

Municipal Setting Designation Application Amendment B

**Polk Street MSD
5440 Polk Street and 5436 Clay Street
Houston, Harris County, Texas 77023**



City of Houston

Public Works and Engineering

Planning and Development Division

Prepared for:

**Strong, Pipkin, Bissel, & Ledyard, LLP
1301 McKinney, Ste 2100
Houston, Harris County, Texas 77010**

September 20, 2010

Prepared by:

InControl Technologies, Inc.

3845 FM 1960 West, Suite 195
Houston, Texas 77068
(281) 580-8892 FAX (281) 580-8853



ITEM	YES	NO	N/A	COH Use Only
**Executive Summary (Use Sheet Attached)	√			
1. Provide a legal description of the boundaries of the designated property and a copy of the deed for the designated property. <u>Label "Appendix A" - Cross Reference with TCEQ's # 3</u>		√		
2. 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 and whether the designated property is located in a floodplain or floodway, as those terms are defined in Chapter 19 of the Code. 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. <u>Label "Appendix B" - Cross Reference with TCEQ's # 1, 2 & 4</u>	√			
3. A description of the current use, and, to the extent known, the anticipated uses, of the designated property and properties within 500 feet of the boundary of the designated property. <u>Label "Appendix C"</u>		√		
4. For each contaminant of concern within the ingestion protective concentration level exceedence zone, to the extent known, provide the following: a. A description of the ingestion protective concentration level exceedence zone and the non-ingestion protective concentration level exceedence zone, including a specification of the horizontal area and the minimum and maximum depth below ground surface. 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). <u>Label "Appendix D" - Cross Reference with TCEQ's # 5</u>	√			
5. For each contaminant of concern within the designated groundwater, to the extent known: a. A description of the ingestion protective concentration level exceedence zone and the non-ingestion protective concentration level exceedence zone, including a specification of the horizontal area and the minimum and maximum depth below ground surface. 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). <u>Label "Appendix E" - Cross Reference with TCEQ's # 5</u>	√			

ITEM	YES	NO	N/A	COH Use Only
6. A table displaying the following information for each contaminant of concern, to the extent known: <ul style="list-style-type: none"> 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. <p style="text-align: center;"><u>Label "Appendix F" - Cross Reference with TCEQ's # 5</u></p>	√			
7. A statement as to whether the plume of contamination is stable, expanding, or contracting, with the basis for that statement. If this information is not known, a statement of why the information is not known should be attached. <p style="text-align: center;"><u>Label "Appendix G"</u></p>	√			
8. A statement as to whether contamination on and off the designated property without a municipal setting designation <u>exceeds</u> 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. <p style="text-align: center;"><u>Label "Appendix H"</u></p>		√		
9. A statement as to whether contamination on and off the designated property with a municipal setting designation <u>will exceed</u> 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. <p style="text-align: center;"><u>Label "Appendix I"</u></p>		√		
10. Identification of the points of origin of the contamination and the persons responsible for the contamination, to the extent known. <p style="text-align: center;"><u>Label "Appendix J"</u></p>		√		
11. A description of any environmental regulatory actions that have been taken within the past five years in connection with the designated property, to the extent known. <p style="text-align: center;"><u>Label "Appendix K"</u></p>	√			
12. A listing of all existing state or EPA registrations, permits, and identification numbers that applies to the designated property. <p style="text-align: center;"><u>Label "Appendix L"</u></p>		√		
13. A statement as to whether the designated property has been admitted to the Texas Voluntary Cleanup Program (section 361.601 of the Texas Health & Safety Code, as may be amended from time to time) or similar state or federal programs, and a description of the status of the designated property in the program. <p style="text-align: center;"><u>Label "Appendix M"</u></p>		√		

ITEM	YES	NO	N/A	COH Use Only
14. A summary of any environmental site assessment reports filed with TCEQ regarding any site investigations or response actions that are planned, ongoing or completed related to the designated property. <u>Label "Appendix N"</u>		√		
15. A statement as to whether any public drinking water supply system exists that satisfies the requirements of Chapter 341 of the Texas Health and Safety Code and that supplies or is capable of supplying drinking water to the designated property and property within one-half mile of the designated property and the identity of each supply system. <u>Label "Appendix O" - Cross Reference with TCEQ's # 2. 1st bullet</u>		√		
16. The name and address of each owner or operator of a water well registered or permitted by the state or the Houston-Galveston Subsidence District that is located within five miles of the boundary of the designated property, along with: <ul style="list-style-type: none"> a. A map showing the location of each well and, to the extent known, a notation of whether each well is used for potable water. b. A statement as to whether the applicant has provided notice to each owner in compliance with section 361.805 of the Texas Health and Safety Code. <u>Label "Appendix P" - Cross Reference with TCEQ's # 8 & 9</u>		√		
17. The name and address of each retail public utility, as defined in section 13.002 of the Texas Water Code, that owns or operates a groundwater supply well within five miles of the boundary of the designated property, along with a statement as to whether the applicant has provided notice as required by section 361.805 of the Texas Health and Safety Code. <u>Label "Appendix Q" - Cross Reference with TCEQ's # 7, 3rd bullet</u>		√		
18. A listing of each municipality, other than the city of Houston, with a corporate limit within one-half mile of the boundary of the designated property, and a statement as to whether the applicant has provided notice as required by section 361.805 of the Texas Health and Safety Code. <u>Label "Appendix R" - Cross Reference with TCEQ's # 7, 2nd bullet</u>		√		
19. A listing of each municipality, other than the city of Houston, that owns or operates a groundwater supply well within five miles of the boundary of the designated property, and a statement as to whether the applicant has provided notice as required by section 361.805 of the Texas Health and Safety Code. <u>Label "Appendix S" - Cross Reference with TCEQ's # 7, 4th bullet</u>		√		
20. A listing of owners of real property within 2,500 ft. of the boundary of the designated property as indicated by the most recent appraisal district records. (Include pre-printed mailing labels) <u>Label "Appendix T"</u>		√		

ITEM	YES	NO	N/A	COH Use Only
<p>21. The following statement signed and sealed by a licensed professional engineer or licensed professional geoscientist authorized to practice in the State of Texas with expertise in environmental remediation:</p> <p>‘To the best of my knowledge and belief, based upon a review of all public and private records and other information sources available to me in the exercise of due diligence, the opinions stated and conclusions made in this application are supported by such information, and the technical and scientific information submitted with the application is true, accurate and complete. Based on such review, the contaminants of concern from sources on the designated property or migrating from or through the designated property more likely than not do exceed or do not exceed a non-ingestion protective concentration level on property beyond the boundaries of the designated property’</p> <p style="text-align: center;"><u>Label “Appendix U”</u></p>	√			
<p>22. If the licensed professional engineer or licensed professional geoscientist determines that contaminants of concern from sources on the designated property are migrating from or through the designated property more likely than not do exceed a non-ingestion protective concentration level on property beyond the boundary of the designated property, then the applicant must:</p> <ol style="list-style-type: none"> a. Specify the name and address of the owner of each property. b. Send a copy of the application to the owner of the property with the notice of the public meeting. c. Provide documentation that the designated property has been included in a state or federal program that requires that the entire non-ingestion protective concentration level exceedance zone be addressed to the satisfaction of the agency administering the program, along with documentation of the estimated time period in which it is to be addressed. An example of such a program is the Texas Voluntary Cleanup Program (section 361.501 of the Texas Health and Safety Code, as may be amended from time to time). d. Provide documentation upon completion of the state or federal program showing that the non-ingestion protective concentration level exceedances have been addressed to the satisfaction of the agency administering the program. <p style="text-align: center;"><u>Label “Appendix V”</u></p>	√			
<p>23. The following statement certified by the applicant and any authorized representatives of the applicant(s) listed in the application:</p> <p>‘I certify under penalty of law that this application and all attachments were prepared under my direction or supervision in a manner designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the persons responsible for gathering and evaluating the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment for knowing violation’.</p>	√			

<u>Label "Appendix W"</u>				
24. A copy of the TCEQ application, if it has been filed, excluding attachments. <u>Label "Appendix X"</u>		√		
25. The signature of the applicant and proof that the applicant has the legal authority to restrict the use of the groundwater on the designated property. <u>Label "Appendix Y"</u>	√			
26. The initial filing fee of \$2,000.00 payable to "City of Houston". <u>Label "Appendix Z"</u>		√		
27. Any additional information. <u>Label "Appendix AA"</u>		√		

CITY OF HOUSTON



**PUBLIC WORKS AND
ENGINEERING
PLANNING & DEVELOPMENT
DIVISION**

EXECUTIVE SUMMARY

InControl Technologies, Inc was retained by CBS Corporation to provide environmental consulting services at the 5436 Clay Street property located in Houston, Harris County, Texas. The property is currently owned by 5436, LLC and was included, with other parcels, in the Texas State Municipal Setting Designation ("MSD") Certificate No. 127. Originally, 5610 Company, LLC submitted a MSD application for the 5610 Polk Street property and two neighboring properties to the east owned by METRO and CenterPoint Energy. This application was then modified by 5610 Company to expand the boundary of the MSD to include the tract of land located at 5436 Clay Street. The original application requested a MSD for the lower groundwater bearing unit located at 30 to 60-feet below ground surface (bgs). This application is requesting an MSD for the upper groundwater bearing unit located on 5436 Clay Street property. The City assigned the secondary application number MSD #2007-003-5610C Amendment B to this application.

The subject property is currently light industrial/commercial. The intended future use of the designated property will remain the same. The area surrounding the designated property is currently of mixed commercial/industrial and residential use. This area was industrially developed as early as 1929 and, according to TCEQ public records, contamination of groundwater is widespread throughout the area. The City of Houston provides drinking water for the designated property and the surrounding properties within one-half mile and therefore, there is no reliance of the upper groundwater bearing unit as a source of drinking water.

Historical environmental assessments identified chlorinated solvents in groundwater beneath the designated property at concentrations which exceed the most conservative drinking water standards. The designated groundwater consists of the Upper Saturated Zone, which consists of a thin water bearing strata between 20 and 25 feet bgs. A yield study performed by InControl Technologies has determined that the upper transmissive unit is of extremely low yield and will not produce more than 150 gallons per day. A groundwater yield study performed by InControl Technologies determined groundwater yield was less than 150 gallons per day (gpd). Therefore, the groundwater would be considered a Class 3 Groundwater Resource. However, the study has not been submitted for formal review by the TCEQ. Class 2 Groundwater standards will still be used for groundwater evaluation purposes. Contaminant plumes within the designated groundwater unit appear to be stable and are fully delineated. Groundwater

InControl Technologies, Inc.

monitoring data has confirmed stable concentrations of the target COCs observed over several years of monitoring.

The concentrations of COCs in the designated groundwater do not exceed the TRRP residential noningestion PCLs in any monitoring wells. Based on historic monitoring data, it is believed that this will remain the case and upon the implementation of an MSD, concentrations of COCs in the designated groundwater will remain less than the TRRP residential non-ingestion PCLs. Soil on the designated property are not expected to influence the designated groundwater based on historic monitoring data.

No public water wells are at risk from contamination associated with the designated property. According to records obtained from the TCEQ and the Harris-Galveston Subsidence District, there are approximately 550 registered/permited water wells within a five mile radius of the designated property. Of these, public records indicate that there are 13 active retail public utility (RPU) wells. Within a one-half mile radius, the records indicate that there are approximately 16 City of Houston Public Works and Engineering registered/permited wells. Of these, two (both owned by the City of Houston) are listed as RPU wells.

The municipalities of City of Galena Park, and City of Jacinto City are located within 5 miles of the designated property. However, other than the City of Houston, there are no municipalities within one half mile of the designated property.

Appendix B – Site Maps

The figures set out in this section provide information required under **Item 2**. The maps depict the property location and topography, the area of groundwater contamination, the location of all soil sampling points and groundwater monitoring wells, the groundwater gradient, and the soil and groundwater PCL exceedence zones.

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

Figure B1 – Soil and Groundwater Sample Location Map

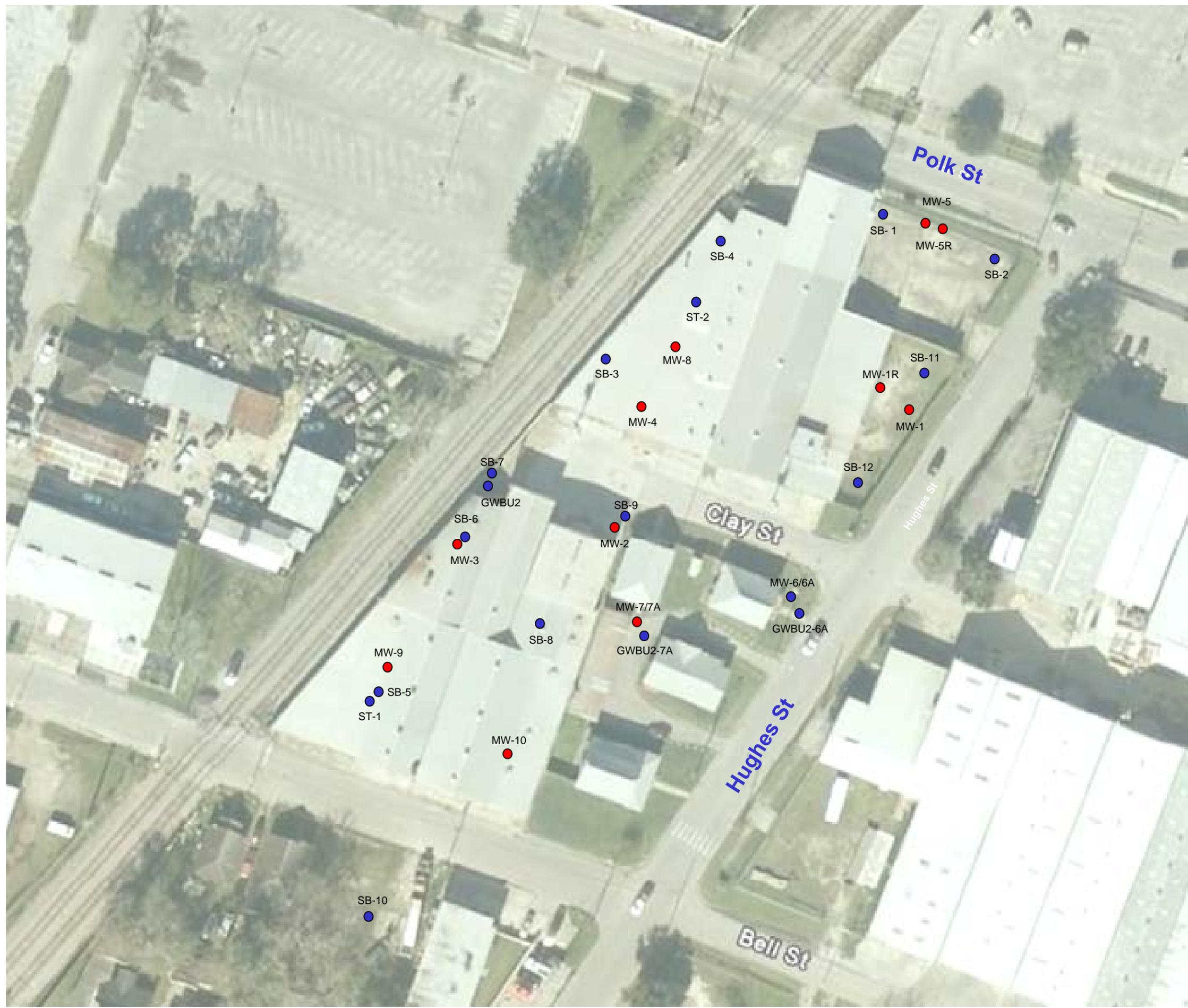
Figure B2 – Groundwater PCLE zone – First Groundwater Bearing Unit

Figure B3-1 – Groundwater PCL Exceedence zone map (PCE)

Figure B3-2 – Groundwater PCL Exceedence zone map (TCE)

Figure B3-3 – Groundwater PCL Exceedence zone map (cis-1,2-DCE)

Figure B3-4 – Groundwater PCL Exceedence zone map (VC)



LEGEND:

- Sample Location
- Groundwater Monitoring Well



Approximate Scale

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**Soil and Groundwater
 Sample Location Map**

CLIENT: Strong, Pipkin, Bissel & Ledyard, LLC		PM: MFM
LOCATION: 5436 Clay Street Houston, Texas 77023		CHECKED:
DETAILED: LMG	DESIGNED:	PROJECT NO: FIGURE: B1



LEGEND:

- Sample Location
- Groundwater Monitoring Well

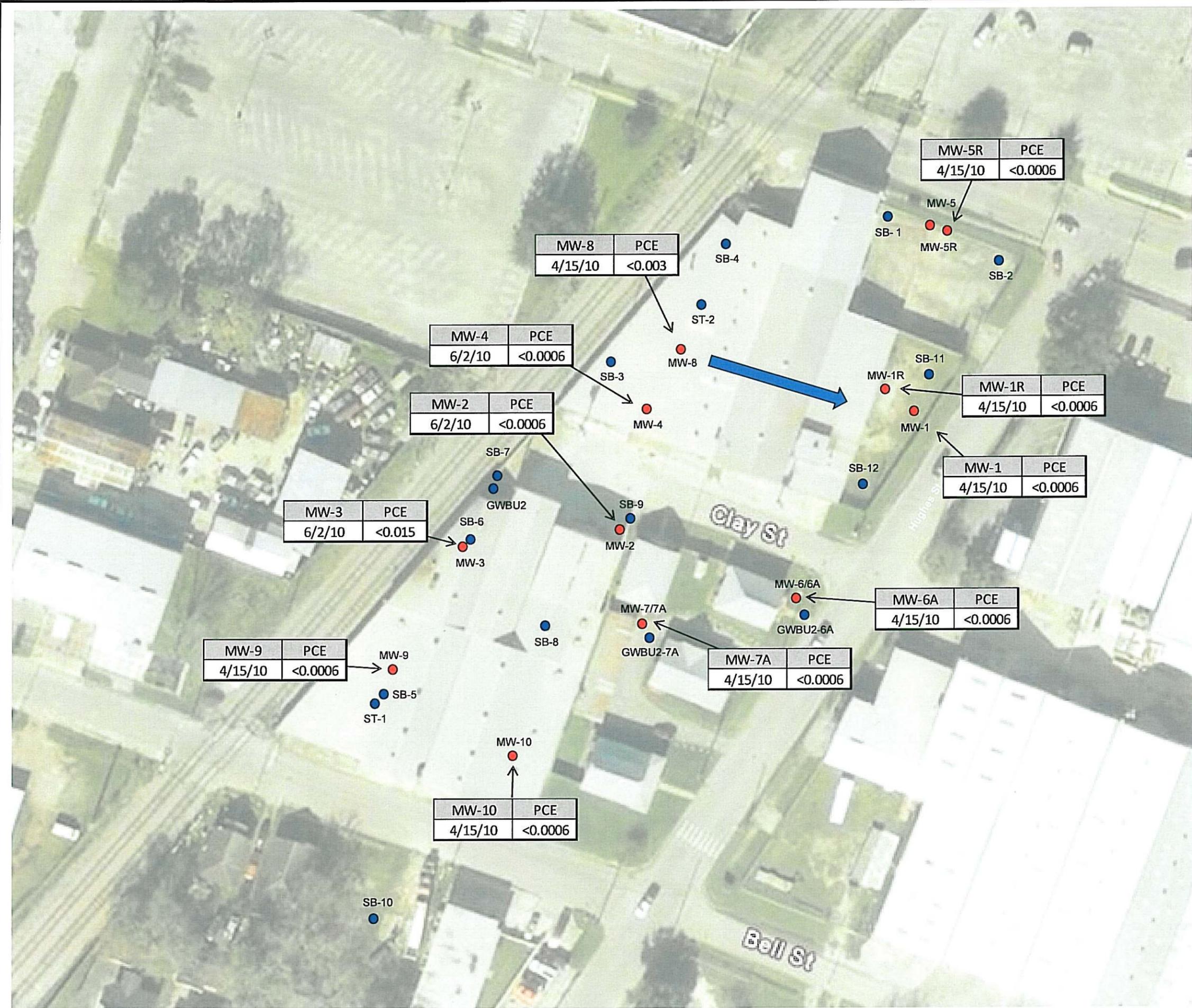


Approximate Scale

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**Groundwater PCLE zone
 First Groundwater Bearing Unit**

CLIENT: Strong, Pipkin, Bissel & Ledyard, LLC			PM: MFM
LOCATION: 5436 Clay Street Houston, Texas 77023			CHECKED:
DETAILED: KCJ	DESIGNED: 9/16/10	PROJECT NO:	FIGURE: B2

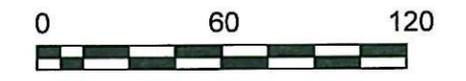


LEGEND:

- Sample Location
- Groundwater Monitoring Well
- ➔ Direction of Groundwater Flow



Note: Concentrations are expressed as mg/L.

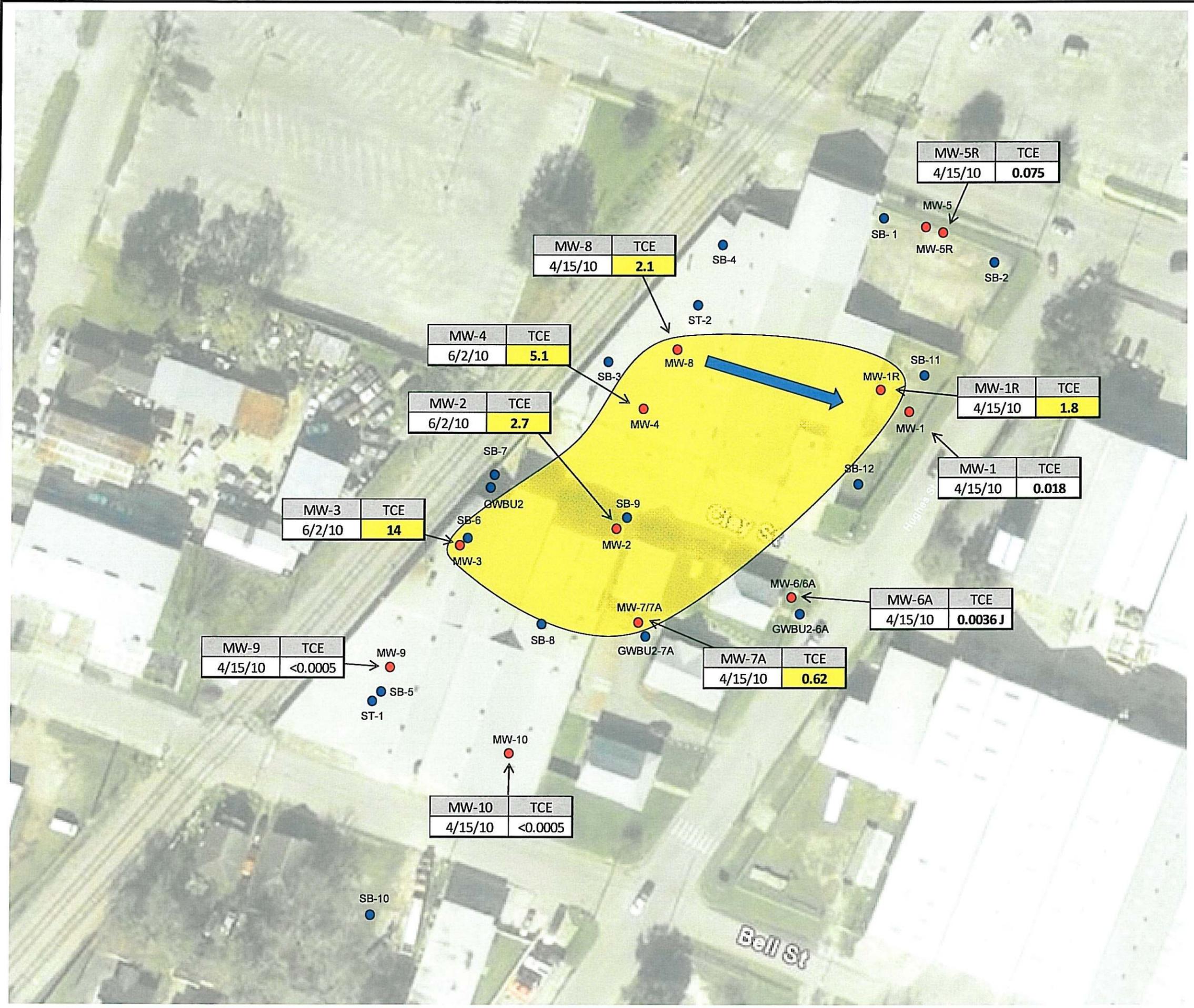


Approximate Scale

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**Groundwater PCL Exceedence Zone
 PCE**

CLIENT: Strong, Pipkin, Bissel & Ledyard, LLC		PM: MFM	
LOCATION: 5436 Clay Street Houston, Texas 77023		CHECKED:	
DETAILED: KCJ	DESIGNED: 9/16/10	PROJECT NO:	FIGURE: B3-1

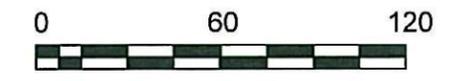


LEGEND:

- Sample Location
- Groundwater Monitoring Well
- ➔ Direction of Groundwater Flow
- PCL Exceedence Zone



Note: Concentrations are expressed as mg/L.

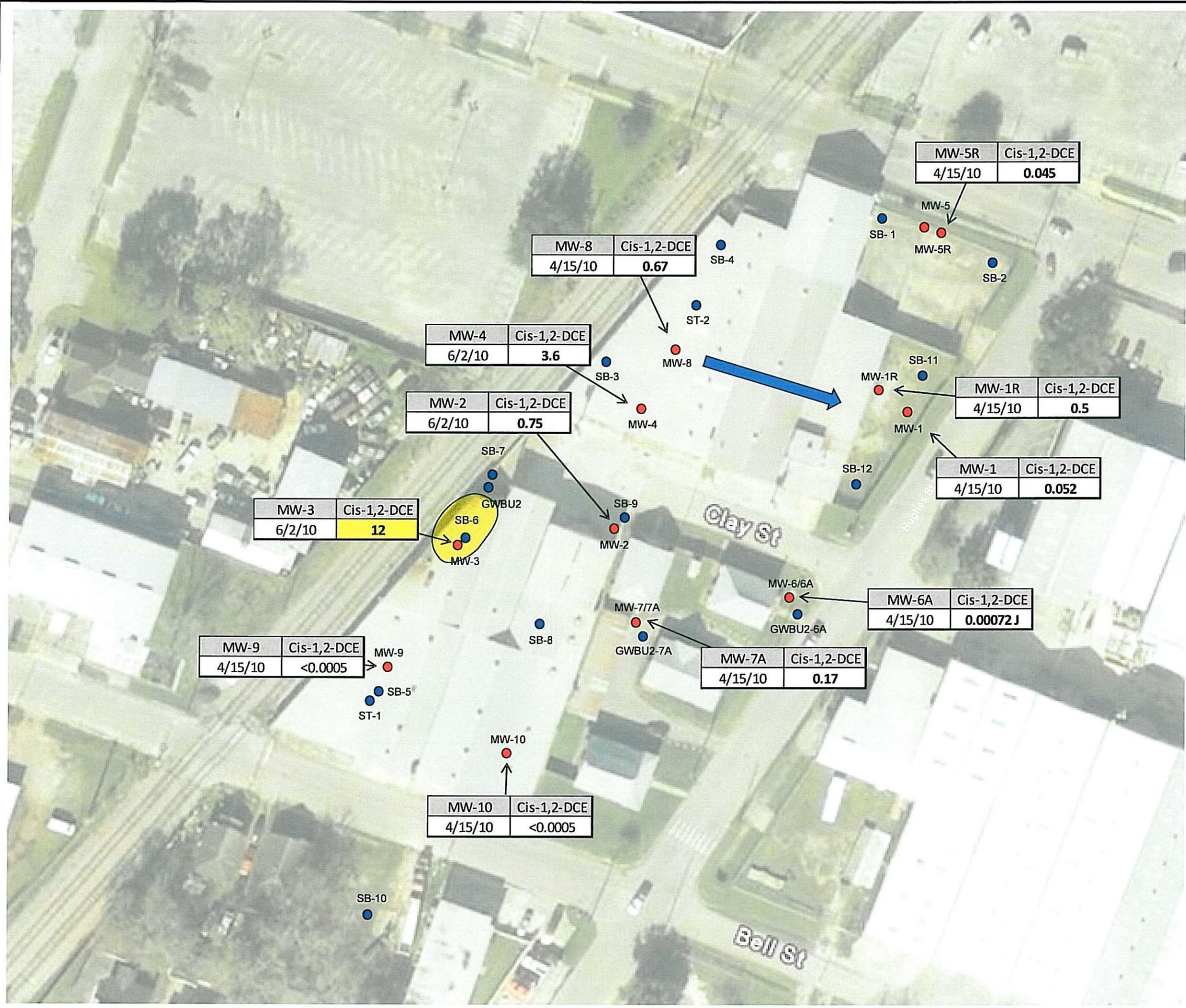


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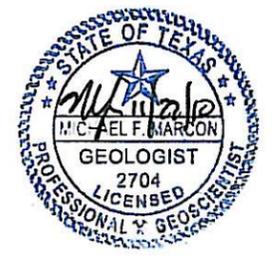
**Groundwater PCL Exceedence Zone
 TCE**

CLIENT: Strong, Pipkin, Bissel & Ledyard, LLC		PM: MFM
LOCATION: 5436 Clay Street Houston, Texas 77023		CHECKED:
DETAILED: KCJ	DESIGNED: 9/16/10	PROJECT NO: FIGURE: B3-2

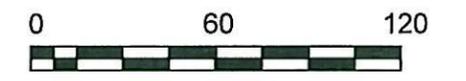


LEGEND:

- Sample Location
- Groundwater Monitoring Well
- ➔ Direction of Groundwater Flow
- PCL Exceedence Zone



Note: Concentrations are expressed as mg/L.

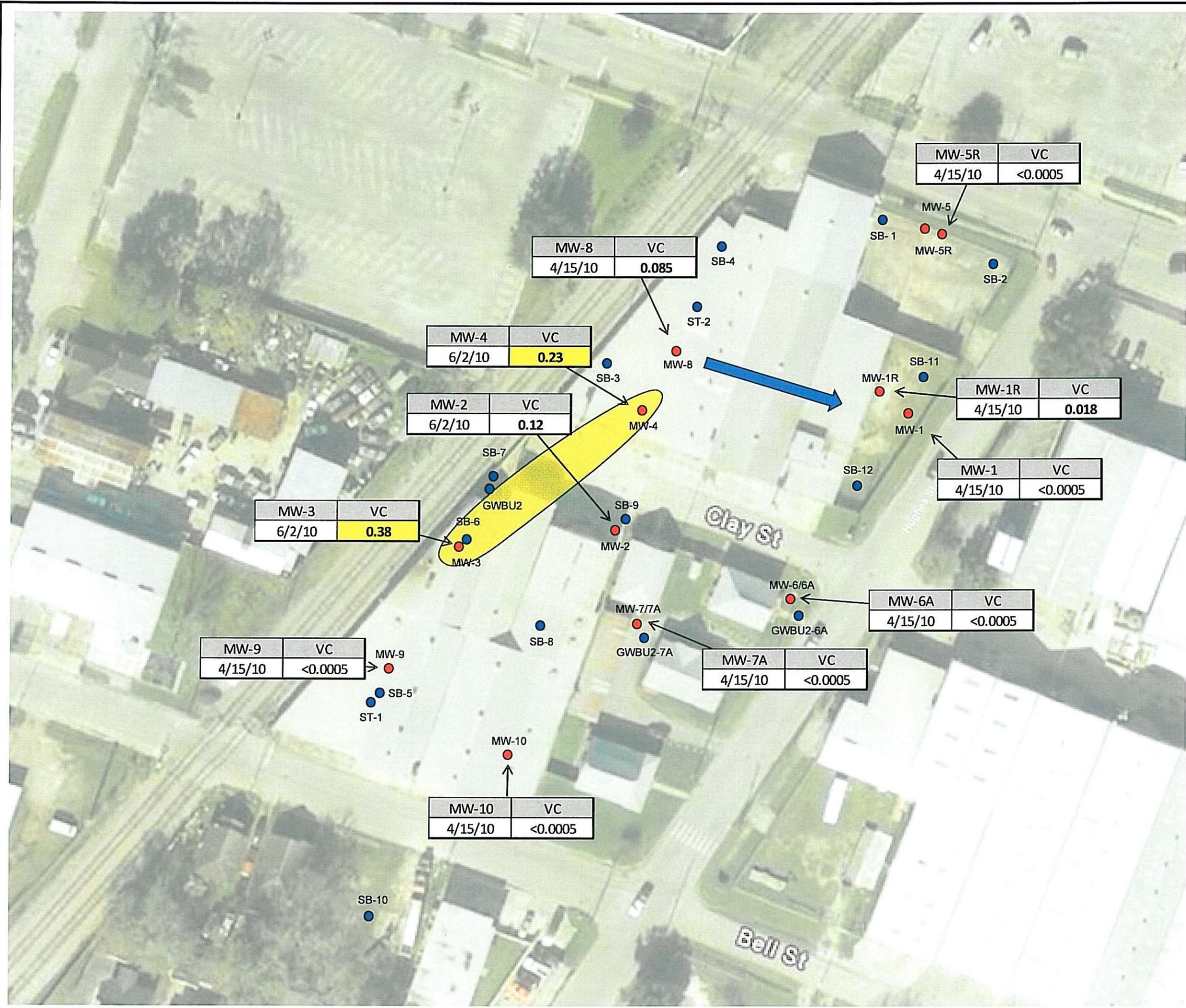


Approximate Scale

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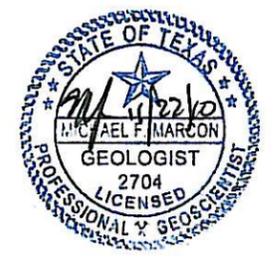
**Groundwater PCL Exceedence Zone
 Cis-1,2-DCE**

CLIENT: Strong, Pipkin, Bissel & Ledyard, LLC			PM: MFM
LOCATION: 5436 Clay Street Houston, Texas 77023			CHECKED:
DETAILED: KCJ	DESIGNED: 9/16/10	PROJECT NO:	FIGURE: B3-3

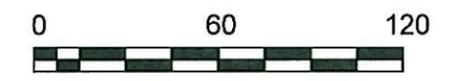


LEGEND:

- Sample Location
- Groundwater Monitoring Well
- ➔ Direction of Groundwater Flow
- PCL Exceedence Zone



Note: Concentrations are expressed as mg/L.

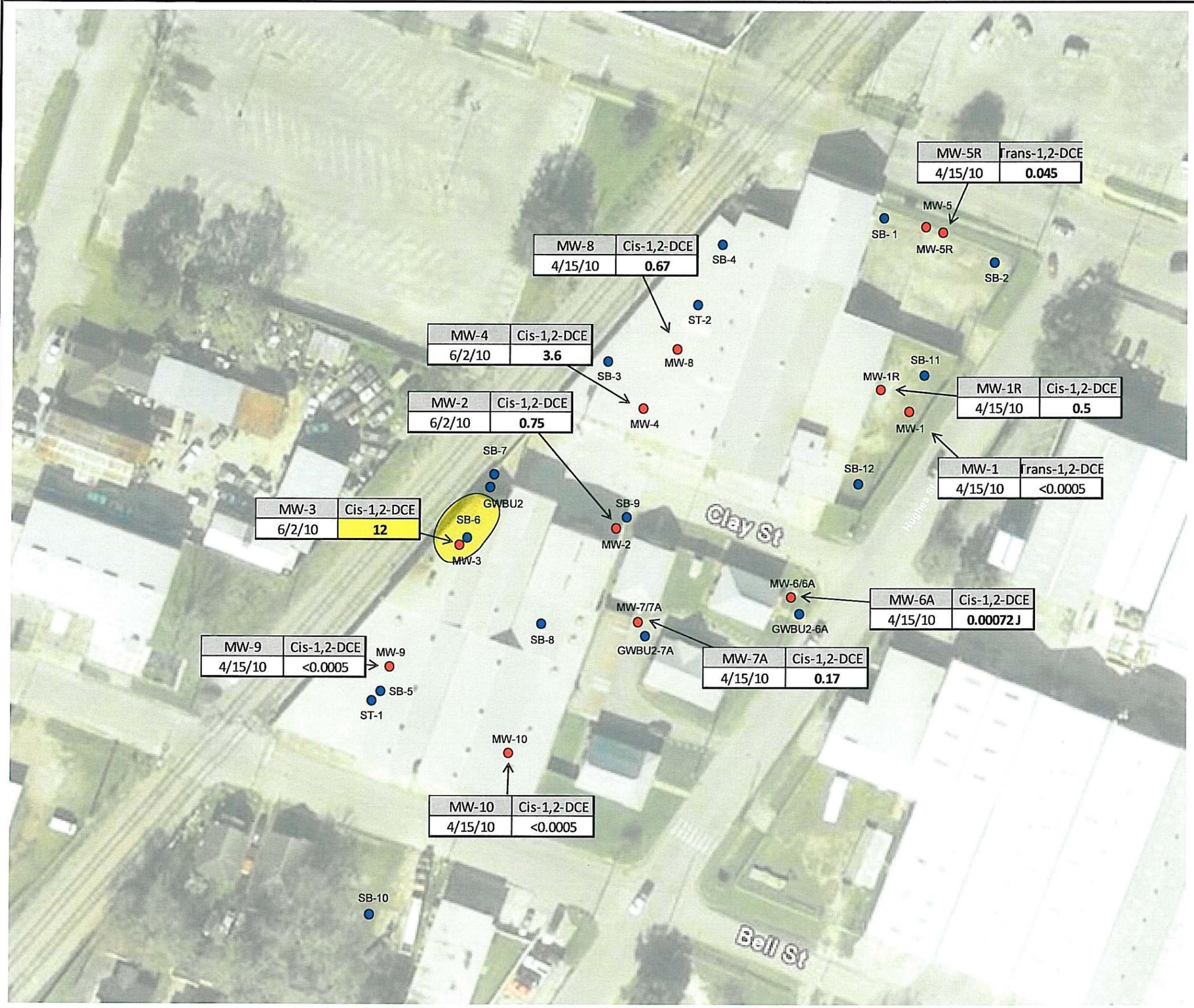


Approximate Scale

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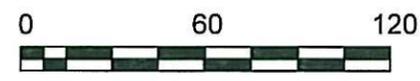
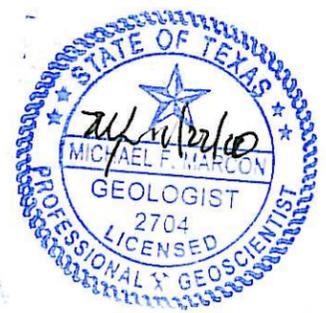
Groundwater PCL Exceedence Zone
 VC

CLIENT: Strong, Pipkin, Bissel & Ledyard, LLC			PM: MFM
LOCATION: 5436 Clay Street Houston, Texas 77023			CHECKED:
DETAILED: KCJ	DESIGNED: 9/16/10	PROJECT NO:	FIGURE: B3-4



LEGEND:

● Sampling Point



Approximate Scale

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 Houston, Texas 77068
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**Groundwater PCL Exceedence Zone
 Cis-1,2-DCE**

CLIENT: Strong, Pipkin, Bissel & Ledyard, LLC		PM: MFM
LOCATION: 5436 Clay Street Houston, Texas 77023		CHECKED:
DETAILED: KCJ	DESIGNED: 9/16/10	PROJECT NO: FIGURE: B3-3

Appendix D – PCLE Zone Discussion

A) A review of recent groundwater sampling data (April and June 2010) indicates the COCs that currently exceed the Tier 1 $^{GW}GW_{Ing}$ PCLs are trichloroethene (TCE) cis-1,2-dichloroethene (cis-1,2-DCE), trans-1,2-dichloroethene (trans-1,2-DCE) and vinyl chloride (VC) in the first groundwater bearing unit. A groundwater yield study performed by InControl Technologies determined groundwater yield was less than 150 gallons per day (gpd). Therefore, the groundwater would be considered a Class 3 Groundwater Resource. The COCs that currently exceed the Tier 1 $^{GW}GW_{Class3}$ PCLs are trichloroethene (TCE) cis-1,2-dichloroethene (cis-1,2-DCE) and vinyl chloride (VC) in the first groundwater bearing unit. However, the study has not been submitted for formal review by the TCEQ. Class 2 Groundwater standards will still be used for groundwater evaluation purposes. Compound specific PCLE zones are depicted on **Figure B3-1** through **Figure B3-4**. Monitor wells located on the surrounding properties indicate the groundwater PCLE zone has extended off-site. Refer to the original MSD Application, MSD#2007-003-5610C, for further off-site delineation.

Based on a review of boring logs, the shallow groundwater on the subject property is first encountered at a depth of approximately 14- to 16-feet below ground surface (ft bgs) (UTZ). The bottom of the UTZ is estimated at approximately 19- to 21-ft bgs. A lower groundwater bearing unit (LTZ) is encountered at a depth of approximately 30- to 60-ft bgs. The UTZ and LTZ are separated by a thick clay unit.

A comparison of the recent groundwater sampling results (April and June 2010) with applicable non-ingestion protective concentration levels ($^{Air}GW_{Inh-v}$) indicates that none of the groundwater samples reported a COC concentration above the $^{Air}GW_{Inh-v}$ PCL. Therefore, based on the recent groundwater monitoring results, there is no non-ingestion protective concentration level exceedence zone within the proposed MSD boundary.

B) The following table represents the groundwater ingestion PCL exceedences that were reported from the April and June 2010 monitoring events:

Table D – Groundwater ingestion PCL Exceedences in First Groundwater Bearing Unit

		PCE (mg/L)	TCE (mg/L)	Cis-1,2-DCE (mg/L)	VC (mg/L)
Tier 1 ^{GW} GW _{Class3} PCLs		0.5	0.5	7.0	0.2
Tier 1 ^{Air} GW _{Inh-v} PCLs		498	118	16,000	3.8
Monitoring Well ID	Sample Date	Concentration (mg/L)			
MW-1	4/15/10	<0.0006	0.018	0.52	<0.0005
MW-1R	4/15/10	<0.0006	1.8	0.5	0.018
MW-2	6/2/10	<0.0006	2.7	0.75	0.12
MW-3	6/2/10	<0.015	14.0	12.0	0.38
MW-4	6/2/10	<0.0006	5.1	3.6	0.23
MW-5R	4/15/10	<0.0006	0.075	0.045	<0.0005
MW-6A	4/15/10	<0.0006	0.0036 J	0.00072 J	<0.0005
MW-7A	4/15/10	<0.0006	0.62	0.17	<0.0005
MW-8	4/15/10	<0.003	2.1	0.67	0.085
MW-9	4/15/10	<0.0006	<0.0005	<0.0005	<0.0005
MW-10	4/15/10	<0.0006	<0.0005	<0.0005	<0.0005

Notes – Values in **Bold** exceed the ^{GW}GW_{Class3} PCL (ingestion PCLE)

Values in **Bold Italics** exceed the ^{Air}GW_{Inh-v} PCL (non-ingestion PCLE)

Groundwater COC concentrations tabulated above are less than the ^{Air}GW_{Inh-v} non-ingestion PCL. Therefore, based on the April and June 2010 monitoring data there is no non-ingestion PCLE zone on the subject property.

C) The chlorinated solvents (PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, 1,1-DCE and VC) detected in groundwater samples reportedly are associated with the historical industrial activities at the 5436 Clay Street site.

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 will “sink”. These compounds are referred to as “dense non-aqueous phase liquids” (DNAPLs). In high concentrations DNAPLs will be able to 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 and is not expected to be present at this site given the relatively low concentration of chlorinated solvents detected in groundwater.

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

Appendix E – COCs in Designated Groundwater Discussion

- A) Refer to **Appendix D** for a discussion of the contaminants of concern (COC) in the ingestion protective concentration level (PCL) exceedence zone. Current groundwater sampling results indicate that there are three identified COCs (TCE, cis-1,2-DCE and VC) that exceed the ingestion protective concentration levels on the subject property in the first groundwater bearing unit. **Figure B3-1** through **Figure B3-4** depicts the PCLE zone for each chemical of concern.
- B) Refer to **Table D** for a tabulated comparison of COC concentrations with the respective TRRP Protective Concentration Levels (PCLs)
- C) Refer to **Appendix D** for a discussion of the basic geochemical properties of the contaminants of concern (COCs) in the ingestion PCL exceedence zone.

Appendix F – Summary of Groundwater Concentration Data

Appendix F contains a table summarizing the concentration levels for the primary chemicals of concern in groundwater (**Table F1**). The table includes the concentration level, the ingestion protective concentration limits ($^{GW}GW_{Ing}$ for groundwater), the non-ingestion protective concentration limits for groundwater ($^{Air}GW_{Inh-V}$), and the critical PCLs assuming that an MSD is in place ($^{Air}GW_{Inh-V}$ for groundwater).

Table F1
 Summary of Chlorinated Compounds in Groundwater
 Polk Street MSD
 5436 Clay Street, Houston, TX

Monitoring Well	Sample Date	PCE (mg/L)	TCE (mg/L)	cis-1,2-DCE (mg/L)	trans-1,2-DCE (mg/L)	VC (mg/L)
Tier 1^{GW} Critical PCL without MSD		0.005	0.005	0.07	0.1	0.002
Tier 1^{Air} Critical PCL with MSD		330	160	16,000	10,000	3.6
First Groundwater Bearing Unit						
MW-1	1/26/2006	<0.00019	0.0298	0.0288	<0.00022	<0.00013
	11/21/2008	<0.0005	0.021	0.0966	<0.00046	<0.00042
	4/15/2010	<0.0006	0.018	0.052	<0.0005	<0.0005
MW-1R	3/24/2009	<0.002	1.9	0.489	0.0119	0.029
	4/15/2010	<0.0006	1.8	0.5	0.015	0.018
MW-2	2/8/2006	<0.00019	3.71	0.662	0.022	0.0707
	11/21/2008	<0.0005	4.17	0.746	0.043	0.0793
	4/15/2010	<0.003	8	0.96	0.054	0.18
	6/2/2010	<0.0006	2.7	0.75	0.037	0.12
MW-3	2/8/2006	<0.00019	7.34	8.6	0.12	0.657
	11/21/2008	<0.0005	18.9	12.7	<0.00046	0.796
	4/15/2010	<0.03	31	19	0.19 J	1.3
	6/2/2010	<0.015	14	12	0.13	0.38
MW-4	1/27/2006	<0.00019	0.676	0.253	0.031	0.0158
	11/21/2008	<0.0005	4.27	1.93	0.533	<0.021
	4/15/2010	<0.003	5.4	2.8	0.41	0.17
	6/2/2010	<0.0006	5.1	3.6	0.42	0.23
MW-5	1/26/2006	<0.00019	0.0029	0.00175	<0.00022	<0.00013
	11/21/2008	<0.0005	0.0194	0.0157	<0.00046	<0.00042
MW-5R	3/24/2009	<0.002	0.0652	0.031	0.0028	0.00063 J
	4/15/2010	<0.0006	0.075	0.045	0.0053	<0.0005
MW-6A	7/11/2007	<0.00068	<0.00044	<0.00043	<0.00064	<0.00062
	4/15/2010	<0.0006	0.0036 J	0.00072 J	<0.0005	<0.0005
MW-7A	8/1/2007	<0.00068	0.53	0.11	0.007	0.004
	4/15/2010	<0.0006	0.62	0.17	0.014	<0.0005
MW-8	11/21/2008	<0.0005	2.32	0.369	0.0531	0.0451
	4/15/2010	<0.003	2.1	0.67	0.49	0.085
MW-9	11/21/2008	<0.0005	<0.00047	<0.00043	<0.00046	<0.00042
	4/15/2010	<0.0006	<0.0005	<0.0005	<0.0005	<0.0005
MW-10	11/21/2008	<0.0005	<0.00047	<0.00043	<0.00046	<0.00042
	4/15/2010	<0.0006	<0.0005	<0.0005	<0.0005	<0.0005
SCI MW-5	10/22/2008	<0.002	0.0592	0.0657	<0.002	<0.002
	4/15/2010	<0.0006	0.1	0.095	0.0015 J	<0.0005
SCI MW-8	10/22/2008	<0.002	<0.002	<0.002	<0.002	<0.002
	4/15/2010	<0.0006	<0.0005	<0.0005	<0.0005	<0.0005

Table F1
 Summary of Chlorinated Compounds in Groundwater
 Polk Street MSD
 5436 Clay Street, Houston, TX

Monitoring Well	Sample Date	PCE (mg/L)	TCE (mg/L)	cis-1,2-DCE (mg/L)	trans-1,2-DCE (mg/L)	VC (mg/L)
Tier 1^{GW}GW_{Ing} Critical PCL without MSD		0.005	0.005	0.07	0.1	0.002
Tier 1^{Air}GW_{Inh-v} Critical PCL with MSD		330	160	16,000	10,000	3.6
SB-1	9/9/2005	<0.00123	0.0543	0.0115	<0.00121	<0.0016
SB-2	9/9/2005	<0.00123	0.0462	0.0206	0.0014 J	<0.0016
SB-3	9/9/2005	<0.00123	0.0579	0.0422	0.0024 J	<0.0016
SB-4	9/9/2005	<0.00123	0.00485 J	0.0086	0.00178 J	<0.0016
SB-5	9/9/2005	<0.00123	<0.00117	<0.00088	<0.00121	<0.0016
SB-6	9/9/2005	<0.00123	31	21.7	0.15	1.43 J
SB-7	9/9/2005	0.00321 J	13.4	15.3	0.306 E	1.05
SB-8	9/9/2005	<0.00123	0.0109	0.00646	<0.00121	<0.0016
SB-9	9/9/2005	<0.00123	4.06	0.823	0.0441	0.122
SB-10	9/9/2005	<0.00123	<0.00117	<0.00088	<0.00121	<0.0016
SB-11	9/9/2005	<0.00123	0.573	0.153	0.00241 J	0.00671
SB-12	9/9/2005	<0.00123	<0.00117	0.00473 J	<0.00121	<0.0016
WSW	3/17/2006	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002
GWBU2	1/25/2006	<0.00019	0.00274	0.00423	<0.00022	<0.00013
GWBU2-6A	7/11/2007	<0.00068	<0.00044	<0.00043	<0.00064	<0.00062
GWBU2-7A	7/11/2007	<0.00068	<0.00044	<0.00043	<0.00064	<0.00062

Bold	values exceed the laboratory limit of quantitation.
Bold	exceeds ^{GW} GW _{Ing} PCL

Appendix G – Plume Stability

The 5436 Clay Street property has been affected by dissolved phase contaminants (one or more of TCE, cis-1,2-DCE, and VC) in the soil and groundwater. These contaminants are believed to be associated with historic industrial operations.

The lateral extent of groundwater impact in the first groundwater bearing unit has been delineated in all directions. The first groundwater bearing unit is delineated to the north by groundwater monitoring well MW-5R and to the south by groundwater monitoring wells MW-9 and MW-10. Groundwater monitoring wells MW-1 and MW-6A are the east delineation points in the first groundwater bearing unit.

A comparison of the sampling results from as early as September 2005 through June 2010 indicates that the area of impact has remained stable over time. Monitoring wells MW-2, MW-3, and MW-4 have historically reported the highest COC concentrations. COC concentrations in monitoring wells MW-2, MW-3, and MW-4 have remained stable over the sampling history of the site.

Monitoring well MW-3 is identified as a suspected source area well in the first groundwater bearing unit. The highest reported concentration of TCE (31.0 mg/L) in MW-3 occurred in April 2010. MW-3 was resampled in June 2010 and had a reported concentration of 14.0 mg/L. Monitoring wells MW-2 and MW-4 are also near source area wells. The perimeter upper groundwater bearing unit monitoring wells have either remained stable or have declined.

Appendix K – Regulatory Actions

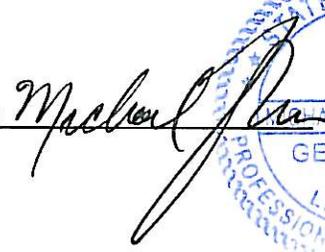
Not Applicable. No regulatory actions have been taken in the last five years.

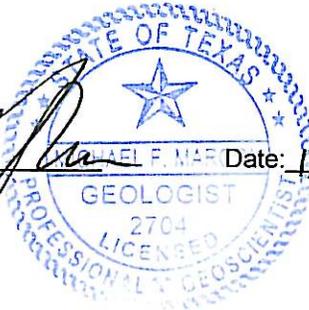
Appendix U – Statement Regarding Completeness of Information and Potential for Off-Site Impact

To the best of my knowledge and belief, based upon a review of all public and private records and other information sources available to me in the exercise of due diligence, the opinions stated and conclusions made in this application are supported by such information, and the technical and scientific information submitted with the application is true, accurate, and complete. Based on such review, the contaminants of concern from the sources on the designated property more likely than not do not exceed a non-ingestion protective concentration level on property beyond the boundaries of the designated property.

Michael F. Marcon, P.G.
President, Principal
InControl Technologies, Inc.

Signature:

 Date: 11/22/10



Appendix V – Determination of off-site source

Not Applicable. The contaminants of concern from sources on the designated property do not exceed a non-ingestion protective concentration level beyond the boundary of the designated property.

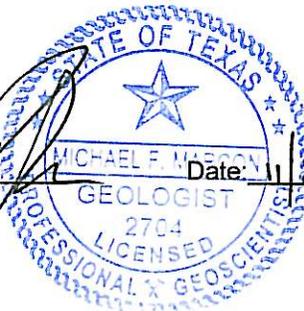
Appendix W – Statement Regarding Accuracy of Information

I certify under penalty of law that this application and all attachments were prepared under my direction or supervision in a manner designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the persons responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Michael F. Marcon, P.G.
President, Principal
InControl Technologies, Inc.

Signature: _____


Date: 11/22/10

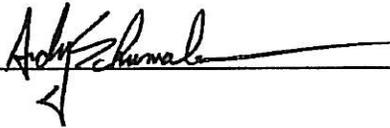


Appendix Y – Signed Restrictive Covenant

Enclosed are the required signatures from the applicant and landowners within the proposed MSD boundary.

Mr. Andrew Schumacher has the authority to sign and file legally binding documents on behalf of 5436, LLC, including documents that restrict access to and the use of groundwater on the designated property owned by 5436, LLC. Included in this Appendix Y are documents from the Secretary of State's office and the Texas Comptroller of Public Accounts office evidencing that Mr. Andrew Schumacher has the authority to sign and file legally binding documents on behalf 5436 LLC, and is the Registered Agent and/or Manager of 5436 LLC.

Mr. Andrew Schumacher as the Applicant, has the authority to restrict the use of groundwater on the designated property for that parcel of land owned by the City of Houston, more specifically described under Appendix A of the original application. Included in this Appendix Y is a copy of such authority as provided by the City of Houston.

By: 

Title: President

Date: Nov. 19, 2010

InControl Technologies, Inc.

Corporations Section
P.O.Box 13697
Austin, Texas 78711-3697



Phil Wilson
Secretary of State

Office of the Secretary of State

February 01, 2008

Corporation Service Company
701 Brazos, Suite 1050
Austin, TX 78701 USA

RE: 5436, LLC
File Number: 800931736

It has been our pleasure to file the certificate of formation and issue the enclosed certificate of filing evidencing the existence of the newly created domestic limited liability company (llc).

Unless exempted, the entity formed is subject to state tax laws, including franchise tax laws. Shortly, the Comptroller of Public Accounts will be contacting the entity at its registered office for information that will assist the Comptroller in setting up the franchise tax account for the entity. The first year franchise tax return will be due a year and ninety days following formation. Thereafter, an annual franchise tax return is due in May of each year. If you need to contact the Comptroller about franchise taxes, you may contact the agency by calling (800) 252-1381, by e-mail to tax.help@cpa.state.tx.us or by writing P. O. Box 13528, Austin, TX 78711-3528. Telephone questions regarding other business taxes, including sales taxes, should be directed to (800) 252-5555.

The entity formed does not file annual reports with the Secretary of State. Documents will be filed with the Secretary of State if the entity needs to amend one of the provisions in its certificate of formation. It is important for the entity to continuously maintain a registered agent and office in Texas. Failure to maintain an agent or office or file a change to the information in Texas may result in the involuntary termination of the entity.

If we can be of further service at any time, please let us know.

Sincerely,

Corporations Section
Business & Public Filings Division
(512) 463-5555

Enclosure

Come visit us on the internet at <http://www.sos.state.tx.us/>

Phone: (512) 463-5555
Prepared by: Lisa Jones

Fax: (512) 463-5709
TID: 10285

Dial: 7-1-1 for Relay Services
Document: 201857120002



Office of the Secretary of State

CERTIFICATE OF FILING OF

5436, LLC
File Number: 800931736

The undersigned, as Secretary of State of Texas, hereby certifies that a Certificate of Formation for the above named Domestic Limited Liability Company (LLC) has been received in this office and has been found to conform to the applicable provisions of law.

ACCORDINGLY, the undersigned, as Secretary of State, and by virtue of the authority vested in the secretary by law, hereby issues this certificate evidencing filing effective on the date shown below.

The issuance of this certificate does not authorize the use of a name in this state in violation of the rights of another under the federal Trademark Act of 1946, the Texas trademark law, the Assumed Business or Professional Name Act, or the common law.

Dated: 01/31/2008

Effective: 01/31/2008



A handwritten signature in black ink that reads "Phil Wilson".

Phil Wilson
Secretary of State

Form 205
(Revised 01/06)

Return in duplicate to:
Secretary of State
P.O. Box 13697
Austin, TX 78711-3697
512 463-5555
FAX: 512 463-5709
Filing Fee: \$300



This space reserved for office use.

**Certificate of Formation
Limited Liability Company**

FILED
In the Office of the
Secretary of State of Texas

JAN 31 2008

Corporations Section

Article 1 - Entity Name and Type

The filing entity being formed is a limited liability company. The name of the entity is:

5436, LLC

The name must contain the words "limited liability company," "limited company," or an abbreviation of one of these phrases.

Article 2 - Registered Agent and Registered Office

(Select and complete either A or B and provide the name and address of a filing governing person.)

A. The initial registered agent is an organization (cannot be entity named above) by the name of:
Corporation Service Company d/b/a CSC-Lawyers Incorporating Service Company

OR

B. The initial registered agent is an individual resident of the state whose name is set forth below:

First Name M.I. Last Name Suffix

C. The business address of the registered agent and the registered office address is:

701 Brazos Street, Suite 1050 Austin TX 78701
Street Address City State Zip Code

Article 3 - Governing Authority

(Select and complete either A or B and provide the name and address of a filing governing person.)

A. The limited liability company will have managers. The name and address of each initial manager are set forth below.

B. The limited liability company will not have managers. The company will be governed by its members, and the name and address of each initial member are set forth below.

NAME OF GOVERNING PERSON (If the name of an individual or an organization, full name)

IF INDIVIDUAL

First Name M.I. Last Name Suffix

OR

IF ORGANIZATION

5610 COMPANY, LLC

Organization Name

ADDRESS OF GOVERNING PERSON

600 Hughes Houston TX USA 77023
Street or Mailing Address City State Country Zip Code

NAME OF GOVERNING PERSON (Enter the name of either an individual or an organization, but not both)				
IF INDIVIDUAL				
<i>First Name</i>	<i>M.I.</i>	<i>Last Name</i>	<i>Suffix</i>	
OR				
IF ORGANIZATION				
<i>Organization Name</i>				
ADDRESS OF GOVERNING PERSON				
<i>Street or Mailing Address</i>	<i>City</i>	<i>State</i>	<i>Country</i>	<i>Zip Code</i>

NAME OF GOVERNING PERSON (Enter the name of either an individual or an organization, but not both)				
IF INDIVIDUAL				
<i>First Name</i>	<i>M.I.</i>	<i>Last Name</i>	<i>Suffix</i>	
OR				
IF ORGANIZATION				
<i>Organization Name</i>				
ADDRESS OF GOVERNING PERSON				
<i>Street or Mailing Address</i>	<i>City</i>	<i>State</i>	<i>Country</i>	<i>Zip Code</i>

Article 4 - Purpose

The purpose for which the company is formed is for the transaction of any and all lawful purposes for which a limited liability company may be organized under the Texas Business Organizations Code.

Supplemental Provisions/Information

Text Area: [The attached addendum, if any, is incorporated herein by reference.]

Organizer

The name and address of the organizer:

Arthur Nathan

Name

1221 McKinney Street, Suite 2100

Houston

TX 77010

Street or Mailing Address

City

State Zip Code

Effectiveness of Filing (Select only A, B, or C)

- A. This document becomes effective when the document is filed by the secretary of state.
 - B. This document becomes effective at a later date, which is not more than ninety (90) days from the date of signing. The delayed effective date is: _____
 - C. This document takes effect upon the occurrence of the future event or fact, other than the passage of time. The 90th day after the date of signing is: _____
- The following event or fact will cause the document to take effect in the manner described below:
- _____
- _____

Execution

The undersigned signs this document subject to the penalties imposed by law for the submission of a materially false or fraudulent instrument.

Date: January 31, 2008



Signature of organizer