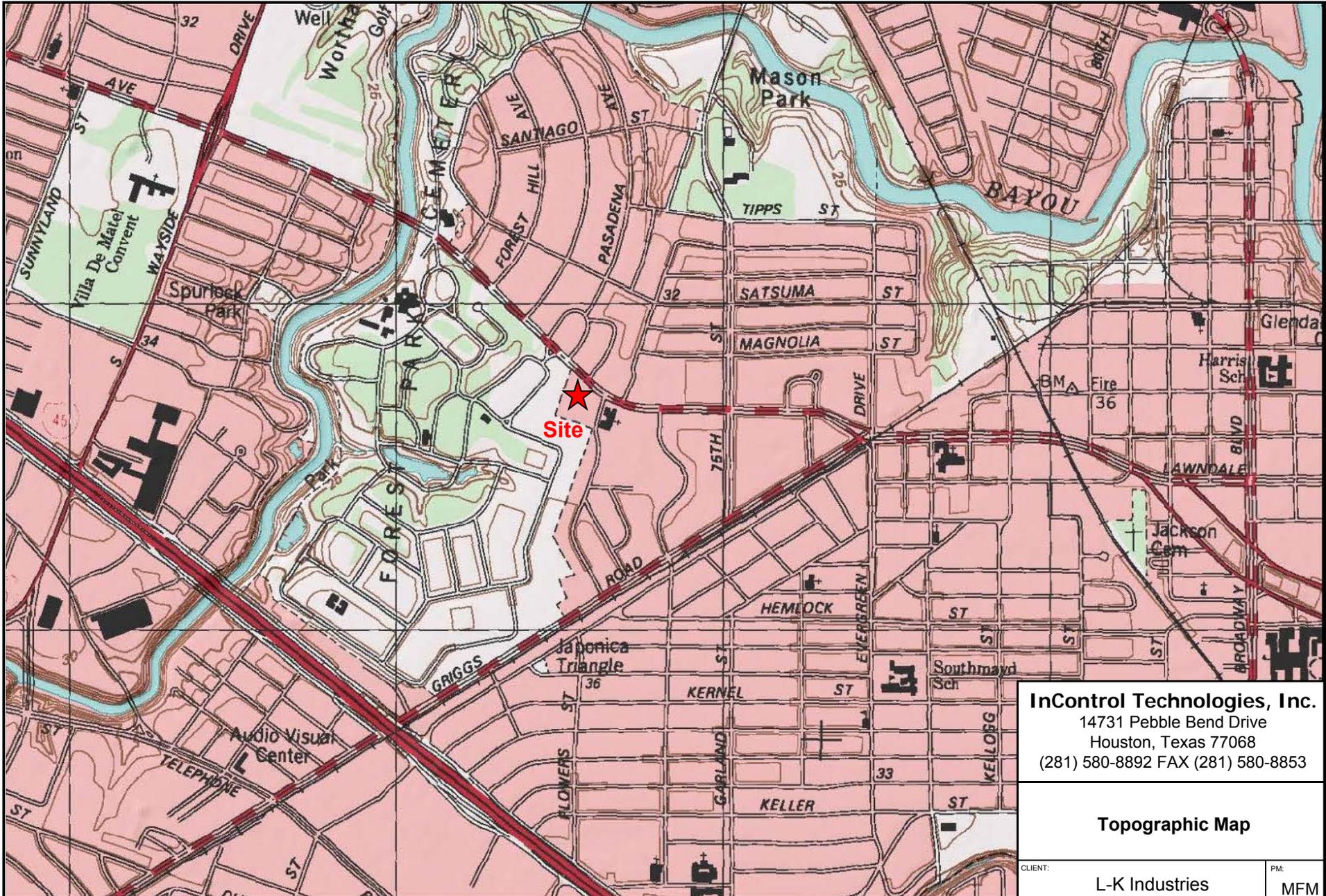
Figure C6 – Groundwater Monitoring Well Location Map

Figure C7 – Groundwater Gradient Map (January/March 2016)

The subject property is located in the Brays Bayou watershed (**Figure C2**) and the property is not located within the 100-year floodplain (**Figure C3**).

**Figure C4-1** through **Figure C4-3** depicts the PCLE zones associated with the subject property. **Figure C5** and **Figure C6** depict the locations of the soil and groundwater samples, respectively. There is a groundwater high between MW-5 and MW-3. From the split, groundwater flows both to the north and to the south. The northern gradient is estimated at 0.001 ft/ft. The southern gradient is estimated at 0.00096 ft/ft (**Figure C7**). The primary COCs are tetrachloroethene (PCE), trichloroethene (TCE), and cis-1,2-dichloroethene (cis-1,2-DCE) (**Figure C4-1** through **Figure C4-3**).

The first groundwater bearing unit is comprised of sand and is encountered at a depth of approximately 18- to 23-ft bgs during drilling. The base of the first groundwater bearing unit is encountered at a depth of approximately 20- to 23-ft bgs and is underlain by a clay. The average static depth to groundwater in the monitoring wells is 11-ft bgs.



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

**Topographic Map**

CLIENT:		L-K Industries	PM:	MFM
LOCATION:		6952 Lawndale St. Houston, Texas 77023		CHECKED:
DETAILED:	DESIGNED:	PROJECT NO:	FIGURE:	
9/10/15	LMG	821-101	C1	

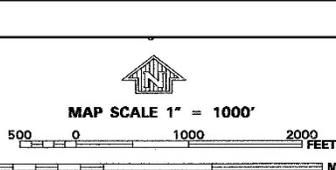
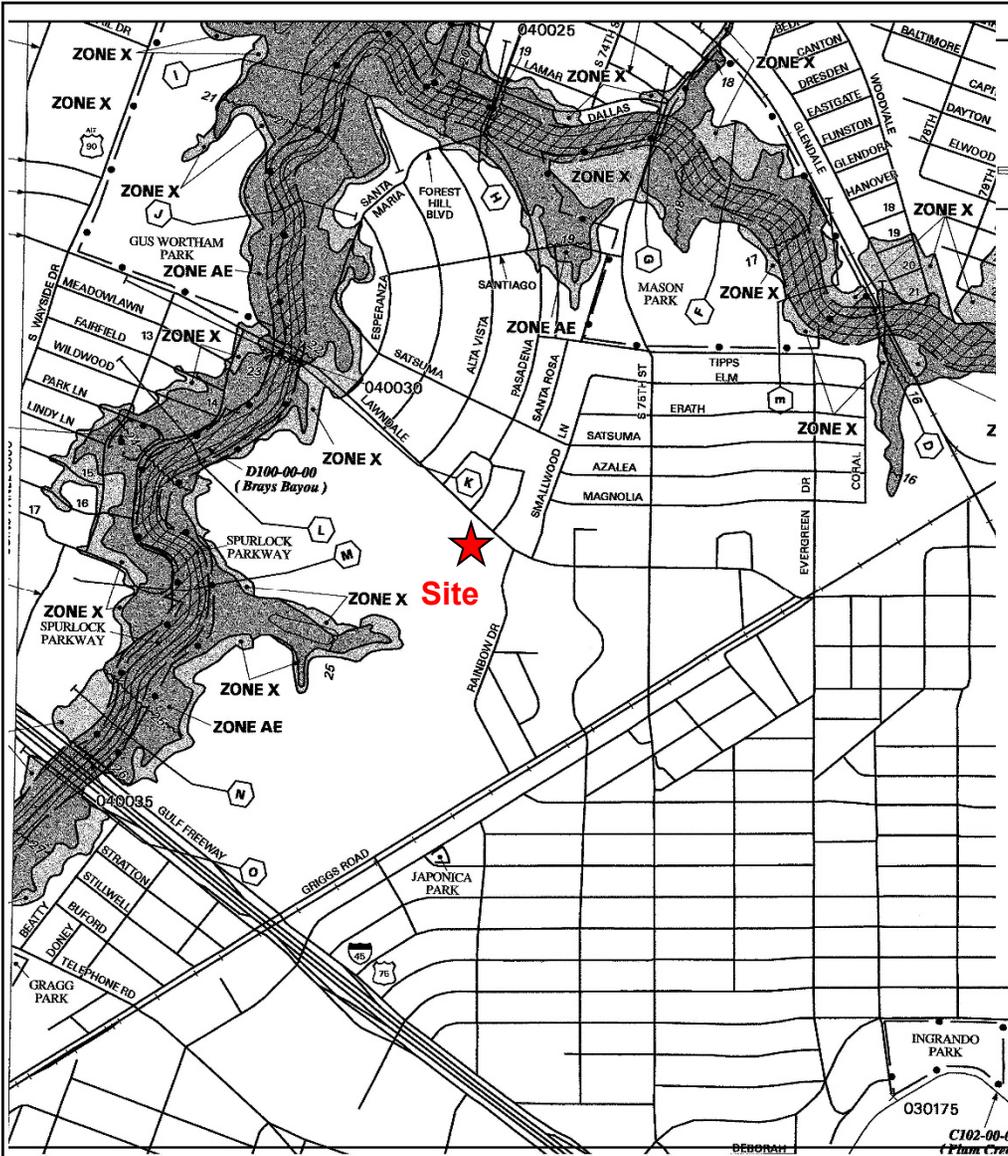


Map provided by MyTopo.com



Source: Harris County Flood Control District

<b>InControl Technologies, Inc.</b> 14731 Pebble Bend Drive Houston, Texas 77068 (281) 580-8892 FAX (281) 580-8853			
<b>Watershed Map</b>			
CLIENT: L-K Industries		PM: MFM	
LOCATION: 6952 Lawndale St. Houston, Texas 77023		CHECKED:	
DETAILED: 2/2/16	DESIGNED: LMG	PROJECT NO: 821-101	FIGURE: C2



### LEGEND

- SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD EVENT**
- The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AG, AR, A99, V, and VE. The Base Elevation is the water surface elevation of the 1% annual chance flood.
- ZONE A** No base flood elevations determined.
  - ZONE AE** Base flood elevations determined.
  - ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.
  - ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
  - ZONE AR** Area of special flood hazard formerly protected from the 1% annual chance flood event by a flood control system that was subsequently deteriorated. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood event.
  - ZONE A99** Area to be protected from 1% annual chance flood event by a Federal flood protection system under construction; no base flood elevations determined.
  - ZONE V** Coastal flood zone with velocity hazard (wave action); no base flood elevations determined.
  - ZONE VE** Coastal flood zone with velocity hazard (wave action); base flood elevations determined.
- FLOODWAY AREAS IN ZONE AE**
- The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.
- OTHER FLOOD AREAS**
- ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
  - OTHER AREAS**
  - ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.
  - ZONE D** Areas in which flood hazards are undetermined, but possible.
  - COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS**
  - OTHERWISE PROTECTED AREAS (OPAs)**
- CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.
- Floodplain boundary
  - Floodway boundary
  - Zone D boundary
  - ..... CBRS and OPA boundary
  - Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or velocities.
  - ~~~~~513~~~~~ Base Flood Elevation line and value, elevation in feet\*

PANEL 0885L

**FIRM**  
FLOOD INSURANCE RATE MAP  
HARRIS COUNTY,  
TEXAS  
AND INCORPORATED AREAS

PANEL 885 OF 1150  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

COMMUNITY	NUMBER	PANEL	SUFFIX
HARRIS COUNTY	48025	0885	L
UNINCORPORATED AREAS	48027	0885	L
DALLAS PARK CITY OF	48028	0885	L

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

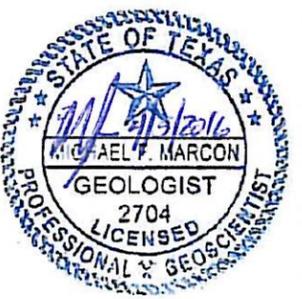
**MAP NUMBER**  
48201C0885L

**MAP REVISED:**  
JUNE 18, 2007

Federal Emergency Management Agency

Source: FEMA

<b>InControl Technologies, Inc.</b>			
14731 Pebble Bend Drive			
Houston, Texas 77068			
(281) 580-8892 FAX (281) 580-8853			
<b>Flood Plain Map</b>			
CLIENT:	L-K Industries		PM: MFM
LOCATION:	6952 Lawndale St. Houston, Texas 77023		CHECKED:
DETAILED:	DESIGNED:	PROJECT NO:	FIGURE:
2/2/16	LMG	821-101	C3

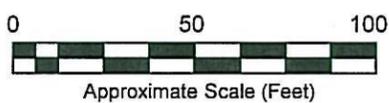


**LEGEND**

- Property Boundary
- 1st GWBU Monitoring Well

Monitoring Well MW-7 PCE Concentration <0.0006

Date of Aerial: 4/8/2014



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

**PCE Concentrations in Groundwater  
 January/March 2016**

CLIENT: L-K Industries		PM: MFM
LOCATION: 6952 Lawndale St. Houston, Texas 77023		CHECKED
DETAILED: 1/28/16	DESIGNED: LMG	PROJECT NO: 821-101
		FIGURE: C4-1

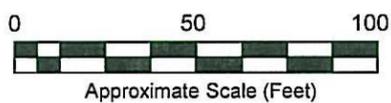


**LEGEND**

- Property Boundary
- 1<sup>st</sup> GWBU Monitoring Well

Monitoring Well MW-7 TCE Concentration  $<0.0005$

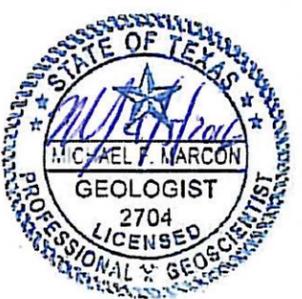
Date of Aerial: 4/8/2014



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

**TCE Concentrations in Groundwater  
 January/March 2016**

CLIENT:	L-K Industries	PM:	MFM
LOCATION:	6952 Lawndale St. Houston, Texas 77023	CHECKED:	
DETAILED:	DESIGNED:	PROJECT NO:	FIGURE:
1/28/16	LMG	821-101	C4-2

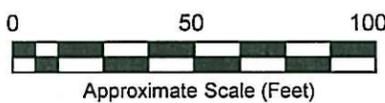


**LEGEND**

-  Property Boundary
-  1<sup>st</sup> GWBU Monitoring Well

Monitoring Well MW-7 Cis-1,2-DCE Concentration <0.0006

Date of Aerial: 4/8/2014



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

**Cis-1,2-DCE Concentrations in Groundwater January/March 2016**

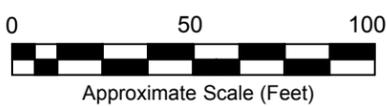
CLIENT:	L-K Industries	PM:	MFM
LOCATION:	6952 Lawndale St. Houston, Texas 77023	CHECKED:	
DETAILED:	DESIGNED:	PROJECT NO:	FIGURE:
1/28/16	LMG	821-101	<b>C4-3</b>



**LEGEND**

Date of Aerial: 4/8/2014

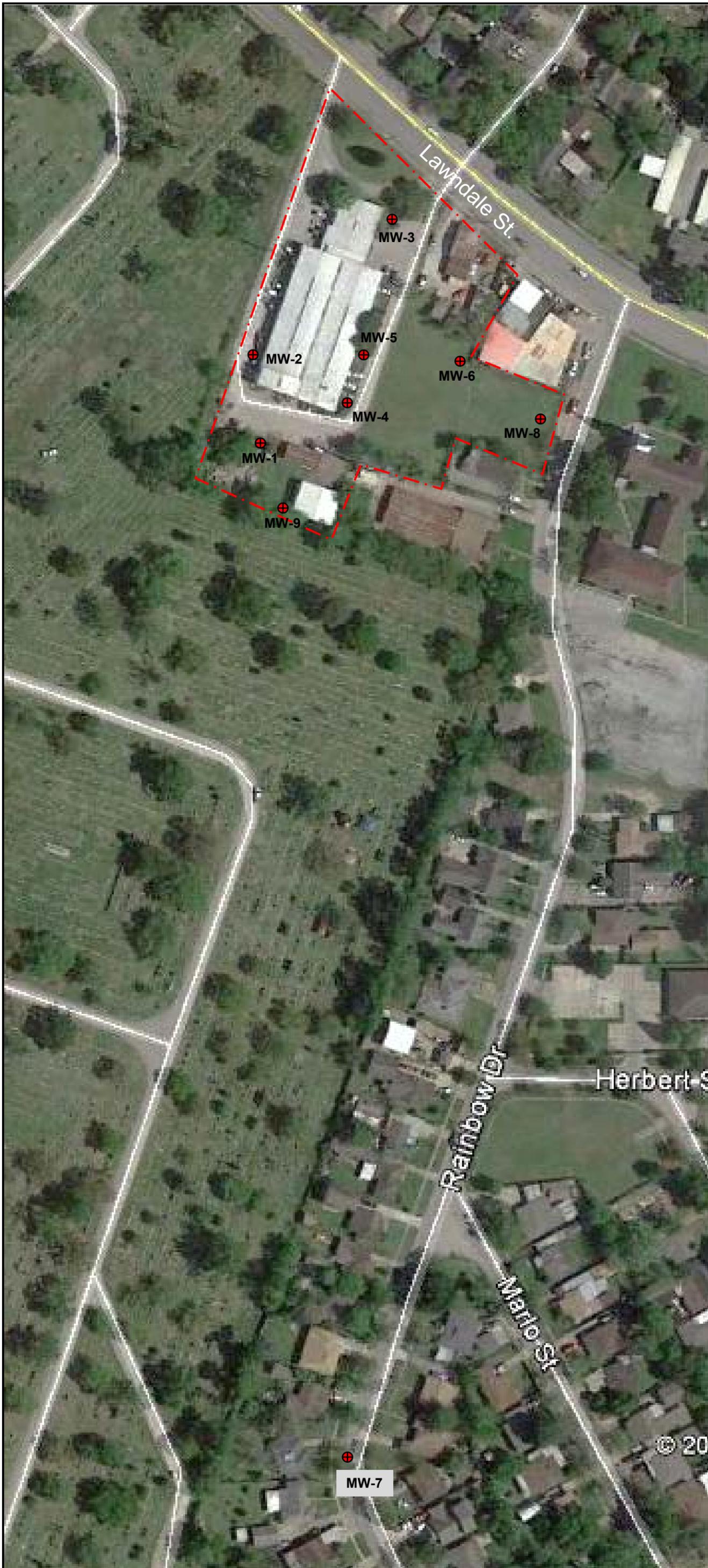
- Property Boundary
- 1<sup>st</sup> GWBU Groundwater Monitoring Well
- Soil Boring Location-VOCs/TPH
- Soil Boring Location-VOCs Only
- Surface Soil Location-Metals Only
- Soil Boring Location-VOCs/TPH/Metals
- Surface Soil Location-Metals/pH/TPH
- Vapor Sample Locations-VOCs Only
- Cone Penetrometer Location



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

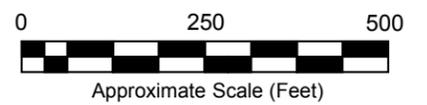
**Soil Boring Location Map**

CLIENT:	L-K Industries		PM:	MFM
LOCATION:	6952 Lawndale St. Houston, Texas 77023		CHECKED	
DETAILED:	DESIGNED:	PROJECT NO:	FIGURE:	
7/24/15	LMG	821-101	<b>C5</b>	



**LEGEND**

-  Property Boundary
-  Groundwater Monitoring Well

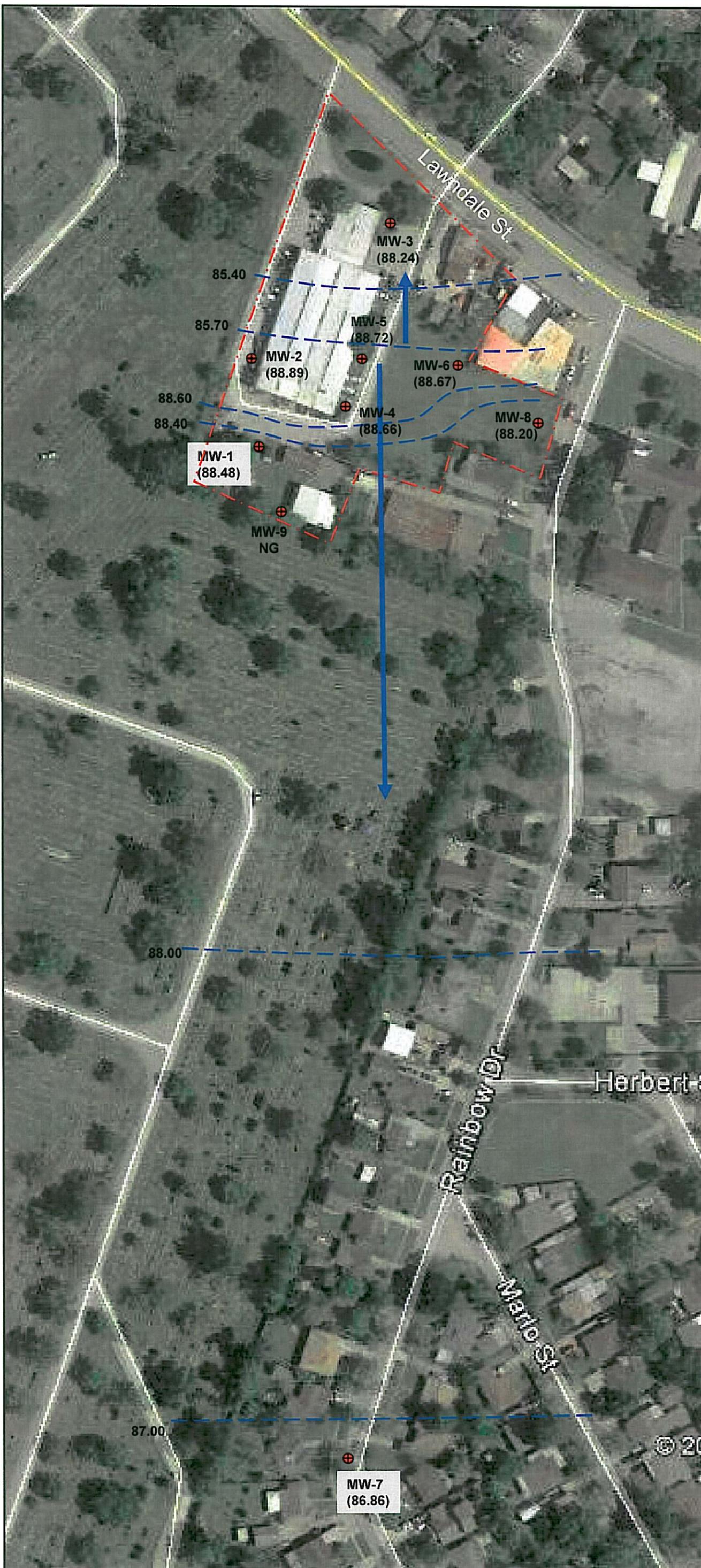


Date of Aerial: 4/8/2014

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

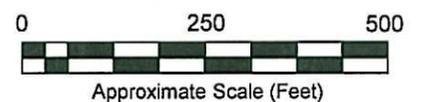
**Monitoring Well Location Map**

CLIENT: L-K Industries		PM: MFM
LOCATION: 6952 Lawndale St. Houston, Texas 77023		CHECKED:
DETAILED: 7/22/15	DESIGNED: LMG	PROJECT NO: 821-101
		FIGURE: <b>C6</b>



**LEGEND**

- Property Boundary
- Groundwater Monitoring Well
- Groundwater Gradient Contour



Date of Aerial: 4/8/2014

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

**Groundwater Gradient Map  
 January 2016**

CLIENT: L-K Industries		PM: MFM
LOCATION: 6952 Lawndale St. Houston, Texas 77023		CHECKED
DETAILED: 1/28/16	DESIGNED: LMG	PROJECT NO: 821-101 FIGURE: C7

## Appendix D

For each contaminant of concern within the designated groundwater:

- a. A description of the ingestion protective concentration level exceedance zone and the non-ingestion protective concentration level exceedance zone, including a specification of the horizontal area and the minimum and maximum depth below ground surface.
- b. The level of contamination, the ingestion protective concentration level, and the non-ingestion protective concentration level, all expressed as mg/L units.
- c. Its basic geochemical properties (e.g. whether the contaminant of concern migrates with groundwater, floats, or is soluble in water).

---

**A) Protective Concentration Level Exceedance (PCLE) Zone** – A review of recent groundwater sampling data indicates that the COCs that currently exceed the Tier 1 <sup>GW</sup>GW<sub>Ing</sub> PCLs are tetrachloroethene (PCE), trichloroethene (TCE), cis-1,2-dichloroethene (cis-1,2-DCE), vinyl chloride (VC), and 1,1-dichloroethene (1,1-DCE) (**Table D1**). The PCLE zones are depicted on **Figure C4-1** through **Figure C4-3** and are discussed in more detail below. The concentrations in all monitoring wells are relatively stable. The area of affected groundwater is fully delineated both laterally and vertically. A cone penetrometer testing (CPT) event was conducted to verify the existence of a confining layer. A competent clay was encountered at approximately 50-ft bgs at each location. A comparison of the groundwater sampling results with applicable non-ingestion protective concentration levels (<sup>Air</sup>GW<sub>Inh-v</sub>) indicates that one of the groundwater samples (MW-5) reported a TCE concentration of 35 mg/L, which is above the <sup>Air</sup>GW<sub>Inh-v</sub> PCL.

ESE advanced eight soil borings across the subject property. InControl Technologies advanced twenty-eight soil borings across the subject property, advanced four hand auger borings, and installed nine groundwater monitoring wells. Samples were analyzed for volatile organic compounds, total petroleum hydrocarbons, and RCRA Metals. Thirty-one samples exceeded the Tier 1 <sup>GW</sup>Soil<sub>Ing</sub> PCL for at least one VOC. One sample, TMW-05 (2-4), exceeded the Tier 1 <sup>Tot</sup>Soil<sub>Comb</sub> PCL for TCE at a concentration of 24.3 mg/kg. Only one TPH sample exceeded a Tier 1 <sup>GW</sup>Soil<sub>Ing</sub> PCL. Sample SB-3 (0-2) reported a C6 to C12 carbon fraction of 190 mg/kg. This sample was below the Tier 1 <sup>Tot</sup>Soil<sub>Comb</sub> PCL. Fifteen soil samples exceeded a Tier 1 <sup>GW</sup>Soil<sub>Ing</sub> PCL for at least one of the RCRA Metals. Only one sample, SB-1 (0-2), exceeded the Tier 1 <sup>Tot</sup>Soil<sub>Comb</sub> PCL for lead. SB-17 was later advanced next to SB-1 in order to replicated the elevated lead result. The lead concentration in SB-17 (0-2) was 53.7 mg/kg. It was determined that the result from SB-1 was anomalous.

The first groundwater bearing unit is comprised of sand and is encountered at a depth of approximately 18- to 23-ft bgs during drilling. The base of the first groundwater bearing unit is encountered at a depth of approximately 20- to 23-ft bgs and is underlain by a clay. The average static depth to groundwater in the monitoring wells is 11-ft bgs. The groundwater bearing unit is a sand unit which is assumed to be a Class 2 groundwater resource.

**B) Groundwater Data Ingestion PCL Exceedences** – The following table represents the most recent groundwater monitoring data for the site collected in January 2016.

**Table D1 – Groundwater Ingestion PCL Exceedences in First Groundwater Bearing Unit**

Monitoring Well ID	PCE (mg/L)	TCE (mg/L)	Cis-1,2-DCE (mg/L)	VC (mg/L)	1,1-DCE (mg/L)
<b>Tier 1 <sup>GW</sup>GW<sub>Ing</sub> PCLs</b>	<b>0.005</b>	<b>0.005</b>	<b>0.07</b>	<b>0.002</b>	<b>0.007</b>
<b>Tier 1 <sup>Air</sup>GW<sub>Inh-v</sub> PCLs</b>	<b>500</b>	<b>24</b>	<b>1,200</b>	<b>3.8</b>	<b>1,700</b>
MW-1	<0.006	<b>9.1</b>	<b>0.69</b>	<b>0.0064 J</b>	<b>0.02 J</b>
MW-2	<0.0006	<0.0005	<0.0006	<0.0004	<0.0005
MW-3	<0.0006	<b>0.0055 J</b>	<0.0006	<0.0004	<0.0005
MW-4	<b>0.0075 J</b>	<b>13.0</b>	<b>0.13</b>	<b>0.0095 J</b>	<0.005
MW-5	<0.015	<b>35</b>	<b>0.29</b>	<0.01	<0.012
MW-5D	<b>0.0047 J</b>	<b>2.8</b>	<b>0.34</b>	<0.002	<b>0.0074 J</b>
MW-6	<b>0.031</b>	<b>0.024</b>	<0.0006	<0.0004	<0.0005
MW-7	<0.0006	<0.0005	<0.0006	<0.0004	<0.0005
MW-8	<0.0006	<0.0005	<0.0006	<0.0004	<0.0005
MW-9	<0.0006	<0.0005	<0.0006	<0.0004	<0.0005

Notes – Values in **Bold** exceed the <sup>GW</sup>GW<sub>Ing</sub> PCL (ingestion PCLE)

Values in **Bold** exceed the <sup>Air</sup>GW<sub>Inh-v</sub> PCL (non-ingestion PCLE)

All groundwater COC concentrations observed at the site to date are less than the <sup>Air</sup>GW<sub>Inh-v</sub> non-ingestion PCL with the exception of MW-5. Monitoring well MW-5 is located in the source area and reported a concentration of 35.0 mg/L during the January 2016 sampling event. The TCE concentrations in this well have continued to decrease each of the last three sampling events. Overall, the concentrations are stable to declining. Monitoring well MW-9 was installed on the southernmost property boundary downgradient of the source area. This well did not report any COCs above a laboratory detection limit. The plume is laterally delineated.

**C) Groundwater COCs** – The chemicals of concern (COCs) detected in groundwater samples (TCE and its breakdown products) are associated with the vapor degreaser used at the L-K Industries facility within the proposed MSD boundary.

Chlorinated solvents are characterized by their high volatilities, high densities, low viscosities, low interfacial tension, low absolute solubilities, high relative solubilities, low partitioning to soil materials and low degradability. Chlorinated solvents will dissolve in water at low concentrations but once the groundwater has reached the saturation limit for that compound, the chlorinated solvent will form a separate phase in equilibrium with the water. Because chlorinated solvents have higher densities relative to water, the separate phase may “sink”. However, these compounds tend to form micro-droplets which adhere to the soil particles within the saturated unit. It is also common for these chemicals to collect within the capillary

fringe between the vadose zone and the saturated unit. Because of these characteristics, these compounds are referred to as “dense non-aqueous phase liquids” (DNAPLs). In extremely high concentrations DNAPLs can penetrate the water table and form “pools” on the top of less permeable layers. Historically, DNAPL has not been identified in any of the monitor wells within the groundwater monitor well network using both an interface probe and visual screening.

Based on the field observations and laboratory results, it appears that the groundwater COCs on the subject property are primarily dissolved in the shallow groundwater.

## 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  $^{Air}Soil_{Inh-v}$ ) and groundwater ( $^{Air}GW_{Inh-v}$ ), 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  $^{Air}GW_{Inh-v}$  for groundwater). The following is a list of the tables in **Appendix E**.

<b>Table E1</b>	Volatile Organic Compounds (VOCs) in Soil
<b>Table E2</b>	Total Petroleum Hydrocarbons (TPH) in Soil
<b>Table E3</b>	RCRA Metals in Soil
<b>Table E4</b>	Volatile Organic Compounds (VOCs) in Groundwater
<b>Table E5</b>	Total Petroleum Hydrocarbons (TPH) in Groundwater
<b>Table E6</b>	RCRA Metals in Groundwater

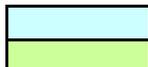
Table E1  
Summary of Volatile Organic Compounds Detected in Soil  
L-K Industries  
6952 Lawndale St., Houston, TX 77023  
VCP No. 2733

Sample ID	Depth	Date	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl chloride	1,1,2-Trichloroethane	1,2-Dichloroethane
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Residential	Soil <sub>Comb</sub> <sup>Tot</sup>		710	18	140	590	2300	3.7	18	11
Residential	Soil <sub>Ing</sub> <sup>GW</sup>		0.05	0.034	0.25	0.49	0.05	0.022	0.02	0.014
TMW-01	3-5	1/6/2015	<0.0012	<0.00056	<0.00055	<0.00053	<0.0005	<0.0007	<0.0008	<0.00057
TMW-02	2-4	1/6/2015	<0.001	0.0015 J	<0.00045	<0.00043	<0.00041	<0.00057	<0.00066	<0.00047
TMW-03	2-4	1/6/2015	<0.0011	0.0015 J	<0.00049	<0.00047	<0.00045	<0.00063	<0.00072	<0.00051
TMW-04	8-10	1/6/2015	<0.0012	<0.00058	<0.00056	<0.00054	<0.00051	<0.00072	<0.00083	<0.00059
TMW-05	2-4	1/6/2015	0.0163	24.3	0.0689	<0.00049	<0.00046	<0.00065	0.0253	<0.00053
	12-14	1/6/2015	0.0012 J	2.6	0.004 J	<0.00048	<0.00046	<0.00064	0.0148	<0.00053
TMW-07	12-14	1/7/2015	<0.0012	0.0021 J	<0.00053	<0.00051	<0.00049	<0.00068	<0.00078	<0.00056
TMW-08	8-10	1/7/2015	<0.0013	9.01	4.01	0.0267	0.0031 J	0.0011 J	0.0137	<0.00059
SB-1	0-2	5/11/2015	<0.0013	0.013	0.11	0.0041 J	<0.0019	<0.0013	<0.0025	<0.00075
	4-6	5/11/2015	<0.0012	0.011	1.7	0.11	<0.0018	0.047	<0.0024	<0.00073
	10-12	5/11/2015	<0.0012	0.77	0.61	0.055	<0.0017	0.0054	<0.0023	<0.0007
SB-2	2-4	5/11/2015	<0.0012	0.027	1	0.074	<0.0018	0.12	<0.0024	<0.00072
	6-8	5/11/2015	<0.0011	0.53	0.74	0.044	<0.0017	0.024	<0.0023	<0.00068
	10-12	5/11/2015	<0.0011	0.21	0.077	0.01	<0.0016	0.0041	<0.0022	<0.00066
SB-3	0-2	5/11/2015	<0.0012	0.022	0.33	0.033	<0.0018	0.0056	<0.0024	<0.00071
	6-8	5/11/2015	<0.0012	0.21	0.21	0.018	<0.0018	0.003	<0.0023	<0.0007
	10-12	5/11/2015	<0.0011	0.23	0.075	0.0086	<0.0017	0.0017 J	<0.0023	<0.00068
SB-4	2-4	5/11/2015	<0.0012	0.077	0.024	<0.0011	<0.0018	<0.0012	<0.0024	<0.00072
	6-8	5/11/2015	<0.0011	<0.0017	<0.0016	<0.00097	<0.0016	<0.0011	<0.0022	<0.00065
	10-12	5/11/2015	<0.0012	0.011	0.0022 J	<0.0011	<0.0019	<0.0012	<0.0025	<0.00074
SB-5	0-2	5/11/2015	<0.0013	0.97	0.032	<0.0011	<0.0019	<0.0013	<0.0025	<0.00076
	4-6	5/11/2015	0.0016 J	3.6	0.055	<0.0011	<0.0018	<0.0012	<0.0024	<0.00072
	10-12	5/11/2015	<0.0012	1.1	0.022	<0.0011	<0.0019	<0.0012	0.0051 J	<0.00075
SB-6	2-4	5/11/2015	0.0014 J	0.91	0.077	<0.0011	<0.0018	<0.0012	0.0051 J	<0.00071
	8-10	5/11/2015	<0.0012	1	0.028	<0.0011	<0.0018	<0.0012	<0.0024	<0.00071
	12-14	5/11/2015	<0.0012	0.28	0.022	<0.0011	<0.0019	<0.0012	<0.0025	<0.00075
SB-7	2-4	5/11/2015	<0.0013	0.24	0.02	<0.0011	<0.0019	<0.0013	0.011	<0.00075
	6-8	5/11/2015	<0.0012	1.8	0.0039 J	<0.0011	<0.0018	<0.0012	<0.0025	<0.00074
	10-12	5/11/2015	<0.0012	0.38	<0.0017	<0.001	<0.0017	<0.0012	<0.0023	<0.00069
SB-8	2-4	5/11/2015	<0.0012	2	0.016	<0.0011	<0.0018	<0.0012	<0.0024	<0.00071
	6-8	5/11/2015	<0.0012	5	<0.0018	<0.0011	<0.0018	<0.0012	<0.0023	<0.0007
	10-12	5/11/2015	<0.001	0.55	0.0042 J	<0.00092	<0.0015	<0.001	<0.0021	<0.00062
SB-9	2-4	5/11/2015	<0.0012	0.6	0.0043 J	<0.0011	<0.0018	<0.0012	<0.0024	<0.00071
	6-8	5/11/2015	<0.0011	0.42	0.0022 J	<0.00095	<0.0016	<0.0011	<0.0021	<0.00064
	10-12	5/11/2015	<0.0012	<0.0019	<0.0018	<0.0011	<0.0018	<0.0012	<0.0023	<0.0007
SB-10	3-5	8/26/2015	<0.00087	<0.00075	<0.001	<0.00062	<0.00062	<0.001	<0.00062	<0.00075
	10-12	8/26/2015	<0.00077	<0.00066	<0.00088	<0.00055	<0.00055	<0.00088	<0.00055	<0.00066

Table E1  
 Summary of Volatile Organic Compounds Detected in Soil  
 L-K Industries  
 6952 Lawndale St., Houston, TX 77023  
 VCP No. 2733

Sample ID	Depth	Date	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl chloride	1,1,2-Trichloroethane	1,2-Dichloroethane
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Residential <sup>Tot</sup> Soil <sub>Comb</sub>			710	18	140	590	2300	3.7	18	11
Residential <sup>GW</sup> Soil <sub>Ing</sub>			0.05	0.034	0.25	0.49	0.05	0.022	0.02	0.014
SB-11	2-4	8/26/2015	<0.00075	<0.00065	<0.00086	<0.00054	<0.00054	<0.00086	<0.00054	<0.00065
	10-12	8/26/2015	<0.00081	<0.00069	<0.00092	<0.00058	<0.00058	<0.00092	<0.00058	<0.00069
SB-12	3-5	8/26/2015	<0.00074	<0.00063	<0.00084	<0.00053	<0.00053	<0.00084	<0.00053	<0.00063
	10-12	8/26/2015	<0.0008	<0.00068	<0.00091	<0.00057	<0.00057	<0.00091	<0.00057	<0.00068
SB-13	2-4	8/26/2015	<0.0008	<0.00069	<0.00091	<0.00057	<0.00057	<0.00091	<0.00057	<0.00069
	10-12	8/26/2015	<0.00081	<0.00069	<0.00092	<0.00058	<0.00058	<0.00092	<0.00058	<0.00069
SB-14	2-4	8/26/2015	<0.00083	<0.00071	<0.00094	<0.00059	<0.00059	<0.00094	<0.00059	<0.00071
	10-12	8/26/2015	<0.00085	<0.00073	<0.00097	<0.00061	<0.00061	<0.00097	<0.00061	<0.00073
SB-15	0-2	8/26/2015	<0.00079	<0.00068	<0.0009	<0.00056	<0.00056	<0.0009	<0.00056	<0.00068
	10-12	8/26/2015	<0.00083	<0.00071	<0.00095	<0.00059	<0.00059	<0.00095	<0.00059	<0.00071
SB-16	0-2	8/26/2015	<0.00082	<0.00071	<0.00094	<0.00059	<0.00059	<0.00094	<0.00059	<0.00071
	8-10	8/26/2015	<0.00077	<0.00066	<0.00089	<0.00055	<0.00055	<0.00089	<0.00055	<0.00066
SB-22	2-4	8/26/2015	<0.00078	0.049	0.0021 J	<0.00056	<0.00056	<0.0009	<0.00056	<0.00067
	10-12	8/26/2015	<0.00079	0.12	0.019	<0.00056	<0.00056	<0.0009	<0.00056	<0.00068
SB-23	2-4	8/26/2015	<0.00084	0.068	0.0015 J	<0.0006	<0.0006	<0.00097	<0.0006	<0.00072
	10-12	8/26/2015	<0.0008	<0.00068	<0.00091	<0.00057	<0.00057	<0.00091	<0.00057	<0.00068
MW-5	0-2	3/23/2015	<0.0012	0.02	<0.0018	<0.0011	<0.0018	<0.0012	<0.0024	<0.00072
	7.5-10	3/23/2015	<0.0012	2.4	<0.0018	<0.0011	<0.0018	<0.0012	<0.0025	<0.00074
MW-7	7.5-10	7/10/2015	<0.0008	<0.00069	<0.00092	<0.00057	<0.00057	<0.00092	<0.00057	<0.00069
MW-8	2-4	8/27/2015	<0.00088	<0.00075	<0.001	<0.00063	<0.00063	<0.001	<0.00063	<0.00075
MW-9	0-5	2/24/2016	<0.00067	<0.00057	<0.00076	<0.00048	<0.00048	<0.00076	<0.00048	<0.00057
	5-10	2/24/2016	<0.00073	<0.00063	<0.00083	<0.00052	<0.00052	<0.00083	<0.00052	<0.00063
HA-1	2-4	2/24/2016	<0.00072	<0.00062	<0.00082	<0.00051	<0.00051	<0.00082	<0.00051	<0.00062
	4-6	2/24/2016	<0.00079	<0.00068	<0.0009	<0.00056	<0.00056	<0.0009	<0.00056	<0.00068
	8-10	2/24/2016	<0.00071	<0.00061	<0.00081	<0.0005	<0.0005	<0.00081	<0.0005	<0.00061
HA-2	2-4	2/24/2016	<0.00071	<0.00061	<0.00081	<0.00051	<0.00051	<0.00081	<0.00051	<0.00061
	4-6	2/24/2016	<0.00062	0.033	<0.00071	<0.00044	<0.00044	<0.00071	<0.00044	<0.00053
	8-10	2/24/2016	<0.00063	0.062	<0.00072	<0.00045	<0.00045	<0.00072	<0.00045	<0.00054
HA-3	2-4	2/24/2016	<0.00061	0.00088 J	<0.0007	<0.00044	<0.00044	<0.0007	<0.00044	<0.00053
	4-6	2/24/2016	<0.00061	0.0018 J	<0.0007	<0.00044	<0.00044	<0.0007	<0.00044	<0.00052
	8-10	2/24/2016	<0.00067	0.007	<0.00076	<0.00048	<0.00048	<0.00076	<0.00048	<0.00057
HA-4	2-4	2/24/2016	<0.00069	0.00084 J	<0.00079	<0.00049	<0.00049	<0.00079	<0.00049	<0.00059
	4-6	2/24/2016	<0.00066	0.0016 J	<0.00076	<0.00047	<0.00047	<0.00076	<0.00047	<0.00057
	8-10	2/24/2016	<0.00069	0.0054	<0.00079	<0.00049	<0.00049	<0.00079	<0.00049	<0.00059

Notes:



Exceeds a PCL

Exceeds a 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

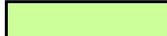
Table E2  
 Summary of Total Petroleum Hydrocarbons in Soil  
 L-K Industries  
 6952 Lawndale St., Houston, TX 77023  
 VCP No. 2733

Sample ID	Depth	Date	C6 to C12 mg/L	>C12 to C28 mg/L	>C28 to C35 mg/L	C6 to C35 (Total) mg/L
Residential <sup>Tot</sup> Soil <sub>Comb</sub>			1600	2300	2300	
Residential <sup>GW</sup> Soil <sub>Ing</sub>			65	200	200	
TMW-01	3-5	1/6/2015	<16.0	<16.0	<16.0	<16.0
TMW-02	2-4	1/6/2015	<13.0	<13.0	<13.0	<13.0
TMW-03	2-4	1/6/2015	<15.0	<15.0	<15.0	<15.0
TMW-04	8-10	1/6/2015	<18.0	<18.0	<18.0	<18.0
TMW-05	2-4	1/6/2015	<16.0	<16.0	<16.0	<16.0
	12-14	1/6/2015	<15.0	<16.0	<16.0	<15.0
TMW-07	12-14	1/7/2015	<16.0	<17.0	<17.0	<16.0
TMW-08	8-10	1/7/2015	<17.0	<17.0	<17.0	<17.0
SB-1	0-2	5/11/2015	<12.0	<12.0	<12.0	<12.0
	4-6	5/11/2015	<12.0	<12.0	<12.0	<12.0
	10-12	5/11/2015	<12.0	<12.0	<12.0	<12.0
SB-2	2-4	5/11/2015	<13.0	<13.0	<13.0	<13.0
	6-8	5/11/2015	<13.0	<13.0	<13.0	<13.0
	10-12	5/11/2015	<12.0	<12.0	<12.0	<12.0
SB-3	0-2	5/11/2015	190	120	<12.0	310
	6-8	5/11/2015	<12.0	<12.0	<12.0	<12.0
	10-12	5/11/2015	<12.0	<12.0	<12.0	<12.0
SB-4	2-4	5/11/2015	<12.0	<12.0	<12.0	<12.0
	6-8	5/11/2015	<11.0	<11.0	<11.0	<11.0
	10-12	5/11/2015	<13.0	<13.0	<13.0	<13.0
SB-5	0-2	5/11/2015	<13.0	<13.0	<13.0	<13.0
	4-6	5/11/2015	<12.0	<12.0	<12.0	<12.0
	10-12	5/11/2015	<12.0	<12.0	<12.0	<12.0
SB-6	2-4	5/11/2015	<12.0	<12.0	<12.0	<12.0
	8-10	5/11/2015	<12.0	<12.0	<12.0	<12.0
	12-14	5/11/2015	<13.0	<13.0	<13.0	<13.0
SB-7	2-4	5/11/2015	<13.0	<13.0	<13.0	<13.0
	6-8	5/11/2015	<13.0	<13.0	<13.0	<13.0
	10-12	5/11/2015	<12.0	<12.0	<12.0	<12.0
SB-8	2-4	5/11/2015	<13.0	<13.0	14.0 J	14.0 J
	6-8	5/11/2015	<12.0	<12.0	<12.0	<12.0
	10-12	5/11/2015	<12.0	<12.0	<12.0	<12.0

Table E2  
 Summary of Total Petroleum Hydrocarbons in Soil  
 L-K Industries  
 6952 Lawndale St., Houston, TX 77023  
 VCP No. 2733

Sample ID	Depth	Date	C6 to C12 mg/L	>C12 to C28 mg/L	>C28 to C35 mg/L	C6 to C35 (Total) mg/L
Residential <sup>Tot</sup> Soil <sub>Comb</sub>			1600	2300	2300	
Residential <sup>GW</sup> Soil <sub>Ing</sub>			65	200	200	
SB-9	2-4	5/11/2015	<12.0	<12.0	<12.0	<12.0
	6-8	5/11/2015	<12.0	<12.0	<12.0	<12.0
	10-12	5/11/2015	<12.0	<12.0	<12.0	<12.0
SB-10	3-5	8/26/2015	<12.0	<12.0	<12.0	<12.0
	10-12	8/26/2015	<12.0	<12.0	<12.0	<12.0
SB-11	2-4	8/26/2015	<12.0	<12.0	<12.0	<12.0
	10-12	8/26/2015	<12.0	<12.0	<12.0	<12.0
SB-12	3-5	8/26/2015	<12.0	<12.0	<12.0	<12.0
	10-12	8/26/2015	<12.0	<12.0	<12.0	<12.0
SB-13	2-4	8/26/2015	<12.0	<12.0	<12.0	<12.0
	10-12	8/26/2015	<12.0	<12.0	<12.0	<12.0
SB-14	2-4	8/26/2015	<12.0	<12.0	<12.0	<12.0
	10-12	8/26/2015	<12.0	<12.0	<12.0	<12.0
SB-15	0-2	8/26/2015	<12.0	<12.0	<12.0	<12.0
	10-12	8/26/2015	<12.0	<12.0	<12.0	<12.0
SB-16	0-2	8/26/2015	<12.0	<12.0	<12.0	<12.0
	8-10	8/26/2015	<13.0	<13.0	<13.0	<13.0
SB-26	0-1	11/13/2015	<8.2	<6.7	<6.7	<6.7
SB-27	0-1	11/13/2015	<9.2	<7.5	<7.5	<7.5
SB-28	0-1	11/13/2015	<8.2	<6.7	<6.7	<6.7
MW-5	0-2	3/23/2015	<12.0	<12.0	<12.0	<12.0
	7.5-10	3/23/2015	<12.0	<12.0	<12.0	<12.0
MW-7	7.5-10	7/10/2015	<11.0	<11.0	<11.0	<11.0
MW-8	2-4	8/27/2015	<13.0	<13.0	<13.0	<13.0
HA-1	2-4	2/24/2016	<11.0	<11.0	<11.0	<11.0
HA-2	4-6	2/24/2016	<9.0	<9.0	<9.0	<9.0
HA-3	8-10	2/24/2016	<8.8	<8.8	<8.8	<8.8
HA-4	4-6	2/24/2016	<8.8	<8.8	<8.8	<8.8

Notes:



Exceeds a 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

Table E3  
Summary of RCRA Metals in Soil  
L-K Industries  
6952 Lawndale St., Houston, TX 77023  
VCP No. 2733

Sample ID	Depth	Date	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Residential	Soil <sub>Comb</sub> <sup>Tot</sup>		20	8100	52	33000	500	3.6	310	97
Residential	Soil <sub>Ing</sub> <sup>GW</sup>		5.9	440	1.5	2400	15	0.04	2.3	0.48
TMW-02	2-4	1/6/2015	2.3	138	0.084 J	17.4	55.6	0.96	0.19 J	0.42 J
TMW-03	2-4	1/6/2015	3.7	113	<0.014	16	18.7	<0.013	0.14 J	<0.039
TMW-08	8-10	1/7/2015	3.7	101	0.078 J	18.1	14.5	<0.015	<0.12	<0.043
SB-1	0-2	5/11/2015	3.31	119	1.22	12.1	1380	0.359	1.49	1.31
SB-5	0-2	5/11/2015	4.04	292	0.897	10.7	89.8	0.0764	1.31	3.78
SB-15	0-2	8/26/2015	1.44	55.9	0.123 J	3.97	14.2	0.0452	0.287 J	<0.0877
SB-16	0-2	8/26/2015	1.68	127	2.15	5.54	40.9	0.181	0.373 J	0.172 J
SB-17	0-2	8/26/2015	3.39	175	0.187 J	5.93	53.7	0.0916	0.513 J	0.118 J
SB-18	0-2	8/26/2015	1.24	217	0.102 J	7.78	32.3	0.531	0.614	0.448 J
SB-19	0-2	8/26/2015	0.542 J	16.2	2.65	22.8	79.4	0.0834	0.353 J	0.0954 J
SB-20	0-2	8/26/2015	2.32	171	0.128 J	7.56	40.1	0.0403	0.452 J	<0.0918
SB-21	0-2	8/26/2015	1.37	174	<0.0606	11.2	13	0.00649	0.735	<0.0969
SB-24	0-1	11/13/2015	2.7	170	0.82	63.2	137	0.48	<0.61	0.22 J
SB-25	0-1	11/13/2015	3.2	131	0.61	20.6	69.2	0.41	<0.12	0.1 J
SB-26	0-1	11/13/2015	1.9	34.5	0.22 J	8.2	31	0.15	<0.098	<0.069
SB-27	0-1	11/13/2015	2.7	93.9	0.19 J	16	54	0.34	0.21 J	0.084 J
SB-28	0-1	11/13/2015	2.3	36.7	0.18 J	8	26.4	0.14	<0.1	<0.071
MW-5	0-2	3/23/2015	2.75	125	0.529 J	8.38	88.5	0.441	0.622	0.26 J

Notes:   Exceeds a PCL   Exceeds a 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

Table E4  
 Summary of Volatile Organic Compounds in Groundwater  
 L-K Industries  
 6952 Lawndale St., Houston, TX 77023  
 VCP No. 2733

Sample ID	Date	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl chloride	1,1-Dichloroethene	1,1,2-Trichloroethane
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Residential	<sup>GW</sup> GW <sub>Ing</sub>	0.005	0.005	0.07	0.1	0.002	0.007	0.005
Residential	<sup>Air</sup> GW <sub>Inh-V</sub>	500	24	1200	770	3.8	1700	80
MW-1	3/24/2015	<0.006	3.8	0.13	0.031 J	0.0049 J	0.014 J	<0.005
	7/16/2015	<0.006	7.6	0.33	0.077	0.0079 J	0.017 J	<0.005
	10/12/2015	<0.003	4.9	0.39	0.088	0.005 J	0.018 J	<0.0025
	1/15/2016	<0.006	10	0.71	0.14	0.0087 J	0.021 J	0.0075 J
	3/3/2016	<0.006	9.1	0.69	0.14	0.0064 J	0.02 J	<0.005
MW-2	3/24/2015	<0.0006	<0.0005	<0.0006	<0.0004	<0.0004	<0.0005	<0.0005
	7/16/2015	<0.0006	<0.0005	<0.0006	<0.0004	<0.0004	<0.0005	<0.0005
	10/12/2015	<0.0006	<0.0005	<0.0006	<0.0004	<0.0004	<0.0005	<0.0005
	1/15/2016	<0.0006	<0.0005	<0.0006	<0.0004	<0.0004	<0.0005	<0.0005
MW-3	3/24/2015	<0.0006	0.023	<0.0006	<0.0004	<0.0004	<0.0005	<0.0005
	7/16/2015	<0.0006	0.0026 J	<0.0006	<0.0004	<0.0004	<0.0005	<0.0005
	10/12/2015	<0.0006	0.0015 J	<0.0006	<0.0004	<0.0004	<0.0005	<0.0005
	1/15/2016	<0.0006	0.00055 J	<0.0006	<0.0004	<0.0004	<0.0005	<0.0005
MW-4	3/24/2015	<0.012	7.1	0.057 J	<0.008	<0.008	<0.01	<0.01
	7/16/2015	<0.012	14	0.12	0.0093 J	<0.008	<0.01	<0.01
	10/13/2015	0.0077 J	13	0.13	0.01 J	<0.004	<0.005	<0.005
	1/15/2016	0.0075 J	13	0.13	0.0095 J	<0.004	<0.005	0.0087 J
MW-5	3/24/2015	<0.06	60	<0.06	<0.04	<0.04	<0.05	<0.05
	7/16/2015	<0.03	63	0.11 J	<0.02	<0.02	<0.025	<0.025
	10/13/2015	<0.015	50	0.22	<0.01	<0.01	<0.012	0.014 J
	1/15/2016	<0.015	35	0.29	<0.01	<0.01	<0.012	0.023 J
MW-6	3/24/2015	0.035	0.035	<0.0006	<0.0004	<0.0004	<0.0005	<0.0005
	7/16/2015	0.028	0.02	<0.0006	<0.0004	<0.0004	<0.0005	<0.0005
	10/12/2015	0.029	0.018	<0.0006	<0.0004	<0.0004	<0.0005	<0.0005
	1/15/2016	0.031	0.024	<0.0006	<0.0004	<0.0004	<0.0005	<0.0005
MW-7	7/16/2015	<0.0006	<0.0005	<0.0006	<0.0004	<0.0004	<0.0005	<0.0005
	10/12/2015	<0.0006	<0.0005	<0.0006	<0.0004	<0.0004	<0.0005	<0.0005
	1/15/2016	<0.0006	<0.0005	<0.0006	<0.0004	<0.0004	<0.0005	<0.0005
MW-8	8/27/2015	<0.0006	<0.0005	<0.0006	<0.0004	<0.0004	<0.0005	<0.0005
	10/12/2015	<0.0006	<0.0005	<0.0006	<0.0004	<0.0004	<0.0005	<0.0005
	1/15/2016	<0.0006	<0.0005	<0.0006	<0.0004	<0.0004	<0.0005	<0.0005
MW-9	3/3/2016	<0.0006	<0.0005	<0.0006	<0.0004	<0.0004	<0.0005	<0.0005

Notes:  Exceeds a PCL  Exceeds a 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

Table E5  
 Summary of Total Petroleum Hydrocarbons in Groundwater  
 L-K Industries  
 6952 Lawndale St., Houston, TX 77023  
 VCP No. 2733

Sample ID	Date	C6 to C12	>C12 to C28	>C28 to C35	C6 to C35 (Total)
		mg/L	mg/L	mg/L	mg/L
Residential	<sup>GW</sup> GW <sub>Ing</sub>	0.98	0.98	0.98	
Residential	<sup>Air</sup> GW <sub>Inh-v</sub>	1800	7500	7500	
TMW-01	1/6/2015	3.86	<0.87	<0.87	3.86
TMW-02	1/6/2015	<0.76	<0.83	<0.83	<0.76
TMW-03	1/6/2015	<0.8	<0.86	<0.86	<0.8
TMW-04	1/6/2015	<0.8	<0.87	<0.87	<0.8
TMW-05	1/6/2015	7.47	<0.86	<0.86	7.47
TMW-06	1/6/2015	<0.8	<0.87	<0.87	<0.8
TMW-07	1/7/2015	<0.79	<0.85	<0.85	<0.79
TMW-08	1/7/2015	1.97 J	<0.87	<0.87	1.97 J
MW-8	8/27/2015	<0.2	<0.2	<0.2	<0.2

Notes:  Exceeds a 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

Table E6  
 Summary of RCRA Metals in Groundwater  
 L-K Industries  
 6952 Lawndale St., Houston, TX 77023  
 VCP No. 2733

Sample ID	Date	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Residential	<sup>GW</sup> GW <sub>Ing</sub>	0.01	2	0.005	0.1	0.015	0.002	0.05	0.12
Residential	<sup>Air</sup> GW <sub>Inh-V</sub>						7.3		
MW-1	10/12/2015	0.0055	0.176	<0.0002	<0.0004	<0.0006	<0.00004	<0.0011	<0.0002
MW-2	10/12/2015	0.005 J	0.123	<0.0002	<0.0004	<0.0006	<0.00004	<0.0011	<0.0002
MW-3	10/12/2015	0.000865 J	0.0373	<0.0002	<0.0004	<0.0006	<0.00004	0.00512	<0.0002
MW-4	10/13/2015	0.00174 J	0.269	<0.0002	<0.0004	<0.0006	<0.00004	<0.0011	<0.0002
MW-5	10/13/2015	0.00102 J	0.123	<0.0002	<0.0004	<0.0006	<0.00004	0.00789	<0.0002
MW-6	10/12/2015	0.000759 J	0.31	<0.0002	<0.0004	<0.0006	<0.00004	<0.0011	<0.0002
MW-7	10/12/2015	0.00173 J	0.107	<0.0002	0.000794 J	<0.0006	<0.00004	<0.0011	<0.0002
MW-8	10/12/2015	0.00148 J	0.236	<0.0002	0.00158 J	<0.0006	0.000123 J	<0.0011	<0.0002

Notes: <: 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

## 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.*

Shallow groundwater has been affected by dissolved phase chemicals including PCE, TCE, cis-1,2-DCE, VC, and 1,1-DCE. The area of affected groundwater is depicted on **Figure C4-1** through **Figure C4-3**. Based on the results of the most recent groundwater monitoring and sampling event conducted in January 2016, the area of affected groundwater extends off-site in the downgradient direction.

The plume potentially extends beneath the following offsite properties:

Property Address	Owner Name	Owner Mailing Address	HCAD Property ID No.
6900 Lawndale St. Houston, TX 77023	Forest Park Cemetery	PO Box 194 Houston, TX 77001	041-007-023-0030
7014 Lawndale St. Houston, TX 77023	Miguel A Perez	7014 Lawndale St. Houston, TX 77023	041-030-000-0035
2008 Rainbow Dr. Houston, TX 77023	Fernando & Mayda Mendiola	17422 Endel Way Richmond, TX 77407	041-030-000-0003
(Tr 5F) 2000 Rainbow Dr. Houston, TX 77023	Timothy McKinley	2000 Rainbow Dr. Houston, TX 77023	041-030-000-0037
(Tr 5F-1) 2000 Rainbow Dr. Houston, TX 77023	Jose Longoria Nohemi Galindo	7219 Findley Houston, TX 77017	041-030-000-0623

InControl has spoken with the property owner for the property located at 6900 Lawndale St. They are aware that the contaminate plume most likely extends slightly onto their property, but they denied InControl access to install a monitoring well on their property. Notification letters were sent to the remaining four property owners.

## Appendix G

A statement as to whether the source of the plume has been removed, the plume of contamination is stable (i.e. no change) or contracting, and the plume is delineated, **with the basis for that statement.** Please include historical sampling data.

---

Shallow groundwater is affected by dissolved phase chemicals including PCE, TCE, cis-1,2-DCE, and VC. These chemicals are believed to be associated with the vapor degreasing operations conducted on the subject property. The chlorinated solvents tend to move rapidly in the sub-surface environment and quickly reach equilibrium as long as there is no ongoing contributing mass source. The source, the vapor degreaser, is still active at this site.

Numerous soil samples were collected from the onsite property during the Phase II investigation. VOCs, TPH, and Metals all exceeded a <sup>GW</sup>Soil<sub>Ing</sub> PCL. Only one sample, TMW-05, exceeded a <sup>Tot</sup>Soil<sub>Comb</sub> PCL for TCE at a concentration of 24.3 mg/kg (**Table E1**). This sample is located in the source area.

The current groundwater monitoring network consists of eight permanent groundwater monitoring wells installed in the first groundwater bearing unit (GWBU). Five of these wells have exceeded a PCL at some point during the sampling history. Currently, one monitoring well, MW-5, exceeds the <sup>Air</sup>GW<sub>Inh-v</sub> PCL at a concentration of 35 mg/L. The lateral extent of groundwater impact in the shallow groundwater bearing unit has been delineated. A clay confining layer was determined to be continuous across the site following the advancement of three CPT borings that were advanced to 60-ft bgs. According to the most recent groundwater data, the concentrations of COCs within the plume appear to be relatively stable (**Table E4**). **Figure C4-1** through **Figure C4-3** depicts the COC plume in shallow groundwater.

In summary, the groundwater data collected to date indicates that the area of affected groundwater is stable, and was the result of historic releases associated with past operations within the proposed MSD boundary.

## 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**, PCE, TCE, cis-1,2-DCE, and VC were reported at concentrations that exceeded the TRRP Residential Assessment Levels without a Municipal Setting Designation (<sup>GW</sup>GW<sub>Ing</sub>) in several groundwater monitoring wells. Groundwater samples collected from groundwater monitoring wells within the proposed MSD boundary reported one or more COCs at concentrations greater than the TRRP residential ingestion exceedance level without a municipal setting designation (<sup>GW</sup>GW<sub>Ing</sub>). One well, MW-5, reports TCE at a concentration of 35 mg/L, which exceeds the <sup>Air</sup>GW<sub>Inh-v</sub> PCL (**Figure C4-1** through **Figure C4-3, Table E4**). The TCE concentrations in MW-5 have continued to decrease at each of the last three sampling events. At this level, this well will exceed the Residential Assessment Level even after the MSD is granted. A review of the most recent groundwater sampling data within the proposed MSD boundary confirms these findings.

### **Off the Designated Property**

There is only one off-site monitoring well (MW-7) associated with this site. Groundwater samples collected from this off-site groundwater monitoring point indicate that the area of impacted groundwater has not extended into the neighborhood to the southwest of the subject property. It is likely, however, that the groundwater plume has extended onto the Forest Park Lawndale Cemetery immediately south of the subject property. InControl was denied access to install a monitoring well on their property. The off-site extent of impacted groundwater has been delineated to the residential assessment level without a MSD to the most reasonable extent possible.