CITY OF HOUSTON

PUBLIC WORKS AND ENGINEERING
PLANNING & DEVELOPMENT DIVISION

Application for Approval of Municipal Setting Designation

APPLICANT INFORMATION

Applicant's Name: Grace Bible Church EFCA

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

Address: 1111 West 14th Street (Street) | Houston (City) | TX (State) | 77008 (Zip)

Phone No.: 713-631-7221 Fax No.: _____

Email: CarterB@morgangroup.com

Contact Information

Name of Contact: Mike Schultz, P.E.

Title: Vice-President / Partner, SKA Consulting, L.P.

Address: 1515 Witte Road, Suite 150 (Street) | Houston (City) | TX (State) | 77080 (Zip)

Phone No.: 713-266-6056 Fax No.: 713-266-0996

Email: mike.schultz@skaconsulting.com

SITE INFORMATION

Site HCAD No(s): 1297760010001

Site Name: Former Seatex Corporation

Site Size: 8.8645 acres

Site Address: 6325 Hurst Street (Street) | Houston (City) | TX (State) | 77008 (Zip)

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

Owner: Grace Bible Church EFCA

Owner Address: 1111 West 14th Street (Street) | Houston (City) | TX (State) | 77008 (Zip)

Name of Contact: Carter Bechtol

Title: Church Elder

Organization: Grace Bible Church EFCA

Phone No.: 713-361-7221 Fax No.: 713-361-7299

Email: CarterB@morgangroup.com

Additional Owner List

(Cont'd from pg. 2)

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)

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: ____

Executive Summary

SKA Consulting, L.P. (SKA), on behalf of Grace Bible Church EFCA (Grace Bible), has prepared this Municipal Setting Designation (MSD) Application for approximately 8.864 acres of privately-owned, vacant land approximately 165 feet west of the intersection of Hurst Street and Shirkmere Road in Houston, Harris County, Texas (designated property). The designated property was historically improved with single-family residences followed by industrial development in approximately 1953. The industrial facility was operated by various chemical manufacturing companies, most recently by the Seatex Corporation from approximately 1986 to 2004. The designated property is currently undeveloped and covered with grass, dirt, and gravel. The designated property is situated approximately 4 miles northwest of downtown Houston and is bordered by Hurst Street followed by Hawsken Stainless Steel Company to the north, GTM Waste Processing (a municipal solid waste[grease] processing facility) to the west, Northwest Pipe Company to the south, and by single-family residential (the Timbergrove Manor Subdivision) to the east.

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

Properties in the vicinity of the designated property are predominantly mixed commercial/industrial and single-family residential. The proposed future use of the designated property is anticipated to be a church and planned development includes a sanctuary, administrative area, and day care.

According to records obtained from the Texas Commission on Environmental Quality (TCEQ), the Harris-Galveston Subsidence District, and The Banks Group, approximately 330 registered/permitted water wells are reportedly located within a 5-mile radius of the designated property. Of these, six are reportedly located within a 0.5-mile radius of the designated property. The closest of these six water wells is reportedly located approximately 790 feet southwest of the designated property; three water wells are reportedly located 1,190 feet to 1,850 feet west of the designated property; and two water wells are reportedly located from approximately 2,375 to 2,630 feet east of the designated property. These water wells were reportedly screened in groundwater bearing units (GWBUs) occurring more than 250 feet below ground surface (ft-bgs). As such, these wells will not likely be affected by contaminants present in soil or groundwater at the designated property.

Of the approximately 330 registered/permitted water wells reportedly located within 5 miles of the designated property, approximately 53 are reportedly owned or operated by a public retail water utility. In addition, 6 of the 53 water wells reportedly located within 5 miles of the designated property are reportedly owned by municipalities other than the City of Houston. These municipalities include the City of West University Place, City of Southside Place, and the Memorial Villages Water Authority.

The current designated property owner is Grace Bible. In September 2010, Grace Bible enrolled an approximately 2.9-acre parcel in the southeastern corner of the designated property in the TCEQ Voluntary Clean-Up Program (VCP) under the rules of the TCEQ's Texas Risk Reduction Program (TRRP) found in 30 Texas Administrative Code (TAC) 350. The parcel was assigned VCP No. 2343, and was expanded in August 2012 to approximately 4.3 acres. Chemicals of concern (COCs) detected in the uppermost groundwater bearing unit (GWBU) above TCEQ TRRP Tier 1 Residential Groundwater Ingestion (GW_{Ing}) Protective Concentration Limits (PCLs) include carbon tetrachloride, cis-1,2-dichloroethene (cis-1,2-DCE), methylene chloride, trichloroethene (TCE), and vinyl chloride (VC). Detections of arsenic, barium, and lead were detected in the soil above the TCEQ TRRP Tier 1 Residential Groundwater Protection Soil ($^{GW}Soil_{Ing}$) PCLs; however, barium was the only metal detected above the TCEQ TRRP Tier 2 Residential Soil PCL.

Prior to ownership by Grace Bible, an approximately 1.33-acre parcel in the southwest corner of the designated property was enrolled in the TCEQ VCP as VCP No. 2119 in January 2008 and was issued a Certificate of Completion in July 2009. Historically, an underground storage tank (UST) system, raw product storage areas, a sump, mixing and blending areas were located within the boundaries of VCP No. 2119. The Affected Property Assessment for VCP No. 2119 identified impacted soil and groundwater. The assessment also concluded that the groundwater was impacted from an industrial solvent plume reportedly from an off-site source. Remedial actions on VCP No. 2119 included soil corrective actions for the former UST system and an institutional control prohibiting the use of groundwater in the uppermost GWBU.

As a Certificate of Completion was issued by the TCEQ for VCP No. 2119, this MSD application will discuss soil and groundwater assessment activities in all areas of the remaining designated property except for VCP No. 2119. The area exclusive of VCP No. 2119 will be referred to as the remaining designated property. VCP No. 2343 is completely within the remaining designated property.

The results of assessment and monitoring activities performed to date in the remaining designated property indicate the TRRP groundwater ingestion PCL exceedance (PCLE) zones detected are stable and/or decreasing in magnitude, and are contained within the boundaries of the remaining designated property. One limited soil PCLE zone was also identified within the remaining designated property when compared to applicable TCEQ TRRP Tier 2 Residential Soil ($^{GW}Soil_{Ing}$) PCLs. No COCs have been detected in soil or groundwater outside the remaining designated property in excess of any TRRP ingestion or non-ingestion PCLs. In addition, no COCs are expected to migrate off the remaining designated property in the future at concentrations that would exceed any applicable TRRP non-ingestion PCLs (the TRRP PCLs applicable for the remaining designated property should an MSD be granted).

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

Appendix B – Property Use

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

Current and Anticipated Land Use of the Designated Property

The designated property consists of approximately 8.864 acres of privately-owned vacant land approximately 165 feet west of the intersection of Hurst Street and Shirkmere Road in Houston, Harris County, Texas (***Figure C.1***). The designated property is contiguous, rectangular in-shape, and located approximately four miles northwest of downtown Houston, Texas.

The designated property is bordered by Hurst Street followed by Hawsken Stainless Steel Company to the north, GTM Waste Processing to the west, Northwest Pipe Company to the south, and single-family residential (the Timbergrove Manor Subdivision) to the east. A plat map and metes and bounds description of the designated property is included in ***Appendix A***.

The designated property is located in the White Oak Bayou Watershed. According to the Federal Emergency Management Agency (FEMA) Federal Insurance Rate Map (FIRM), *Map No. 48201C0670L*, the northwestern portion of the designated property is classified as Zone X (unshaded), the central portion of the designated property is classified as Zone X (shaded), and the eastern portion of the designated property is classified as Zone AE. Zone X (unshaded) consists of areas determined by FEMA to be outside the 0.2% annual chance floodplains. Zone X (shaded) consists of areas determined by FEMA to be within the 0.2% annual chance floodplains but outside of the 1% annual flood chance floodplains. Zone AE consists of areas subject to inundation by the 1% annual flood chance. A watershed map and a FEMA floodplain map of the area containing the designated property are included as ***Figures C.2*** and ***C.3***, respectively.

The designated property is currently vacant and covered with grass, dirt, and gravel. The structures and features formerly present on the designated property were demolished in 2009. However, three storm water drains remain located in the southeastern portion of the designated property, within the boundaries of VCP No. 2343. The proposed future land use is a church and planned development includes a sanctuary, administrative area, and day care.

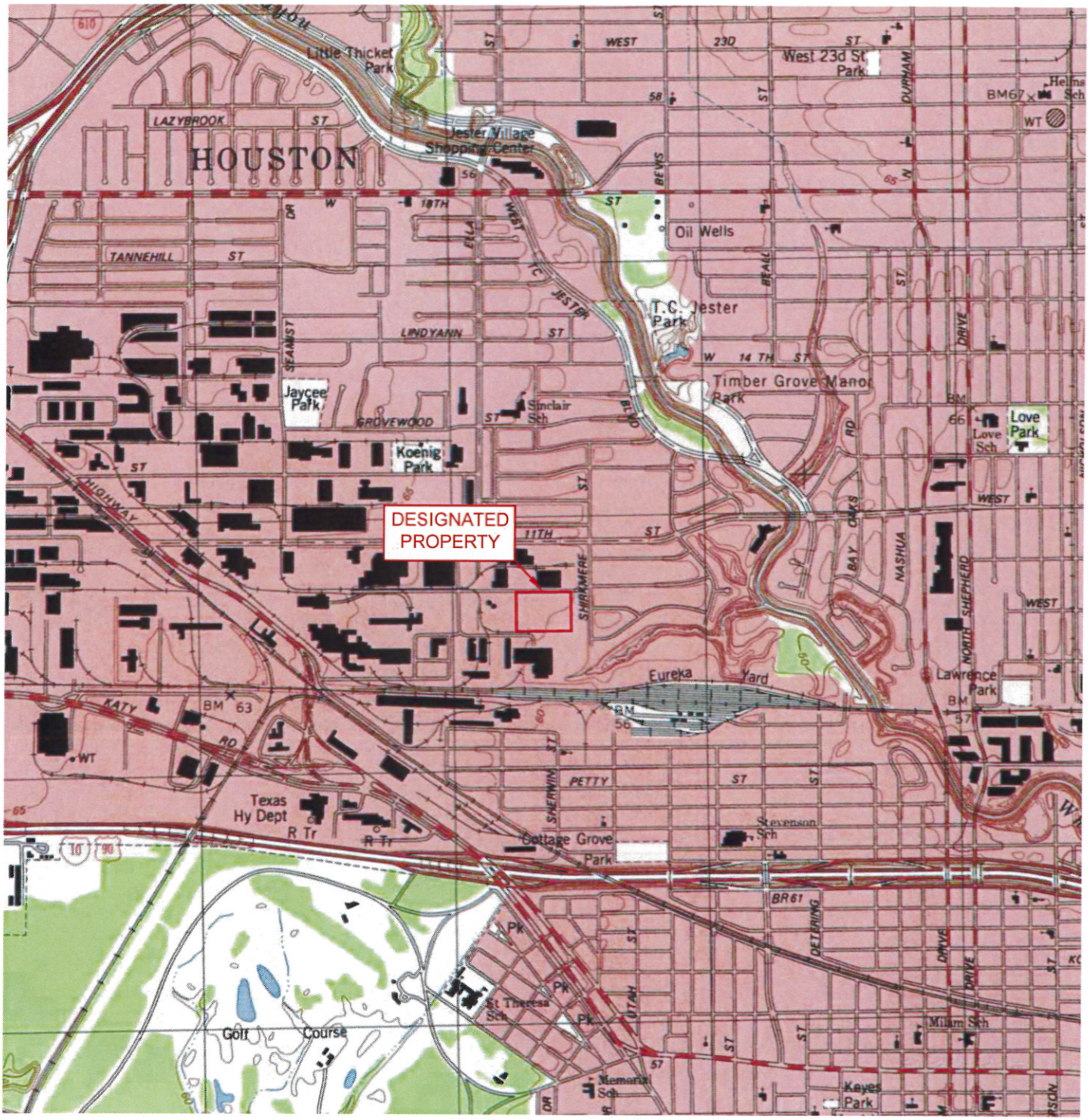
Current and Anticipated Land Use of the Surrounding Properties

Properties in the vicinity of the designated property are mixed commercial/industrial and single-family residential buildings. Commercial/industrial properties are located north, south, and west of the designated property, and single-family residences are located east of the designated property. A map detailing the land use of the surrounding properties within 500 feet of the designated property is presented as ***Figure C.4***. The future land use in the area of the designated property is anticipated to remain mixed commercial/industrial and single-family residential.

Appendix C – Site Maps

The following figures are included in ***Appendix C***.

- Figure C.1 Site Location and Topographic Map
- Figure C.2 Watershed Map
- Figure C.3 Floodplain Map
- Figure C.4 Surrounding Land Use Map
- Figure C.5 Soil and Groundwater Sampling Location Map
- Figure C.6 Groundwater Gradient Map February 21, 2012
- Figure C.6A Groundwater Gradient Map May 25, 2012
- Figure C.7 Protective Concentration Level Exceedance (PCLE) Zone Map-Soil
- Figure C.8 Protective Concentration Level Exceedance (PCLE) Zone Map-Groundwater



REFERENCE:
USGS 7.5-MINUTE TOPOGRAPHIC QUADRANGLE
HOUSTON HEIGHTS, TEXAS 1995

0 1000 2000

APPROXIMATE SCALE: 1"=2000'

SKA CONSULTING, L.P.
1515 WITTE ROAD, SUITE 150
HOUSTON TEXAS 77080
Texas Registered Engineering Firm F-005009
Texas Registered Geoscience Firm 50011

SITE LOCATION AND TOPOGRAPHIC MAP

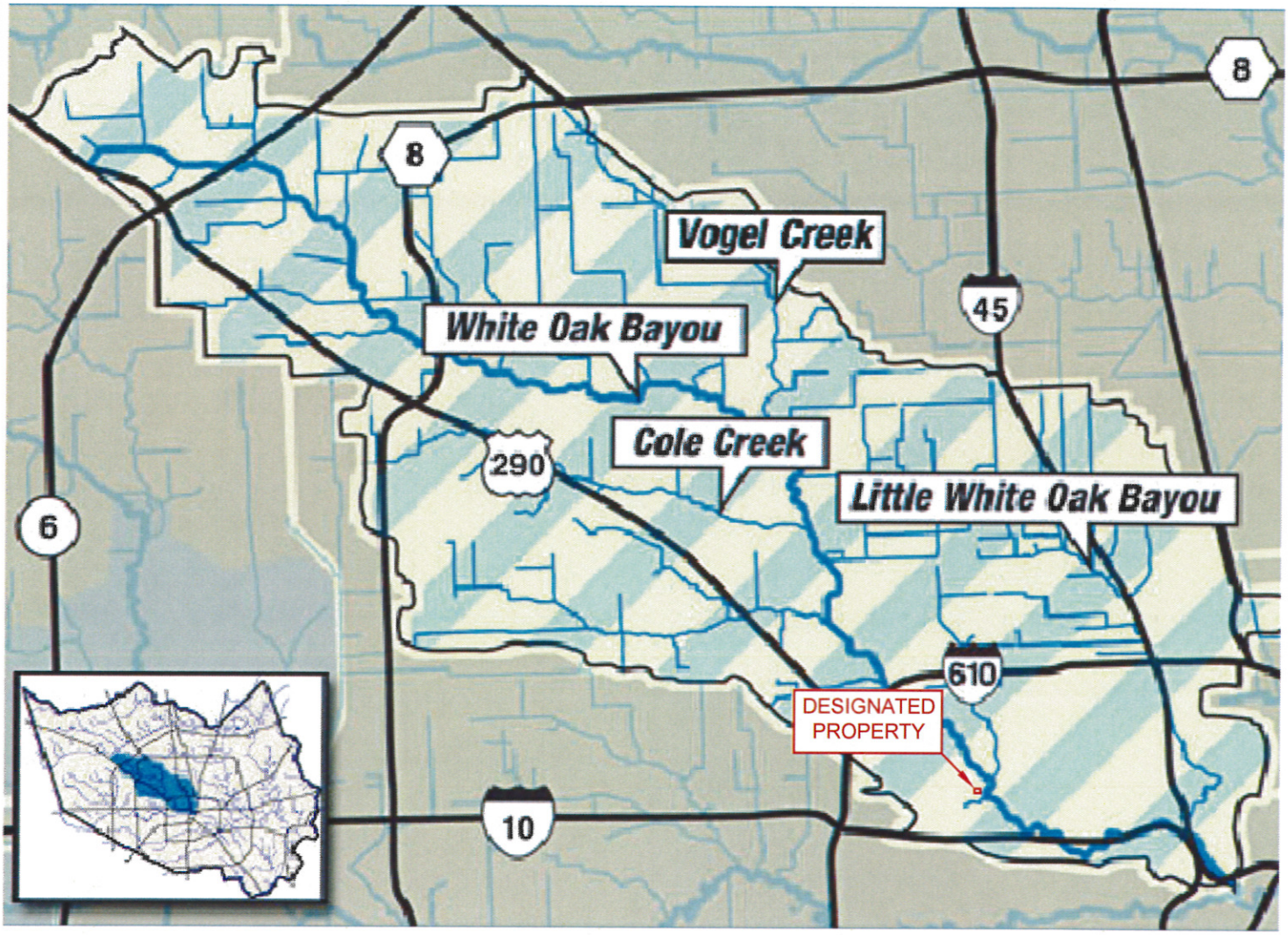
FIGURE C.1

CITY OF HOUSTON MUNICIPAL SETTING DESIGNATION APPLICATION
FORMER SEATEX CORPORATION PROPERTY
6325 HURST STREET
HOUSTON, HARRIS COUNTY, TEXAS

DATE:	JOB NO:	SCALE:
AUGUST 2012	11009-0001	AS SHOWN

1	FIRST REVISION	-	DRAWN BY: JCS
2	SECOND REVISION	-	CHECKED BY: RCN
3	THIRD REVISION	-	APPROVED BY: JRM

FILE INFO: G:\2009\11009-0001\Dwg\VCP\MSD COH\FigC.1.dwg sandersjc NO XREFS ATTACHED



WHITE OAK BAYOU WATERSHED
HARRIS COUNTY FLOOD CONTROL DISTRICT, 2012

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1515 WITTE ROAD, SUITE 150
HOUSTON TEXAS 77080
Texas Registered Engineering Firm F-005009
Texas Registered Geoscience Firm 50011

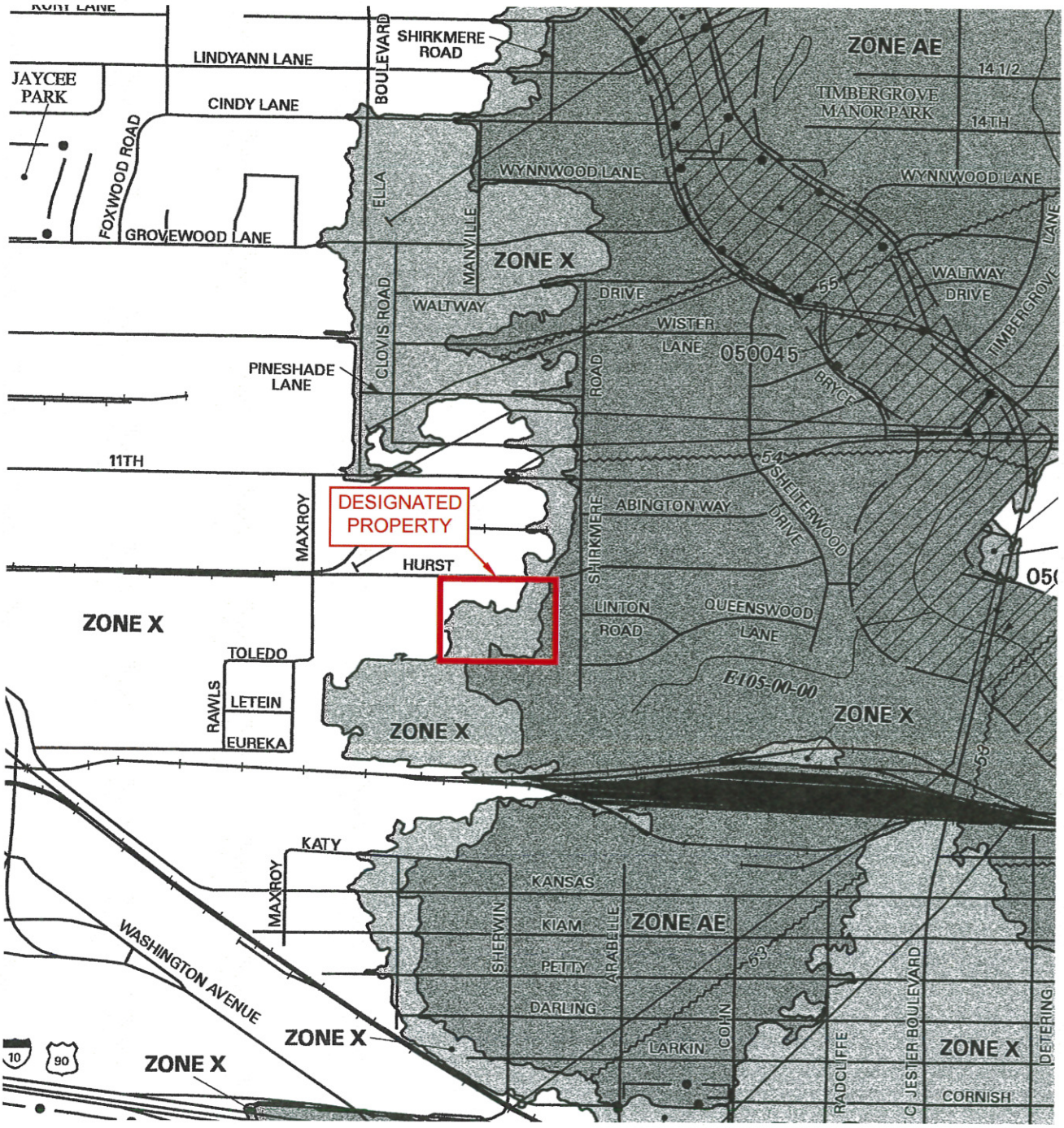
WATERSHED MAP

FIGURE C.2

CITY OF HOUSTON MUNICIPAL SETTING DESIGNATION APPLICATION
FORMER SEATEX CORPORATION PROPERTY
6325 HURST STREET
HOUSTON, HARRIS COUNTY, TEXAS

DATE:	AUGUST 2012	JOB NO:	11009-0001	SCALE:	NTS
1	FIRST REVISION	-	DRAWN BY:	JCS	
2	SECOND REVISION	-	CHECKED BY:	RCN	
3	THIRD REVISION	-	APPROVED BY:	JRM	

FILE INFO: G:\2009\11009-0001\Dwg\VCP\MSD COH\FigC.2.dwg sandersjc NO XREFS ATTACHED



EXPLANATION:

Zone X (Unshaded) - Areas determined to be outside the 0.2% annual chance floodplains.

Zone X (Shaded) - Areas determined to be between 0.2% and 0.1% annual chance floodplains.

Zone AE - Areas subject to inundation by the 1% annual chance flood event.

FEDERAL EMERGENCY MANAGEMENT AGENCY
HARRIS COUNTY, TEXAS
MAP NO.: 48201C0670L (06/18/2007)

0 500 1000

APPROXIMATE SCALE: 1"=1000'

SKA CONSULTING, L.P.
1515 WITTE ROAD, SUITE 150
HOUSTON TEXAS 77080
Texas Registered Engineering Firm F-005009
Texas Registered Geoscience Firm 50011

FLOODPLAIN MAP

FIGURE C.3

CITY OF HOUSTON MUNICIPAL SETTING DESIGNATION APPLICATION
FORMER SEATEX CORPORATION PROPERTY
6325 HURST STREET
HOUSTON, HARRIS COUNTY, TEXAS

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2	SECOND REVISION	-	CHECKED BY:	RCN	
3	THIRD REVISION	-	APPROVED BY:	JRM	

FILE INFO: G:\2009\11009-0001\Dwg\VCP\MSD COH\figC.3.dwg sandersjc NO XREFS ATTACHED

LEGEND

- PROPOSED MSD PROPERTY BOUNDARY
- VCP NO. 2343 BOUNDARY
- VCP NO. 2119 BOUNDARY
- 500-FOOT RADIUS

PARCEL LAND USE

- COMMERCIAL/INDUSTRIAL
- RESIDENTIAL
- VACANT

0 50 100

APPROXIMATE SCALE: 1"=100'

STATE OF TEXAS
PAUL MICHAEL SCHULTZ
68765
REGISTERED
PROFESSIONAL ENGINEER
9/5/12

SKA CONSULTING, L.P.
1515 WITTE ROAD, SUITE 150
HOUSTON TEXAS 77080
Texas Registered Engineering Firm F-005009
Texas Registered Geoscience Firm 50011

SURROUNDING LAND USE MAP

FIGURE C.4

CITY OF HOUSTON MUNICIPAL SETTING DESIGNATION APPLICATION
FORMER SEATEX CORPORATION PROPERTY
6325 HURST STREET
HOUSTON, HARRIS COUNTY, TEXAS

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3 THIRD REVISION	-	APPROVED BY:	JRM

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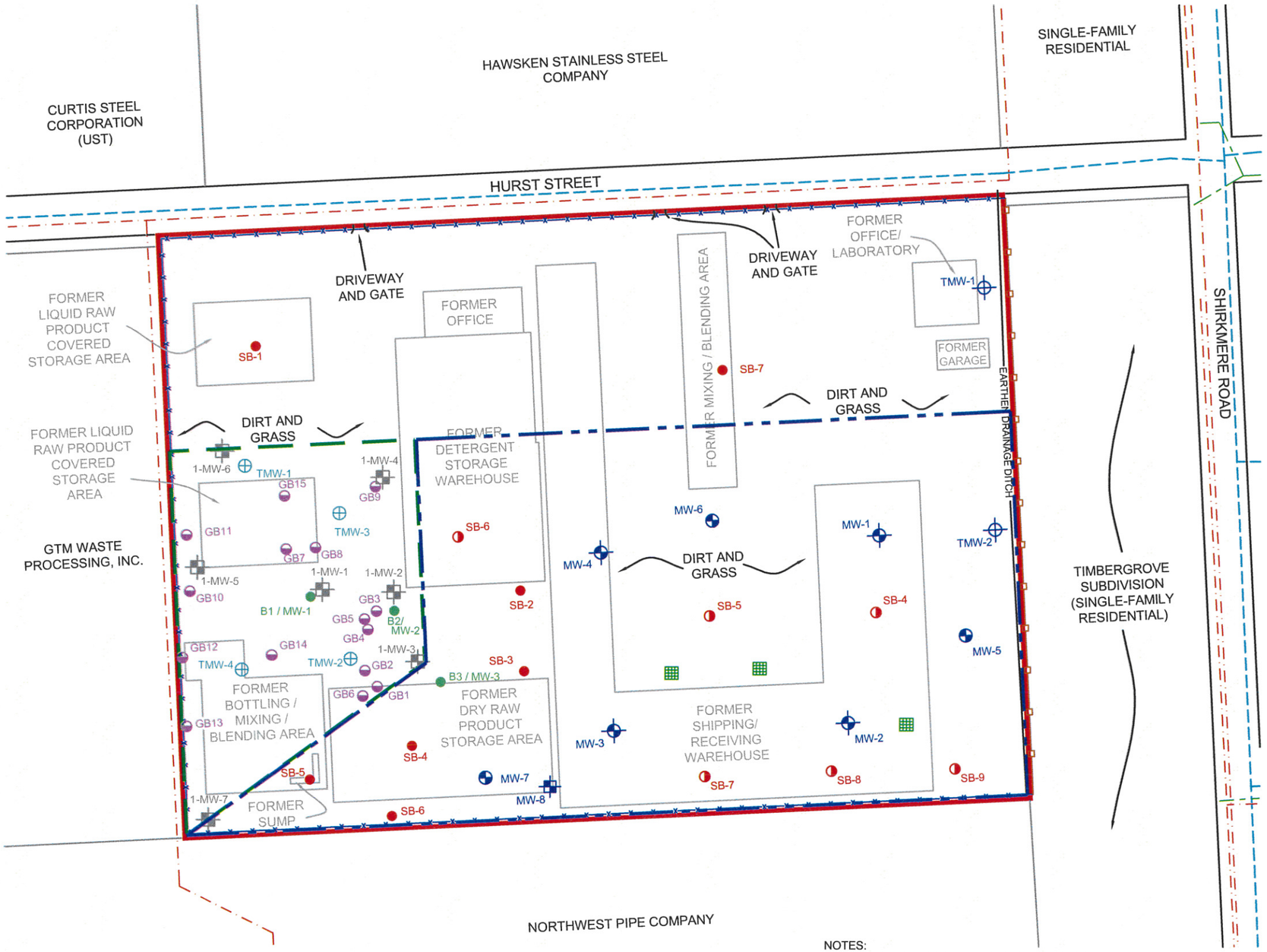

LEGEND

- PROPOSED MSD PROPERTY BOUNDARY
- VCP NO. 2343 BOUNDARY
- VCP NO. 2119 BOUNDARY
- CHAIN-LINK FENCE
- WOODEN FENCE
- SANITARY SEWER
- WATER LINE
- STORM SEWER
- STORM WATER DRAIN
- TMW-2 — FORMER TEMPORARY GROUNDWATER MONITORING WELL LOCATION (SKA 12/2009)
- MW-2 — GROUNDWATER MONITORING WELL LOCATION (SKA 3/2010)
- MW-5 — GROUNDWATER MONITORING WELL LOCATION (SKA 3/2011)
- MW-8 — GROUNDWATER MONITORING WELL LOCATION (SKA 1/2012)
- 1-MW-1 — FORMER GROUNDWATER MONITORING WELL LOCATION (SKA 6/2007)
- TMW-1 — FORMER TEMPORARY MONITORING WELL LOCATION (SKA 7/2007)
- B1 / MW-1 — FORMER SOIL BORING/MONITOIRING WELL LOCATION (PHASE ENGINEERING 5/2007)
- GB1 — SOIL BORING LOCATION (GEO-TECH 5/2008)
- SB-1 — SOIL BORING LOCATION (SKA 12/2009)
- SB-4 — SOIL BORING LOCATION (SKA 3/2011)

0 50 100

APPROXIMATE SCALE: 1"=100'

STATE OF TEXAS
PAUL MICHAEL SCHULTZ
68765
REGISTERED PROFESSIONAL ENGINEER
9/5/12

NOTES:
1. FORMER ON-SITE BUILDING LOCATION SOURCE:
PHASE ENGINEERING, INC.
LIMITED PHASE II ASSESSMENT
(REPORT NO. 2704080; DATED MAY 12, 2007)
2. SANITARY SEWER, WATER LINE, AND STORM SEWER LINE LOCATIONS OBTAINED FROM CITY OF HOUSTON GEOGRAPHIC INFORMATION MANAGEMENT SYSTEM (JANUARY 2011).
3. MONITORING WELLS ASSOCIATED WITH VCP NO. 2119 WERE PLUGGED AND ABANDONED IN FEBRUARY 2009.

SKA CONSULTING, L.P.
1515 WITTE ROAD, SUITE 150
HOUSTON TEXAS 77080
Texas Registered Engineering Firm F-005009
Texas Registered Geoscience Firm 50011

SOIL AND GROUNDWATER SAMPLING LOCATION MAP

FIGURE C.5

CITY OF HOUSTON MUNICIPAL SETTING DESIGNATION APPLICATION
FORMER SEATEX CORPORATION PROPERTY
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HOUSTON, HARRIS COUNTY, TEXAS

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2	SECOND REVISION	-	CHECKED BY:	RCN	
3	THIRD REVISION	-	APPROVED BY:	JRM	

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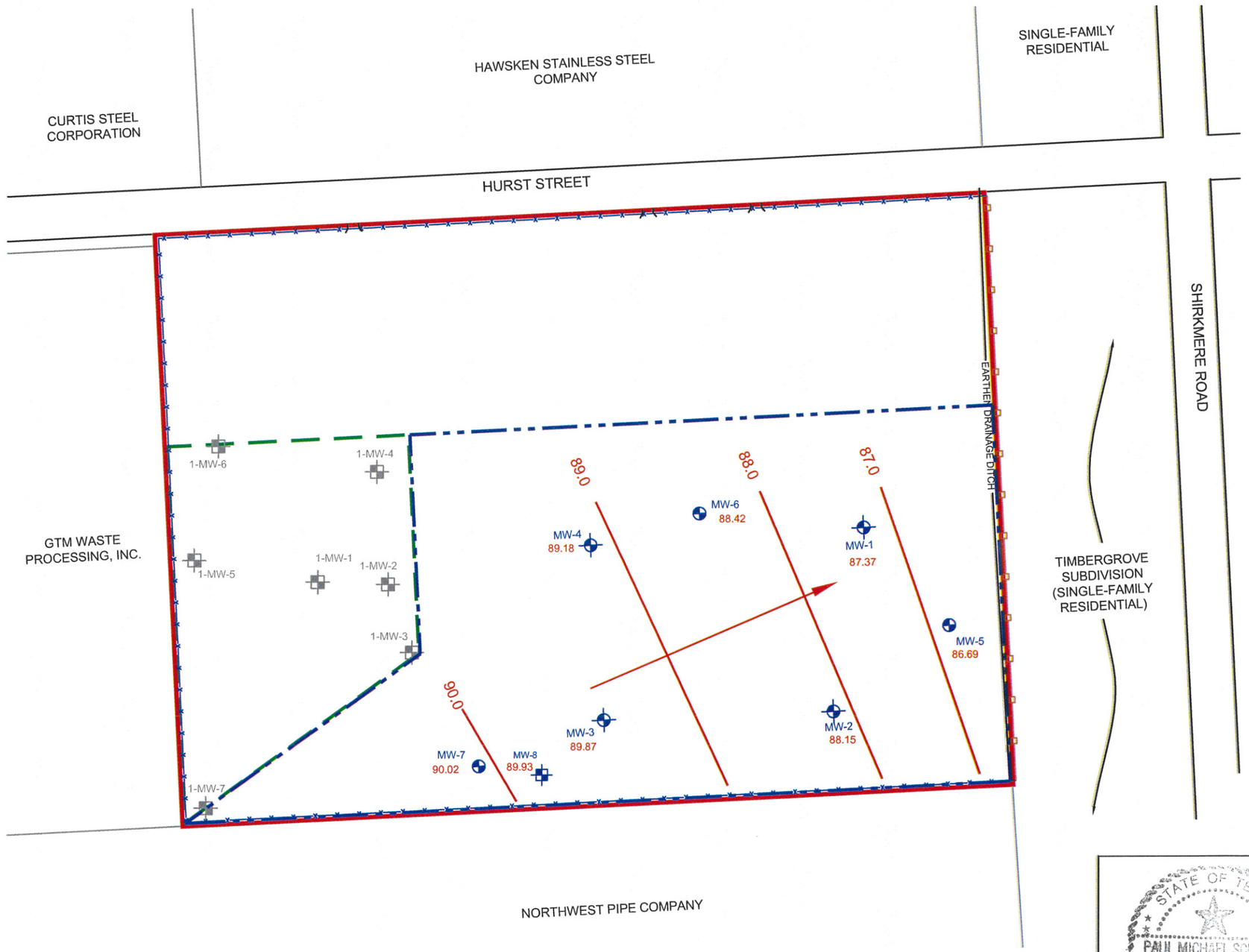

LEGEND

- PROPOSED MSD PROPERTY BOUNDARY
- VCP NO. 2343 BOUNDARY
- VCP NO. 2119 BOUNDARY
- CHAIN-LINK FENCE
- WOODEN FENCE
- MW-2 — GROUNDWATER MONITORING WELL LOCATION (SKA 3/2010)
- MW-5 — GROUNDWATER MONITORING WELL LOCATION (SKA 3/2011)
- MW-8 — GROUNDWATER MONITORING WELL LOCATION (SKA 1/2012)
- 1-MW-1 — FORMER GROUNDWATER MONITORING WELL LOCATION (SKA 6/2007)
- 87.37 — GROUNDWATER ELEVATION (ARBITRARY DATUM)
- 90.0 — GOUNDWATER ELEVATION CONTOUR
- GROUNDWATER FLOW DIRECTION

NOTE:
MONITORING WELLS ASSOCIATED WITH VCP ID NO. 2119 WERE PLUGGED AND ABANDONED (P&A) IN FEBRUARY 2009.

0 50 100
APPROXIMATE SCALE: 1"=100'

STATE OF TEXAS
PAUL MICHAEL SCHULTZ
68755
REGISTERED PROFESSIONAL ENGINEER
9/5/12

SKA CONSULTING, L.P.
1515 WITTE ROAD, SUITE 150
HOUSTON TEXAS 77080
Texas Registered Engineering Firm F-005009
Texas Registered Geoscience Firm 50011

GROUNDWATER GRADIENT MAP FEBRUARY 21, 2012

FIGURE C.6

CITY OF HOUSTON MUNICIPAL SETTING DESIGNATION APPLICATION
FORMER SEATEX CORPORATION PROPERTY
6325 HURST STREET
HOUSTON, HARRIS COUNTY, TEXAS

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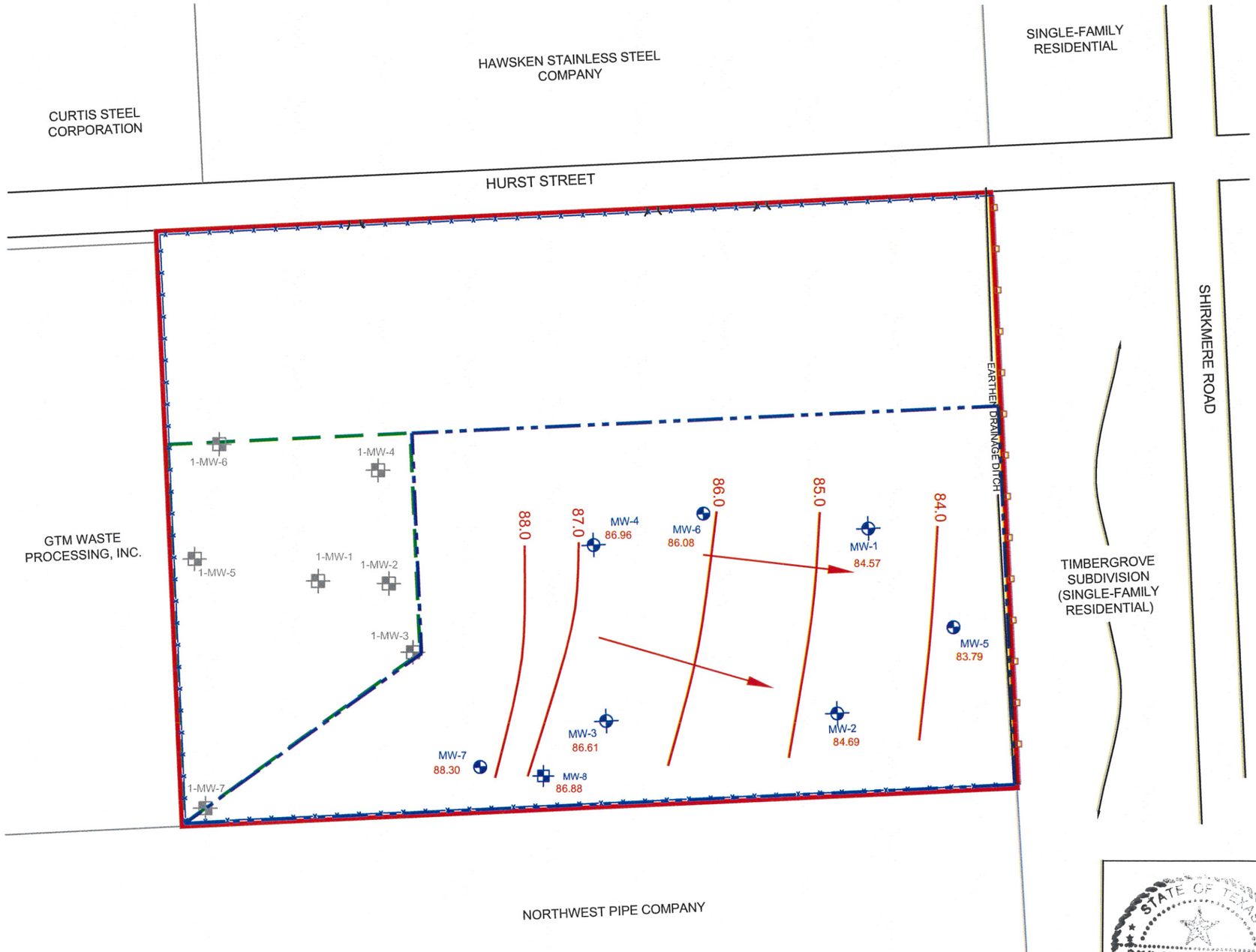

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- MW-8 — GROUNDWATER MONITORING WELL LOCATION (SKA 1/2012)
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- 90.0 — GOUNDWATER ELEVATION CONTOUR
- GROUNDWATER FLOW DIRECTION

NOTE:
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0 50 100
APPROXIMATE SCALE: 1"=100'

STATE OF TEXAS
PAUL MICHAEL SCHULTZ
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REGISTERED
PROFESSIONAL ENGINEER
9/5/12

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1515 WITTE ROAD, SUITE 150
HOUSTON TEXAS 77080
Texas Registered Engineering Firm F-005009
Texas Registered Geoscience Firm 50011

GROUNDWATER GRADIENT MAP
MAY 25, 2012

FIGURE
C.6A

CITY OF HOUSTON MUNICIPAL SETTING DESIGNATION APPLICATION
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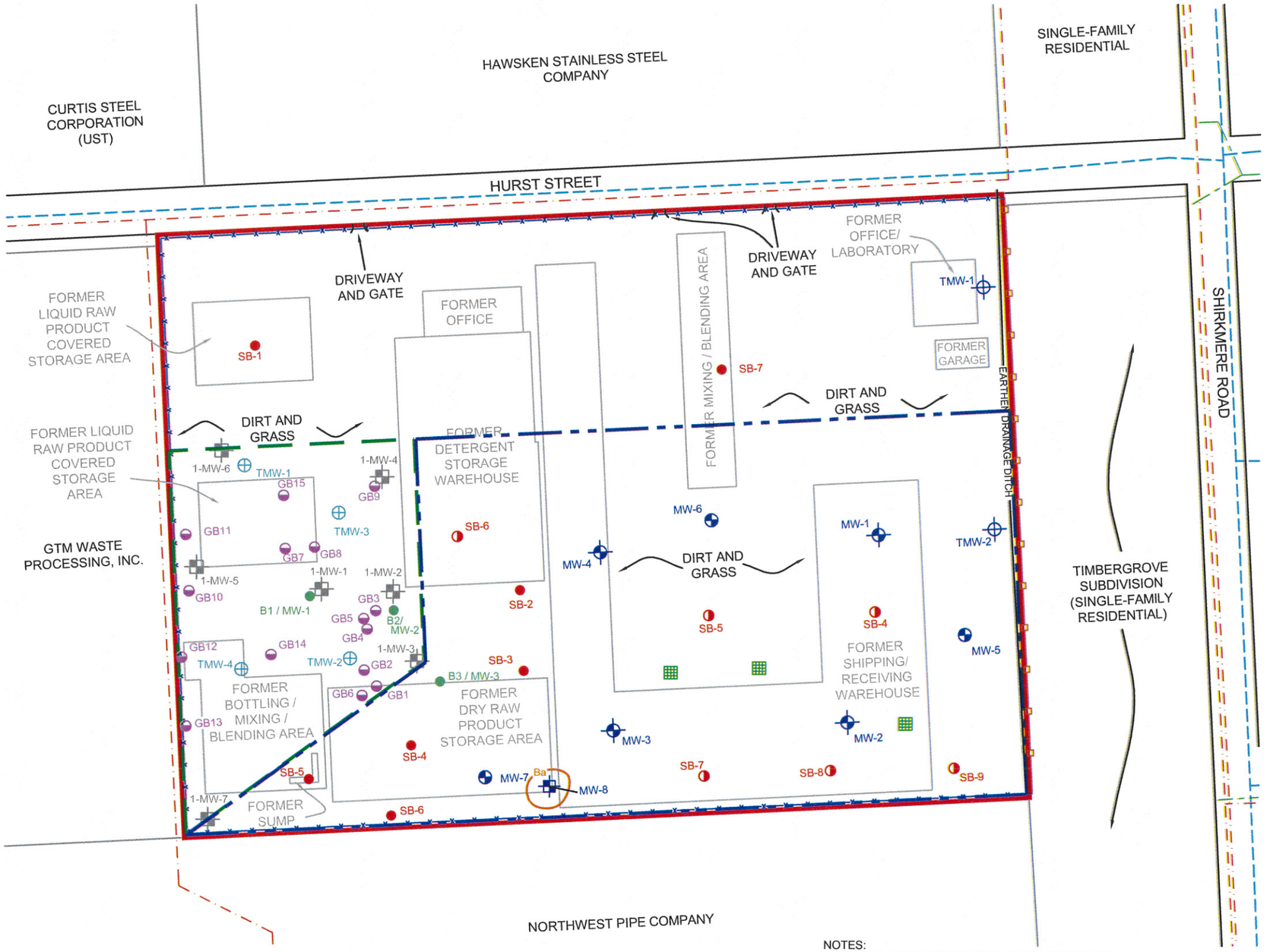

LEGEND

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- MW-8 — GROUNDWATER MONITORING WELL LOCATION (SKA 1/2012)
- 1-MW-1 — FORMER GROUNDWATER MONITORING WELL LOCATION (SKA 6/2007)
- TMW-1 — FORMER TEMPORARY MONITORING WELL LOCATION (SKA 7/2007)
- B1 / MW-1 — FORMER SOIL BORING/MONITOIRING WELL LOCATION (PHASE ENGINEERING 5/2007)
- GB1 — SOIL BORING LOCATION (GEO-TECH 5/2008)
- SB-1 — SOIL BORING LOCATION (SKA 12/2009)
- SB-4 — SOIL BORING LOCATION (SKA 3/2011)
- Ba — BARIUM PCLE ZONE (BASED ON TRRP TIER 2 RESIDENTIAL $GW_{SOIL_{Ing}}$ PCL)

0 50 100

APPROXIMATE SCALE: 1"=100'

STATE OF TEXAS
PAUL MICHAEL SCHULTZ
68765
REGISTERED PROFESSIONAL ENGINEER
4/5/12

NOTES:
1. FORMER ON-SITE BUILDING LOCATION SOURCE:
   PHASE ENGINEERING, INC.
   LIMITED PHASE II ASSESSMENT
   (REPORT NO. 2704080; DATED MAY 12, 2007)
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3. MONITORING WELLS ASSOCIATED WITH VCP NO. 2119 WERE PLUGGED AND ABANDONED IN FEBRUARY 2009.

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HOUSTON TEXAS 77080
Texas Registered Engineering Firm F-005009
Texas Registered Geoscience Firm 50011

PROTECTIVE CONCENTRATION LEVEL EXCEEDANCE (PCLE) ZONE MAP - SOIL

FIGURE C.7

CITY OF HOUSTON MUNICIPAL SETTING DESIGNATION APPLICATION
FORMER SEATEX CORPORATION PROPERTY
6325 HURST STREET
HOUSTON, HARRIS COUNTY, TEXAS

DATE:	JOB NO:	SCALE:
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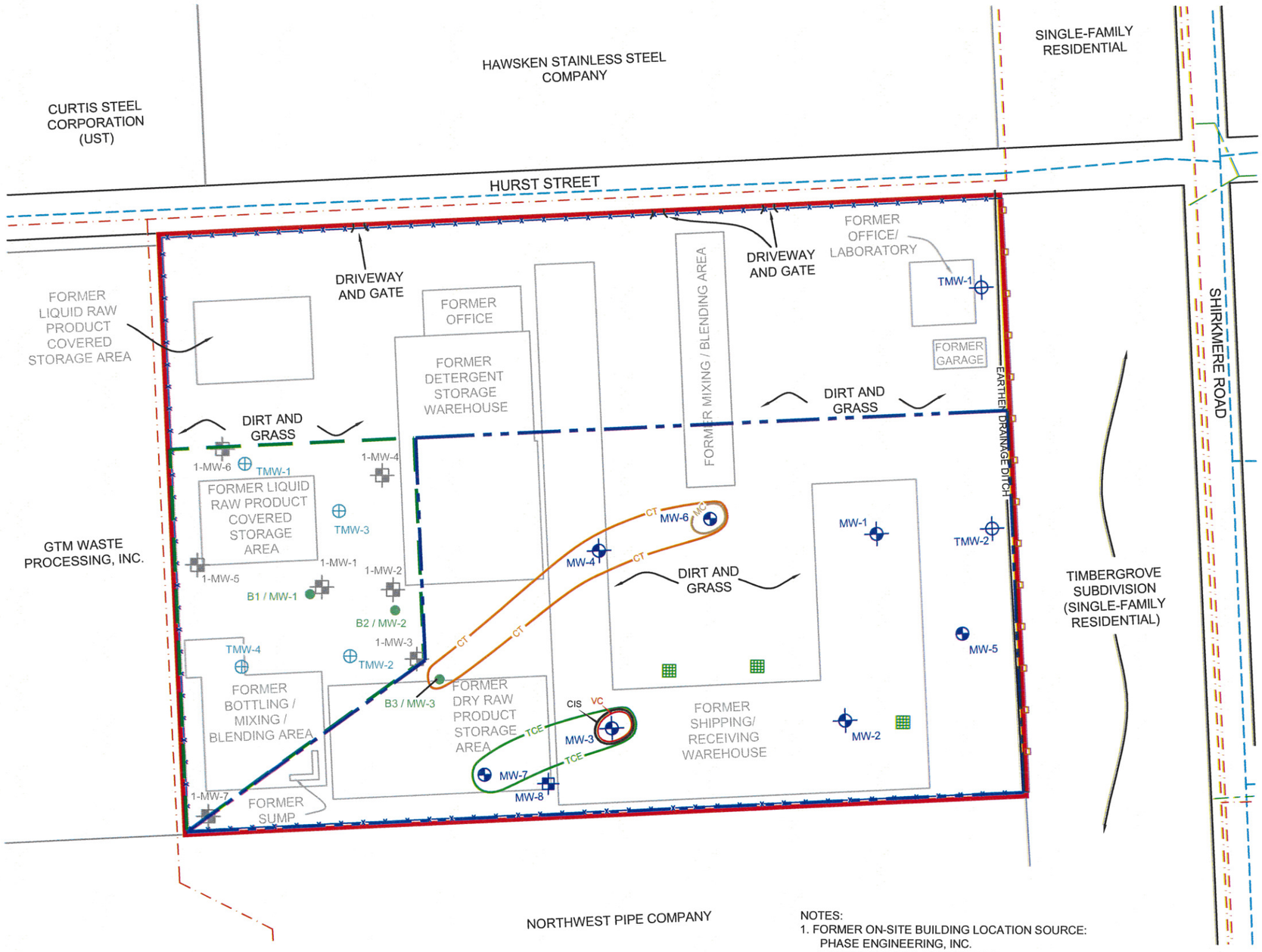
3	THIRD REVISION	-	APPROVED BY: JRM

FILE INFO: G:\2009\11009-0001\Dwg\VCP\MSD COH\FigC.7.dwg sandersjc NO XREFS ATTACHED



LEGEND

- PROPOSED MSD PROPERTY BOUNDARY
- VCP NO. 2343 BOUNDARY
- VCP NO. 2119 BOUNDARY
- CHAIN-LINK FENCE
- WOODEN FENCE
- SANITARY SEWER
- WATER LINE
- STORM SEWER
- STORM WATER DRAIN
- TMW-2 — FORMER TEMPORARY GROUNDWATER MONITORING WELL LOCATION (SKA 12/2009)
- MW-2 — GROUNDWATER MONITORING WELL LOCATION (SKA 3/2010)
- MW-5 — GROUNDWATER MONITORING WELL LOCATION (SKA 3/2011)
- MW-8 — GROUNDWATER MONITORING WELL LOCATION (SKA 1/2012)
- 1-MW-1 — FORMER GROUNDWATER MONITORING WELL LOCATION (SKA 6/2007)
- TMW-1 — FORMER TEMPORARY MONITORING WELL LOCATION (SKA 7/2007)
- B1 / MW-1 — FORMER SOIL BORING /MONITORING WELL LOCATION (PHASE ENGINEERING 5/2007)
- CT — CARBON TETRACHLORIDE PCLE ZONE
- MC — METHYLENE CHLORIDE PCLE ZONE
- TCE — TRICHLOROETHENE PCLE ZONE
- CIS — CIS 1,2-DICHLOROETHENE PCLE ZONE
- VC — VINYL CHLORIDE PCLE ZONE

0 50 100

APPROXIMATE SCALE: 1"=100'

STATE OF TEXAS
PAUL MICHAEL SCHULTZ
68765
REGISTERED
PROFESSIONAL ENGINEER
9/5/12

NOTES:
1. FORMER ON-SITE BUILDING LOCATION SOURCE:
PHASE ENGINEERING, INC.
LIMITED PHASE II ASSESSMENT
(REPORT NO. 2704080; DATED MAY 12, 2007)
2. SANITARY SEWER, WATER LINE, AND STORM SEWER LINE LOCATIONS OBTAINED FROM CITY OF HOUSTON GEOGRAPHIC INFORMATION MANAGEMENT SYSTEM (JANUARY 2011).
3. MONITORING WELLS ASSOCIATED WITH VCP NO. 2119 WERE PLUGGED AND ABANDONED IN FEBRUARY 2009.
4. ANALYTICAL DATA FOR WELLS ON VCP ID NO. 2119 FROM SKA CONSULTING, LP AND GEO-TECH ENVIRONMENTAL, INC. AFFECTED PROPERTY ASSESSMENT REPORT, MAY 2008.

SKA CONSULTING, L.P.
1515 WITTE ROAD, SUITE 150
HOUSTON TEXAS 77080
Texas Registered Engineering Firm F-005009
Texas Registered Geoscience Firm 50011

PROTECTIVE CONCENTRATION LEVEL EXCEEDANCE (PCLE) ZONE MAP - GROUNDWATER

FIGURE C.8

CITY OF HOUSTON MUNICIPAL SETTING DESIGNATION APPLICATION
FORMER SEATEX CORPORATION PROPERTY
6325 HURST STREET
HOUSTON, HARRIS COUNTY, TEXAS

DATE:	JOB NO:	SCALE:
AUGUST 2012	11009-0001	AS SHOWN

1	FIRST REVISION	-	DRAWN BY: JCS
2	SECOND REVISION	-	CHECKED BY: RCN
3	THIRD REVISION	-	APPROVED BY: JRM

FILE INFO: G:\2009\11009-0001\Dwg\VCP\MSD COH\FIG1.dwg sandersjc NO XREFS ATTACHED

Appendix D – PCLE Zone Discussion

This section includes a description of the ingestion PCL exceedance zone (PCLE) and non-ingestion PCLE zone, the level of contamination, and the basic geochemical properties of each contaminant of concern of the designated property. As previously discussed, there are two VCP sites (VCP No. 2119 and VCP No. 2343) within the designated property. The completed VCP site (VCP No. 2119) is located along the western portion of the designated property and was closed in 2009. The active VCP site (VCP No. 2343) is located in the southeastern portion of the designated property. Only PCLE zones outside of VCP No. 2119 will be discussed within the designated property (remaining designated property). However, soil and groundwater analytical data from VCP No. 2119 is included for reference in the soil and groundwater analytical tables (***Tables D.1 and D.2***, respectively).

Soil PCLE Zone

Soil sampling and analysis results obtained for soil samples collected from the remaining designated property indicate that three COCs (arsenic, barium, and lead) were detected in excess of their TRRP soil-to-groundwater ingestion PCL (TRRP Tier 1 residential $^{GW}Soil_{Ing}$ PCLs); however, only barium was detected in excess of its applicable TRRP soil-to-groundwater ingestion PCL (TRRP Tier 2 residential $^{GW}Soil_{Ing}$ PCL). The Tier 2 calculations for arsenic, barium, and lead are included as ***Tables D.3-D.5***, respectively. The soil PCLE zone is centered on monitoring well MW-8, located in the southeast portion of the remaining designated property within VCP No. 2343, as shown in ***Figure C.7***. The soil analytical data and TRRP PCLs utilized for determination of the designated property's soil-to-groundwater ingestion and non-ingestion PCLE zones are included in ***Table D.1***.

None of the VOCs detected in the soil at the designated property exceed their applicable TRRP soil-to-groundwater ingestion PCLs (TRRP Tier 1 residential $^{GW}Soil_{Ing}$ PCLs for surface soils) or non-ingestion soil PCLs ($^{Tot}Soil_{Comb}$ PCLs for surface soils and $^{Air}Soil_{Inh\text{-}V}$ PCLs for subsurface soils). As such, no TRRP ingestion or non-ingestion soil PCLE zones exist at the designated property.

Groundwater PCLE Zones

The results of the most recent groundwater sampling and analytical testing from the remaining designated property indicate trichloroethene (TCE), cis-1,2-dichloroethene, (cis-1,2 DCE), vinyl chloride (VC), carbon tetrachloride, and methylene chloride, are present in the groundwater of the uppermost GWBU in excess of the COCs' applicable TRRP groundwater ingestion PCLs (TRRP Tier 1 residential $^{GW}GW_{Ing}$ PCLs).

None of the COCs detected in the uppermost GWBU exceed their applicable TRRP non-ingestion groundwater PCLs (TRRP Tier 1 residential $^{Air}GW_{Inh\text{-}V}$ PCLs). As such, no TRRP non-ingestion groundwater PCLE zones exist at the remaining designated property.

Groundwater gauging data collected at different times from 2010 to 2012 within the remaining designated property indicates groundwater in the uppermost GWBU flows consistently to the

east-northeast (***Figure C.6***). Gauging data collected in May 2012 indicated a groundwater flow direction to the east-southeast (***Figure C.6A***).

Further discussion regarding each of the TRRP groundwater ingestion PCLE zones follows and is based on the most recent analytical data from each temporary and permanent monitoring well within the remaining designated property. The locations of the TRRP groundwater PCLE zones are shown on ***Figure C.8*** in ***Appendix C***.

TCE, cis-1,2-DCE, and VC PCLE Zones

The most recent groundwater monitoring data indicates the existence of a TCE groundwater ingestion PCLE zone (TCE PCLE Zone) in the uppermost GWBU located in the south-central portion of the designated property (within VCP No. 2343). The TCE PCLE zone encompasses approximately 4,700 square feet (SF). Within the TCE PCLE zone are two smaller cis-1,2-DCE and VC PCLE zones, both centered on monitoring well MW-3 and approximately 550 SF. The TCE PCLE zone is delineated laterally by temporary monitoring well B3/MW-3 to the west and monitoring wells MW-8, MW-2, and MW-4 to the south, east, and north, respectively.

The most recent TCE, cis-1,2-DCE, and VC concentrations were detected at monitoring well MW-3 in May 2012 and are 0.049 mg/L, 0.17 mg/L, and 0.0021 mg/L, respectively. These concentrations exceed their applicable TRRP groundwater ingestion PCLs (TRRP Tier 1 residential $^{GW}GW_{Ing}$ PCLs) of 0.005 mg/L (TCE), 0.005 mg/L (cis-1,2-DCE), and 0.002 mg/L (VC), respectively.

Carbon Tetrachloride and Methylene Chloride PCLE Zones

The most recent groundwater monitoring data indicates a carbon tetrachloride groundwater ingestion PCLE zone (carbon tetrachloride PCLE zone) currently exists in the central portion of the remaining designated property (within VCP No. 2343). The western extent of the carbon tetrachloride PCLE zone is the temporary monitoring well location B3/MW-3 and the eastern extent is monitoring well MW-6. Within the carbon tetrachloride PCLE zone is a smaller methylene chloride PCLE zone centered on monitoring well MW-6.

The current carbon tetrachloride PCLE zone is delineated laterally by monitoring wells MW-1, MW-2, and MW-3. The current extent of the carbon tetrachloride PCLE zone is estimated to be approximately 8,100 SF and the extent of the methylene chloride PCLE zone is approximately 540 SF.

The most recent carbon tetrachloride concentration detected in the groundwater is 0.070 mg/L detected at monitoring well MW-4 in May 2012. This concentration exceeds carbon tetrachloride's applicable TRRP groundwater ingestion PCL (TRRP Tier 1 residential $^{GW}GW_{Ing}$ PCL) of 0.005 mg/L. The most recent methylene chloride concentration detected in the groundwater at monitoring well MW-6 in May 2012 is 0.0080 (J) mg/L. This concentration represents an estimated value (J) between the sample detection limit and the method quantitation limit and exceeds the TRRP Tier 1 residential $^{GW}GW_{Ing}$ PCL of 0.005 mg/L.

Geochemical Properties of COCs in Groundwater

The COCs (TCE, cis-1,2-DCE, and VC) detected in the groundwater of remaining designated property are chlorinated ethenes. Cis-1,2-DCE and VC are daughter products of TCE. The chlorinated ethene COCs occur in the dissolved-phase and no direct evidence of non-aqueous phase liquids (NAPLs) has been observed or detected. Due to their high densities, NAPLs comprised of chlorinated ethenes are generally referred to as dense NAPLs or DNAPLs. DNAPL-phase COCs have a tendency to migrate vertically and "sink" in GWBUs. Typically, dissolved-phase chlorinated ethenes preferentially migrate with groundwater flow. However, DNAPLs, when present, can migrate along the dip of geologic contacts counter to groundwater flow. Monitoring wells installed at the remaining designated property fully penetrate the GWBU, but no DNAPL-phase COCs have been observed.

Generally, chlorinated ethenes such as those detected in the groundwater of the remaining designated property are colorless liquids at room temperature. In addition, they are relatively volatile, have higher densities than water, relatively low viscosities, relatively low solubilities, and relatively low explosive limits.

The COCs (carbon tetrachloride and methylene chloride) are chlorinated methanes, which are present in the groundwater in the dissolved-phase. While chloroform is a direct daughter product of carbon tetrachloride, it has not been detected above its applicable TRRP groundwater ingestion PCL, unlike methylene chloride, which is a daughter product of chloroform. As previously stated, no direct evidence of NAPLs has been observed or detected. Due to their high densities, carbon tetrachloride and methylene chloride are DNAPLs. DNAPL-phase COCs have a tendency to migrate vertically and "sink" in GWBUs.

Generally, the COCs detected in the groundwater are characterized as being colorless liquids at room temperature. In addition, they are volatile or semi-volatile, aromatic and have higher densities than water.

TABLE D.1
SOIL DATA SUMMARY
CITY OF HOUSTON MUNICIPAL SETTING DESIGNATION
FORMER SEATEX CORPORATION PROPERTY
6325 HURST STREET
HOUSTON, HARRIS COUNTY, TEXAS

			VOCs								RCRA 8 METALS								TPH			
Sample Name	Sample Depth (ft-bgs)	Sample Date	2-Butanone	Acetone	Benzene	Ethylbenzene	Methylene chloride	Naphthalene	Styrene	Toluene	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver	C6-C12	C12-C28	C28-C35	Total TPH (C6-C35)
			Method 8260B mg/Kg-Dry	Method 8260B mg/Kg-Dry	Method 8260B mg/Kg-Dry	Method 8260B mg/Kg-Dry	Method 8260B mg/Kg-Dry	Method 8260B mg/Kg-Dry	Method 8260B mg/Kg-Dry	Method 8260B mg/Kg-Dry	Method 6020 mg/Kg-Dry	Method 6020 mg/Kg-Dry	Method 6020 mg/Kg-Dry	Method 6020 mg/Kg-Dry	Method 6020 mg/Kg-Dry	Method 7471A mg/Kg-Dry	Method 6020 mg/Kg-Dry	Method 6020 mg/Kg-Dry	Method TX 1005 mg/Kg-Dry	Method TX 1005 mg/Kg-Dry	Method TX 1005 mg/Kg-Dry	Method TX 1005 mg/Kg-Dry
VCP NO. 2119 (GEO TECH)																						
GB2	1	2/28/2008	--	--	--	--	--	--	--	--	**1.78**	**260**	**0.122 J**	**28.2**	**12.5**	**0.025**	<0.2	<0.05	<12.7	**45.1**	**88.4**	**133.5**
GB3	1	2/28/2008	--	--	--	--	--	--	--	--	**1.73**	**68.9**	<0.07	**9.39**	**5.88**	**0.015**	<0.2	<0.05	<12.7	<20.6	<22.2	--
GB5	7.5	2/28/2008	<0.002	--	<0.001	**1.19**	<0.002	**3.7**	<0.001	<0.001	**2.11**	**689**	<0.07	**29.7**	**21.4**	**0.01**	<0.2	<0.05	**318**	**1,979**	**2,356**	**4,653**
	8.5		<0.002	--	<0.001	<0.001	<0.002	**2.21**	<0.001	<0.001	**8.72**	**556**	**0.177 J**	**11.6**	**1.52**	**0.01**	<0.2	<0.05	**148**	**561**	<19.6	**709**
GB6	10-11	2/28/2008	<0.002	--	<0.001	<0.001	<0.002	**0.004**	<0.001	<0.001	**2.65**	**732**	<0.07	**19.6**	**5.91**	**0.005**	<0.2	<0.05	<12.7	<18.2	<19.6	--
	13		<0.002	--	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	**2.04**	**104**	<0.07	**6.46**	**6.17**	<0.002	<0.2	<0.05	<12.7	<18.2	<19.6	--
GB7	7-9	2/28/2008	<0.002	--	<0.001	<0.001	<0.002	<0.002	<0.001	**0.209**	**2.63**	**283**	<0.07	**22.5**	**4.19**	**0.007**	<0.2	<0.05	**66**	**22.9**	<19.6	**88.9**
	13		<0.002	--	<0.001	<0.001	<0.002	**0.006**	<0.001	<0.001	**3.53**	**63.9**	<0.07	**10.9**	**9.9**	**0.005**	<0.2	<0.05	<12.7	<18.2	<19.6	--
GB8	0.6	2/28/2008	--	--	--	--	--	--	--	--	**1.47**	**97**	<0.07	**6.93**	**8.85**	**0.011**	<0.2	<0.05	<12.7	<18.2	**27.2**	**27.2**
	8.5		<0.002	--	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	--	--	--	--	--	--	--	--	--	--	--	--
GB9	1	2/28/2008	--	--	--	--	--	--	--	--	**1.79**	**219**	<0.07	**11.9**	**6.06**	**0.007**	<0.2	<0.05	<12.7	**52.6**	**112**	**164.6**
	6		<0.002	--	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	--	--	--	--	--	--	--	--	--	--	--	--
GB10	1.5	2/28/2008	--	--	--	--	--	--	--	--	**2.00**	**270**	**0.110 J**	**19.3**	**22.7**	**0.006**	<0.2	<0.05	<12.7	<18.2	<19.6	--
	6		<0.002	--	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	--	--	--	--	--	--	--	--	--	--	--	--
GB11	1	2/28/2008	--	--	--	--	--	--	--	--	**2.27**	**296**	<0.07	**8.86**	**10.7**	**0.015**	<0.2	<0.05	<12.7	<18.2	<19.6	--
	6		<0.002	--	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	--	--	--	--	--	--	--	--	--	--	--	--
GB12	1	2/28/2008	--	--	--	--	--	--	--	--	**1.54**	**69**	<0.07	**7.29**	**6.48**	**0.01**	<0.2	<0.05	<12.7	<18.2	<19.6	--
	6		<0.002	--	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	--	--	--	--	--	--	--	--	--	--	--	--
GB13	1	2/28/2008	--	--	--	--	--	--	--	--	**2.21**	**114**	<0.07	**6.31**	**4.49**	**0.004**	<0.2	<0.05	<12.7	<18.2	<19.6	--
	6		**0.006 J**	--	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	--	--	--	--	--	--	--	--	--	--	--	--
GB14	1	2/28/2008	--	--	--	--	--	--	--	--	**2.56**	**186**	<0.07	**27.4**	**10.2**	**0.014**	<0.2	<0.05	<12.7	<18.2	<19.6	--
	6		<0.002	--	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	--	--	--	--	--	--	--	--	--	--	--	--
GB15	1	2/28/2008	--	--	--	--	--	--	--	--	**5.72**	**229**	**0.124 J**	**13.5**	**13.5**	**0.01**	<0.2	<0.05	<12.7	<18.2	<19.6	--
	6		<0.002	--	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	--	--	--	--	--	--	--	--	--	--	--	--
VCP NO. 2119 (SKA)																						
B1/MW1	2	5/3/2007	<0.010	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	**0.65**	**69.5**	<0.250	**26.2**	**2.9**	<0.004	<0.250	<0.500	<20.0	<20.0	<50.0	--
B2/MW2	2	5/3/2007	<0.010	<0.010	<0.005	**0.0282**	<0.005	**0.113**	<0.005	<0.005	<0.250	**138**	<0.250	**2.35**	**1.1**	<0.004	<0.250	<0.500	<20.0	<20.0	<50.0	--
B3/MW3	2	5/3/2007	<0.010	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.250	**150**	<0.250	**1.97**	**1.45**	<0.004	<0.250	<0.500	<20.0	<20.0	<50.0	--
REMAINING DESIGNATED PROPERTY																						
SB-1	2-4	12/22/2009	<0.0017	<0.0024	<0.00060	<0.00060	**0.0022 J**	<0.00060	<0.00060	<0.00060	--	--	--	--	--	--	--	--	<19	<19	<19	<19
SB-2	6-7.5	12/23/2009	<0.0017	**0.017 J**	<0.00059	<0.00059	<0.0012	<0.00059	<0.00059	<0.00059	--	--	--	--	--	--	--	--	<19	<19	<19	<19
SB-3	2-4	12/22/2009	<0.0017	<0.0025	<0.00062	<0.00062	**0.0035 J**	<0.00062	<0.00062	<0.00062	--	--	--	--	--	--	--	--	<19	<19	<19	<19
SB-4	4-6	12/22/2009	<0.0016	**0.016 J**	<0.00058	<0.00058	**0.0021 J**	<0.00058	<0.00058	<0.00058	--	--	--	--	--	--	--	--	<18	<18	<18	ND
SB-5	2-4	12/23/2009	<0.0017	**0.027**	<0.00060	<0.00060	<0.0012	<0.00060	<0.00060	<0.00060	--	--	--	--	--	--	--	--	<19	<19	<19	ND
SB-6	4-6	12/23/2009	<0.0017	<0.0025	<0.00062	<0.00062	<0.0012	<0.00062	<0.00062	<0.00062	--	--	--	--	--	--	--	--	<19	<19	<19	ND
SB-7	2-4	12/22/2009	<0.0016	<0.0024	<0.00059	<0.00059	**0.0026 J**	<0.00059	<0.00059	<0.00059	--	--	--	--	--	--	--	--	<19	<19	<19	ND
TMW-1	4-6	12/22/2009	<0.0016	<0.0023	<0.00057	<0.00057	<0.0011	<0.00057	<0.00057	<0.00057	-	-	-	-	-	-	-	-	<18	<18	<18	ND
SB-4	4-6	3/23/2011	<0.0016	**0.0033 J**	<0.00056	<0.00056	<0.0011	<0.00056	<0.00056	<0.00056	**2.45**	**128**	**0.0588 J**	**6.86**	**6.81**	<0.00024	**0.454 J**	<0.043	<16	<16	<16	<16
	14-15		<0.0017	**0.0027 J**	<0.00062	<0.00062	<0.0012	<0.00062	<0.00062	<0.00062	**3.96**	**126**	**0.0883 J**	**9.92**	**7.16**	<0.00027	**0.602**	<0.044	<18	<18	<18	<18
SB-5	6-8	3/23/2011	<0.0017	**0.0074 J**	<0.00060	<0.00060	<0.0012	<0.00060	<0.00060	<0.00060	**3.69**	**140**	**0.121 J**	**4.61**	**5.68**	<0.00026	<1.4	<0.045	<18	<18	<18	<18
	14-15		<0.0021	<0.0030	<0.00075	<0.00075	<0.0015	<0.00075	<0.00075	<0.00075	**12.7**	**341**	<0.060	**16.1**	**13.9**	<0.00033	**0.812 J**	<0.12	<22	<22	<22	<22
SB-6	2-4	3/23/2011	<0.0016	**0.0035 J**	<0.00058	<0.00058	<0.0012	<0.00058	<0.00058	<0.00058	**2.25**	**83.2**	<0.043	**7.53**	**7.14**	**0.0117**	**0.478 J**	**0.0447 J**	<17	<17	<17	<17
	14-15		<0.0017	**0.0077 J**	<0.00059	<0.00059	<0.0012	<0.00059	<0.00059	<0.00059	**2.16**	**222**	<0.043	**4.3**	**5.11**	**0.00180 J**	**0.320 J**	<0.043	<18	<18	<18	<18

TABLE D.1
SOIL DATA SUMMARY
CITY OF HOUSTON MUNICIPAL SETTING DESIGNATION
FORMER SEATEX CORPORATION PROPERTY
6325 HURST STREET
HOUSTON, HARRIS COUNTY, TEXAS

			VOCs								RCRA 8 METALS								TPH			
Sample Name	Sample Depth (ft-bgs)	Sample Date	2-Butanone	Acetone	Benzene	Ethylbenzene	Methylene chloride	Naphthalene	Styrene	Toluene	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver	C6-C12	C12-C28	C28-C35	Total TPH (C6-C35)
			Method 8260B mg/Kg-Dry	Method 8260B mg/Kg-Dry	Method 8260B mg/Kg-Dry	Method 8260B mg/Kg-Dry	Method 8260B mg/Kg-Dry	Method 8260B mg/Kg-Dry	Method 8260B mg/Kg-Dry	Method 8260B mg/Kg-Dry	Method 6020 mg/Kg-Dry	Method 6020 mg/Kg-Dry	Method 6020 mg/Kg-Dry	Method 6020 mg/Kg-Dry	Method 6020 mg/Kg-Dry	Method 7471A mg/Kg-Dry	Method 6020 mg/Kg-Dry	Method 6020 mg/Kg-Dry	Method TX 1005 mg/Kg-Dry	Method TX 1005 mg/Kg-Dry	Method TX 1005 mg/Kg-Dry	Method TX 1005 mg/Kg-Dry
SB-7	6-8	3/23/2011	<0.0016	**0.0026 J**	<0.00056	<0.00056	<0.0011	<0.00056	<0.00056	<0.00056	**5.37**	**961**	**0.0945 J**	**6.64**	**10.5**	**0.000486 J**	**0.600**	<0.043	<16	<16	<16	<16
	14-15		<0.0017	<0.0025	<0.00062	<0.00062	<0.0012	<0.00062	<0.00062	<0.00062	**5.96**	**70.3**	**0.0460 J**	**10.4**	**8.46**	**0.000901 J**	**0.326 J**	<0.043	<18	<18	<18	<18
SB-8	4-6	3/23/2011	<0.0016	**0.0051 J**	<0.00057	<0.00057	<0.0011	<0.00057	<0.00057	<0.00057	**0.866**	**459**	<0.045	**5.07**	**5.9**	**0.00463**	<0.28	<0.45	<17	<17	<17	<17
	14-15		<0.0017	<0.0025	<0.00062	<0.00062	<0.0012	<0.00062	<0.00062	<0.00062	**1.11**	**29.8**	<0.048	**8.86**	**8.15**	**0.00379 J**	<0.30	<0.048	<18	<18	<18	<18
SB-9	6-8	3/23/2011	<0.0017	<0.0024	<0.00059	<0.00059	<0.0012	<0.00059	<0.00059	<0.00059	**1.20**	**113**	<0.041	**5.3**	**10.3**	**0.00602**	**0.448 J**	<0.041	<18	<18	<18	<18
	14-15		<0.0017	**0.0056 J**	<0.00062	<0.00062	<0.0012	<0.00062	<0.00062	<0.00062	**3.63**	**69.1**	<0.044	**8.37**	**9.48**	**0.00469**	**0.498 J**	<0.044	<19	<19	<19	<19
PERMANENT MONITORING WELLS																						
MW-3	15-17.5	3/26/2010	<0.0016	< 0.0023	**0.00087 J**	**0.0041 J**	**0.0070 J**	<0.00058	**0.0035 J**	**0.00081 J**	**5.36**	**81.3**	**0.107 J**	**6.93**	**6.18**	<0.00024	**0.525 J**	<0.043	<18	<18	<18	<19
	25-27.5		<0.0018	< 0.0026	**0.00091 J**	**0.0072**	**0.0099 J**	<0.00064	**0.0079**	**0.0011 J**	**7.63**	**824**	<0.048	**14.0**	**8.07**	<0.00027	**0.409 J**	<0.048	<20	<20	<20	<20
	25-27.5	3/23/2011	--	--	**--**	**--**	**--**	--	**--**	**--**	**4.75**	**--**	--	**--**	**--**	--	**--**	--	--	--	--	--
	36-38	3/26/2010	<0.0017	< 0.0024	<0.00061	**0.0011 J**	**0.0060 J**	<0.00061	<0.00061	<0.00061	**2.04**	**45.2**	<0.046	**9.66**	**5.07**	<0.00026	**1.34**	<0.046	<19	<19	<19	<19
	36-38	3/23/2011	--	--	--	**--**	**--**	**--**	--	--	**--**	**--**	--	**--**	**--**	--	**0.685**	--	--	--	--	--
MW-4	8-10	3/26/2010	<0.0016	< 0.0026	**0.00086 J**	**0.0045 J**	**0.0070 J**	<0.0057	**0.0044 J**	**0.00081 J**	**0.323 J**	**40.5**	<0.040	**4.93**	**3.98**	<0.00024	<0.25	<0.040	<18	<18	<18	<18
	18-20		<0.0018	< 0.0025	<0.00065	**0.0017 J**	**0.0073 J**	<0.0065	<0.00065	<0.00065	**4.02**	**186**	<0.049	**11.0**	**8.41**	<0.00028	<0.30	<0.049	<21	<21	<21	<21
	38-40		<0.0017	< 0.0023	**0.0014 J**	**0.0075**	**0.0076 J**	<0.0061	**0.0062**	**0.0012 J**	**3.79**	**225**	<0.044	**11.5**	**8.59**	<0.00026	**0.327 J**	<0.044	<19	<19	<19	<19
MW-5	12.5-15	3/22/2011	<0.0019	**0.0058 J**	<0.00067	<0.00067	<0.0013	<0.00067	<0.00067	<0.00067	**8.32**	**238**	<0.050	**10.8**	**21**	**0.00184 J**	**0.911**	<0.050	<20	<20	<20	<20
	17.5-20		<0.0017	**0.013 J**	<0.00060	<0.00060	<0.0012	**0.00068 J**	<0.00060	<0.00060	**0.515 J**	**49.5**	<0.047	**6.08**	**4.08**	**0.00147 J**	<0.29	0.047	<18	<18	<18	<18
MW-6	5-7.5	3/22/2011	<0.0017	**0.013 J**	<0.00060	<0.00060	<0.0012	<0.00060	<0.00060	<0.00060	**2.69**	**188**	**0.0734 J**	**6.45**	**5.17**	<0.00025	**0.361 J**	<0.043	<18	<18	<18	<18
	22.5-25		<0.0017	**0.0084 J**	<0.00060	<0.00060	<0.0012	<0.00060	<0.00060	<0.00060	**0.795**	**65.6**	<0.047	**5.52**	**4.37**	<0.00025	<0.30	<0.047	<18	<18	<18	<18
MW-7	5-7.5	3/22/2011	**0.0056 J**	**0.059**	<0.00060	<0.00060	<0.0012	<0.00060	<0.00060	<0.00060	**2.05**	**123**	<0.044	**5.29**	**9.62**	**0.00733**	**0.491 J**	<0.044	<18	<18	<18	<18
	22.5-25		<0.0016	**0.011 J**	<0.00059	<0.00059	<0.0012	<0.00059	<0.00059	<0.00059	**3.82**	**40.7**	<0.044	**6.56**	**6**	<0.00025	<0.28	<0.044	<18	<18	<18	<18
MW-8	5-7.5	1/19/2012	<0.0020	<0.0040	<0.00069	<0.0010	<0.0029	<0.00092	<0.00069	<0.00081	**1.91**	**1,930**	**0.104 J**	**4.67**	**11.9**	**0.0186**	**1.24**	<0.085	<17	<17	<17	<17
	17.5-20		<0.0026	<0.0055	<0.00072	<0.0011	<0.0030	<0.00096	<0.00072	<0.00084	**3.53**	**98.1**	<0.052	**6.91**	**4.24**	<0.00035	**0.321 J**	**<0.083**	<18	<18	<18	<18
	40-42		<0.0026	<0.0055	<0.00072	<0.0011	<0.0030	<0.00096	<0.00072	<0.000841	**1.96**	**273**	**0.0621 J**	**10.5**	**14.1**	**0.00141 J**	**1.12**	<0.088	<18	<18	<18	<18
REGULATORY STANDARDS																						
TCEQ TRRP Tier 1 $^{Tot}Soil_{Comb}$ Residential Soil PCLs (0.5-Acre Source Area)			**40,000**	**66,000**	**120**	**6,400**	**480**	**220**	**6,700**	**5,900**	**24**	**8,100**	**52**	**33,000**	**500**	**3.6**	**310**	**97**	**1,600**	**2,300**	**2,300**	**-**
TCEQ TRRP Tier 1 $^{GW}Soil_{Ing}$ Residential Soil PCLs (0.5-Acre Source Area)			**29**	**43**	**0.026**	**7.6**	**0.013**	**31**	**3.3**	**8.2**	**5.0**	**440**	**1.5**	**2,400**	**3.0**	**0.0078**	**2.3**	**0.48**	**65**	**200**	**200**	**-**
TCEQ TRRP Tier 1 $^{Air}Soil_{Inh-V}$ Residential Soil PCLs (0.5-Acre Source Area)			**200,000**	**600,000**	**160**	**29,000**	**13,000**	**270**	**11,000**	**63,000**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**3,100**	**15,000**	**15,000**	**-**
TCEQ Texas-Specific Background Concentrations 30 TAC 350.51(m)			**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**5.9**	**300**	**-**	**30**	**15**	**0.04**	**0.3**	**-**	**-**	**-**	**-**	**-**
TCEQ TRRP Tier 2 $^{GW}Soil_{Ing}$ Residential PCLs			**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**28**	**1,770**	**-**	**-**	**1,640**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

NOTES:
Only VOC analytes with at least one sample with a concentration above the laboratory reporting limit shown on this table.
"--" Not Analyzed.
"-" Not Applicable.
"ft-bgs" indicates feet below ground surface.
"mg/Kg-Dry" indicates Milligrams per Kilogram- Dry weight corrected.
"<" indicates a concentration less than the laboratory Sample Detection Limit (SDL).
"J" indicates that the target analyte was positively identified below the Method Quantitation Limit (MQL) and above the SDL.
Protective Concentration Levels (PCLs) highlighted yellow indicate the residential assessment level (RAL).
Concentrations in bold exhibit a concentration in excess of the laboratory SDL.
Concentrations in bold and highlighted yellow exhibit a concentration in excess of the laboratory SDL and the RAL.
TCEQ TRRP Tier 1 residential PCLs (30 TAC 350) Table 1: Tier 1 Residential Soil PCLs Dated June 29, 2012.

TABLE D.2
GROUNDWATER DATA SUMMARY
CITY OF HOUSTON MUNICIPAL SETTING DESIGNATION
FORMER SEATEX CORPORATION PROPERTY
6325 HURST STREET
HOUSTON, HARRIS COUNTY, TEXAS

		VOCs												RCRA 8 METALS						TOTAL PETROLEUM HYDROCARBONS				SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCS)					
Sample Name	Sample Date	1,2-Dichlorobenzene	1,1-Dichloroethene	1,2-Dichloroethane	Carbon tetrachloride	Chloroform	cis-1,2-Dichloroethene	Methyl tert-butyl ether	Methylene chloride	trans-1, 2-Dichloroethene	Tetrachloroethene	Trichloroethene	Vinyl chloride	Arsenic	Barium	Chromium	Lead	Mercury	Selenium	C6-C12	C12-C28	C28-C35	Total TPH (C6-C35)	1,2-Dichlorobenzene	2-Methylnaphthalene	Bis(2-ethylhexyl)phthalate	Di-n-butyl phthalate	Diethyl phthalate	Naphthalene
		Method 8260B	Method 8260B	Method 8260B	Method 8260B	Method 8260B	Method 8260B	Method 8260B	Method 8260B	Method 8260B	Method 8260B	Method 8260B	Method 8260B	Method 6020	Method 6020	Method 6020	Method 6020	Method 7470	Method 6020	Method TX 1005	Method TX 1005	Method TX 1005	Method TX 1005	SW8270	SW8270	SW8270	SW8270	SW8270	SW8270
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MONITORING WELLS - VCP ID NO. 2119																													
B1/MW1	5/3/2007	<0.001	<0.001	<0.001	**0.0407**	**0.0176**	**0.0092**	<0.001	<0.001	<0.001	**0.0232**	**0.0382**	<0.001	<0.005	**0.073**	<0.005	<0.005	<0.0002	<0.005	<2.0	<2.0	<5.0	--	--	--	--	--	--	--
B2/MW2	5/3/2007	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	**0.0051**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	**0.094**	<0.005	<0.005	<0.0002	<0.005	<2.0	<2.0	<5.0	--	--	--	--	--	--	--
B3/MW3	5/3/2007	<0.001	<0.001	<0.001	**0.0152**	**0.0192**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	**0.667**	<0.005	<0.005	<0.0002	<0.005	<2.0	<2.0	<5.0	--	--	--	--	--	--	--
TMW-1	7/11/2007	--	<0.00060	<0.00060	<0.00060	<0.00050	<0.00050	<0.00050	<0.00060	<0.00060	<0.00050	<0.00070	<0.00060	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TMW-2	7/11/2007	**0.0028J**	<0.00060	<0.00060	**0.0061**	**0.0018 J**	**0.016**	<0.00050	**0.00077 J**	<0.00060	<0.00050	**0.0037 J**	<0.00060	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TMW-3	7/11/2007	<0.00090	<0.00060	<0.00060	<0.00060	<0.00050	<0.00050	<0.00050	<0.00060	<0.00060	<0.00050	<0.00070	<0.00060	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TMW-4	7/11/2007	<0.00090	**0.00098 J**	<0.00060	<0.00060	<0.00050	**0.014**	<0.00050	<0.00060	<0.00060	**0.028**	**0.11**	<0.00060	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1MW-1	6/12/2007	<0.00090	**0.0014 J**	<0.00050	<0.00060	**0.0011 J**	**0.015**	<0.00050	<0.00060	**0.00063 J**	**0.0053**	**0.038**	<0.00060	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/13/2008	<0.001	<0.001	<0.001	**0.001 J**	<0.001	**0.01**	--	<0.002	<0.001	**0.004 J**	**0.025**	<0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/31/2008	<0.003	<0.003	<0.003	<0.003	<0.003	**0.013**	**--**	<0.003	<0.003	<0.003	**0.026**	<0.003	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1MW-2	6/12/2007	<0.00090	<0.00060	<0.00060	<0.00060	<0.00050	<0.00050	**0.14**	<0.00060	<0.00060	<0.00050	<0.00070	<0.00060	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/13/2008	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.002	<0.001	<0.001	<0.001	<0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/31/2008	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	**--**	<0.003	<0.003	<0.003	<0.003	<0.003	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1MW-3	6/11/2007	<0.00090	<0.00060	<0.00060	<0.00060	<0.00050	<0.00050	<0.00050	<0.00060	<0.00060	<0.00050	<0.00070	<0.00060	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/13/2008	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.002	<0.001	<0.001	<0.001	<0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/31/2008	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	**--**	<0.003	<0.003	<0.003	<0.003	<0.003	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1MW-4	6/11/2007	<0.00090	<0.00060	<0.00060	<0.00060	<0.00050	<0.00050	**0.0030 J**	<0.00060	<0.00060	**0.00062 J**	**0.0012 J**	<0.00060	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/13/2008	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.002	<0.001	<0.001	<0.001	<0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/31/2008	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	**--**	<0.003	<0.003	<0.003	<0.003	<0.003	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1MW-5	6/11/2007	<0.00090	**0.0012 J**	<0.00060	<0.00060	<0.00050	**0.026**	<0.00050	<0.00060	**0.0016 J**	**0.0058**	**0.094**	<0.00060	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/13/2008	<0.001	<0.001	<0.001	<0.001	<0.001	**0.012**	--	<0.002	<0.001	**0.003 J**	**0.046**	<0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/31/2008	<0.003	<0.003	<0.003	<0.003	<0.003	**0.009**	**--**	<0.003	<0.003	<0.003	**0.027**	<0.003	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1MW-6	8/9/2007	<0.00090	<0.00060	<0.00050	<0.00060	<0.00050	<0.00050	<0.00050	<0.00060	<0.00060	<0.00050	<0.00070	<0.00060	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/13/2008	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.002	<0.001	<0.001	<0.001	<0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/31/2008	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	**--**	<0.003	<0.003	<0.003	<0.003	<0.003	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1MW-7	8/9/2007	<0.00090	<0.00060	<0.00050	<0.00060	<0.00050	<0.00050	<0.00050	<0.00060	<0.00060	<0.00050	<0.00070	<0.00060	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/13/2008	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.002	<0.001	<0.001	<0.001	<0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/31/2008	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	**--**	<0.003	<0.003	<0.003	<0.003	<0.003	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
REMAINING DESIGNATED PROPERTY - SKA																													
TEMPORARY MONITORING WELLS																													
TMW-1	12/22/2009	<0.00050	<0.00050	<0.0050	<0.0050	<0.0050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00060	<0.00050	<0.00050	--	**--**	**--**	--	--	--	<0.17	<0.17	<0.17	ND	--	--	--	--	--	--
TMW-2	12/22/2009	<0.00050	<0.00050	<0.0050	<0.0050	<0.0050	**0.0037 J**	<0.00050	<0.00050	<0.00050	<0.00060	**0.0045 J**	<0.00050	**--**	**--**	**--**	--	--	--	<0.19	<0.19	<0.19	<0.19	--	--	--	--	--	--
PERMANENT MONITORING WELLS																													
MW-1	3/29/2010	<0.00050	<0.00050	<0.00050	**0.00083 J**	<0.00050	**0.0029 J**	<0.00050	**0.00065 J**	<0.00050	<0.00060	**0.0018 J**	<0.00050	<0.00090	**0.354**	**0.00173 J**	<0.00040	<0.000042	<0.0025	<0.19	<0.19	<0.19	<0.19	<0.00013	**0.00010 J**	**0.0035**	**0.0011**	**0.000078 J**	**0.00015 J**
	3/25/2011	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	**0.0031 J**	<0.00050	<0.00050	<0.00050	<0.00060	**0.0020 J**	<0.00050	<0.00090	**0.138**	**0.00165 J**	<0.00040	<0.000042	<0.0025	<0.19	**0.33 J**	<0.19	**0.33**	--	--	--	--	--	--
	6/6/2011	<0.00080	<0.0013	<0.0010	<0.0018	<0.0010	**0.0031 J**	<0.0012	<0.0013	<0.0010	<0.0017	**0.0020 J**	<0.0010	**0.00200 J**	**0.162**	**0.0134**	**0.00187 J**	<0.000042	<0.0025	<0.19	<0.19	<0.19	<0.19	--	--	--	--	--	--
	9/14/2011	<0.00080	<0.0013	<0.0010	<0.0018	<0.0010	**0.0031 J**	<0.0012	<0.0013	<0.0010	<0.00060	**0.0016 J**	<0.0010	<0.0013	**0.104**	**0.00150 J**	<0.00070	<0.000042	<0.0010	<0.19	<0.19	<0.19	<0.19	--	--	--	--	--	--
	2/22/2012	<0.00080	<0.0013	<0.0010	<0.0018	<0.0010	**0.0026 J**	<0.0012	<0.0013	<0.0010	<0.0017	**0.0013 J**	<0.0010	**0.00264 J**	**0.119**	**0.00246 J**	<0.00070	<0.000042	<0.0010	<0.19	<0.19	<0.19	<0.19	--	--	--	--	--	--
	5/29/2012	<0.00080	<0.0013	<0.0010	<0.0018	<0.0010	<0.0025	<0.0012	<0.0013	<0.0010	<0.0017	<0.0011	<0.0010	<0.0013	**0.111**	**0.00200 J**	<0.00070	<0.000042	**0.00156 J**	--	--	--	--	--	--	--	--	--	--
MW-2	3/29/2010	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00060	<0.00050	<0.00050	<0.00090	**0.197**	**0.00132 J**	**0.000527 J**	<0.000042	<0.0025	<0.19	<0.19	<0.19	<0.19	<0.00013	<0.000070	**0.0031**	**0.0041**	<0.000070	<0.00010
	3/25/2011	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00060	<0.00050	<0.00050	<0.00090	**0.124**	**0.00126 J**	<0.00040	<0.000042	<0.0025	<0.19	**0.27 J**	<0.19	**0.27**	--	--	--	--	--	--
	6/6/2011	<0.00080	<0.0013	<0.0010	<0.0018	<0.0010	<0.0025	<0.0012	<0.0013	<0.0010	<0.0017	<0.0011	<0.0010	0.00122 J	**0.141**	**0.00123 J**	<0.00040	<0.000042	<0.0025	<0.19	<0.19	<0.19	<0.19	--	--	--	--	--	--
	9/14/2011	<0.00080	<0.0013	<0.0010	<0.0018	<0.0010	<0.0025	<0.0012	<0.0013	<0.0010	<0.00060	<0.0011	<0.0010	<0.0013	**0.119**	<0.0012	**0.000826 J**	<0.000042	**0.00173 J**	<0.19	<0.19	<0.19	<0.19	--	--	--	--	--	--
	2/22/2012	<0.00080	<0.0013	<0.0010	<0.0018	<0.0010	<0.0025	<0.0012	<0.0013	<0.0010	<0.0017	<0.0011	<0.0010	**0.00236 J**	**0.189**	**0.00155 J**	<0.00070	<0.000042	<0.0010	<0.19	<0.19	<0.19	<0.19	--	--	--	--	--	--
MW-3	3/29/2010	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	**0.17**	<0.00050	**0.0012 J**	**0.03**	<0.00060	**0.062**	**0.0024**	<0.00090	**0.0551**	**0.0007000 J**	<0.00040	<0.000042	<0.0025	<0.19	<0.19	<0.19	<0.19	<0.00013	<0.000070	**0.003**	**0.0056**	<0.000070	**0.00022**
	3/28/2011	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	**0.19**	<0.00050	<0.00050	**0.032**	<0.00060	**0.052**	**0.0022**	**0.00129 J**	**0.034**	**0.00108 J**	**0.000534 J**	**0.0000990 J**	<0.0025	<0.19	<0.19	<0.19	<0.19	--	--	--	--	--	--
	6/8/2011	<0.00080	<0.0013	<0.0010	<0.0018	<0.0010	**0.20**	<0.0012	0.0014 J	**0.029**	<0.0017	**0.053**	**0.0021**	**0.00137 J**	**0.0266**	<0.0012	<0.00070	**0.0000850 J**	0.00127 J	0.42 J	<0.19	<0.19	0.42 J	--	--	--	--	--	--
	9/14/2011	<0.00080	<0.0013	<0.0010	<0.0018	<0.0010	**0.19**	<0.0012	**0.0013 J**	**0.03**	<0.00060	**0.052**	**0.0025**	<0.0013	**0.0269**	<0.0012	<0.00070	**0.000137 J**	**0.00170 J**	<0.19	<0.19	<0.19	<0.19	--	--	--	--	--	--
	2/23/2012	<0.00080	<0.0013	<0.0010	<0.0018	<0.0010	**0.17**	<0.0012	<0.0013	**0.030**	<0.0017	**0.049**	**0.0021**	<0.0013	**0.0510**	<0.0012	<0.00070	**0.0000570 J**	0.000218 J	<0.19	<0.19	<0.19	<0.19	--	--	--	--	--	--
MW-4	3/29/2010	**0.0014 J**	<0.00050	**0.00070 J**	**0.056**	**0.018**	**0.0032 J**	**0.0057**	**0.0032 J**	<0.00050	<0.00060	**0.0034 J**	<0.00050	<0.00090	**0.753**	<0.00060	<0.00040	<0.000042	<0.0025	<0.19	<0.19	<0.19	<0.19	**0.00057**	<0.000070	**0.0056**	**0.0061**	**0.000072 J**	**0.00010 J**
	3/25/2011	**0.0012 J**	<0.00050	**0.00092 J**	**0.080**	**0.0095**	**0.0020 J**	**0.0073**	**0.0021 J**	<0.00050	<0.00060	**0.0021 J**	<0.00050	<0.00090	**0.438**	**0.000835 J**	<0.00040	<0.000042	<0.0025	<0.20	**0.33 J**	<0.20	**0.33**	--	--	--	--	--	--
	6/8/2011	**0.0012 J**	<0.0013	**0.0010 J**	**0.087**	**0.011**	<0.0025	**0.0087**	**0.0023 J**	<0.0010	<0.0017	**0.0021 J**	<0.0010	0.00136 J	**0.415**	**0.00124 J**	<0.00070	<0.000042	<0.0010	<0.19	<0.19	<0.19	<0.19	--	--	--	--	--	--
	9/14/2011	<0.00080	<0.0013	<0.0010	**0.062**	**0.0083**	<0.0025	**0.0086**	**0.0020 J**	<0.0010	<0.00060	**0.0015 J**	<0.0010	<0.0013	**0.382**	<0.0012	<0.00070	**0.0000610 J**	**0.00148 J**	<0.19	<0.19	<0.19	<0.19	--	--	--	--	--	--
	2/23/2012	**0.0013 J**	<0.0013	**0.0016 J**	**0.17**	**0.018**	**0.0025 J**	**0.0020 J**	**0.0032 J**	<0.0010	<0.0017	**0.0018 J**	<0.0010	<0.0013	**0.839**	<0.0012	<0.00070	**0.000141 J**	<0.0010	<0.19	<0.19	<0.19	<0.19	--	--	--	--	--	--
	5/29/2012	<0.00080	<0.0013	<0.0010	**0.070**	**0.0081**	<0.0025	**0.0093**	<0.0013	<0.0010	<0.0017	**0.0011 J**	<0.0010	<0.0013	**0.371**	<0.0012	<0.00070	**0.000057**	**0.000218 J**	--	--	--	--	--	--	--	--	--	--

GROUNDWATER DATA SUMMARY
CITY OF HOUSTON MUNICIPAL SETTING DESIGNATION
FORMER SEATEX CORPORATION PROPERTY
6325 HURST STREET
HOUSTON, HARRIS COUNTY, TEXAS

		VOCs												RCRA 8 METALS						TOTAL PETROLEUM HYDROCARBONS				SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCS)					
Sample Name	**Sample Date**	**1,2-Dichlorobenzene**	**1,1-Dichloroethene**	**1,2-Dichloroethane**	**Carbon tetrachloride**	**Chloroform**	**cis-1,2-Dichloroethene**	**Methyl tert-butyl ether**	**Methylene chloride**	**trans-1, 2-Dichloroethene**	**Tetrachloroethene**	**Trichloroethene**	**Vinyl chloride**	**Arsenic**	**Barium**	**Chromium**	**Lead**	**Mercury**	**Selenium**	**C6-C12**	**C12-C28**	**C28-C35**	**Total TPH (C6-C35)**	**1,2-Dichlorobenzene**	**2-Methylnaphthalene**	**Bis(2-ethylhexyl)phthalate**	**Di-n-butyl phthalate**	**Diethyl phthalate**	**Naphthalene**
		Method 8260B mg/L	Method 8260B mg/L	Method 8260B mg/L	Method 8260B mg/L	Method 8260B mg/L	Method 8260B mg/L	Method 8260B mg/L	Method 8260B mg/L	Method 8260B mg/L	Method 8260B mg/L	Method 8260B mg/L	Method 8260B mg/L	Method 6020 mg/L	Method 6020 mg/L	Method 6020 mg/L	Method 6020 mg/L	Method 7470 mg/L	Method 6020 mg/L	Method TX 1005 mg/L	Method TX 1005 mg/L	Method TX 1005 mg/L	Method TX 1005 mg/L	SW8270 mg/L	SW8270 mg/L	SW8270 mg/L	SW8270 mg/L	SW8270 mg/L	SW8270 mg/L
MW-5	3/24/2011	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00060	<0.00050	<0.00050	<0.00090	**0.255**	**0.00176 J**	**0.000541 J**	<0.000042	<0.0025	<0.19	**0.37 J**	<0.19	**0.37**	--	--	--	--	--	--
	6/6/2011	<0.00080	<0.0013	<0.0010	<0.0018	<0.0010	<0.0025	<0.0012	<0.0013	<0.0010	<0.0017	<0.0011	<0.0010	0.00159 J	**0.308**	**0.00536**	**0.000706 J**	<0.000042	<0.0025	<0.19	<0.19	<0.19	<0.19	--	--	--	--	--	--
	9/14/2011	<0.00080	<0.0013	<0.0010	<0.0018	<0.0010	<0.0025	<0.0012	<0.0013	<0.0010	<0.00060	<0.0011	<0.0010	<0.0013	**0.293**	<0.0012	<0.00070	<0.000042	**0.00148 J**	<0.19	<0.19	<0.19	<0.19	--	--	--	--	--	--
	2/22/2012	<0.00080	<0.0013	<0.0010	<0.0018	<0.0010	<0.0025	<0.0012	<0.0013	<0.0010	<0.0017	<0.0011	<0.0010	**0.00200 J**	**0.287**	**0.00136 J**	<0.00070	<0.000042	<0.0010	<0.19	<0.19	<0.19	<0.19	--	--	--	--	--	--
	5/29/2012	<0.00080	<0.0013	<0.0010	<0.0018	<0.0010	<0.0025	<0.0012	<0.0013	<0.0010	<0.0017	<0.0011	<0.0010	<0.0013	**0.264**	<0.0012	<0.00070	<0.000042	**0.000159 J**	--	--	--	--	--	--	--	--	--	--
MW-6	3/24/2011	<0.00050	<0.00050	<0.00050	**0.0027 J**	**0.0018 J**	**0.00096 J**	<0.00050	**0.0014 J**	<0.00050	<0.00060	**0.00070 J**	<0.00050	<0.00090	**0.490**	**0.00245 J**	**0.000423 J**	<0.000042	<0.0025	<0.19	**0.41 J**	<0.19	**0.41**	--	--	--	--	--	--
	6/8/2011	<0.00080	<0.0013	<0.0010	<0.0018	**0.0011 J**	<0.0025	<0.0012	**0.0020 J**	<0.0010	<0.0017	<0.0011	<0.0010	0.00162 J	**0.414**	<0.0012	<0.00070	0.0000440 J	0.00142 J	<0.19	<0.19	<0.19	<0.19	--	--	--	--	--	--
	9/14/2011	<0.00080	<0.0013	<0.0010	**0.0096**	**0.0016 J**	<0.0025	<0.0012	**0.0041 J**	<0.0010	<0.00060	<0.0011	<0.0010	<0.0013	**0.431**	<0.0012	<0.00070	**0.000153 J**	**0.00124 J**	<0.19	<0.19	<0.19	<0.19	--	--	--	--	--	--
	2/23/2012	<0.00080	<0.0013	<0.0010	**0.031**	**0.0038 J**	<0.0025	<0.0012	**0.010**	<0.0017	<0.0010	<0.0011	<0.0010	<0.00130	**0.475**	<0.0012	<0.00070	**0.000135 J**	<0.0010	<0.20	<0.20	<0.20	<0.20	--	--	--	--	--	--
	5/29/2012	<0.00080	<0.0013	<0.0010	**0.020**	**0.0027 J**	<0.0025	<0.0012	**0.0080 J**	<0.0010	<0.0017	<0.0011	<0.0010	<0.0013	**0.279**	<0.0012	<0.00070	**0.0000980 J**	**0.00261 J**	--	--	--	--	--	--	--	--	--	--
MW-7	3/24/2011	<0.00050	<0.00050	<0.00050	**0.00088 J**	<0.00050	**0.068**	<0.00050	**0.0019 J**	**0.0046 J**	<0.00060	**0.0074**	**0.00082 J**	<0.00090	**0.0509**	**0.00246 J**	<0.00040	<0.000042	<0.0025	<0.19	**0.27 J**	<0.19	**0.27**	--	--	--	--	--	--
	6/9/2011	<0.00080	<0.0013	<0.0010	<0.0018	<0.0010	**0.092**	<0.0012	**0.0016 J**	**0.0059**	<0.0017	**0.011**	<0.0010	0.00184 J	**0.0241**	**0.00155 J**	<0.00070	<0.000042	0.00151 J	**0.24 J**	<0.19	<0.19	**0.24 J**	--	--	--	--	--	--
	9/14/2011	<0.00080	<0.0013	<0.0010	<0.0018	<0.0010	**0.092**	<0.0012	**0.0018 J**	**0.0054**	<0.00060	**0.013**	<0.0010	**0.00150 J**	**0.0199**	<0.0012	<0.00070	<0.000042	**0.00132 J**	<0.19	<0.19	<0.19	<0.19	--	--	--	--	--	--
	2/23/2012	<0.00080	<0.0013	<0.0010	**0.0024 J**	<0.0010	**0.058**	<0.0012	**0.0020 J**	**0.0034 J**	<0.0017	**0.0076**	<0.0010	<0.0013	**0.0188**	<0.0012	<0.00070	<0.000042	<0.0010	<0.19	<0.19	<0.19	<0.19	--	--	--	--	--	--
MW-8	2/22/2012	<0.00080	<0.0013	<0.0010	<0.0018	<0.0010	<0.0025	<0.0012	<0.0013	<0.0010	<0.0017	<0.0011	<0.0010	**0.00293 J**	**0.101**	**0.00140 J**	**0.000708 J**	<0.000042	<0.0010	<0.19	<0.19	<0.19	<0.19	--	--	--	--	--	--
REGULATORY STANDARDS																													
TCEQ TRRP Tier 1 $^{GW}GW_{Ing}$ Residential PCLs		**0.60**	**0.007**	**0.005**	**0.005**	**0.24**	**0.07**	**0.24**	**0.005**	**0.10**	**0.005**	**0.005**	**0.002**	**0.01**	**2.0**	**0.1**	**0.015**	**0.002**	**0.05**	**0.98**	**0.98**	**0.98**	**-**	**0.6**	**0.098**	**0.006**	**2.4**	**20**	**0.49**
TCEQ TRRP Tier 1 $^{Air}GW_{Inh-V}$ Residential PCLs		**120**	**1,700**	**33**	**20**	**20**	**120**	**4,000**	**21,000**	**770**	**500**	**2.4**	**3.8**	**-**	**-**	**-**	**-**	**-**	**-**	**1,800**	**7,500**	**7,500**	**-**	**1200**	**-**	**-**	**-**	**-**	**320**

NOTES:
Only analytes with at least one sample with a concentration above the laboratory reporting limit shown on this table.
"--" Not Analyzed.
"mg/L" Milligrams per liter.
"<" Indicates the analyte was NOT detected at or above the specified laboratory standard detection limit (SDL).
"J" indicates that the target analyte was positively identified below the Method Quantitation Limit (MQL) and above the SDL.
Protective Concentration Levels (PCLs) highlighted yellow indicate the residential assessment level (RAL).
Bold numbers indicate concentrations at or above the laboratory's reporting limit.
Bold numbers highlighted in YELLOW indicate concentrations in excess of their respective RAL.
TCEQ TRRP Tier 1 residential PCLs (30 TAC 350) Table 3: Tier 1 Groundwater PCLs Dated June 29, 2012.

Table D.3
Former Seatex Corporation Property
6325 Hurst Street
Houston, Harris County, Texas
Tier 2 Arsenic Calculations

INPUT PARAMETERS

Parameter	Definition	Value	Notes
--	Land use	1	Residental
--	Groundwater Classification	1	GW_Ing
^{GW}PCL	Constituent's Groundwater Protective Concentration Limit (mg/L)	0.010	Arsenic
L_1	Thickness of affected soil (cm)	76.2	
P	Mean annual precipitation (cm/yr)	121.5136	
--	Vadose zone soil type	3	Clay
W_s	Lateral width of affected vadose zone in direction of groundwater (m)	3.00	
U_{gw}	Groundwater Darcy velocity (cm/yr)	20.96	
b_{gw}	Aquifer thicknes (m)	5.00	
--	Source area	1	0.5 acre
--	COC type	Metal	
pH	pH of vadose zone soils (SU)	8.73	

TIERED MODEL PARAMETERS

Parameter	Definition	Value	Notes
L_2	Depth from top of affected soil to groundwater table (cm)	350.50	
ρ_b	Soil bulk density (g-soil/cm3-soil)	1.67	
θ_{ws}	Volumetric water content of vadose zone soils (cm^3-water/cm^3-soil)	0.16	
θ_{as}	Volumetric air content of vadose zone soils (cm^3-air/cm^3-soil)	0.21	
LDF	Lateral Dilution Factor	20.000	
foc	Fraction of organic carbon in soil (g-carbon/g-soil)	0.003	
Kd	Soil-water partition coefficient (cm3-water/g-soil)	31	

CALCULATED PARAMETERS

Parameter	Definition	Value	Notes
I_f	Net infiltration rate of water through soil (cm/yr)	2.66	
α_v	Vertical groundwater dispersivity (m)	0.017	
δ_{gw}	Groundwater mixing zone thickness (m)	0.68	
H'	Dimensionless Henry's Law Constant (cm^3-water/cm^3-air)	0	
K_{SW}	Soil-Leachate partition factor for COC (mg/L-water/kg-soil)	0.0322	
Bw	Bulk water partioning coefficient (unitless)	51.930	

MODEL RESULTS

Parameter	Definition	Value	Notes
BDF	Tier 3 Biodecay Factor (dimensionless)	0.0000	☐ USE -- Tier 3 Only
TAF	Tier 3 Time Averaging Factor - Carcinogens Only (dimensionless)	0.9978	☐ USE -- Tier 3 Only
^{GW}SOIL	Concentration of constituent in soil protective of groundwater (mg/kg)	28.6	

Note: grey shading indicates that this parameter was not used in the Tier 2 GW Soil calculation.

Table D.4
Former Seatex Corporation Property
6325 Hurst Street
Houston, Harris County, Texas
Tier 2 Barium Calculations

INPUT PARAMETERS

Parameter	Definition	Value	Notes
--	Land use	1	Residental
--	Groundwater Classification	1	GW_Ing
^{GW}PCL	Constituent's Groundwater Protective Concentration Limit (mg/L)	2.000	Barium
L_1	Thickness of affected soil (cm)	716.28	
P	Mean annual precipitation (cm/yr)	121.5136	
--	Vadose zone soil type	3	Clay
W_s	Lateral width of affected vadose zone in direction of groundwater (m)	3.00	
U_{gw}	Groundwater Darcy velocity (cm/yr)	20.96	
b_{gw}	Aquifer thicknes (m)	5.00	
--	Source area	1	0.5 acre
--	COC type	Metal	
pH	pH of vadose zone soils (SU)	8.73	

TIERED MODEL PARAMETERS

Parameter	Definition	Value	Notes
L_2	Depth from top of affected soil to groundwater table (cm)	609.60	
ρ_b	Soil bulk density (g-soil/cm3-soil)	1.67	
θ_{ws}	Volumetric water content of vadose zone soils (cm^3-water/cm^3-soil)	0.16	
θ_{as}	Volumetric air content of vadose zone soils (cm^3-air/cm^3-soil)	0.21	
LDF	Lateral Dilution Factor	20.000	
foc	Fraction of organic carbon in soil (g-carbon/g-soil)	0.002	
Kd	Soil-water partition coefficient (cm3-water/g-soil)	52	

CALCULATED PARAMETERS

Parameter	Definition	Value	Notes
I_f	Net infiltration rate of water through soil (cm/yr)	2.66	
α_v	Vertical groundwater dispersivity (m)	0.017	
δ_{gw}	Groundwater mixing zone thickness (m)	0.68	
H'	Dimensionless Henry's Law Constant (cm^3-water/cm^3-air)	0	
K_{SW}	Soil-Leachate partition factor for COC (mg/L-water/kg-soil)	0.0192	
Bw	Bulk water partioning coefficient (unitless)	87.000	

MODEL RESULTS

Parameter	Definition	Value	Notes
BDF	Tier 3 Biodecay Factor (dimensionless)	4.5461E+151	☐ USE -- Tier 3 Only
TAF	Tier 3 Time Averaging Factor - Carcinogens Only (dimensionless)	0.9992	☐ USE -- Tier 3 Only
^{GW}SOIL	Concentration of constituent in soil protective of groundwater (mg/kg)	1773.5	

Note: grey shading indicates that this parameter was not used in the Tier 2 GW Soil calculation.

Table D.5
Former Seatex Corporation Property
6325 Hurst Street
Houston, Harris County, Texas
Tier 2 Lead Calculations

INPUT PARAMETERS

Parameter	Definition	Value	Notes
--	Land use	1	Residental
--	Groundwater Classification	1	GW_Ing
^{GW}PCL	Constituent's Groundwater Protective Concentration Limit (mg/L)	0.015	Lead (inorganic)
L_1	Thickness of affected soil (cm)	76.2	
P	Mean annual precipitation (cm/yr)	121.5136	
--	Vadose zone soil type	3	Clay
W_s	Lateral width of affected vadose zone in direction of groundwater (m)	3.00	
U_{gw}	Groundwater Darcy velocity (cm/yr)	20.96	
b_{gw}	Aquifer thicknes (m)	5.00	
--	Source area	1	0.5 acre
--	COC type	Metal	
pH	pH of vadose zone soils (SU)	8.73	

TIERED MODEL PARAMETERS

Parameter	Definition	Value	Notes
L_2	Depth from top of affected soil to groundwater table (cm)	228.60	
ρ_b	Soil bulk density (g-soil/cm3-soil)	1.67	
θ_{ws}	Volumetric water content of vadose zone soils (cm^3-water/cm^3-soil)	0.16	
θ_{as}	Volumetric air content of vadose zone soils (cm^3-air/cm^3-soil)	0.21	
LDF	Lateral Dilution Factor	20.000	
foc	Fraction of organic carbon in soil (g-carbon/g-soil)	0.003	
Kd	Soil-water partition coefficient (cm3-water/g-soil)	1830	

CALCULATED PARAMETERS

Parameter	Definition	Value	Notes
I_f	Net infiltration rate of water through soil (cm/yr)	2.66	
α_v	Vertical groundwater dispersivity (m)	0.017	
δ_{gw}	Groundwater mixing zone thickness (m)	0.68	
H'	Dimensionless Henry's Law Constant (cm^3-water/cm^3-air)	0	
K_{SW}	Soil-Leachate partition factor for COC (mg/L-water/kg-soil)	0.0005	
Bw	Bulk water partioning coefficient (unitless)	3056.260	

MODEL RESULTS

Parameter	Definition	Value	Notes
BDF	Tier 3 Biodecay Factor (dimensionless)	0.0000	☐ USE -- Tier 3 Only
TAF	Tier 3 Time Averaging Factor - Carcinogens Only (dimensionless)	0.9999	☐ USE -- Tier 3 Only
^{GW}SOIL	Concentration of constituent in soil protective of groundwater (mg/kg)	1647.1	

Note: grey shading indicates that this parameter was not used in the Tier 2 GW Soil calculation.

Appendix E – COCs in Designated Groundwater

As previously discussed and documented in ***Appendix D***, groundwater sampling and analysis activities performed to date within the remaining designated property indicate the groundwater currently contains concentrations of five COCs that exceed the TRRP ingestion PCLs (TCE, cis-1,2-DCE, VC, carbon tetrachloride, and methylene chloride). A brief summary discussion regarding the COCs that are currently present in the groundwater of the remaining designated property follows. A more detailed discussion of the COCs and their associated groundwater PCLE zones is provided in ***Appendix D***. Maps showing the current locations and concentrations of COCs in the groundwater are provided in ***Appendix C*** and summary tables of all groundwater sampling and analysis results obtained for the designated property are provided in ***Appendix D*** as ***Tables D.1*** and ***D.2***.

Ingestion PCLE Zone in Designated Groundwater

Groundwater sampling and analysis activities performed to date indicate the groundwater of the remaining designated property currently contains detectable concentrations of ten VOCs. Of the ten VOCs detected in the groundwater of the remaining designated property, five (TCE, cis-1,2-DCE, VC, carbon tetrachloride, and methylene chloride) exceed the applicable TRRP groundwater ingestion PCLs (TRRP Tier 1 residential $^{GW}GW_{Ing}$ PCLs). The other five VOC COCs (1,2-Dichlorobenzene, 1,2-Dichloroethane, chloroform, methyl-tert butyl ether, and trans-1,2-Dichloroethene) were detected but are below TRRP groundwater ingestion PCLs. The COCs occur in the dissolved-phase and no direct or indirect evidence of NAPLs has been observed or detected. The maximum concentrations for TCE, cis-1,2-DCE, and VC have currently (and historically) been detected in monitoring well MW-3 located in the southern portion of the remaining designated property (within VCP No. 2343). The maximum concentration for carbon tetrachloride has currently (and historically) been detected in monitoring well MW-4 and the maximum concentration for methylene chloride has currently (and historically) been detected in monitoring well MW-6; both monitoring well MW-4 and MW-6 are located in the central portion of the remaining designated property (within VCP No. 2343). Historical groundwater sampling and monitoring data indicate that the COCs' associated TRRP groundwater ingestion PCLE zones are laterally delineated within the remaining designated property.

Non-Ingestion PCLE Zone in Designated Groundwater

No concentrations of any COCs have been detected in the groundwater of the remaining designated property in excess of applicable TRRP non-ingestion PCLs. As such, no TRRP non-ingestion groundwater PCLE zones exist in connection with the remaining designated property.

Geochemical Properties of COCs in Designated Groundwater

The COCs (TCE, cis-1,2-DCE, VC, carbon tetrachloride, and methylene chloride) detected in the remaining designated property are chlorinated organics. The COCs are present in the groundwater in the dissolved-phase and no direct evidence of NAPLs has been observed or detected. Due to their high densities, these COCs are DNAPLs. DNAPL-phase COCs have a tendency to migrate vertically and "sink" in GWBUs. Typically, dissolved-phase COCs

preferentially migrate with groundwater flow. However, DNAPLs, when present, can migrate along the dip of geologic contacts counter to groundwater flow. Monitoring wells installed at the remaining designated property fully penetrate the GWBU, but no DNAPL-phase COCs have been observed.

Generally, the COCs detected in the groundwater of the remaining designated property are characterized as being colorless liquids at room temperature. In addition, they are volatile, aromatic, and have higher densities than water.

Appendix F – Summary of Soil and Groundwater Data

As previously discussed and detailed in ***Appendix D*** and ***Appendix E***, one COC in soil (barium) was detected in excess of its applicable TRRP Tier 2 soil-to-groundwater ingestion PCL in the southeast portion of the remaining designated property (within VCP No. 2343). Groundwater sampling and analysis activities performed to date have revealed detectable concentrations of trichloroethene (TCE), cis-1,2-dichloroethene (cis-1,2-DCE), vinyl chloride (VC), carbon tetrachloride, and methylene chloride present in the groundwater above TRRP groundwater ingestion PCLs of the remaining designated property, specifically within the boundaries of VCP No. 2343. Summary tables showing the maximum concentrations of COCs detected in soil and groundwater at the remaining designated property are provided in ***Tables F.1*** and ***F.2***. Included with the maximum COC concentrations in ***Tables F.1*** and ***F.2*** are the COC's applicable TRRP PCLs for both ingestion and non-ingestion exposure pathways.

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

Complete summaries of all soil and groundwater sampling and analysis results obtained for samples collected from the designated property since 2007 are provided in ***Tables D.1*** and ***D.2*** in ***Appendix D***. The locations of all soil and groundwater sampling points are presented on ***Figure C.7*** in ***Appendix C***.

TABLE F.1
SUMMARY OF MAXIMUM SOIL CONCENTRATIONS
REMAINING DESIGNATED PROPERTY
MUNICIPAL SETTING DESIGNATION APPLICATION
FORMER SEATEX CORPORATION PROPERTY
6325 HURST STREET
HOUSTON, HARRIS COUNTY, TEXAS

CHEMICAL OF CONCERN	MAXIMUM SOIL CONCENTRATION				CRITICAL TRRP RESIDENTIALSOIL PROTECTIVE CONCENTRATION LEVEL			
					Ingestion PCL (Without MSD)		Non-Ingestion PCL (With MSD)	
	Sample ID	Sample Depth	Sample Date	Detected Concentration (mg/kg)	$^{GW}Soil_{Ing}$ or Texas-Specific Background Levels (mg/Kg)	Tier 2 $^{GW}Soil_{Ing}$ (mg/kg)	$^{Tot}Soil_{Comb}$ (mg/kg)	$^{Air}Soil_{Inh-V}$ (mg/kg)
Arsenic	SB-5	14-15	3/23/11	**12.7**	**5.9**	**28**	**24**	**NA**
Barium	MW-8	5-7.5	1/19/12	**1,930**	**440**	**1,770**	**8,100**	**NA**
Lead	MW-5	12.5-15	3/22/11	**21**	**3**	**1,640**	**500**	**NA**

NOTE:
COCs highlighted in yellow exceed the critical TRRP Tier 1 Residential Soil PCL (applicable TRRP Tier 1 Residential Soil Ingestion PCL, June 29, 2012) or or Texas-Specific Background Levels as defined in 30 TAC 350.51(m) without an MSD. COCs highlighted in pink exceed TRRP Tier 2 Soil PCLs but do not exceed the critical TRRP Tier 1 Residential Soil PCL (applicable TRRP Tier 1 Residential Soil Non-Ingestion PCL) with an MSD.

TABLE F.2
SUMMARY OF MAXIMUM GROUNDWATER CONCENTRATIONS
REMAINING DESIGNATED PROPERTY
MUNICIPAL SETTING DESIGNATION APPLICATION
FORMER SEATEX CORPORATION PROPERTY
6325 HURST STREET
HOUSTON, HARRIS COUNTY, TEXAS
VCP No. 2343

CHEMICAL OF CONCERN	MAXIMUM GROUNDWATER CONCENTRATION			CRITICAL TRRP TIER 1 RESIDENTIALGROUNDWATER PROTECTIVE CONCENTRATION LEVEL	
	Sample ID	Sample Date	Detected Concentration (mg/L)	Ingestion PCL (Without MSD) $^{GW}GW_{Ing}$ (mg/L)	Non-Ingestion PCL (With MSD) $^{Air}GW_{Inh-V}$ (mg/L)
Trichloroethene	MW-3	3/29/10	**0.062**	**0.005**	**24**
cis-1,2-Dichloroethene	MW-3	6/8/11	**0.20**	**0.07**	**1,200**
Vinyl Chloride	MW-3	9/14/11	**0.0025**	**0.002**	**3.8**
Carbon Tetrachloride	MW-4	2/23/12	**0.17**	**0.005**	**20**
Methylene Chloride	MW-6	2/23/12	**0.010**	**0.005**	**21,000**

NOTE:
COCs highlighted in yellow exceed the critical TRRP Tier 1 Residential Groundwater PCL (applicable TRRP Tier 1 Residential Groundwater Ingestion PCL, June 29, 2012) without an MSD; but do not exceed the critical TRRP Tier 1 Residential Groundwater PCL (applicable TRRP Tier 1 Residential Groundwater Non-Ingestion PCL) with an MSD.

Appendix G – Plume Stability

Soil and groundwater assessments and monitoring activities performed to date on the remaining designated property have identified one distinct soil contaminant plume and two distinct groundwater contaminant plumes. The soil plume consists of barium, and the groundwater plumes are each composed of chlorinated solvent parent and daughter products. The soil and groundwater plumes are located in the southeastern portion of the remaining designated property. The following sections provide discussions regarding the stability of each of the soil and groundwater contaminant plumes in the remaining designated property.

Soil Plume

Assessment activities performed to date indicate a detection of barium in excess of the applicable TRRP soil-to-groundwater ingestion PCLs (TRRP Tier 2 residential $^{GW}Soil_{Ing}$ PCLs) centered on monitoring well MW-8, within the southeastern portion of the remaining designated property (VCP No. 2343), shown on ***Figure C.7***. The soil PCLE zone is located in the vicinity of the former shipping/receiving warehouse. The barium PCLE zone is from approximately 5-7.5 ft-bgs in surface soils. No concentration of barium has been detected in the groundwater in excess of the TRRP groundwater ingestion PCLs.

Groundwater Plumes

Assessment activities performed to date in the southeastern portion of the remaining designated property have revealed two distinct chlorinated solvent groundwater plumes, shown on ***Figure C.8***. The first plume consists primarily of TCE and associated daughter products (cis-1,2-DCE and VC) that have adversely impacted groundwater. TCE degrades to cis-1,2-DCE in a one-to-one relationship (i.e., one molecule of TCE degrades to one molecule of cis-1,2 DCE [primarily] which degrades to one molecule of VC).

The second chlorinated solvent groundwater plume consists of carbon tetrachloride and methylene chloride. Natural attenuation of carbon tetrachloride, in which carbon tetrachloride degrades to chloroform, and then to methylene chloride in a one-to-one relationship (i.e., one molecule of carbon tetrachloride degrades to one molecule of chloroform [primarily] which degrades to one molecule of methylene chloride) is also occurring in the second groundwater solvent plume. Concentrations of chloroform (an intermediate daughter-product of carbon tetrachloride) were detected in monitoring wells MW-4 and MW-6; however, none of the chloroform concentrations exceeded the TRRP ingestion groundwater PCL.

TCE Plume

Evidence of the TCE plume was detected in groundwater sampled from monitoring wells MW-3 and MW-7, in the southeast portion of the remaining designated property and entirely within VCP No. 2343. The most recent groundwater sampling results indicate concentrations of TCE in monitoring wells MW-3 and MW-7 and cis-1,2-DCE and VC in monitoring well MW-3 are in excess of their respective TRRP groundwater ingestion PCLs (TRRP Tier 1 Residential $^{GW}GW_{Ing}$ PCL). As seen in graphs utilizing monitoring wells parallel to the longitudinal axis of the plume (***Graphs G.1 and G.2***), the concentrations of TCE, cis-1,2-DCE, and VC are highest at

monitoring well MW-3 indicating that monitoring well MW-3 may be relatively near the source area. Upgradient monitoring well MW-7 has lower concentrations than monitoring well MW-3. Concentrations decrease to below detectable levels at downgradient monitoring well MW-2, the closest monitoring well downgradient of the TCE PCLE zone on the designated property. In addition, concentrations of TCE and cis-1,2-DCE are stable to slightly decreasing in MW-7 and MW-3 from March 2010 to February 2012. Vinyl chloride concentrations show a similar trend during this time period in monitoring well MW-3 ***(Table D.2***).

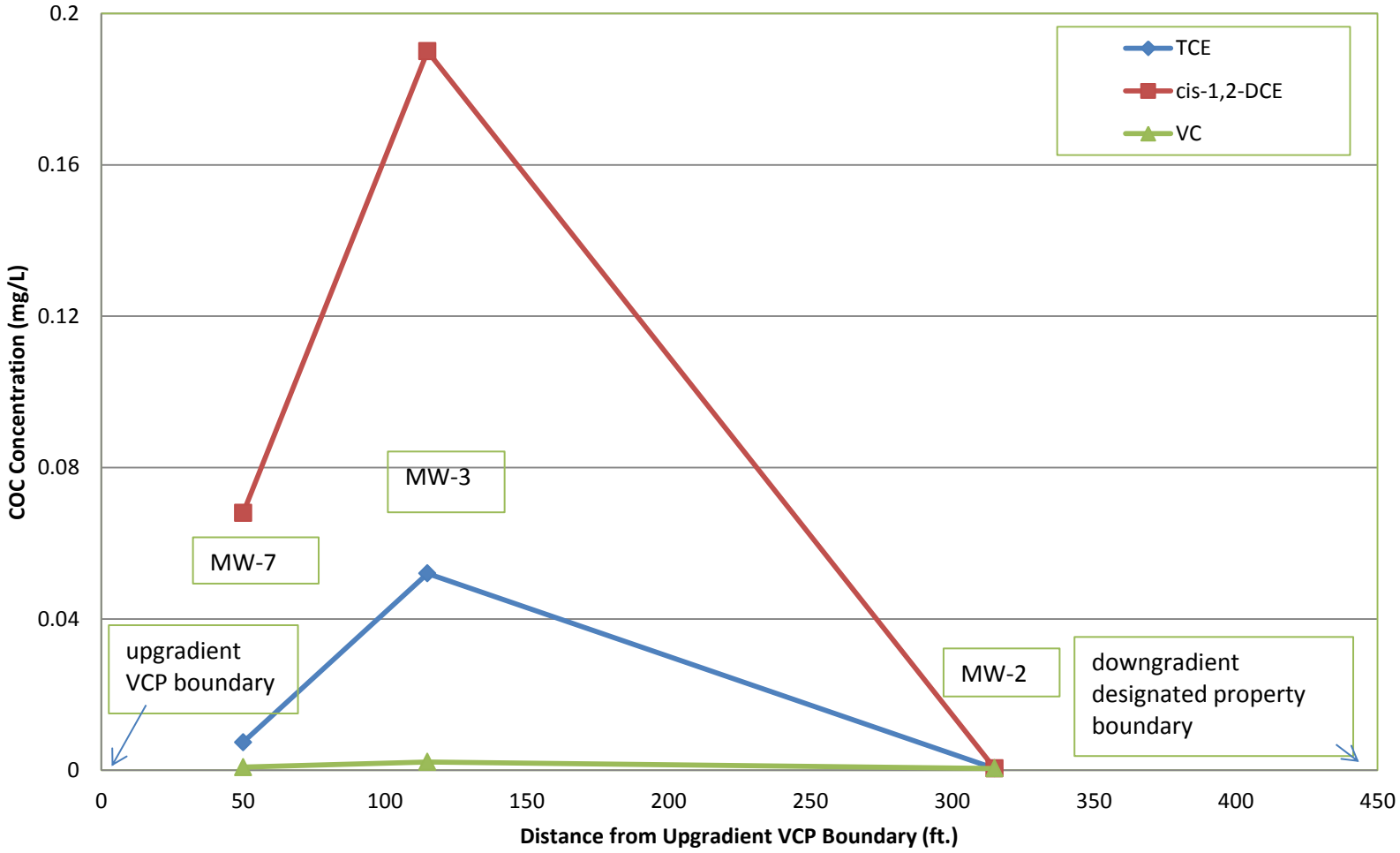
As COCs have not been detected in groundwater samples from the most downgradient monitoring well (MW-2), the TCE plume is contained within the designated property. In addition, the presence of daughter products, cis-1,2-DCE and VC in monitoring well MW-3, and cis-1,2-DCE in monitoring well MW-7 indicate that degradation of the TCE plume is occurring. The TCE plume is stable, decreasing in a downgradient direction, delineated to the residential assessment level, and is contained well within the designated property boundary.

Carbon Tetrachloride Plume

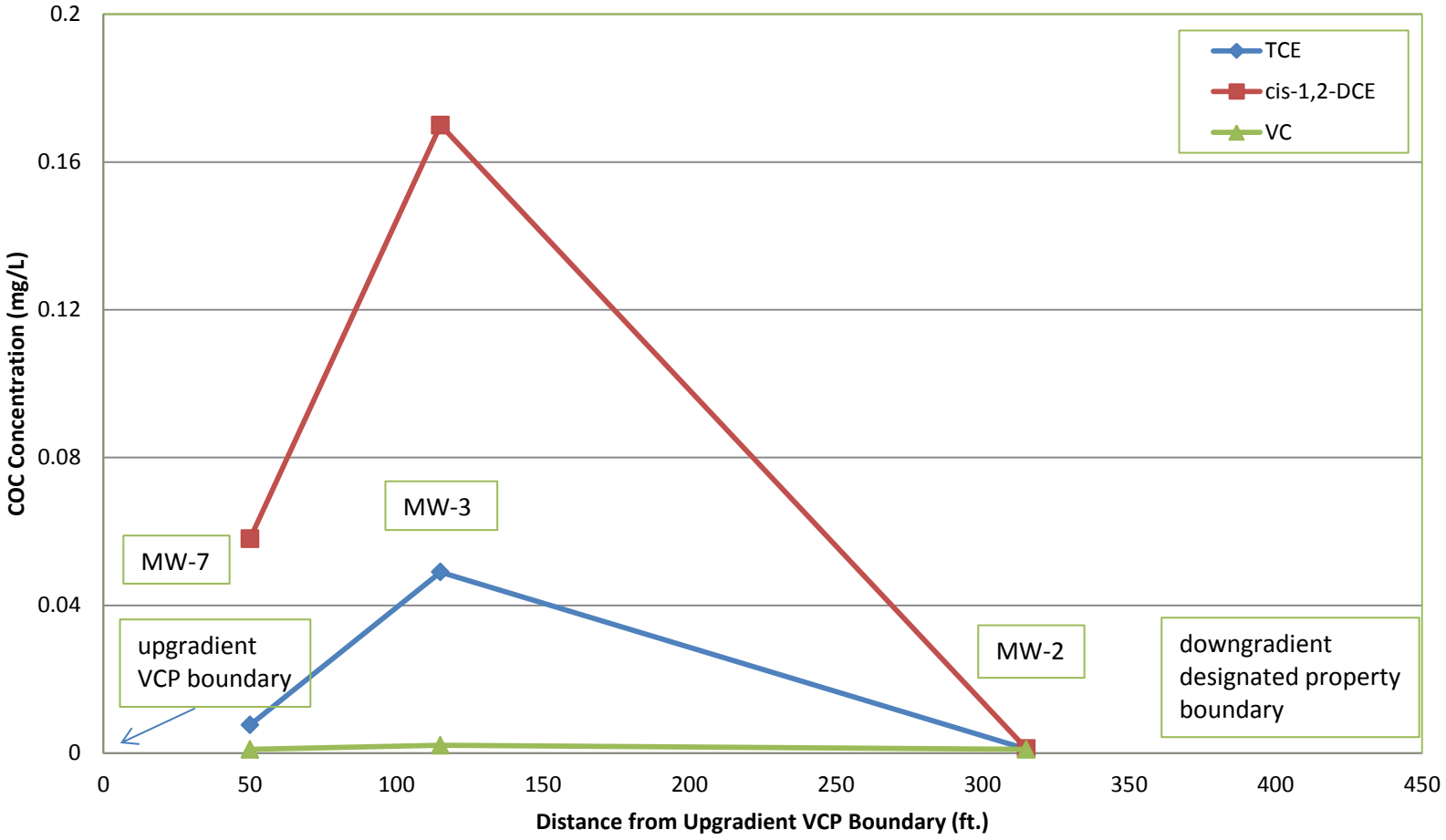
Evidence of the carbon tetrachloride plume was detected in groundwater sampled from temporary monitoring wells B1/MW1 and TMW-2 (adjacently west of VCP No. 2343 within VCP No. 2119), and temporary monitoring well B3/MW3 and monitoring wells MW-4 and MW-6, in the southeast portion of the remaining designated property (***Figure C.8***). Carbon tetrachloride was not detected in permanent monitoring wells 1-MW-1, 1-MW-2, and 1-MW-3 (located on the western portion of the designated property within VCP No. 2119) in excess of the TRRP Tier 1 Residential $^{GW}GW_{Ing}$ PCL during sampling events completed by others from June 2007 thru July 2008. As shown in ***Table D.2***, the highest concentrations of carbon tetrachloride have been in monitoring well MW-4 in the southeast portion of the remaining designated property indicating that monitoring well MW-4 may be relatively near the source area. The most recent groundwater sampling results indicate carbon tetrachloride in monitoring wells MW-4 and MW-6 and methylene chloride in monitoring well MW-6 are in excess of their respective TRRP groundwater ingestion PCLs (TRRP Tier 1 Residential $^{GW}GW_{Ing}$ PCL). As seen in graphs utilizing monitoring wells MW-4, MW-6 and MW-1, parallel to the longitudinal axis of the plume (***Graphs G.3 and G.4***), the concentrations of carbon tetrachloride decrease in a downgradient direction from monitoring well MW-4 to monitoring well MW-6, and are consistently below detectable limits in monitoring well MW-1, the closest monitoring well downgradient of the PCLE zone on the designated property. Concentrations of carbon tetrachloride are stable in monitoring well MW-4 from March 2010 to May 2012, indicating that the carbon tetrachloride plume is stable.

Because COCs have not been detected in groundwater samples from the most downgradient monitoring well (MW-1), it is clear the carbon tetrachloride plume is contained within the designated property. In addition, the presence of daughter products chloroform and methylene chloride in MW-4 and MW-6 indicate that degradation of the carbon tetrachloride plume is occurring. The carbon tetrachloride plume is stable, decreasing in a downgradient direction, delineated to the residential assessment level, and is contained well within the designated property boundary.

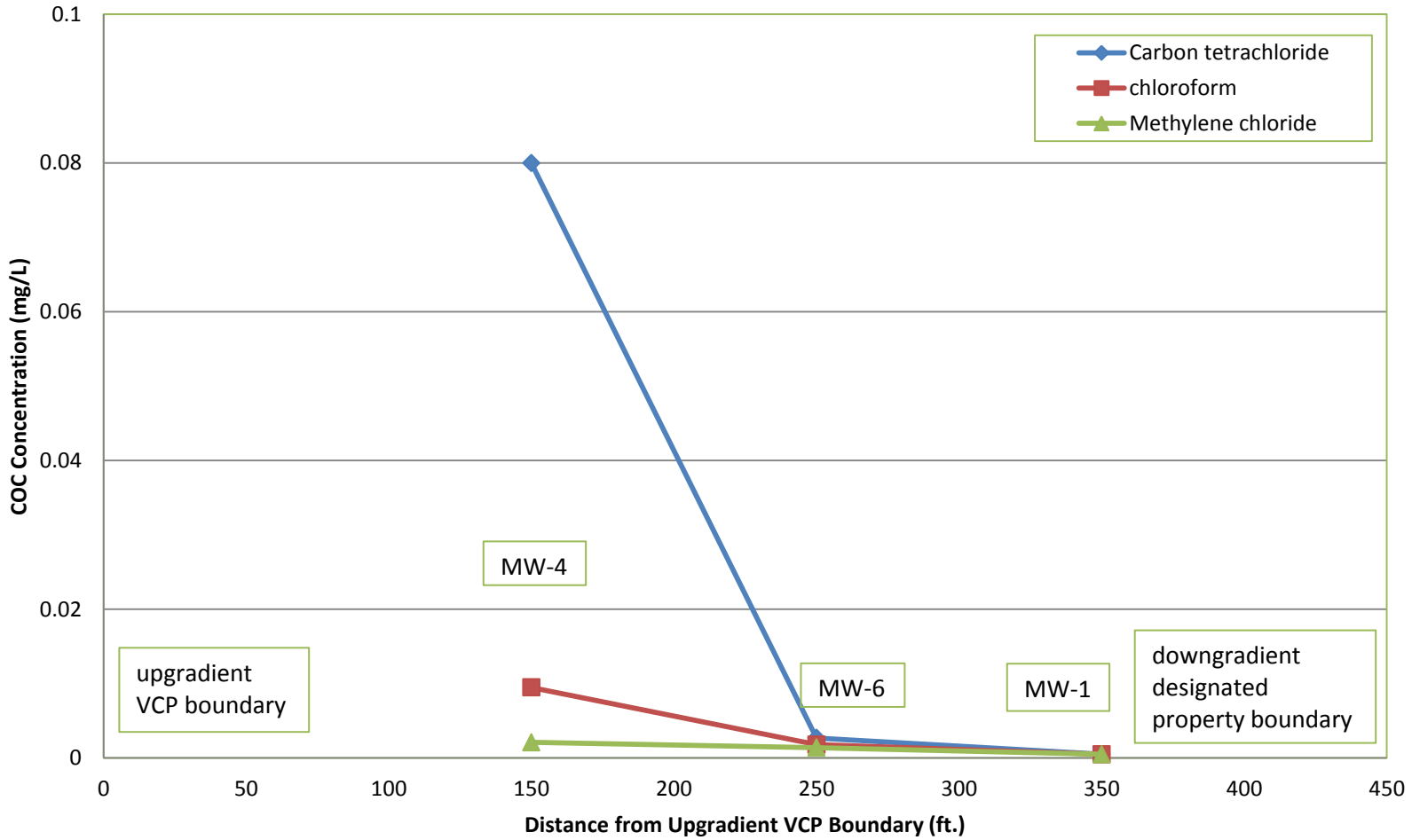
Graph G.1
Trichloroethene and Daughter Products-March 2011
Former Seatex Corporation Property
6325 Hurst Street, Houston, Texas
VCP No. 2343



Graph G.2
Trichloroethene and Daughter Products - February 2012
Former Seatex Corporation Property
6325 Hurst Street, Houston, Texas
VCP No. 2343



Graph G.3
Carbon Tetrachloride and Daughter Products - March 2011
Former Seatex Corporation Property
6325 Hurst Street, Houston, Texas
VCP No. 2343



Graph G.4
Carbon Tetrachloride and Daughter Products - May 2012
Former Seatex Corporation Property
6325 Hurst Street, Houston, Texas
VCP No. 2343