CITY OF HOUSTON

PUBLIC WORKS AND ENGINEERING
PLANNING & DEVELOPMENT DIVISION

EXECUTIVE SUMMARY

The designated Municipal Setting Designation (MSD) property is the Carmax Auto Superstore, Inc. (Carmax) located at 6909 Southwest Freeway in Houston, Harris County, Texas (Figure C1). The site is bounded by Bintliff Street on the west, the Southwest Freeway (Interstate Highway 59) on the north, Hornwood Street on the east, and a mosque and residential development on the south In May 1997, a Carmax Auto Superstore was constructed on the site which is used for the retail sale of pre-owned cars. The site has been improved with two buildings: the main building and a carwash building. The western portion of the main building is used as a show room and office space. The eastern portion of the main building is the service department. Minor auto maintenance and repair activities associated with preparing the automobiles for sale are performed onsite.

The site is located in a predominately commercially developed area within the municipal boundaries of the City of Houston (COH) which has been commercially developed since at least the 1960s (Figure B1). Currently, the land use of the surrounding area within 500 feet of the site include offices and commercial businesses to the east across Hornwood, west across Bintliff, and north across Southwest Freeway and residential development and a mosque to the south.

The site is located within the Brays Bayou watershed (Figure C3). According to the Flood Insurance Rate Map, the site is located outside the 100-year floodplain (Figure C2).

Volatile organic compound (VOC) Protective Concentration Level Exceedence (PCLE) Zones Zones were identified on the designated MSD property. The VOC PCLE Zones are shown on Figure C7.

Site and Surrounding Area Land Use History

The former Halliburton Geophysical Services (Halliburton) facility onsite operations consisted of manufacturing and assembling geophysical tools and equipment between 1961 and 1994. The former Halliburton Geophysical Service facility is considered the historical source of onsite

contamination. The facility contained 98,000 square feet of buildings (five buildings) situated on 206,000 square feet of land. Buildings D and E located near the south side of the site contained a paint area, plating shop and vehicle maintenance shop. Hazardous waste and petroleum oil storage sheds were located near Buildings D and E. Wastes known to have been generated at the site when Halliburton was in operation included paint, paint related wastes, toluene, chromic and other acids, petroleum dispersants, solvents, and waste oil. Several historic USTs were located onsite near Buildings D and E. The potential onsite sources of impact were removed over 15 years ago when Halliburton vacated the site. Figures C5 and J1 show the historical land use of the site and surrounding area.

The primary offsite source of potential environmental concern identified is the former Target Tune & Lube (Target) auto service center located at 7051 Southwest Freeway. The former Target was located approximately 300 feet west of the property across Bintliff Street and operated between 1969 and approximately 2006. A petroleum hydrocarbon and chlorinated VOC release to soil and groundwater was discovered during an investigation around the former UST system and the site was closed by the TCEQ PST Program under construction worker criteria. The offsite former Target property entered into the Voluntary Cleanup Program (VCP) (VCP No. 2072) in 2009 and a VCP Certificate of Completion was issued in 2010 based on the PST closure under 30 TAC 334 Rules.

Site Sensitive Receptor Survey

No surface water bodies or sensitive receptors were identified within 0.25-mile of the designated MSD site. No domestic drinking water wells are present on the site or within 0.5-mile of the site. Three City of Houston municipal water wells located approximately 1,200 feet south of the affected property do not produce from the affected shallow groundwater-bearing unit and are not threatened by the onsite release since the production zones are greater than 800 feet below ground surface (bgs).

Site Assessment

The primary objectives of the site assessment were to investigate the soil and groundwater at the site, identify the chemicals of concern (COCs), and define the soil and groundwater COC Protective Concentration Limit Exceedance (PCLE) zones as part of the process to obtain closure under Texas Risk Reduction Rules (TRRP) Texas Administration Code (TAC) 30 §350 through the TCEQ VCP.

Site investigations were performed onsite in the identified areas of concern and onsite and offsite groundwater plumes delineated between August 1994 and May 2008. Groundwater sampling events were performed between June 1998 through June 2012. The site investigations consisted of advancing numerous soil borings and installing groundwater monitoring wells onsite in the identified areas of concern and offsite in the Bintliff Drive City of

Houston (COH) right-of-way (ROW) and on the former Target property. A total of 16 shallow soil borings and 23 deep soil borings were advanced on the site and on offsite properties. The deep soil borings were converted to permanent monitoring wells (Figure C5). The soil samples and groundwater samples collected from the onsite soil borings and monitoring wells were analyzed for total petroleum hydrocarbons (TPH), volatile organic compounds (VOCs) and/or the 8-listed Resource Conservation and Recovery Act (RCRA) metals. The soil and groundwater samples collected from the offsite soil borings and monitoring wells were analyzed for VOCs.

Investigation Findings and Conclusions

- Based on concentration trends, three groundwater plumes were identified: two onsite plumes (eastern and western) and an off-site plume beneath the Bintliff Drive ROW. The COCs identified in the groundwater plumes that exceed the applicable groundwater ingestion ($^{GW}GW_{Ing}$) PCLs are trichloroethene (TCE), 1,1-dichloroethene (1,1-DCE), and vinyl chloride (VC). The COCs that exceed $^{GW}GW_{Ing}$ PCLs in the plumes consist of 1,1-DCE and VC in the onsite eastern plume; 1,1-DCE, TCE, and VC in the onsite western plume; and,1,1-DCE, TCE, and VC in the offsite plume.

- The primary source for the COCs (TCE, 1,1-DCE, and VC) in the groundwater plumes appears to be historical onsite Halliburton operations between 1961 and 1994. The onsite historical sources were removed approximately 15 years ago. Further discussion of the onsite sources is provided in Appendix J.

- TPH and metals were not detected in the soil and shallow groundwater at concentrations exceeding TCEQ residential ingestion PCLs. VOCs were not detected in the soil at concentrations exceeding TCEQ residential ingestion PCLs.

- The affected groundwater in the plumes has been delineated horizontally and vertically to TCEQ residential ingestion PCLs (Figure C4-1). The PCLE Zones for the groundwater COCs are vertically confined to the shallow groundwater zone encountered between approximately 14 feet and 55 feet bgs.

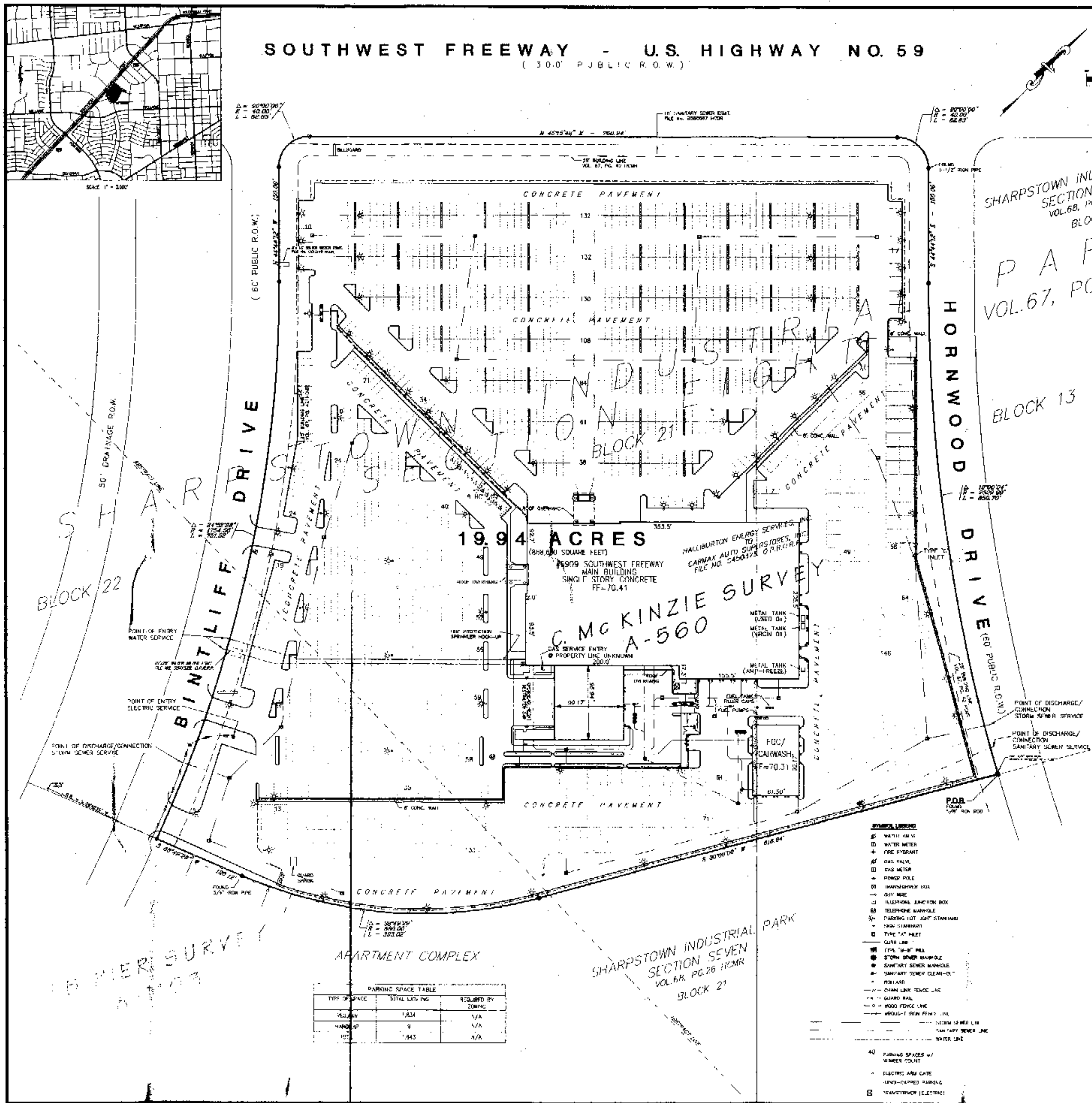
- The COC concentrations in the shallow groundwater have not exceeded TCEQ non-ingestion PCLs during 14 years of groundwater monitoring.

- The groundwater plumes have been monitored for 14 years and are stable or decreasing in size and concentration. The COC concentrations are decreasing through dechloronization (Graphs G1 to G7 in Appendix G).

APPENDIX A - LEGAL PROPERTY DESCRIPTION

Provide a legal description of the boundaries of the designated property, including metes and bounds, and a copy of the deed for the property.

A legal description of the boundaries of the designated property and a copy of the deed for the property are included in Appendix A. The metes and bounds description is included as Exhibit A to the deed.



TYPE OF SPACE	TOTAL EXISTING	REQUIRED BY ZONING
REGULAR	1,834	N/A
HANDICAP	9	N/A
TOTAL	1,843	N/A

PARKING SPACE TABLE

METES AND BOUNDS DESCRIPTION
OF 19.94 ACRES OF LAND
OUT OF SHARPSTOWN INDUSTRIAL PARK, SECTION EIGHT
IN THE J.B. PIER SURVEY, A 1103 &
THE C. Mc KINZIE SURVEY, A-560
HARRIS COUNTY, TEXAS

All that certain 19.94 acres of land, that same tract described in the deed from Halliburton Energy Services, Inc. to Carmax Auto Superstores, Inc., recorded under File No. S450375, in the Official Public Records of Real Property of Harris County, Texas, out of Sharpstown Industrial Park, Section Eight according to the plat thereof recorded under Volume 67, Page 42, in the Map Records of Harris County, Texas, in the J.B. Pier Survey, A-1103 and the C. Mc Kinzie Survey, A 560, Harris County, Texas, and being more particularly described by metes and bounds as follows: (All bearings based on the aforesaid plat)

BEGINNING at a 5/8" iron rod found for the most easterly corner of said 19.94 acre tract, in the easterly line of Sharpstown Industrial Park, Section Eight at its intersection with the southerly right-of-way line of Hornwood Drive (60' R.O.W.), from which a found 5/8" iron rod N 69° 52' 32" W - 1.30'

THENCE S 30° 00' 08" W - 618.84' along said easterly line to a 5/8" iron rod found for the Point of Curvature of a curve the right having a central angle of 38° 49' 29" and a radius of 580.00';

THENCE along said curve to the right, continuing along said easterly line, in a southwesterly direction, an arc distance of 393.02' to a 3/4" iron pipe found for Point of Tangency;

THENCE S 68° 49' 39" W - 120.12' to a 5/8" iron rod found for the most southerly corner of the herein described tract in the northerly right-of-way line of Bintliff Drive (60' R.O.W.), common to a point on a curve to the left having a central angle of 24° 32' 28", a radius of 1754.56' and from which point the center of the circle of said curve bears S 68° 48' 16" W;

THENCE along said curve to the left and along said northerly right-of-way line, in a northwesterly direction, an arc distance of 751.52' to a 5/8" iron rod found for the Point of Tangency;

THENCE N 44° 44' 12" W - 150.00' continuing along said northerly right-of-way line to a 5/8" iron rod found for the Point of Curvature of a curve to the right, having a central angle of 90° 00' 00", and a radius of 40.00';

THENCE along said curve to the right, in a northeasterly direction, an arc distance of 62.83', to a 5/8" iron rod found for the Point of Tangency in the easterly right-of-way line of the Southwest Freeway / U.S. 59 (300' R.O.W.);

THENCE N 45° 15' 48" E - 760.94' along said easterly right-of-way line to a 5/8" iron rod found for the Point of Curvature of a curve to the right, having a central angle of 90° 00' 00", and a radius of 40.00';

THENCE along said curve to the right, in a southeasterly direction an arc distance of 62.83' to a 1 1/2" iron pipe found for the Point-of-Tangency, in the aforesaid southerly right-of-way line of Hornwood Drive;

THENCE S 44° 44' 12" E - 150.00' along said southerly right-of-way line to a 5/8" iron rod found for the Point-of-Curvature of a curve to the left, having a central angle of 16° 00' 04", and a radius of 2329.99';

THENCE along said curve to the left, continuing along said southerly right-of-way line, in a southeasterly direction, an arc distance of 650.70' to the POINT OF BEGINNING of the herein described tract and containing 19.94 acres of land.

THE FOREGOING LEGAL DESCRIPTION DESCRIBES THE SAME PROPERTY AS SHOWN IN THE VESTING DEED, RECORDED AT S450375, AND IS THE SAME PROPERTY DESCRIBED IN SCHEDULE A OF THE TITLE COMMITMENT No. 44-901-80-216988 BEARING AN EFFECTIVE DATE OF 12/01/98 AS PREPARED BY: CHICAGO TITLE INSURANCE COMPANY

ACCESS NOTE:
THE SURVEY TRACT SHOWN HEREON HAS ADEQUATE INGRESS AND EGRESS FROM BINTLIFF DRIVE, A PUBLIC RIGHT-OF-WAY MAINTAINED BY THE CITY OF HOUSTON

ZONING NOTE:
THE SURVEY TRACT SHOWN HEREON IS IN THE CITY OF HOUSTON LIMITS, NO ZONING IN EFFECT.

COVENANTS NOTE:
THE TRACT SHOWN HEREON IS SUBJECT THE FOLLOWING RESTRICTIVE COVENANTS AS RECORDED IN VOL. 67, PG. 42 H.C.M.R.
INCLUDING THE FOLLOWING SETBACK REQUIREMENTS:
ALONG ANY STREET R.O.W. - 25'

FLOOD PLAIN NOTE:
THE PROPERTY DESCRIBED ON THIS SURVEY DOES NOT LIE WITHIN A SPECIAL FLOOD HAZARD AREA AS DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, THE PROPERTY LIES WITHIN ZONE X OF THE FLOOD INSURANCE RATE MAP IDENTIFIED AS COMMUNITY PANEL No. 4820102075, BEARING AN EFFECTIVE DATE OF SEPTEMBER 30, 1998

NOTE: ● 5/8" IRON RODS HAVE BEEN FOUND FOR EACH CORNER, ANGLE POINT AND/OR POINT OF CURVATURE OR TANGENT ON THE PERIMETER BOUNDARY LINE OF THIS SURVEY, UNLESS OTHERWISE NOTED.

THIS SURVEY IS ISSUED BASED ON: COMMITMENT NO. 44-901-80-216988 DATED: DECEMBER 1,1997 PREPARED BY: CHICAGO TITLE INSURANCE COMPANY

THE BEARING CONVENTION USED ON THIS SURVEY IS BASED ON SHARPSTOWN INDUSTRIAL PARK, SECTION EIGHT AS RECORDED IN VOL. 67, PAGE 42, H.C.M.R.

ROCKY J. BRADSHAW, A REGISTERED PROFESSIONAL LAND SURVEYOR, LICENSE No. 4729, IN THE STATE OF TEXAS, AND LEGALLY DOING BUSINESS IN HARRIS COUNTY, DOES HEREBY CERTIFY TO NOMURA ASSET CAPITAL CORPORATION, ITS SUCCESSORS AND ASSIGNS, C.C-INVESTORS - HOUSTON, CARMAX AUTO STORES, INC., CIRCUIT CITY STORES, INC., AND CHICAGO TITLE INSURANCE COMPANY THAT:

THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE (I) IN ACCORDANCE WITH "MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEY," JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND ACSM IN 1992, (AS MODIFIED): (II) AND IN ACCORDANCE WITH THE "NOMURA ASSET CAPITAL CORPORATION STANDARD SURVEY REQUIREMENTS DATED SEPTEMBER 17, 1996 AND INCLUDES ALL APPLICABLE ITEMS FROM THE NOMURA TABLE A REQUIREMENTS SPECIFICALLY DEFINED THEREIN, AND (III) PURSUANT TO THE ACCURACY STANDARDS (AS ADOPTED BY ALTA AND ACSM AND IN EFFECT ON THIS DATE OF THIS CERTIFICATION) OF AN URBAN SURVEY AND THAT:

(A) AN ACCURATE "AS-BUILT" ON THE GROUND INSTRUMENT SURVEY ENTITLED "ALTA/ACSM OF 19.94 ACRES (THE "SURVEY") OF THE PREMISES (THE "PROPERTY") KNOWN BY THE STREET ADDRESS 8909 SOUTHWEST FREEWAY WAS CONDUCTED UNDER MY DIRECTION ACCORDING TO LOCAL PROFESSIONAL PRACTICES;

(B) THE SURVEY INFORMATION, COURSES AND DISTANCES SHOWN THEREON ARE CORRECT;

(C) ALL MONUMENTS SHOWN ON THE SURVEY ACTUALLY EXIST, AND THE LOCATION AND TYPE OF MATERIALS THEREOF ARE CORRECTLY SHOWN.

(D) THE TITLE LINES AND ACTUAL POSSESSION OF THE PROPERTY ARE THE SAME.

(E) THE SIZE, LOCATION AND TYPE OF ALL BUILDINGS AND IMPROVEMENTS ON THE PROPERTY ARE AS SHOWN ON THE SURVEY AND ALL ARE WITHIN THE BOUNDARY LINES AND APPLICABLE SETBACK LINES OF THE PROPERTY EXCEPT AS LISTED IN SECTIONS (K) AND (N) HEREOF,

(F) TO THE BEST OF MY KNOWLEDGE THERE ARE NO VIOLATIONS OF ZONING ORDINANCES, RESTRICTIONS OR OTHER RULES AND REGULATIONS WITH REFERENCE TO THE LOCATION, HEIGHT, FRONTAGE AREA, AND YARD SIZE OF ALL BUILDINGS AND IMPROVEMENTS ON THE PROPERTY;

(G) THE NUMBER AND LOCATION OF AVAILABLE PARKING SPACES ARE NOTED ON THE SURVEY;

(H) ZONING, (SEE NOTE) USE AND DENSITY CLASSIFICATIONS ARE SHOWN;

(I) THE PROPERTY HAS DIRECT ACCESS TO THE FOLLOWING STREETS: BINTLIFF DRIVE WHICH IS A DEDICATED PUBLIC WAY;

(J) THERE ARE NO EASEMENTS, RIGHTS OF WAY, OLD HIGHWAYS OR ABANDONED ROADS, LANES, DRIVEWAYS OR USES AFFECTING THE PROPERTY APPEARING FROM A CAREFUL PHYSICAL INSPECTION OF THE SAME, OTHER THAN THOSE SHOWN AND DEPICTED ON THE SURVEY;

(K) THERE ARE NO ENCROACHMENTS BY IMPROVEMENTS SITUATED ON THE PROPERTY UPON ADJACENT PROPERTY NOR ARE THERE ENCROACHMENTS BY IMPROVEMENTS SITUATED ON ADJACENT PROPERTY ONTO THE PROPERTY;

(L) THERE ARE NO VISIBLE DISCREPANCIES, CONFLICTS, SHORTAGES IN AREA OR BOUNDARY LINE CONFLICTS:

(M) ALL RECORDED EASEMENTS AND OTHER EXCEPTIONS, AS NOTED IN THE TITLE COMPANY'S COMMITMENT, HAVE BEEN CORRECTLY PLOTTED ON THE SURVEY EXCEPT AS NOTED;

(N) THERE ARE NO SETBACK LINES, PARTY WALLS, ENCROACHMENTS OR OVERHANGS OF ANY IMPROVEMENTS LOCATED ON ADJACENT LAND UPON THE PROPERTY;

(O) THERE ARE NO VISIBLE CEMETERIES OR BURYING GROUNDS ON THE PROPERTY;

(P) ALL UTILITY SERVICES REQUIRED FOR OPERATION OF THE PROPERTY EITHER ENTER THE PROPERTY THROUGH ADJOINING PUBLIC STREETS OR, IF VISIBLE AND ACCESSIBLE, THE SURVEY SHOWS THE POINT OF ENTRY AND LOCATION OF ANY UTILITIES WHICH PASS THROUGH OR ARE LOCATED ON ADJOINING LAND;

(Q) THE SURVEY SHOWS THE LOCATION OF ANY VISIBLE TELEPHONE, TELEGRAPH, ELECTRIC OR OTHER POWER LINES, WIRES AND POLES ON THE PROPERTY;

(R) THE SURVEY SHOWS THE LOCATION AND DIRECTION OF ALL ACCESSIBLE STORM DRAINAGE SYSTEMS FOR THE COLLECTION AND DISPOSAL OF SURFACE DRAINAGE AND STREAMS, RIVERS, PONDS OR LAKES LOCATED ON, BORDERING ON, OR RUNNING THROUGH THE PROPERTY,

(S) ANY DISCHARGE FROM THE PROPERTY OR IMPROVEMENTS THEREON INTO STREAMS, RIVERS, PONDS OR LAKES OR OTHER CONVEYANCE SYSTEM IS SHOWN ON THE SURVEY;

(T) THE PARCELS DESCRIBED ON THE SURVEY DO NOT LIE WITHIN THE LIMITS OF THE 100-YEAR FLOOD PLAIN, AS DELINEATED ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NUMBER 48210C0275 COUNTY, HARRIS;

(U) THE PROPERTY IS MADE UP OF ONE OR MORE PARCELS, EACH OF WHICH CONSTITUTES A SEPARATE TAX LOT AND NONE OF WHICH CONSTITUTES A PORTION OF ANY OTHER TAX LOT;

(V) THERE ARE NO SUBSTANTIAL CONFLICTS BETWEEN THE RECORDED LEGAL DESCRIPTION OF THE SUBJECT PROPERTY AND THE SURVEYOR'S MEASUREMENTS;

THE PARTIES LISTED IN THE FIRST PARAGRAPH OF THIS CERTIFICATE ARE ENTITLED TO RELY ON THE SURVEY AND THIS CERTIFICATE AS BEING TRUE AND ACCURATE.

THE UNDERSIGNED HAS RECEIVED A COPY OF CHICAGO TITLE INSURANCE COMPANY'S COMMITMENT No. 44-901-80-216988, DATED DECEMBER 1, 1997, AND THE LOCATION OF ANY MATTER SHOWN THEREON, TO THE EXTENT IT CAN BE LOCATED, HAS BEEN SHOWN ON THIS SURVEY.

NOV. 21, 1997
CERTIFICATE DATE

ROCKY J. BRADSHAW, R.P.L.S. NO. 4729

DATE	REVISION
12-9-97	REVISED CERTIFICATION AND RESTRICTIVE COVENANTS
1-30-98	REVISED CERTIFICATION AND GENERAL REVISIONS
2-3-98	REVISED CERTIFICATION

G. P. SURVEYORS
a division of PATE ENGINEERS, INC.

ALTA/ACSM LAND TITLE SURVEY

19.94 ACRES CARMAX SOUTHWEST #7111
SHARPSTOWN INDUSTRIAL PARK, SECTION EIGHT
BLOCK 21
OUT OF THE
C. McKINZIE SURVEY, A-560 & J.B. PIER SURVEY, A-1103
HARRIS COUNTY, TEXAS

DRAWN: C.K.F.	ORIGINAL ISSUE DATE NOV. 21, 1997	ORIGINAL SCALE 1" = 30'
APPROVED FOR ISSUE:	JOB No. 622-001-51	

S450375

CHICAGO TITLE
GF 196767-D

05/14/97 100481473 S450375 $11.00

SPECIAL WARRANTY DEED

513-02-0632

KNOW ALL MEN BY THESE PRESENTS:

That **HALLIBURTON ENERGY SERVICES, INC. FORMERLY KNOWN AS HALLIBURTON COMPANY**, a Delaware corporation, Grantor, in consideration of the sum of Ten and No/100 Dollars ($10.00) and other good and valuable considerations, to it paid, the receipt of which is hereby acknowledged, does hereby grant, bargain, sell and convey unto **CARMAX AUTO SUPERSTORES, INC.** a Virginia Corporation, Grantee, the following described real property and improvements thereon situated in **HARRIS COUNTY, TEXAS**, to wit:

All right, title and interest in and to a tract of land described as follows:

> **Block Twenty-One (21), of Sharpstown Industrial Park, Section Eight (8), an addition in Harris County, Texas, according to the map or plat thereof, recorded in Volume 67, Page 42, of the Map Records of Harris County, Texas.**

This deed is given and Grantee accepts same subject to 1997 general real estate taxes not yet due or payable, which taxes shall be prorated between Grantor and Grantee as of the date of closing, which proration shall be based upon the latest assessments or actual invoices available. Should any such proration be inaccurate based upon the actual tax bill or assessment when received, either party may demand and shall be entitled to receive a payment correcting any such misapportionment, and is further subject to mineral reservations retained by prior grantors in deeds of record, and to any and all valid and subsisting covenants, conditions, restrictions, reservations and easements of record.

TO HAVE AND TO HOLD the property, together with all and singular the rights and appurtenances thereto in anywise belonging unto the Grantee, its legal representatives, successors, and assigns, forever; and Grantor does hereby bind itself and its legal representatives, successors, and assigns, to WARRANT AND FOREVER DEFEND all and singular the Property unto Grantee, its legal representatives, successors, and assigns, against every person whomsoever lawfully claiming or to claim the same or any part thereof, by, through or under Grantor, but not otherwise. The Property is hereby conveyed in its strict "as is, where is" condition, without representation or warranty of any kind, except for any express written representations or warranties made by Grantor to Grantee, and except as to title as expressly set forth herein.

IN WITNESS WHEREOF, the said first party hereto has caused these presents to be signed in its name and by its Attorney-in-Fact and its corporate seal affixed this 14th day of MAY, 1997.

HALLIBURTON ENERGY SERVICES, INC.

By Tamara W. Blair
Tamara W. Blair
Attorney-in-Fact

RETURN TO:
WILLIAM D. CLEVELAND
909 FANNIN #100
HOUSTON, TEXAS 77010

REVIEWED
OPERATIONS
LEGAL
5/7/97

m:*.*\corp\real.est\texas\hes2819.DOC

196767-D

513-02-0633

STATE OF TEXAS)
COUNTY OF HARRIS) ss

Before me Bridgett Johnson a Notary Public, in and for said County and State, on this 7 day of May, 1997, personally appeared Tamara W. Blair, to me known to be the identical person who subscribed the name of the maker thereof to the foregoing instrument as its Attorney-in-Fact, and acknowledged to me that she executed the same as her free and voluntary act and deed and as the free and voluntary act and deed of such corporation, for the uses and purposes therein set forth.

WITNESS my hand and official seal the day and year last above written.

Bridgett S. Johnson
Notary Public

My Commission Expires: _____

BRIDGETT S. JOHNSON
Notary Public, State of Texas
Commission Expires: 10-06-97

ANY PROVISION HEREIN WHICH RESTRICTS THE SALE, RENTAL, OR USE OF THE DESCRIBED REAL PROPERTY BECAUSE OF COLOR OR RACE IS INVALID AND UNENFORCEABLE UNDER FEDERAL LAW
THE STATE OF TEXAS }
COUNTY OF HARRIS }
I hereby certify that this instrument was FILED in File Number Sequence on the date and at the time stamped hereon by me; and was duly RECORDED, in the Official Public Records of Real Property of Harris County, Texas on:

MAY 1 4 1997

COUNTY CLERK
HARRIS COUNTY TEXAS

FILED
97 MAY 14 PM 3:20
COUNTY CLERK
HARRIS COUNTY, TEXAS

APPENDIX B – PROPERTY USE

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

The designated MSD property (site) is the Carmax Auto Superstore, Inc. located at 6909 Southwest Freeway in Houston, Harris County, Texas. The site is bounded by Bintliff Street on the west, the Southwest Freeway (Interstate Highway 59) on the north, Hornwood Street on the east, and a mosque and residential development on the south. In May 1997, a Carmax Auto Superstore was constructed on the site which is used for the retail sale of pre-owned cars. Minor auto maintenance and repair activities associated with preparing the automobiles for sale are performed onsite.

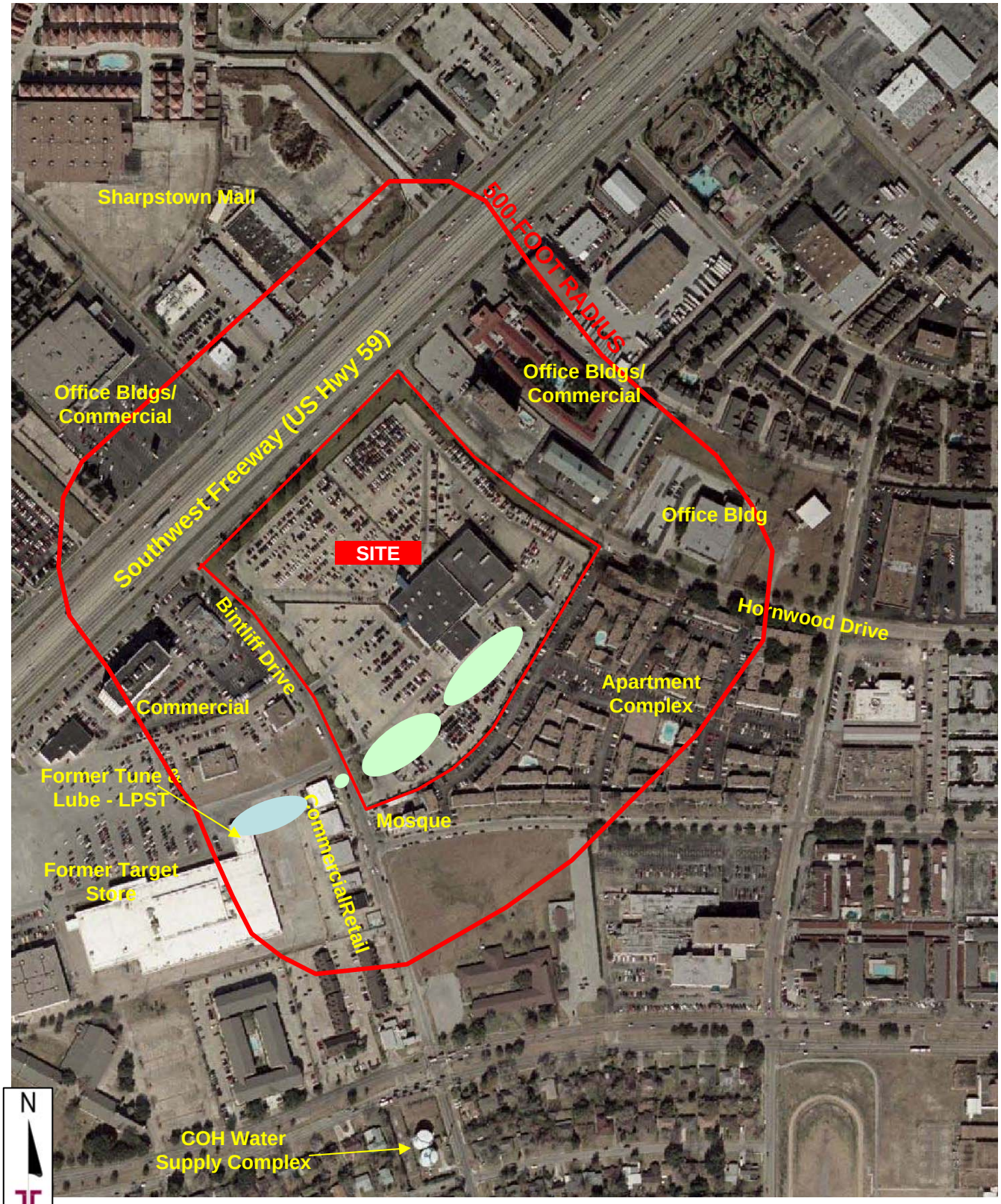
The site has been improved with two buildings: the main building and a carwash building. The western portion of the main building is used as a show room and office space. The eastern portion of the main building is the service department. The buildings occupy approximately 35 percent of the property. The remaining 65 percent of the site consists of parking areas and landscaping.

Surrounding Area

The site and surrounding area are predominately commercially developed and have been commercially developed since at least the 1960s. Currently, the land use of the surrounding area within 500 feet of the site include offices and commercial businesses to the east across Hornwood, west across Bintliff, and north across Southwest Freeway and residential development and a mosque to the south. Figure B1 shows the site and the surrounding land use within 500 feet of the site.

A Target Tune & Lube (Target) center (LPST No. 115555) was formerly located approximately 300 feet west of the property across Bintliff and operated between 1969 and the late 1990s. A release to soil and groundwater was discovered during an investigation around the former UST system and the site was closed by the TCEQ under construction worker criteria. The former Target property entered into the Voluntary Cleanup Program (VCP) (VCP No. 2072) in 2009 and a VCP Certificate of Completion was issued in 2010.

The land use of the site and nearby properties is not expected to change in the near future.



SITE MSD VOC PLUME

LPST PLUME

Project No. 92127112	Terracon Consulting Engineers & Scientists	LAND USE MAP	FIGURE
Scale: 1"= 500'	8901 Carpenter Freeway, Suite 100 Dallas, Texas 75247	Former Halliburton Geophysical Service Facility (Carmax)	B1
Source: 2010 Aerial Photograph	PH. (214) 630-1010 FAX. (214) 630-7070	6909 Southwest Freeway Houston, Harris County, Texas	

APPENDIX C – SITE MAPS

A site map showing.

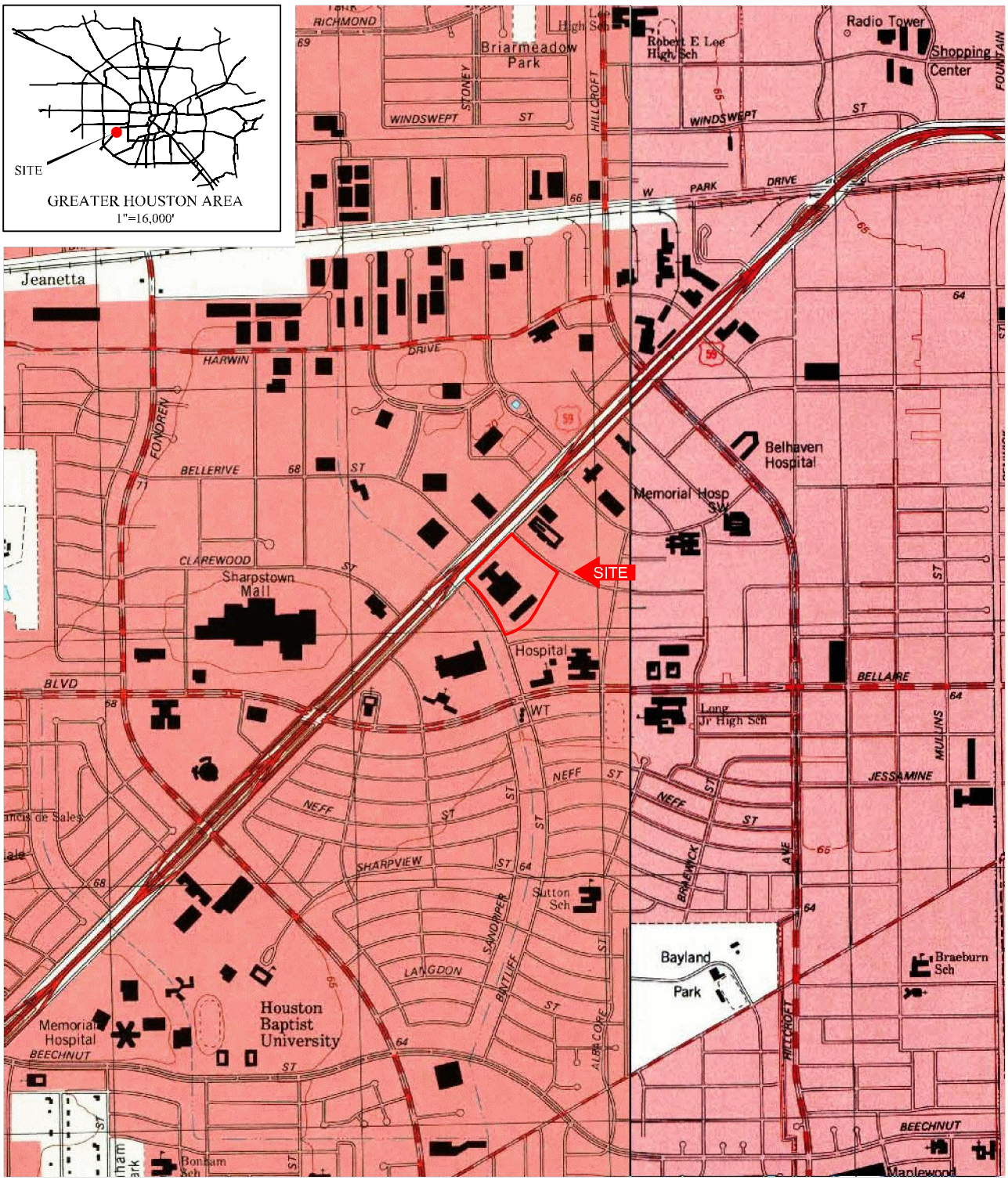
a. The location of the designated property.
b. The topography of the designated property as indicated on publicly available sources, which must note the watershed, including the nearest surface water body, and whether the designated property is located in a floodplain or floodway, as those terms are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

The figures in this section provide information required under Appendix C. The site 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, the groundwater ingestion PCL exceedence (PCLE) zones, and the depth to groundwater for each affected zone.

The following is a list of figures included in Appendix C:

Figure C1 – Site Location (shown on a topographic map)
Figure C2 – Flood Plain Map
Figure C3 – Watershed Map
Figure C4-1 – Detected Area of Onsite Groundwater Contamination – 2012
Figure C4-2 – Detected Area of Onsite Groundwater Contamination – 2005
Figure C5 – Soil Boring and Monitoring Well Location Map
Figure C6-1 – Groundwater Gradient Map – February 2, 2010
Figure C6-2 – Groundwater Gradient Map – November 26, 2010
Figure C6-3 – Groundwater Gradient Map – June 29, 2011
Figure C6-4 – Groundwater Gradient Map – June 14, 2012
Figure C7 – Groundwater COC Ingestion PCLE Zone Map
Figure C8 – Cross Section showing depth to groundwater

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



USGS TOPOGRAPHIC QUADRANGLE MAP

Alief, Texas

Terracon
Consulting Engineers & Scientists

Revised: 1995

APPROXIMATE SCALE 1"= 2000'

0 1000' 2000'

N

Prepared By: REW

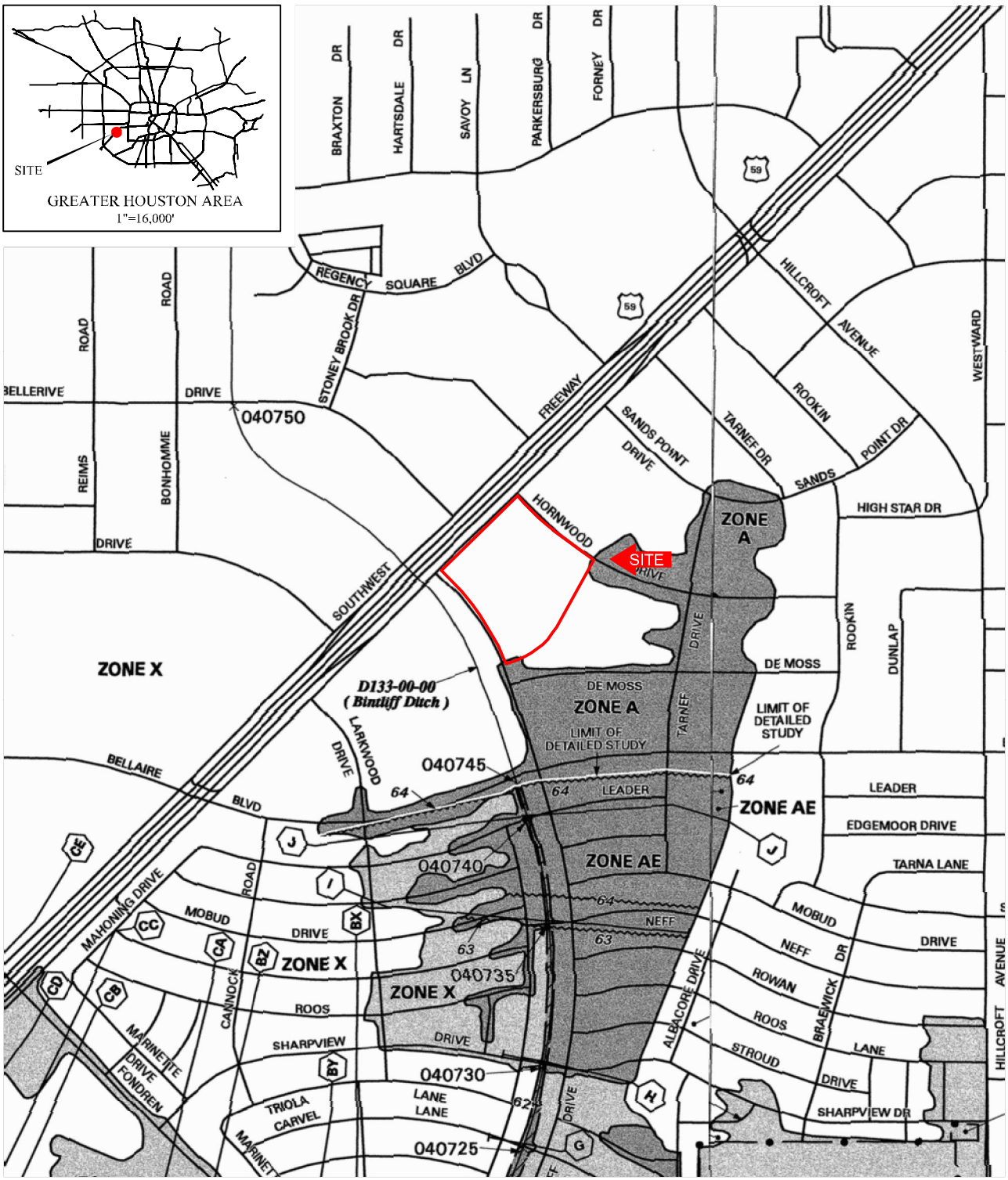
Approved By: MHN

Former Halliburton Geophysical Service Facility (Carmax)
6909 Southwest Freeway
Houston, Texas

TERRACON PROJECT NO. 92127112

FIGURE C1:
SITE LOCATION MAP

N:\ENV\dox\2012\Drafting\92127112\MSD 2012\92127112 Topos.dwg : 1995 Topo



FEMA FLOOD INSURANCE RATE MAP

Harris County, Texas

Terracon
Consulting Engineers & Scientists

Map No.: 48201C0835L
Panel 835 of 1150
Revised: June 18, 2007

APPROXIMATE SCALE 1"= 1,200'

0 600' 1,200'

N

Prepared By: REW

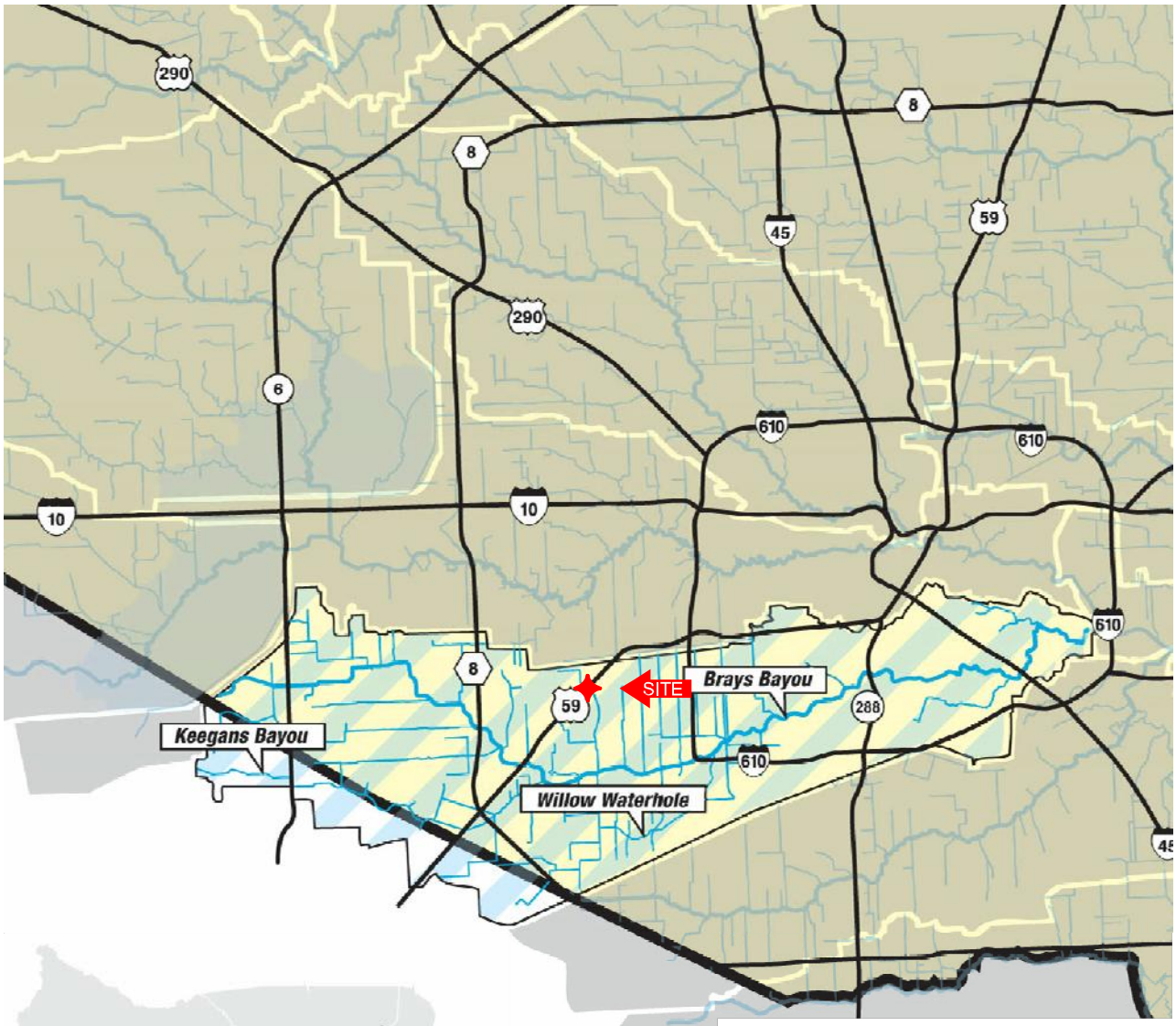
Approved By: MHN

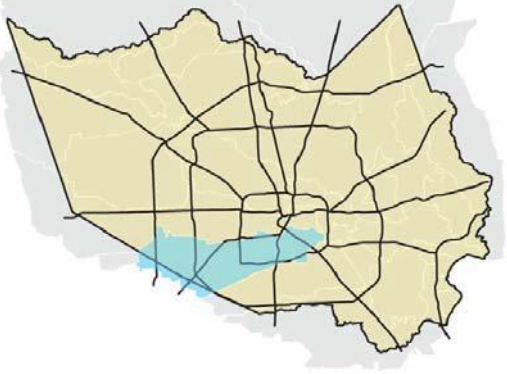
Former Halliburton Geophysical Service Facility (Carmax)
6909 Southwest Freeway
Houston, Texas

TERRACON PROJECT NO. 92127112

FIGURE C2:
SITE FLOODPLAIN MAP

N:\ENV\dox\2012\Drafting\92127112\MSD 2012\92127112 Topos.dwg : FIRM





Drainage Area:
127 Sq. Miles

Watershed Population (in Harris County):
722,716

Open Stream Miles:
121 Miles

Primary Streams:
Brays Bayou
Keegans Bayou
Willow Waterhole

HARRIS COUNTY FLOOD CONTROL DISTRICT
WATERSHED MAP
Brays Bayou, Harris County, Texas

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Consulting Engineers & Scientists

Revised: 2007

APPROXIMATE SCALE 1"= 5 Miles
0 2.5 5

N

Former Halliburton Geophysical Service Facility (Carmax)
6909 Southwest Freeway
Houston, Texas

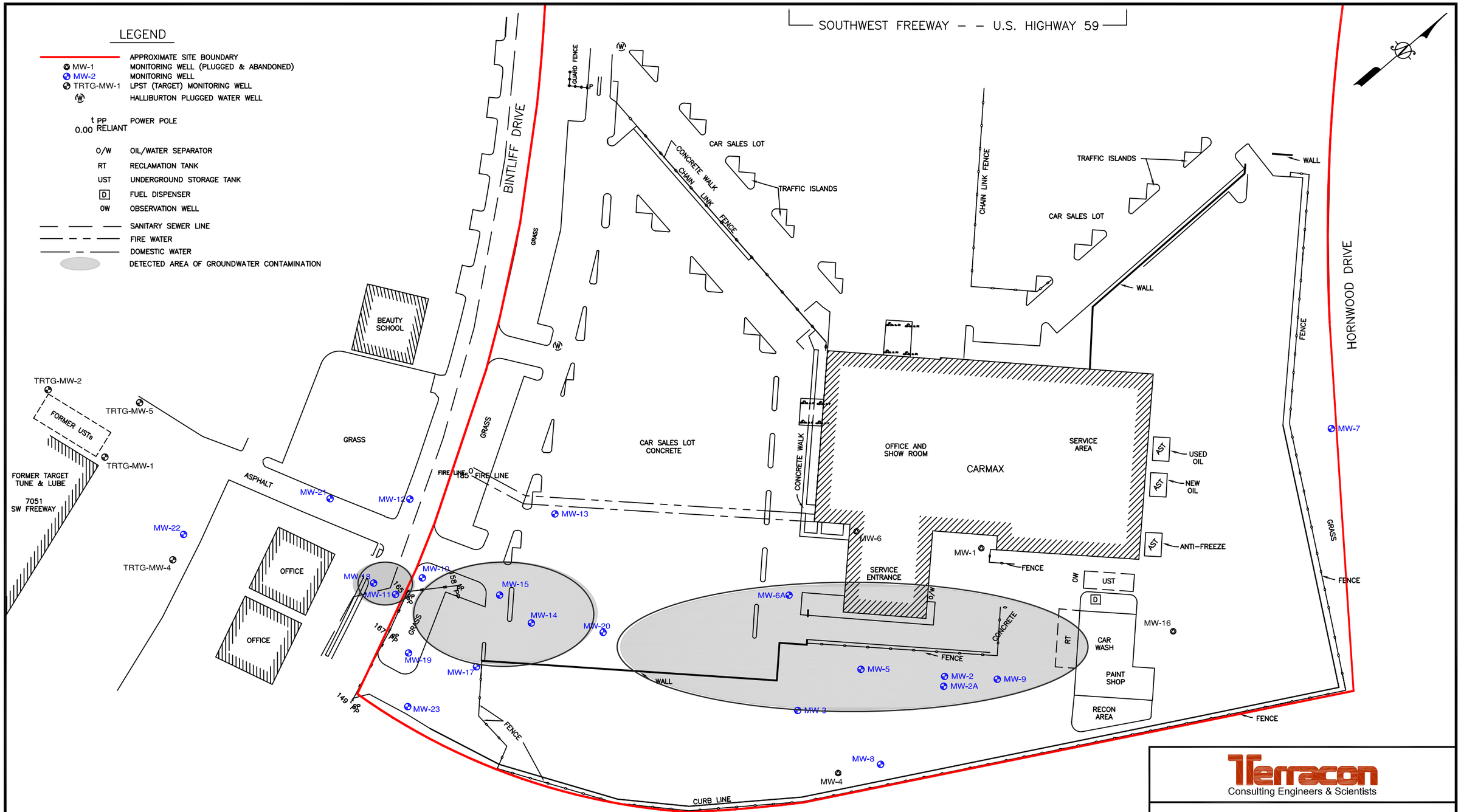
TERRACON PROJECT NO. 92127112

Prepared By: REW

Approved By: MHN

FIGURE C3:
WATERSHED MAP

N:\ENV\dox\2012\Drafting\92127112\MSD 2012\92127112 Topos.dwg : 2007 Watershed



7/8/13

SOURCE: BASELINE CORPORATION PROFESSIONAL SURVEYORS. MONITOR WELL LOCATIONS AT THE CARMAX SITE. JOB No. 01.048.00 THRU 03. DATED 11/2001–06/2008.

N:\ENV\dox\2012\Drafting\92127112\MSD 2012\92127112 Site Plan.dwg : GW Contamination (C4)

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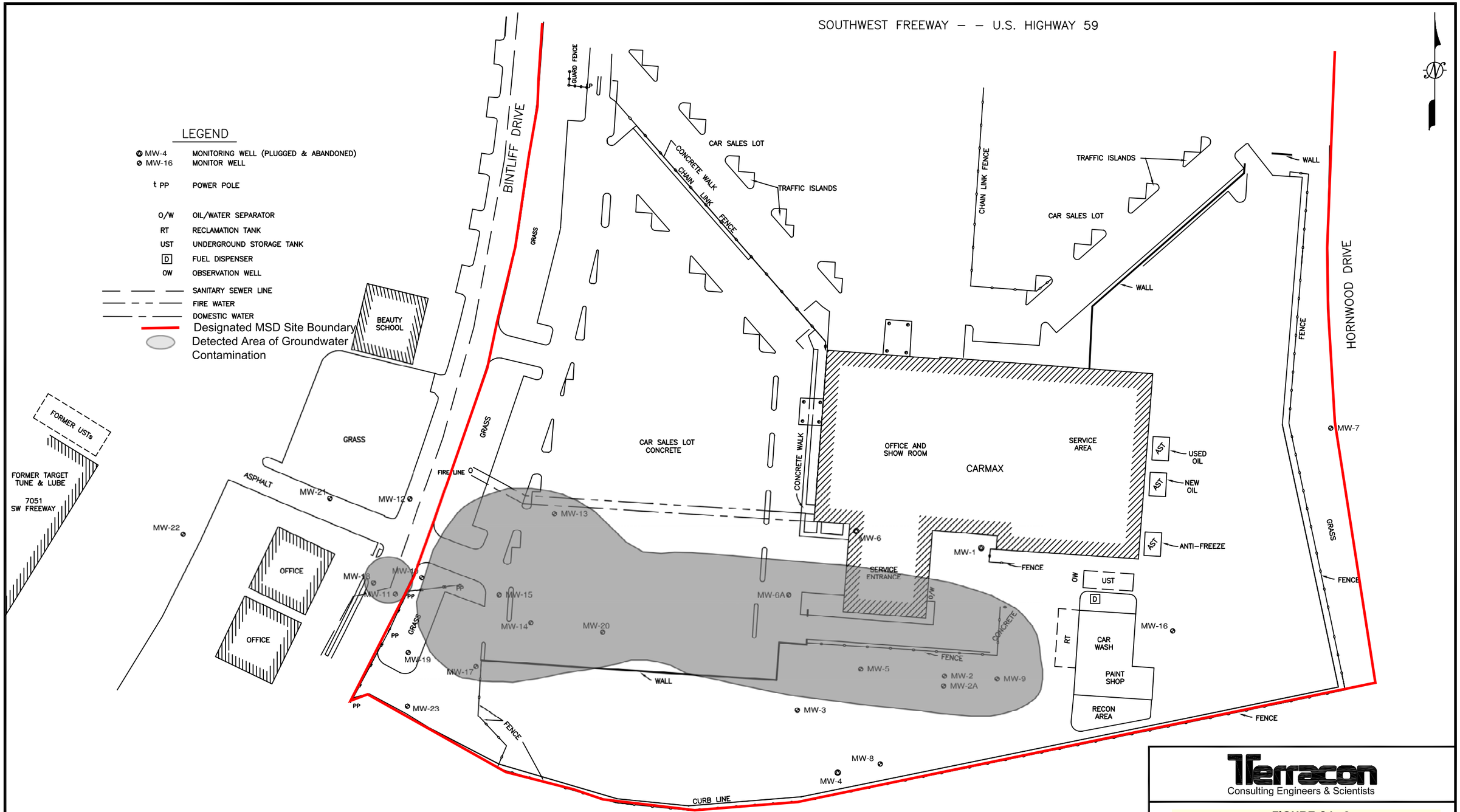
Figure C4-1
Detected Area of Groundwater Contamination Map -2012
Former Halliburton Geophysical Service Facility (Carmax)
6909 Southwest Freeway
Houston, Texas

DRAWN BY: REW	SCALE: AS SHOWN	TERRACON NO:
CHECKED BY: MHN	DATE: 9-4-2012	92127112



7/8/13

SOURCE: BASELINE CORPORATION PROFESSIONAL SURVEYORS. MONITOR WELL LOCATIONS AT THE CARMAX SITE. JOB No. 01.048.00 THRU 03. DATED 11/2001–06/2008.

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FIGURE C4 - 2
DETECTED AREA OF GROUNDWATER CONTAMINATION - 2005
Former Halliburton Geophysical Service Facility (Carmax)
6909 Southwest Freeway
Houston, Texas

DRAWN BY: REW	SCALE: AS SHOWN	TERRACON NO:
CHECKED BY: MHN	DATE: 2-18-2010	92077670

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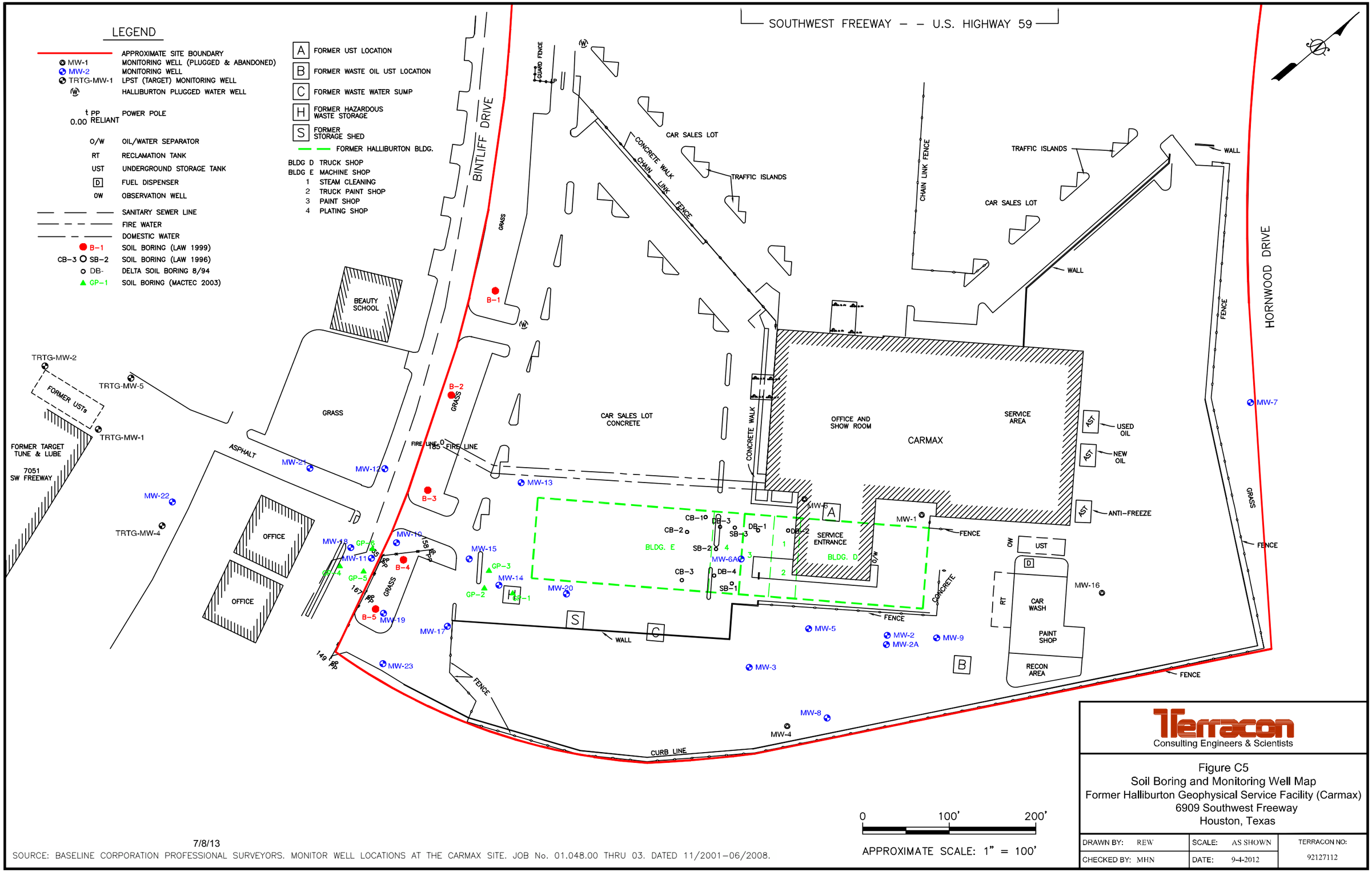

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Figure C5
Soil Boring and Monitoring Well Map
Former Halliburton Geophysical Service Facility (Carmax)
6909 Southwest Freeway
Houston, Texas

DRAWN BY: REW	SCALE: AS SHOWN	TERRACON NO: 92127112
CHECKED BY: MHN	DATE: 9-4-2012	

7/8/13

SOURCE: BASELINE CORPORATION PROFESSIONAL SURVEYORS. MONITOR WELL LOCATIONS AT THE CARMAX SITE. JOB No. 01.048.00 THRU 03. DATED 11/2001–06/2008.

N:\ENV\dox\2012\Drafting\92127112\MSD 2012\92127112 Site Plan.dwg : SB And MW (C5)

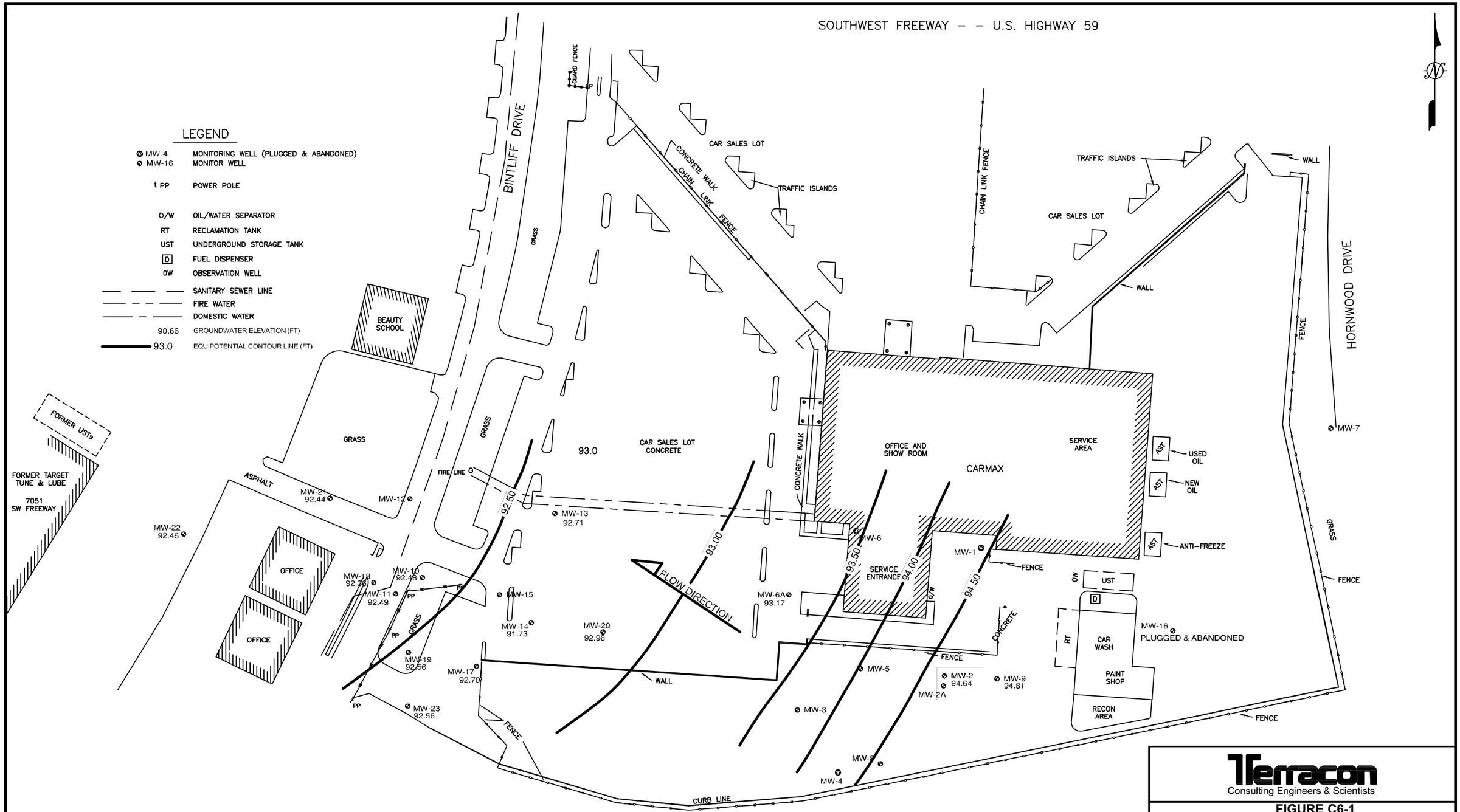

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FIGURE C6-1

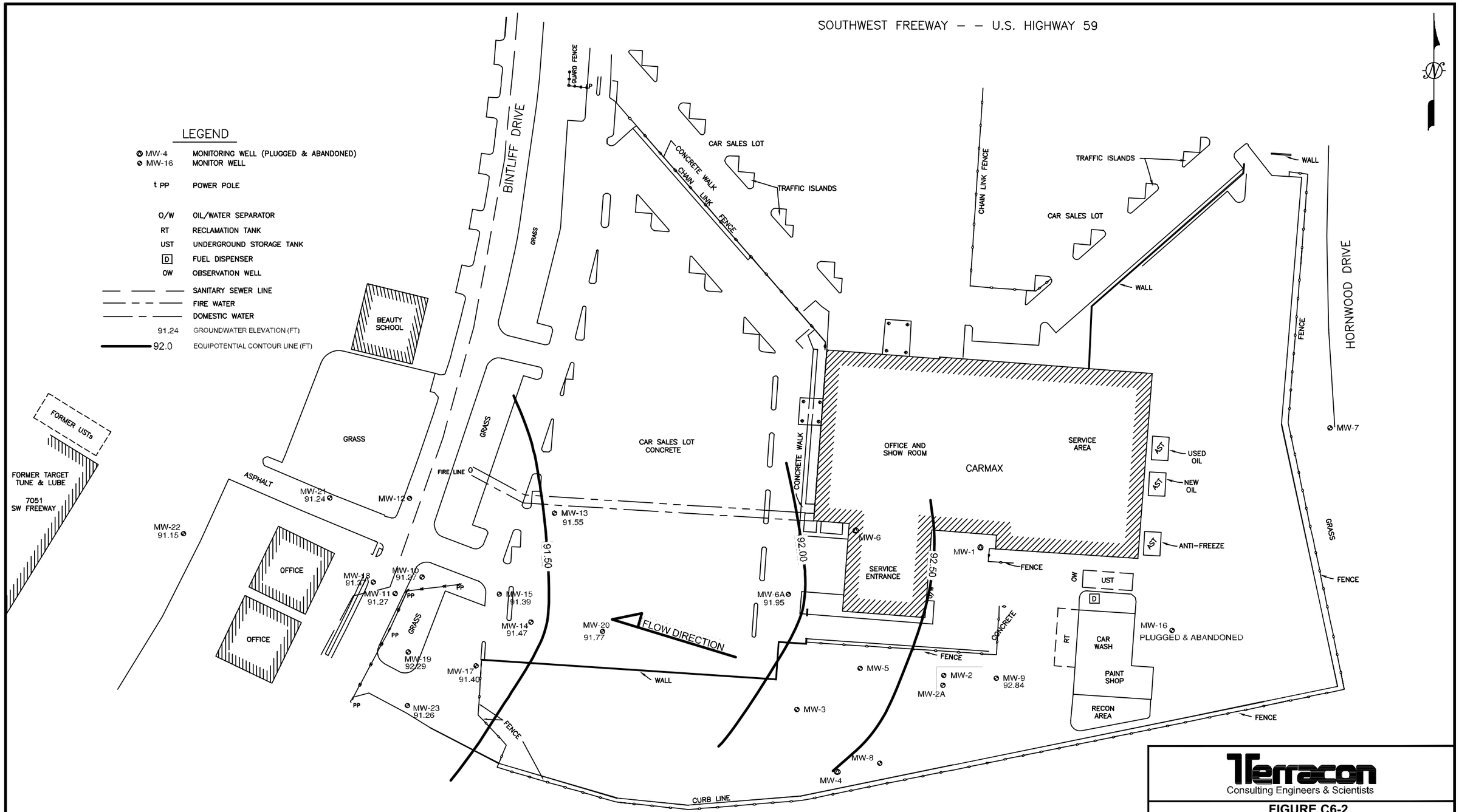
Groundwater Potentiometric Surface Map
February 2, 2010
Former Halliburton Geophysical Service Facility (Carmax)
6909 Southwest Freeway
Houston, Texas

DRAWN BY: REW	SCALE: AS SHOWN	TERRACON NO:
CHECKED BY: MHN	DATE: 2-24-2010	92077670

7/8/13

SOURCE: BASELINE CORPORATION PROFESSIONAL SURVEYORS. MONITOR WELL LOCATIONS AT THE CARMAX SITE. JOB No. 01.048.00 THRU 03. DATED 11/2001–06/2008.

N:\ENV\dox\2007\Drafting\92077670\92077670 GWGM 2010-02-02.dwg



7/8/13

SOURCE: BASELINE CORPORATION PROFESSIONAL SURVEYORS. MONITOR WELL LOCATIONS AT THE CARMAX SITE. JOB No. 01.048.00 THRU 03. DATED 11/2001–06/2008.

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FIGURE C6-2
Groundwater Potentiometric Surface Map
November 26, 2010
Former Halliburton Geophysical Service Facility (Carmax)
6909 Southwest Freeway
Houston, Texas

DRAWN BY: REW	SCALE: AS SHOWN	TERRACON NO:
CHECKED BY: MHN	DATE: 12-28-2010	92077670

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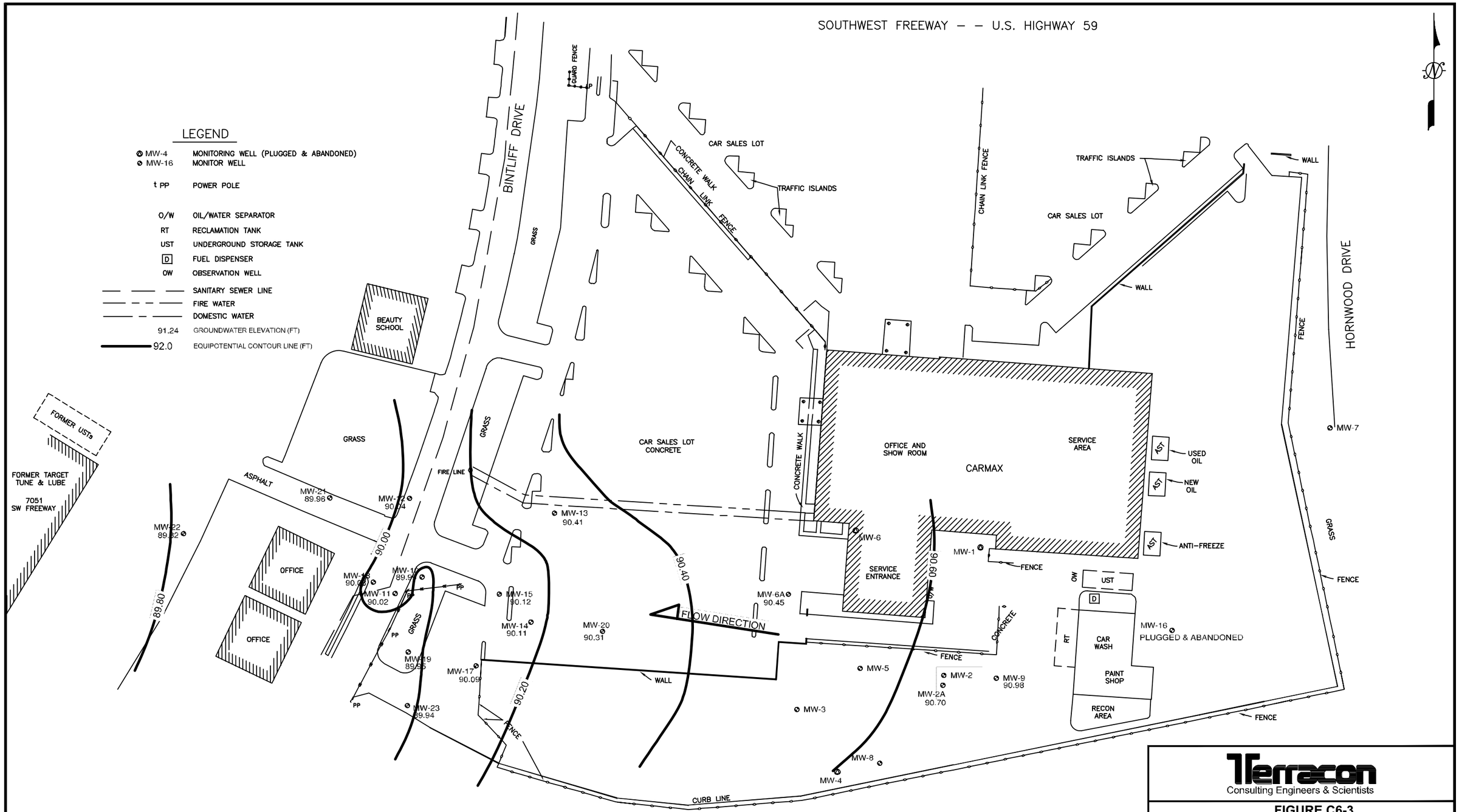

7/8/13

SOURCE: BASELINE CORPORATION PROFESSIONAL SURVEYORS. MONITOR WELL LOCATIONS AT THE CARMAX SITE. JOB No. 01.048.00 THRU 03. DATED 11/2001–06/2008.

N:\ENV\dox\2007\Drafting\92077670\92077670 GWGM 2011-06-29.dwg : Hand Countoured

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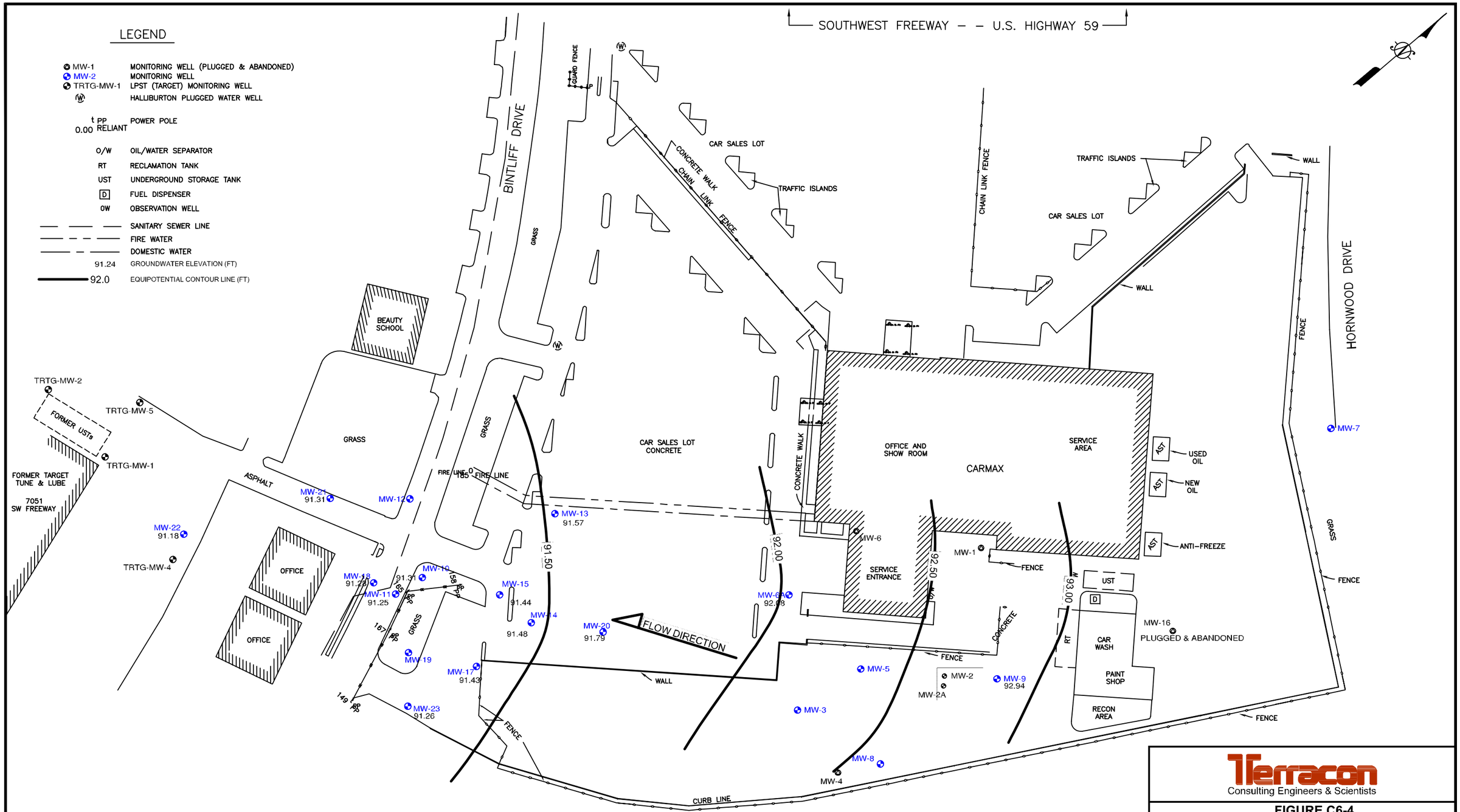
FIGURE C6-3
Groundwater Potentiometric Surface Map
June 29, 2011
Former Halliburton Geophysical Service Facility (Carmax)
6909 Southwest Freeway
Houston, Texas

DRAWN BY: REW	SCALE: AS SHOWN	TERRACON NO:
CHECKED BY: MHN	DATE: 8-4-2011	92077670



7/8/13

SOURCE: BASELINE CORPORATION PROFESSIONAL SURVEYORS. MONITOR WELL LOCATIONS AT THE CARMAX SITE. JOB No. 01.048.00 THRU 03. DATED 11/2001–06/2008.

N:\ENV\dox\2012\Drafting\92127112\92127112 GWGM 2012-06-14.dwg

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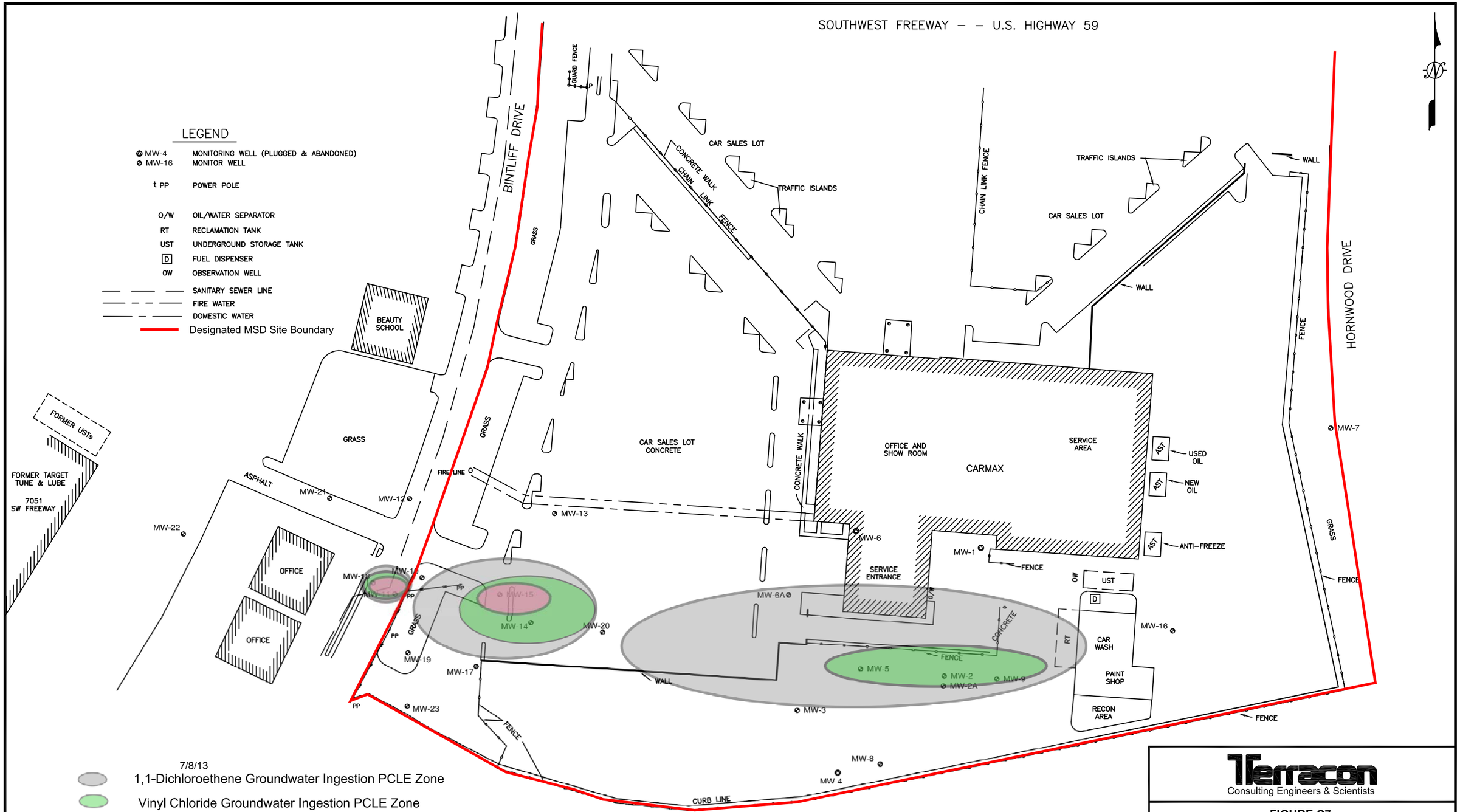
FIGURE C6-4
Groundwater Potentiometric Surface Map
June 14, 2012
Former Halliburton Geophysical Service Facility (Carmax)
6909 Southwest Freeway
Houston, Texas

DRAWN BY: REW	SCALE: AS SHOWN	TERRACON NO: 92077670
CHECKED BY: MHN	DATE: 12-13-2012	



SOURCE: BASELINE CORPORATION PROFESSIONAL SURVEYORS. MONITOR WELL LOCATIONS AT THE CARMAX SITE. JOB No. 01.048.00 THRU 03. DATED 11/2001–06/2008.

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FIGURE C7
GROUNDWATER INGESTION PCLE ZONE MAP
Carmax Superstore (Formerly Haliburton)
6909 Southwest Freeway (US Highway 59)
Houston, Texas

DRAWN BY: REW	SCALE: AS SHOWN	TERRACON NO:
CHECKED BY: MHN	DATE: 2-18-2010	92077670

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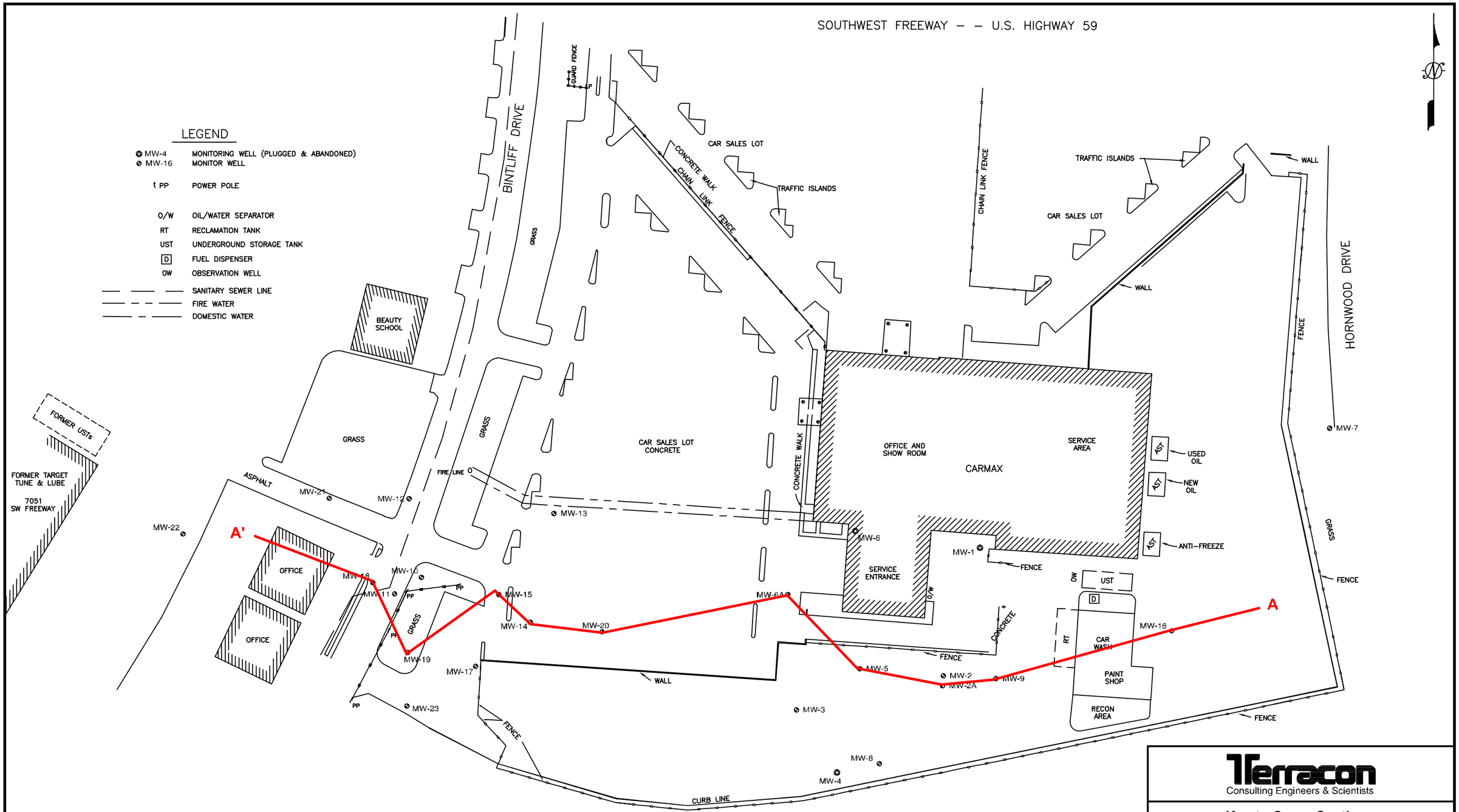

SOURCE: BASELINE CORPORATION PROFESSIONAL SURVEYORS. MONITOR WELL LOCATIONS AT THE CARMAX SITE. JOB No. 01.048.00 THRU 03. DATED 11/2001–06/2008.

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Key to Cross Sections

Former Halliburton Geophysical Service Facility (Carmax)
6909 Southwest Freeway (US Highway 59)
Houston, Texas

DRAWN BY: REW	SCALE: AS SHOWN	TERRACON NO:
CHECKED BY: MHN	DATE: 2-18-2010	92077670

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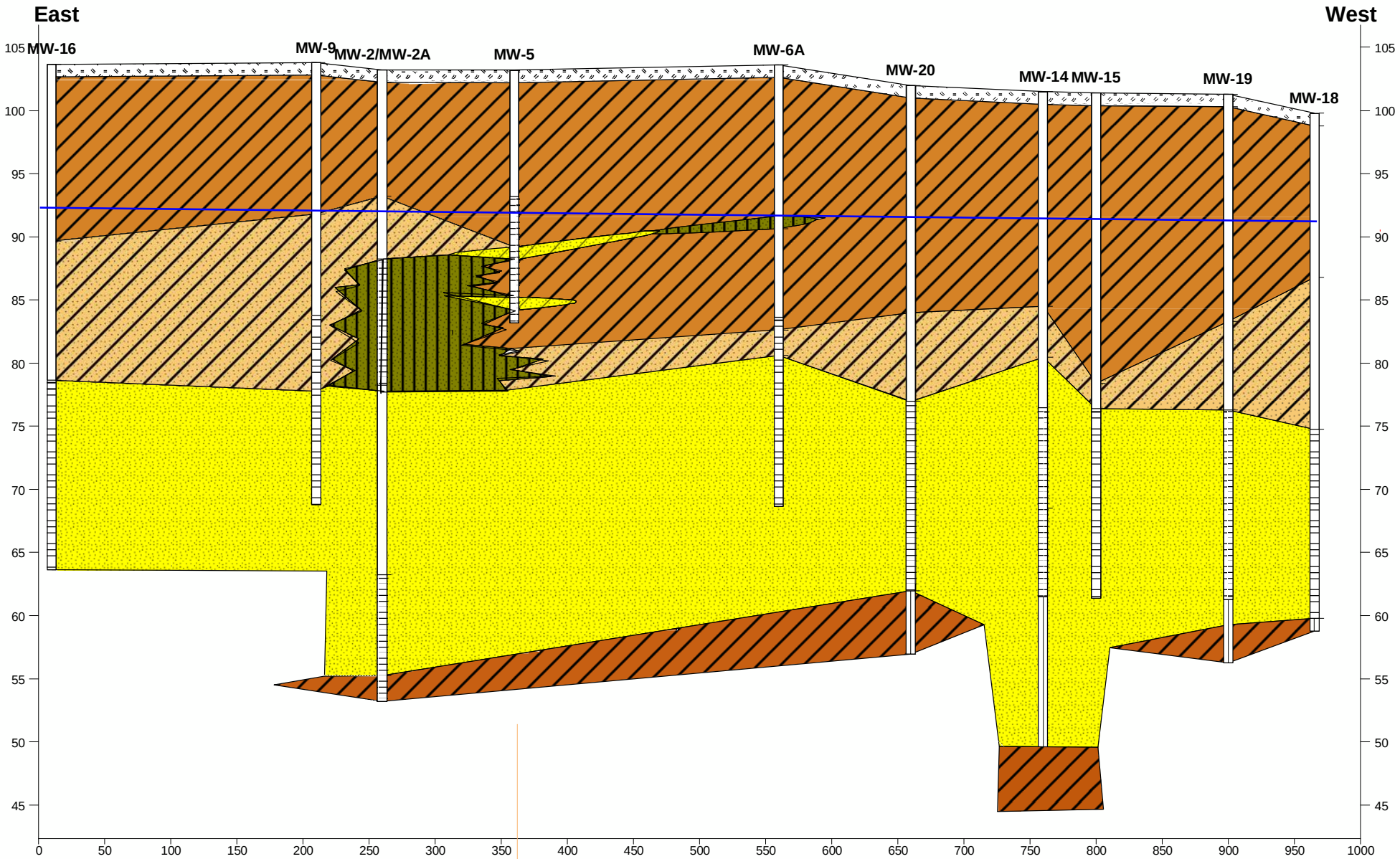


FIGURE C8

CROSS SECTION
A-A'
East-West Cross Section

MACTEC

Carmax
6909 Southwest Freeway
Houston, TX

LEGEND

- Concrete/Asphalt
- Grass
- Clay
- Silty Clay/Clayey Silt/Silt
- Silty Sand/Sand
- Sandy Clay
- Sandy Silt
- Sand
- Clayey Sand
- Groundwater Potentiometric Surface

7/8/13

07-05-2005 L:\MTECH Files\CarMax\Carmax-EastWest-Xsection.cro

APPENDIX D – PCLE ZONE DISCUSSION

Provide for each contaminant of concern within the designated groundwater:

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).

A) A comparison of the most recent groundwater sampling results (June 2012) to applicable Texas Risk Reduction Program (TRRP) Tier 1 residential groundwater Ingestion protective concentration levels (PCLs) ($^{GW}GW_{Ing}$ PCLs) indicates that the COCs in the groundwater plumes that exceed the applicable $^{GW}GW_{Ing}$ PCLs are trichloroethene (TCE), 1,1-dichloroethene (1,1-DCE), and vinyl chloride (VC) (Table D-1).

Comparison of the groundwater sampling results to applicable non-ingestion PCLs ($^{Air}GW_{Inh-V}$) indicates that the groundwater samples do not contain COC concentrations above the $^{Air}GW_{Inh-V}$ PCLs (Table D-1). Therefore, there are no non-ingestion PCLE Zones within the proposed MSD boundary.

The ingestion PCLE Zones for the groundwater COCs are confined vertically to the shallow groundwater zone encountered between approximately 14 feet and 55 feet bgs. Currently, there are three discrete groundwater COC plumes with PCLE Zones: two onsite plumes (one eastern plume consisting of 1,1-DCE and VC PCLE Zones and one western plume consisting of 1,1-DCE, VC, and TCE PCLE Zones) and one offsite plume beneath the Bintliff Drive ROW consisting of 1,1-DCE, VC, and TCE PCLE Zones (Figures C4 and C7). The eastern onsite groundwater plume is approximately 150 feet wide by 500 feet long, the western onsite groundwater plume is approximately 100 feet wide by 200 feet long, and the offsite groundwater plume is approximately 50 feet wide by 50 feet long. The affected groundwater in the groundwater plumes has been delineated horizontally and vertically. Further discussion of the groundwater plumes is provided in Appendix G. The concentrations of COCs in groundwater are included in Tables F5, F6, and F7 and the groundwater concentrations from the most recent groundwater sampling event are shown on Figure F1.

The benzene, ethylbenzene, and 1,2-dichloroethane (1,2-DCA) exceedences present in the offsite monitoring well MW-2 are not related to onsite sources. These VOCs are associated with the offsite Leaking Petroleum Storage Tank (LPST) facility (Former Target Tune & Lube) located adjacent to monitoring well MW-22. Additional information regarding the

LPST facility is presented in Appendix G. *Since the benzene, ethylbenzene, and 1,2-DCA present in the groundwater sample collected from monitoring well MW-22 are not related to the site and are not within the proposed MSD boundary, there is no further discussion of these constituents in this MSD Application, although, the concentration data is included on Table F5 and Figure F1 for informational purposes.*

B) The following table represents the groundwater PCL exceedances that were reported for the monitoring wells associated with the groundwater plumes from the most recent groundwater sampling event (June 2012):

TABLE D-1 – Groundwater PCL Exceedences

		VOCs (EPA 8260B)		
		1,1-Dichloroethene (1,1-DCE)	Trichloroethene (TCE)	Vinyl Chloride (VC)
Tier 1 $^{GW}GW_{Ing}$ Critical PCL (without MSD)		0.007	0.005	0.002
Tier 1 $^{Air}GW_{Inh-v}$ Critical PCL (with MSD)		1,700	120	3
Sample Location	Sample Date	Concentration (mg/L)		
MW-2	6/14/12	**0.099**	<0.0011	**0.0053**
MW-6A	6/14/12	**0.017**	<0.0011	<0.0010
MW-9	6/14/12	**0.086**	<0.0011	**0.0032**
MW-14	6/14/12	**0.15**	<0.0011	**0.0045**
MW-15	6/14/12	**0.20**	**0.021**	**0.010**
MW-11 (Offsite)	6/14/12	**0.18**	**0.015**	**0.006**
MW-18 (Offsite)	6/14/12	**0.34**	**0.042**	**0.015**

Note: Values in **Bold** exceed $^{GW}GW_{Ing}$ PCL (ingestion PCL)

C) The COCs detected in groundwater samples (TCE, cis-1,2-DCE, and 1,1-DCE) are chlorinated VOCs associated with historical onsite operations on the proposed MSD site.

Chlorinated VOCs are characterized by their high volatilities, high densities, low viscosities, low interfacial tension, low absolute solubilities, high relative solubilities, low portioning to soil materials and low degradability Chlorinated VOCs will dissolve in water at low concentrations but once the groundwater has reached the saturation limit for that compound, the chlorinated VOC will form a separate phase in equilibrium with the water. Because chlorinated VOCs 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 installed on and around the site and is not expected to be present onsite given the relatively low concentration of chlorinated solvents detected in the groundwater samples collected from the monitoring wells. In addition, DNAPL was not observed in the very stiff clay lower confining layer present below the saturated zone in monitoring wells MW-2A, MW-17, MW-18, MW-19, and MW-20. Based on the field observations and laboratory results, it appears that the COCs are primarily dissolved in the shallow groundwater and would migrate with the groundwater flow.

Information on the geochemical properties of each COC is included on Table D2.

APPENDIX D

TABLE D2: GEOCHEMICAL PROPERTIES of COCs

Former Halliburton Geophysical Service Facility (Carmax)

6909 Southwest Freeway

Houston, Texas

(all concentrations are in milligrams per liter)

COC: 1,1-Dichloroethene (1,1-DCE)		
Ingestion-Based PCL (Residential ${}^{GW}GW_{Ing}$)		0.007
Ingestion-Based PCLE Zone:	Length (ft):	750
	Width (ft):	150
	Total Area (ft^2):	112,500
Non-Ingestion-Based PCL (${}^{Air}GW_{Inh-V}$)		1700
Non-Ingestion-Based PCLE Zone		None
Geochemical/Physical Properties		
Molecular Weight:	96.94	
Specfic Gravity:	1.213	
Solubility in Water:	2,400 mg/l	
COC: Trichloroethene (TCE)		
Ingestion-Based PCL (Residential ${}^{GW}GW_{Ing}$)		0.005
Ingestion-Based PCLE Zone:	Length (ft):	250
	Width (ft):	50
	Total Area (ft^2):	12,500
Non-Ingestion-Based PCL (${}^{Air}GW_{Inh-V}$)		120
Non-Ingestion-Based PCLE Zone		None
Geochemical/Physical Properties		
Molecular Weight:	131.39	
Specfic Gravity:	1.46	
Solubility in Water:	1,100 mg/l	
COC: Vinyl Chloride (VC)		
Ingestion-Based PCL (Residential ${}^{GW}GW_{Ing}$)		0.005
Ingestion-Based PCLE Zone:	Length (ft):	200
	Width (ft):	50
	Total Area (ft^2):	10,000
Non-Ingestion-Based PCL (${}^{Air}GW_{Inh-V}$)		120
Non-Ingestion-Based PCLE Zone		None
Geochemical/Physical Properties		
Molecular Weight:	62.5	
Specfic Gravity:	0.91	
Solubility in Water:	2,760 mg/l	

APPENDIX E – SUMMARY OF SOIL AND GROUNDWATER CONCENTRATION DATA

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

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

A) Tables E1 and E2 present the maximum concentrations for the COCs in the soil and groundwater and the Critical Ingestion and Non-Ingestion PCLs.

B) Tables E3-1, E3-2, E4-1, and E4-2 summarize the constituent concentrations in soil and Tables E5, E6, and E7 summarize the current and historical constituent concentrations in groundwater. The tables include the concentration level, the Critical residential Ingestion PCLs assuming no MSD is in place ($^{GW}Soil_{Ing}$ for soil and $^{GW}GW_{Ing}$ for groundwater) and the Critical residential Non-Ingestion PCLs assuming that an MSD is in place ($^{Tot}Soil_{Comb}$ and $^{Air}Soil_{Inh\text{-}V}$ for soil and $^{Air}GW_{Inh\text{-}V}$ for groundwater). Please note that the analytical data summary tables have been divided into subtables based on the COC such as VOCs, TPH, RCRA 8 metals, etc. *Also, although the soil and groundwater COCs associated with the offsite LPST detected in offsite monitoring wells MW-21 and MW-22 are not included or discussed in this MSD application, the COC concentrations are included in Table E5 and on Figure E1 for informational purposes.*

<u>Groundwater</u>

The TCE, 1,1-DCE, and VC concentrations in the shallow onsite groundwater exceed the applicable Critical Ingestion PCLs ($^{GW}GW_{Ing}$). The only metal detected in the groundwater was barium and the concentrations did not exceed the Critical Ingestion PCL ($^{GW}GW_{Ing}$). The COC Ingestion PCL exceedences in the shallow groundwater have been delineated vertically and horizontally to the applicable Ingestion PCLs. The results of the most recent groundwater sampling event are shown on Figure E1.

The COC concentrations in the groundwater do not exceed the applicable Critical Non-Ingestion PCLs

Soil

The 1,1-DCE and 1,2-dichlorethane (1,2-DCA) concentrations in the soil samples do not exceed the applicable Critical Ingestion PCLs ($^{GW}Soil_{Ing}$) or Non-Ingestion PCLs ($^{Tot}Soil_{Comb}$). TCE and VC were not detected in the soil samples above laboratory sample detection limits. Metals concentrations detected in the soil samples do not exceed the applicable Critical Non-Ingestion PCLs ($^{Tot}Soil_{Comb}$).

The following is a listing of tables included in Appendix E:

Table E1 – Summary of COCs in Soil – Maximum Concentrations
Table E2 – Summary of COCs in Groundwater – Maximum Concentrations

Table E3-1 – Summary of COCs in Surface Soil – VOCs
Table E3-2 – Summary of COCs in Surface Soil – TPH and Metals

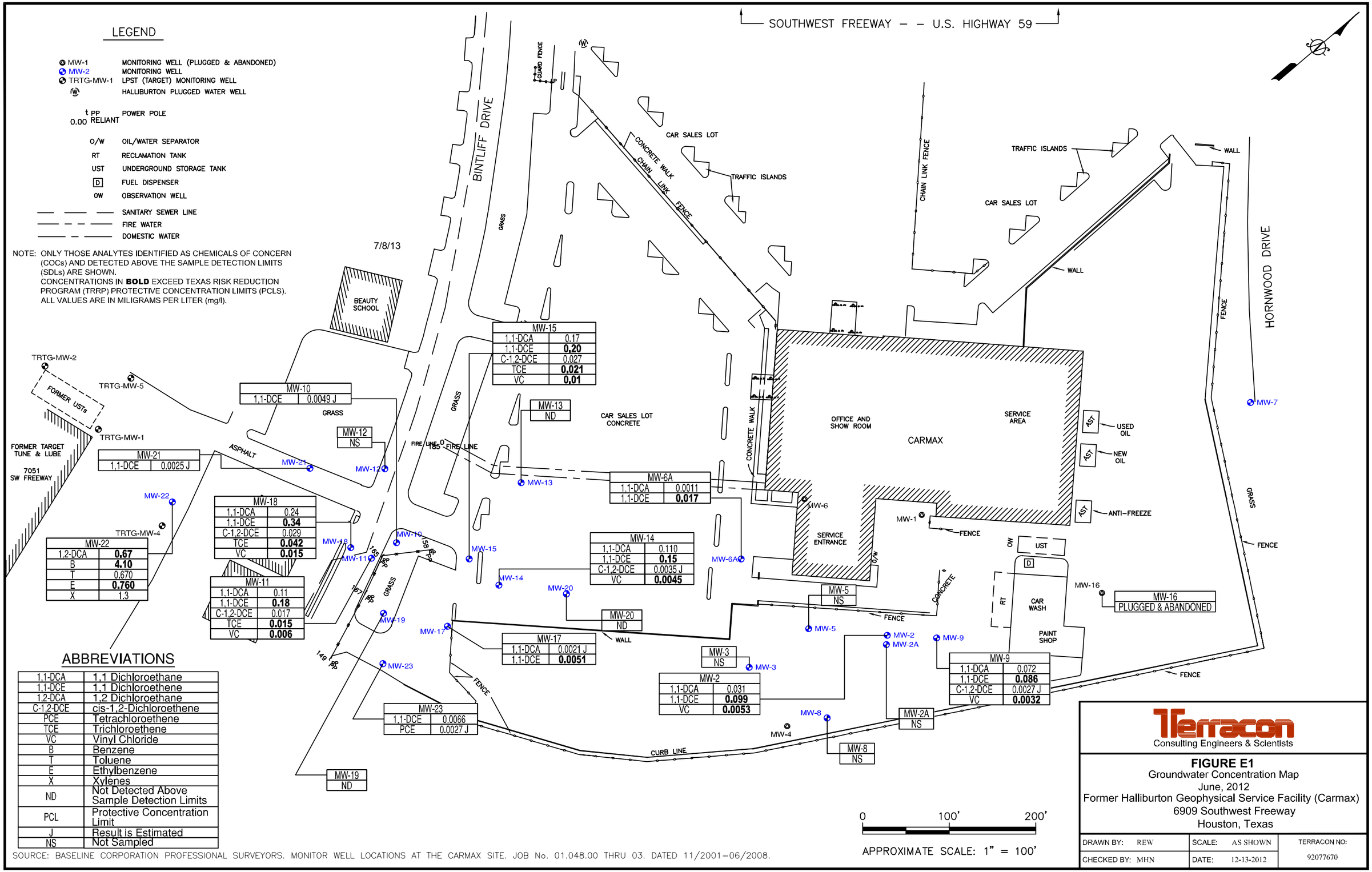
Table E4-1 – Summary of COCs in Subsurface Soil – VOCs
Table E4-2 – Summary of COCs in Subsurface Soil – TPH and Metals

Table E5 – Summary of COCs in Groundwater – Onsite & Offsite Wells - VOCs
Table E6 – Summary of COCs in Groundwater – Metals
Table E7 – Summary of COCs in Groundwater – Historical (1998 – 2004) - VOCs

LEGEND

MW-1	MONITORING WELL (PLUGGED & ABANDONED)
MW-2	MONITORING WELL
TRTG-MW-1	LPST (TARGET) MONITORING WELL
W	HALLIBURTON PLUGGED WATER WELL
t PP 0.00 RELIANT	POWER POLE
O/W	OIL/WATER SEPARATOR
RT	RECLAMATION TANK
UST	UNDERGROUND STORAGE TANK
D	FUEL DISPENSER
OW	OBSERVATION WELL
— — —	SANITARY SEWER LINE
— — —	FIRE WATER
— — —	DOMESTIC WATER

NOTE: ONLY THOSE ANALYTES IDENTIFIED AS CHEMICALS OF CONCERN (COCs) AND DETECTED ABOVE THE SAMPLE DETECTION LIMITS (SDLs) ARE SHOWN.
CONCENTRATIONS IN **BOLD** EXCEED TEXAS RISK REDUCTION PROGRAM (TRRP) PROTECTIVE CONCENTRATION LIMITS (PCLS).
ALL VALUES ARE IN MILIGRAMS PER LITER (mg/l).



ABBREVIATIONS

1,1-DCA	1,1 Dichloroethane
1,1-DCE	1,1 Dichloroethene
1,2-DCA	1,2 Dichloroethane
C-1,2-DCE	cis-1,2-Dichloroethene
PCE	Tetrachloroethene
TCE	Trichloroethene
VC	Vinyl Chloride
B	Benzene
T	Toluene
E	Ethylbenzene
X	Xylenes
ND	Not Detected Above Sample Detection Limits
PCL	Protective Concentration Limit
J	Result is Estimated
NS	Not Sampled

SOURCE: BASELINE CORPORATION PROFESSIONAL SURVEYORS. MONITOR WELL LOCATIONS AT THE CARMAX SITE. JOB No. 01.048.00 THRU 03. DATED 11/2001–06/2008.

Terracon
Consulting Engineers & Scientists

FIGURE E1
Groundwater Concentration Map
June, 2012
Former Halliburton Geophysical Service Facility (Carmax)
6909 Southwest Freeway
Houston, Texas

DRAWN BY: REW	SCALE: AS SHOWN	TERRACON NO: 92077670
CHECKED BY: MHN	DATE: 12-13-2012	

N:\ENV\dox\2012\Drafting\92127112\92127112 GW Concentrations 2012-06.dwg

APPENDIX E

TABLE E1: MAXIMUM CONCENTRATIONS TABLE - SOIL
Former Halliburton Geophysical Service Facility (Carmax)
6909 Southwest Freeway
Houston, Texas
VCP No. 525

(all concentrations are in milligrams per kilogram)

Contaminants of Concern (COCs)	Residential Use (0.5-acre source area)			Sample ID	Sample Depth (ft)	Sample Date	Maximum COC Concentrations (mg/Kg)
	Critical Ingestion-Based PCL	Critical Non Ingestion-Based PCLs					
	${}^{GW}Soil_{Ing}$ (without MSD)	${}^{Tot}Soil_{Comb}$ (with MSD)	${}^{Air}Soil_{Inh-V}$ (with MSD)				
Arsenic	5.9	24	NE	DB-4	4-6	8/31/94	**6.2**
Lead	15	500	NE	DB-1	4-6	8/31/94	**29.3**

Notes:
1. Shaded concentrations represent the critical protective concentration levels without the MSD
2. Shaded and **bolded** concentrations represent the *exceedence* of critical protective concentration levels without the MSD

APPENDIX E

TABLE E2: MAXIMUM CONCENTRATIONS TABLE - GROUNDWATER

Former Halliburton Geophysical Service Facility (Carmax)
6909 Southwest Freeway
Houston, Texas
VCP No. 525

(all concentrations are in milligrams per liter)

Contaminants of Concern (COCs)	Ingestion-Based PCL	Non-Ingestion-Based PCL	Sample ID	Sample Date	Maxium COC Concentrations (mg/l)
	$^{GW}Soil_{Ing}$ (without MSD)	$^{Air}GW_{Inh-V}$ (with MSD)			
1,1-Dichloroethene (1,1-DCE)	0.007	1,700	MW-15	6/15/2012	**0.20**
Trichloroethene (TCE)	0.005	120	MW-18	6/15/2012	**0.042**
Vinyl Chloride (VC)	0.002	3	MW-18	6/15/2012	**0.015**

Notes:
1. Shaded concentrations represent the critical protective concentration levels without the MSD
2. Shaded and **bolded** concentrations represent the *exceedence* of critical protective concentration levels without the MSD
3. "Sample Date" column represents the most current date for the maximum concentration for instances where the COC is detected on multiple dates.

TABLE E3-1
SUMMARY OF SURFACE SOIL ANALYTICAL RESULTS - VOCs
Former Halliburton Geophysical Service Facility (Carmax)
Houston, Texas
VCP No. 525

Sample ID and Sample Date ->	Tier 1 $^{GW}Soil_{Ing}$ Critical PCL without MSD	Tier 1 $^{Tot}Soil_{Comb}$ Critical PCL with MSD	Tier 1 $^{Air}Soil_{Inh-v}$ Critical PCL with MSD	MAX	DB-1 (4-6) 8/31/94	DB-2 (4-6) 8/31/94	DB-3 (4-6) 8/31/94	DB-4 (4-6) 8/31/94	CB-1 (0-2) 7/17/96	CB-1 (3-5) 7/17/96	CB-2 (0-2) 7/17/96	CB-2 (3-5) 7/17/96	CB-3 (0-2) 7/17/96	CB-3 (3-5) 7/17/96	B-6 (1-5) 10/10/96 B-1 in Lab Data	B-6 (10-12.5) 10/10/96 B-1 in Lab Data
Analyte				**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**
1,1-Dichloroethane (1,1-DCA)	**18**	**11,000**	**37,000**	**0.0072**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
1,1-Dichloroethene (1,1-DCE)	**0.05**	**2,300**	**5,200**	**0.012**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005

NOTE:
Nondetect for samples analyzed prior to September 2002
equivalent to MQL. - all other nondetects equivalent to SQL.
MQL = Method Quantitation Limit
SQL = Sample Quantitation Limit
"J" Qualifier indicates result is estimated, not quantified.

TABLE E3-1
SUMMARY OF SURFACE SOIL ANALYTICAL RESULTS - VOCs
Former Halliburton Geophysical Service Facility (Carmax)
Houston, Texas
VCP No. 525

Sample ID and Sample Date ->	Tier 1 $^{GW}Soil_{Ing}$ Critical PCL without MSD	Tier 1 $^{Tot}Soil_{Comb}$ Critical PCL with MSD	Tier 1 $^{Air}Soil_{Inh-v}$ Critical PCL with MSD	MAX	B-1 (14-15) 1999	B-3 (15) 1999	GP-1 (6-8) 12/17/03	GP-1 (8.5-9.5) 12/17/03	GP-2 (5-6) 12/17/03	GP-2 (9-10) 12/17/03	GP-3 (6-7) 12/17/03	GP-3 (14-16) 12/17/03	GP-4 (5-7) 12/17/03	GP-5 (8-10) 12/17/03	GP-5 (14-16) 12/17/03
Analyte				mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
1,1-Dichloroethane (1,1-DCA)	**18**	**11,000**	**37,000**	**0.0072**	< 0.00096	< 0.00098	< 0.00096	< 0.00098	< 0.00097	**0.0072**	**0.00300 J**	**0.00250 J**	< 0.00098	< 0.00110	< 0.00097
1,1-Dichloroethene (1,1-DCE)	**0.05**	**2,300**	**5,200**	**0.012**	< 0.00130	< 0.00130	< 0.00130	< 0.00130	< 0.00130	**0.012**	< 0.00130	< 0.00140	< 0.00130	< 0.00150	< 0.00130

NOTE:
Nondetect for samples analyzed prior to September 2002
equivalent to MQL. - all other nondetects equivalent to SQL.
MQL = Method Quantitation Limit
SQL = Sample Quantitation Limit
"J" Qualifier indicates result is estimated, not quantified.

TABLE E3-1
SUMMARY OF SURFACE SOIL ANALYTICAL RESULTS - VOCs
Former Halliburton Geophysical Service Facility (Carmax)
Houston, Texas
VCP No. 525

Sample ID and Sample Date ->	Tier 1 $^{GW}Soil_{Ing}$ Critical PCL without MSD	Tier 1 $^{Tot}Soil_{Comb}$ Critical PCL with MSD	Tier 1 $^{Air}Soil_{Inh-v}$ Critical PCL with MSD	MAX	GP-6 (6-7.5) 12/17/03	GP-6 (10-12) 12/17/03	MW-1 (5-7.5) 7/15/96	MW-2 (10-12.5) 7/15/96	MW-4 (10-15) 10/3/96	MW-5 (10-15) 10/3/96	MW-6 (10-15) 10/3/96	MW-7 (10-15) 10/3/96	MW-6A (2-4) 11/17/97	MW-8 (5-7.5) 10/10/96	MW-9 (2-4) 11/17/97
Analyte				mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
1,1-Dichloroethane (1,1-DCA)	18	11,000	37,000	0.0072	< 0.00099	< 0.00110	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
1,1-Dichloroethene (1,1-DCE)	0.05	2,300	5,200	0.012	< 0.00140	< 0.00150	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005

NOTE:
Nondetect for samples analyzed prior to September 2002
equivalent to MQL. - all other nondetects equivalent to SQL.
MQL = Method Quantitation Limit
SQL = Sample Quantitation Limit
"J" Qualifier indicates result is estimated, not quantified.

TABLE E3-1
SUMMARY OF SURFACE SOIL ANALYTICAL RESULTS - VOCs
Former Halliburton Geophysical Service Facility (Carmax)
Houston, Texas
VCP No. 525

Sample ID and Sample Date ->	Tier 1 $^{GW}Soil_{Ing}$ Critical PCL without MSD	Tier 1 $^{Tot}Soil_{Comb}$ Critical PCL with MSD	Tier 1 $^{Air}Soil_{Inh-v}$ Critical PCL with MSD	MAX	MW-13 (8-10) 5/3/00	MW-14 (8-10) 5/4/00	MW-17 (2.5-5) 12/18/03	OFFSITE MW-18 (10-12) 12/18/03	MW-19 (3-5) 4/12/05	MW-20 (9-10) 4/12/05
Analyte				**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**
1,1-Dichloroethane (1,1-DCA)	**18**	**11,000**	**37,000**	**0.0072**	**0.0054**	< 0.005	< 0.00097	< 0.00100	< 0.00098	< 0.00097
1,1-Dichloroethene (1,1-DCE)	**0.05**	**2,300**	**5,200**	**0.012**	< 0.005	< 0.005	< 0.00130	< 0.00140	< 0.00130	< 0.00130

NOTE:
Nondetect for samples analyzed prior to September 2002
equivalent to MQL. - all other nondetects equivalent to SQL.
MQL = Method Quantitation Limit
SQL = Sample Quantitation Limit
"J" Qualifier indicates result is estimated, not quantified.

TABLE E3-2
SUMMARY OF SURFACE SOIL ANALYTICAL RESULTS - METALS AND TPH
Former Halliburton Geophysical Service Facility (Carmax)
Houston, Texas
VCP No. 525

Sample ID and Sample Date -> / Analyte	Tier 1 $^{GW}Soil_{Ing}$ Critical PCL without MSD	Tier 1 $^{Tot}Soil_{Comb}$ Critical PCL with MSD	Tier 1 $^{Air}Soil_{Inh-v}$ Critical PCL with MSD	MAX	DB-1 (4-6) 8/31/94	DB-2 (4-6) 8/31/94	DB-4 (4-6) 8/31/94	CB-1 (0-2) 7/17/96	CB-1 (3-5) 7/17/96	CB-2 (0-2) 7/17/96	CB-2 (3-5) 7/17/96	CB-3 (0-2) 7/17/96	CB-3 (3-5) 7/17/96
				mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
METALS													
Arsenic	**5.9**	**24**	**-----**	**6.2**	**5.1**	**4.5**	**6.2**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Barium	**440**	**8,100**	**-----**	**369**	**261**	**127**	**108**	**369**	**139**	**211**	**119**	**144**	**128**
Cadmium	**1.5**	**52**	**-----**	< 1.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	**2,400**	**33,000**	**-----**	**10.7**	**4.2**	**3.3**	**4.3**	**2.4**	**3.6**	**3.1**	**1.6**	**2.4**	**1.7**
Lead	**15**	**500**	**-----**	**29.3**	**29.3**	**12.5**	**9.1**	**2.0**	**4.6**	**1.9**	**2.5**	**3.9**	**5.0**
Mercury	**0.04**	**3.6**	**4.6**	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Selenium	**2.3**	**310**	**-----**	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Silver	**0.48**	**97**	**-----**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
TPH (C6-C35) (EPA Method 418.1)	**65**	**200**	**200**	< 0.010	< 0.010	< 0.010	< 0.010	NA	NA	NA	NA	NA	NA

NOTE:
Residential Assessment Level for arsenic, chromium,
and lead equivalent to TX Specific Background Levels.
NA = Not Analyzed
BOLD results exceed Residential Assessment Level.

TABLE E3-2
SUMMARY OF SURFACE SOIL ANALYTICAL RESULTS - METALS AND TPH
Former Halliburton Geophysical Service Facility (Carmax)
Houston, Texas
VCP No. 525

Sample ID and Sample Date ->	Tier 1 $^{GW}Soil_{Ing}$ Critical PCL without MSD	Tier 1 $^{Tot}Soil_{Comb}$ Critical PCL with MSD	Tier 1 $^{Air}Soil_{Inh-v}$ Critical PCL with MSD	MAX	SB-1 on Figures		SB-2 on Figures		SB-3 on Figures					
					SB-1 (2) 10/8/96	SB-2 (4.5) 10/8/96	SB-3 (2) 10/8/96	SB-4 (5) 10/8/96	SB-5 (2) 10/8/96	SB-6 (5) 10/8/96	MW-1 (5-7.5) 7/15/96	MW-2 (10-12.5) 7/15/96	MW-6A (2-4) 11/17/97	MW-9 (2-4) 11/17/97
Analyte				**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**	**mg/Kg**
METALS														
Arsenic	**5.9**	**24**	-----	**6.2**	**3.1**	**2.7**	**1.4**	**1.2**	**2.3**	**1.5**	**1.5**	**2.6**	**1.2**	**2.2**
Barium	**440**	**8,100**	-----	**369**	**75**	**135**	**101**	**134**	**113**	**135**	**116**	**162**	**207**	**129**
Cadmium	**1.5**	**52**	-----	< 1.2	**1.2**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	**2,400**	**33,000**	-----	**10.7**	**5.5**	**9.2**	**5.0**	**10.7**	**4.7**	**7.4**	**6.7**	**8.4**	**4.6**	**7.2**
Lead	**15**	**500**	-----	**29.3**	**8.5**	**8.2**	**5.4**	**6.0**	**7.4**	**7.5**	**2.1**	**7.9**	**4.9**	**9.8**
Mercury	**0.04**	**3.6**	**4.6**	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Selenium	**2.3**	**310**	-----	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Silver	**0.48**	**97**	-----	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
TPH (C6-C35) (EPA Method 418.1)	**65**	**200**	**200**	< 0.010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NOTE:
Residential Assessment Level for arsenic, chromium,
and lead equivalent to TX Specific Background Levels.
NA = Not Analyzed
BOLD results exceed Residential Assessment Level.

TABLE E4-1
SUMMARY OF SUBSURFACE SOIL ANALYTICAL RESULTS - VOCs
Former Halliburton Geophysical Service Facility (Carmax)
Houston, Texas
VCP No. 525

Sample ID and Sample Date ->	Tier 1 $^{GW}Soil_{Ing}$ Critical PCL without MSD	Tier 1 $^{Tot}Soil_{Comb}$ Critical PCL with MSD	Tier 1 $^{Air}Soil_{Inh-v}$ Critical PCL with MSD	MAX	B-2 (24-25) 1999	B-4 (23-24) 1999	B-5 (24-25) 1999	GP-1 (18-20) 12/17/03	GP-2 (16-18) 12/17/03	GP-3 (14-16) 12/17/03	GP-4 (18-20) 12/17/03	GP-5 (14-16) 12/17/03	MW-1 (15-17.5) 7/15/96	MW-2 (15-17.5) 7/15/96	MW-3 (15-17.5) 7/15/96	MW-3 (20-22.5) 7/15/96
Analyte				mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
1,1-Dichloroethane (1,1-DCA)	**18**	**11,000**	**37,000**	**0.020**	**0.00190 J**	< 0.00100	**0.00250 J**	**0.00190 J**	< 0.00100	**0.00250 J**	< 0.00097	< 0.00097	< 0.005	**0.020**	< 0.005	< 0.005
1,1-Dichloroethene (1,1-DCE)	**0.05**	**2,300**	**5,200**	**0.015**	< 0.00140	**0.00200 J**	< 0.00140	< 0.00140	**0.00200 J**	< 0.00140	< 0.00130	< 0.00130	< 0.005	**0.013**	< 0.005	< 0.005

NOTE:
Nondetect for samples analyzed prior to September 2002
equivalent to MQL. - all other nondetects equivalent to SQL.
MQL = Method Quantitation Limit
SQL = Sample Quantitation Limit
"J" Qualifier indicates result is estimated, not quantified.

TABLE E4-1
SUMMARY OF SUBSURFACE SOIL ANALYTICAL RESULTS - VOCs
Former Halliburton Geophysical Service Facility (Carmax)
Houston, Texas
VCP No. 525

Sample ID and Sample Date ->	Tier 1 $^{GW}Soil_{Ing}$ Critical PCL without MSD	Tier 1 $^{Tot}Soil_{Comb}$ Critical PCL with MSD	Tier 1 $^{Air}Soil_{Inh-v}$ Critical PCL with MSD	MAX	MW-6A (23-25) 11/17/97	MW-8 (17.5-20) 10/10/96	MW-9 (25-26) 11/17/97	MW-13 (18-20) 5/3/00	MW-14 (18-20) 5/4/00	MW-15 (24-25) 12/18/01	MW-16 (27-28) 12/18/01	MW-17 (27.5-30) 12/18/03	OFFSITE MW-18 (18-20) 12/18/03	MW-19 (21-23) 04/12/05	MW-20 (20'-21') 04/12/05
Analyte				mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
1,1-Dichloroethane (1,1-DCA)	**18**	**11,000**	**37,000**	**0.020**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	**0.0087**	< 0.005	< 0.00097	< 0.00097	< 0.00100	**0.00130 J**
1,1-Dichloroethene (1,1-DCE)	**0.05**	**2,300**	**5,200**	**0.015**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	**0.015**	< 0.005	< 0.00130	< 0.00130	< 0.00140	< 0.00130

NOTE:
Nondetect for samples analyzed prior to September 2002
equivalent to MQL. - all other nondetects equivalent to SQL.
MQL = Method Quantitation Limit
SQL = Sample Quantitation Limit
"J" Qualifier indicates result is estimated, not quantified.

TABLE E4-2
SUMMARY OF SUBSURFACE SOIL ANALYTICAL RESULTS - METALS
Former Halliburton Geophysical Service Facility (Carmax)
Houston, Texas
VCP No. 525

Sample ID and Sample Date -> / Analyte	Tier 1 $^{GW}Soil_{Ing}$ Critical PCL without MSD	Tier 1 $^{Tot}Soil_{Comb}$ Critical PCL with MSD	Tier 1 $^{Air}Soil_{Inh-v}$ Critical PCL with MSD	MAX mg/Kg	MW-1 (15-17.5) 7/15/96 mg/Kg	MW-2 (15-17.5) 7/15/96 mg/Kg	MW-3 (15-17.5) 7/15/96 mg/Kg	MW-3 (20-22.5) 7/15/96 mg/Kg	MW-6A (23-25) 11/17/97 mg/Kg	MW-9 (25-26) 11/17/97 mg/Kg
METALS										
Arsenic	**5.9**	**24**	-----	**3.8**	< 0.5	**3.8**	< 0.5	< 0.5	**1.2**	**3.8**
Barium	**440**	**8,100**	-----	**265**	**149**	**265**	**162**	**44.9**	**41.7**	**21.8**
Cadmium	**1.5**	**52**	-----	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	**30**	**33,000**	-----	**12.8**	**12.5**	**10.3**	**12.8**	**1.8**	**1.5**	**1.5**
Lead	**15**	**500**	-----	**12.7**	**4.9**	**7.7**	**3.3**	**4.1**	**2.8**	**12.7**
Mercury	**0.04**	**3.6**	**4.6**	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Selenium	**2.3**	**310**	-----	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Silver	**0.48**	**97**	-----	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5

NOTE:
Residential Assessment Level for arsenic, chromium, and lead equivalent to TX Specific Background Levels.
BOLD results exceed Residential Assessment Level.

TABLE E5
SUMMARY OF COCs in GROUNDWATER- Onsite Wells - VOCs
Former Halliburton Geophysical Service Facility (Carmax)
Houston, Texas
VCP No. 525

Analyte	Tier 1 $^{GW}GW_{Ing}$ Critical PCL without MSD mg/L	Tier 1 $^{Air}GW_{Inh-v}$ Critical PCL with MSD mg/L	Maximum Concentration (ONSITE) mg/L	MW-2 04/22/05 mg/L	MW-2 06/08/06 mg/L	MW-2 2/2/07 mg/L	MW-2 9/26/07 mg/L	MW-2 5/27/08 mg/L	MW-2 9/10/08 mg/L	MW-2 12/4/08 mg/L	MW-2 2/2/10 mg/L	MW-2 10/26/10 mg/L	MW-2 6/29/11 mg/L	MW-2 6/15/12 mg/L	MW-2A 04/22/05 mg/L	MW-2A 06/08/06 mg/L	MW-2A 2/2/07 mg/L	MW-2A 9/26/07 mg/L	MW-2A 5/27/08 mg/L
Volatile Organic Compounds (EPA 8260B)																			
1,1-Dichloroethane	**4.9**	**43,000**	**0.130**	**0.069**	**0.021**	**0.067**	**0.092**	**0.038**	**0.066**	**0.059**	**0.028**	**0.038**	**0.040**	**0.031**	< 0.00043	< 0.005	< 0.0005	< 0.0005	< 0.0005
1,1-Dichloroethene	**0.007**	**1,700**	**0.120**	**0.11**	**0.028**	**0.097**	**0.12**	**0.059**	**0.095**	**0.090**	**0.056**	**0.10**	**0.090**	**0.099**	**0.011**	< 0.005	< 0.0006	< 0.0006	**0.00081 J**
1,2-Dichloroethane	**0.005**	**33**	< 0.005	< 0.005	< 0.005	< 0.0005	**0.0009 J**	< 0.0005	**0.00058 J**	< 0.0005	< 0.0005	< 0.0005	< 0.0010	< 0.0010	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005
Benzene *	**0.005**	**180**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	-----	< 0.0005	< 0.0010	< 0.0010	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0005
2-Butanone (MEK)	**15**	**1,000,000**	< 0.010	< 0.010	< 0.010	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0020	< 0.0020	< 0.010	< 0.010	< 0.0008	< 0.0008	< 0.0008
cis-1,2-Dichloroethene	**0.07**	**1,200**	**0.006**	**0.002 J**	< 0.005	**0.0016 J**	**0.0029 J**	**0.0011 J**	**0.0021 J**	**0.0018 J**	**0.0013 J**	**0.0020 J**	< 0.0025	< 0.0025	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005
Ethylbenzene *	**0.7**	**16,000**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	-----	< 0.0005	< 0.0011	< 0.0011	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0005
Tetrachloroethene	**0.005**	**500**	< 0.005	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0017	< 0.0017	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0006
Toluene *	**1.0**	**64,000**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	-----	< 0.0005	< 0.0010	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0005
trans-1,2-Dichloroethene	**0.1**	**770**	< 0.005	< 0.005	< 0.005	< 0.0006	< 0.0006	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0010	< 0.0010	< 0.005	< 0.005	< 0.0006	< 0.0006	< 0.0005
Trichloroethene	**0.005**	**120**	**0.006**	< 0.005	< 0.005	< 0.0007	< 0.0007	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0011	< 0.0011	< 0.005	< 0.005	< 0.0007	< 0.0007	< 0.0005
Vinyl chloride	**0.002**	**3.0**	**0.012**	**0.0057**	< 0.002	**0.0038**	**0.0050**	**0.002 J**	**0.0037**	**0.0033**	**0.0041**	**0.012**	**0.0053**	**0.0053**	< 0.002	< 0.002	< 0.0006	< 0.0006	< 0.0005
Xylenes, Total *	**10.0**	**10,000**	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.001	< 0.001	< 0.001	-----	< 0.001	< 0.0031	< 0.0031	< 0.015	< 0.015	< 0.015	< 0.015	< 0.001

NOTE: COC concentrations above the SDL are shown in **BOLD**
COC concentrations exceeding the Tier 1 Residential Protective Concentration Level (PCL) are shown in **SHADED BOLD**.
* - Constituent associated with offsite LPST facility and not an onsite COC
J - concentration detected betweeen the SDL and the method quantitation limit (MQL) and is an estimated value.
< - not detected at concentrations above the indicated sample detection limit (SDL)
MTBE - methyl tertiary butyl ether
TCEQ - Texas Commission on Environmental Quality
EPA - Environmental Protection Agency
NA - Analyte not analyzed

TABLE E5
SUMMARY OF COCs in GROUNDWATER- Onsite Wells - VOCs
Former Halliburton Geophysical Service Facility (Carmax)
Houston, Texas
VCP No. 525

Analyte	Tier 1 $^{GW}GW_{Ing}$ Critical PCL without MSD mg/L	Tier 1 $^{Air}GW_{Inh-v}$ Critical PCL with MSD mg/L	Maximum Concentration (ONSITE) mg/L	MW-3 04/22/05 mg/L	MW-3 06/08/06 mg/L	MW-3 2/2/07 mg/L	MW-3 9/26/07 mg/L	MW-3 5/22/08 mg/L	MW-5 2/2/07 mg/L	MW-5 5/27/08 mg/L	MW-6A 04/22/05 mg/L	MW-6A 06/08/06 mg/L	MW-6A 2/2/07 mg/L	MW-6A 9/20/07 mg/L	MW-6A 5/22/08 mg/L	MW-6A 9/10/08 mg/L	MW-6A 12/5/08 mg/L	MW-6A 2/2/10 mg/L	MW-6A 10/26/10 mg/L
Volatile Organic Compounds (EPA 8260B)																			
1,1-Dichloroethane	**4.9**	**43,000**	**0.130**	**0.0017 J**	**0.0051**	**0.0025 J**	**0.0024 J**	**0.0021 J**	< 0.0005	< 0.0005	**0.0032 J**	**0.0043 J**	**0.010**	0.0005	**0.0029 J**	**0.0017 J**	**0.0015 J**	**0.0034 J**	**0.0013 J**
1,1-Dichloroethene	**0.007**	**1,700**	**0.120**	< 0.00053	< 0.005	< 0.0006	< 0.0006	< 0.0005	< 0.0006	< 0.0005	**0.028**	**0.023**	**0.021**	**0.0027 J**	**0.019**	**0.021**	**0.015**	**0.013**	**0.014**
1,2-Dichloroethane	**0.005**	**33**	< 0.005	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Benzene *	**0.005**	**180**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	-----	< 0.0005
2-Butanone (MEK)	**15**	**1,000,000**	< 0.010	< 0.010	< 0.010	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.010	< 0.010	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
cis-1,2-Dichloroethene	**0.07**	**1,200**	**0.006**	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	**0.00078 J**	**0.00074 J**	**0.0015 J**	< 0.0005	0.0005	0.0005	0.0005	**0.0015 J**	**0.00069 J**
Ethylbenzene *	**0.7**	**16,000**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	-----	< 0.0005
Tetrachloroethene	**0.005**	**500**	< 0.005	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0006	< 0.0005	< 0.0006	< 0.00043	< 0.005	< 0.0005	< 0.0005	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
Toluene *	**1.0**	**64,000**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0005	< 0.005	< 0.0005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	-----	< 0.0005
trans-1,2-Dichloroethene	**0.1**	**770**	< 0.005	< 0.005	< 0.005	< 0.0006	< 0.0006	< 0.0005	< 0.0006	< 0.0005	< 0.00063	< 0.005	< 0.0006	< 0.0006	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Trichloroethene	**0.005**	**120**	**0.006**	< 0.005	< 0.005	< 0.0007	< 0.0007	< 0.0005	< 0.0007	< 0.0005	< 0.0007	< 0.005	< 0.0007	< 0.0007	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Vinyl chloride	**0.002**	**3.0**	**0.012**	< 0.002	< 0.002	< 0.0006	< 0.0006	< 0.0005	< 0.0006	< 0.0005	**0.0017 J**	< 0.002	**0.0027**	< 0.0006	**0.00082 J**	< 0.0005	< 0.0005	**0.0017 J**	**0.0011 J**
Xylenes, Total *	**10.0**	**10,000**	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.001	< 0.015	< 0.001	< 0.015	< 0.015	< 0.015	< 0.015	< 0.001	< 0.001	< 0.001	-----	< 0.001

NOTE: COC concentrations above the SDL are shown in **BOLD**
COC concentrations exceeding the Tier 1 Residential Protective Concentration Level (PCL) are shown in **SHADED BOLD**.
* - Constituent associated with offsite LPST facility and not an onsite COC
J - concentration detected betweeen the SDL and the method quantitation limit (MQL) and is an estimated value.
< - not detected at concentrations above the indicated sample detection limit (SDL)
MTBE - methyl tertiary butyl ether
TCEQ - Texas Commission on Environmental Quality
EPA - Environmental Protection Agency
NA - Analyte not analyzed

TABLE E5
SUMMARY OF COCs in GROUNDWATER- Onsite Wells - VOCs
Former Halliburton Geophysical Service Facility (Carmax)
Houston, Texas
VCP No. 525

Analyte	Tier 1 $^{GW}GW_{Ing}$ Critical PCL without MSD mg/L	Tier 1 $^{Air}GW_{Inh-v}$ Critical PCL with MSD mg/L	Maximum Concentration (ONSITE) mg/L	MW-6A 6/29/11 mg/L	MW-6A 6/15/12 mg/L	MW-8 2/2/07 mg/L	MW-8 5/27/08 mg/L	MW-9 04/22/05 mg/L	MW-9 06/08/06 mg/L	MW-9 9/26/07 mg/L	MW-9 5/22/08 mg/L	MW-9 9/10/08 mg/L	MW-9 12/4/08 mg/L	MW-9 2/2/10 mg/L	MW-9 10/26/10 mg/L	MW-9 6/29/11 mg/L	MW-9 6/15/12 mg/L	MW-10 04/22/05 mg/L	MW-10 06/08/06 mg/L
Volatile Organic Compounds (EPA 8260B)																			
1,1-Dichloroethane	**4.9**	**43,000**	**0.130**	< 0.0011	**0.0011**	< 0.0005	< 0.0005	**0.094**	**0.130**	**0.066**	**0.075**	**0.097**	**0.086**	**0.048**	**0.083**	**0.091**	**0.072**	< 0.005	**0.0061**
1,1-Dichloroethene	**0.007**	**1,700**	**0.120**	**0.012**	**0.017**	< 0.0006	< 0.0005	**0.091**	**0.100**	**0.062**	**0.061**	**0.089**	**0.083**	**0.053**	**0.085**	**0.093**	**0.086**	< 0.005	**0.025**
1,2-Dichloroethane	**0.005**	**33**	< 0.005	< 0.0010	< 0.0010	< 0.0005	< 0.0005	< 0.005	< 0.005	< 0.0005	**0.00067 J**	**0.0007 J**	**0.0005 J**	< 0.0005	**0.00066 J**	< 0.0010	< 0.0010	< 0.005	< 0.005
Benzene *	**0.005**	**180**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0005	< 0.005	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	-----	< 0.0005	< 0.005	< 0.005	< 0.005	< 0.005
2-Butanone (MEK)	**15**	**1,000,000**	< 0.010	< 0.0020	< 0.0020	< 0.0008	< 0.0008	< 0.010	< 0.010	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0020	< 0.0020	< 0.010	< 0.010
cis-1,2-Dichloroethene	**0.07**	**1,200**	**0.006**	< 0.0025	< 0.0025	< 0.0005	< 0.0005	**0.0019 J**	**0.0029 J**	**0.0017 J**	**0.0020 J**	**0.0026 J**	**0.0021 J**	**0.0012 J**	**0.0023 J**	**0.0027 J**	**0.0027 J**	< 0.005	< 0.005
Ethylbenzene *	**0.7**	**16,000**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0005	< 0.0005	-----	< 0.0005	< 0.005	< 0.005	< 0.005	< 0.005
Tetrachloroethene	**0.005**	**500**	< 0.005	< 0.0017	< 0.0017	< 0.0005	< 0.0006	< 0.005	< 0.005	< 0.0005	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0017	< 0.0017	< 0.005	< 0.005
Toluene *	**1.0**	**64,000**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0005	< 0.0005	-----	< 0.0005	< 0.005	< 0.005	< 0.005	< 0.005
trans-1,2-Dichloroethene	**0.1**	**770**	< 0.005	< 0.0010	< 0.0010	< 0.0006	< 0.0005	< 0.005	< 0.005	< 0.0006	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0010	< 0.0010	< 0.005	< 0.005
Trichloroethene	**0.005**	**120**	**0.006**	< 0.0011	< 0.0011	< 0.0007	< 0.0005	< 0.005	< 0.005	< 0.0007	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0011	< 0.0011	< 0.005	< 0.005
Vinyl chloride	**0.002**	**3.0**	**0.012**	< 0.0010	< 0.0010	< 0.0006	< 0.0005	< 0.002	< 0.002	**0.0043**	**0.0030**	**0.0053**	**0.0048**	**0.002 J**	**0.0072**	**0.0028**	**0.0032**	< 0.002	< 0.002
Xylenes, Total *	**10.0**	**10,000**	< 0.015	< 0.0031	< 0.0031	< 0.015	< 0.001	< 0.015	< 0.015	< 0.015	< 0.001	< 0.001	< 0.001	-----	< 0.001	< 0.0031	< 0.0031	< 0.015	< 0.015

NOTE: COC concentrations above the SDL are shown in **BOLD**
COC concentrations exceeding the Tier 1 Residential Protective Concentration Level (PCL) are shown in **SHADED BOLD**.
* - Constituent associated with offsite LPST facility and not an onsite COC
J - concentration detected betweeen the SDL and the method quantitation limit (MQL) and is an estimated value.
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MTBE - methyl tertiary butyl ether
TCEQ - Texas Commission on Environmental Quality
EPA - Environmental Protection Agency
NA - Analyte not analyzed

TABLE E5
SUMMARY OF COCs in GROUNDWATER- Onsite Wells - VOCs
Former Halliburton Geophysical Service Facility (Carmax)
Houston, Texas
VCP No. 525

Analyte	Tier 1 $^{GW}GW_{Ing}$ Critical PCL without MSD mg/L	Tier 1 $^{Air}GW_{Inh-v}$ Critical PCL with MSD mg/L	Maximum Concentration (ONSITE) mg/L	MW-10 01/31/07 mg/L	MW-10 9/20/07 mg/L	MW-10 5/22/08 mg/L	MW-10 9/11/08 mg/L	MW-10 12/5/08 mg/L	MW-10 2/2/10 mg/L	MW-10 10/27/10 mg/L	MW-10 6/29/11 mg/L	MW-10 6/14/12 mg/L	MW-13 04/22/05 mg/L	MW-13 06/08/06 mg/L	MW-13 2/2/07 mg/L	MW-13 9/26/07 mg/L	MW-13 5/22/08 mg/L	MW-13 9/11/08 mg/L	MW-13 12/4/08 mg/L
Volatile Organic Compounds (EPA 8260B)																			
1,1-Dichloroethane	**4.9**	**43,000**	**0.130**	**0.0005** J	**0.0052**	**0.0170**	**0.0059**	**0.0016** J	**0.0033** J	**0.0017** J	**0.020**	< 0.0005	**0.0054**	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1-Dichloroethene	**0.007**	**1,700**	**0.120**	**0.014**	**0.027**	**0.074**	**0.030**	**0.0087**	**0.017**	**0.0072**	**0.069**	**0.0049** J	**0.033**	< 0.005	< 0.0006	< 0.0006	**0.0019** J	**0.0013** J	**0.0019** J
1,2-Dichloroethane	**0.005**	**33**	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0010	< 0.0010	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Benzene *	**0.005**	**180**	< 0.005	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	-----	< 0.0005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005
2-Butanone (MEK)	**15**	**1,000,000**	< 0.010	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0020	< 0.0020	< 0.010	< 0.010	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
cis-1,2-Dichloroethene	**0.07**	**1,200**	**0.006**	< 0.0005	< 0.0005	**0.0060**	**0.0017** J	< 0.0005	< 0.0005	< 0.0005	**0.0039** J	< 0.0005	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Ethylbenzene *	**0.7**	**16,000**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	-----	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005
Tetrachloroethene	**0.005**	**500**	< 0.005	< 0.0005	< 0.0005	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0017	< 0.0017	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0006	< 0.0006	< 0.0006
Toluene *	**1.0**	**64,000**	< 0.005	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	-----	< 0.0005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005
trans-1,2-Dichloroethene	**0.1**	**770**	< 0.005	< 0.0006	< 0.0006	**0.0014** J	< 0.0006	< 0.0006	< 0.0005	< 0.0005	< 0.0010	< 0.0010	< 0.005	< 0.005	< 0.0006	< 0.0006	< 0.0005	< 0.0005	< 0.0005
Trichloroethene	**0.005**	**120**	**0.006**	< 0.0007	< 0.0007	**0.0058**	**0.002** J	< 0.0005	< 0.0005	< 0.0005	**0.0020** J	< 0.0005	**0.00081** J	< 0.005	< 0.0007	< 0.0007	< 0.0005	< 0.0005	< 0.0005
Vinyl chloride	**0.002**	**3.0**	**0.012**	< 0.0006	< 0.0006	**0.00076** J	< 0.0006	< 0.0006	< 0.0005	< 0.0005	< 0.0031	< 0.0031	< 0.002	< 0.002	< 0.0006	< 0.0006	< 0.0005	< 0.0005	< 0.0005
Xylenes, Total *	**10.0**	**10,000**	< 0.015	< 0.015	< 0.015	< 0.001	< 0.001	< 0.001	-----	< 0.001	< 0.0031	< 0.0031	< 0.015	< 0.015	< 0.015	< 0.015	< 0.001	< 0.001	< 0.001

NOTE: COC concentrations above the SDL are shown in **BOLD**
COC concentrations exceeding the Tier 1 Residential Protective Concentration Level (PCL) are shown in **SHADED BOLD**.
* - Constituent associated with offsite LPST facility and not an onsite COC
J - concentration detected betweeen the SDL and the method quantitation limit (MQL) and is an estimated value.
< - not detected at concentrations above the indicated sample detection limit (SDL)
MTBE - methyl tertiary butyl ether
TCEQ - Texas Commission on Environmental Quality
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NA - Analyte not analyzed

TABLE E5
SUMMARY OF COCs in GROUNDWATER- Onsite Wells - VOCs
Former Halliburton Geophysical Service Facility (Carmax)
Houston, Texas
VCP No. 525

Analyte	Tier 1 $^{GW}GW_{Ing}$ Critical PCL without MSD mg/L	Tier 1 $^{Air}GW_{Inh-v}$ Critical PCL with MSD mg/L	Maximum Concentration (ONSITE) mg/L	MW-13 10/27/10 mg/L	MW-13 6/29/11 mg/L	MW-13 6/15/12 mg/L	MW-14 04/22/05 mg/L	MW-14 06/08/06 mg/L	MW-14 2/2/07 mg/L	MW-14 9/20/07 mg/L	MW-14 5/22/08 mg/L	MW-14 9/10/08 mg/L	MW-14 12/4/08 mg/L	MW-14 2/2/10 mg/L	MW-14 10/26/10 mg/L	MW-14 6/29/11 mg/L	MW-14 6/15/12 mg/L
Volatile Organic Compounds (EPA 8260B)																	
1,1-Dichloroethane	**4.9**	**43,000**	**0.130**	< 0.0005	< 0.0011	< 0.0011	**0.12**	**0.220**	**0.170**	**0.130**	**0.15**	**0.14**	**0.16**	**0.066**	**0.140**	**0.130**	**0.110**
1,1-Dichloroethene	**0.007**	**1,700**	**0.120**	**0.0012 J**	< 0.0013	< 0.0013	**0.18**	**0.220**	**0.190**	**0.160**	**0.20**	**0.18**	**0.20**	**0.110**	**0.19**	**0.18**	**0.15**
1,2-Dichloroethane	**0.005**	**33**	< 0.005	< 0.0005	< 0.0010	< 0.0010	**0.0013 J**	< 0.005	**0.0016 J**	**0.0013 J**	**0.0014 J**	**0.0015 J**	**0.0013 J**	**0.00063 J**	**0.00130 J**	**0.0013 J**	< 0.0005
Benzene *	**0.005**	**180**	< 0.005	< 0.0005	< 0.0010	< 0.0010	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0010	< 0.0010
2-Butanone (MEK)	**15**	**1,000,000**	< 0.010	< 0.0008	< 0.0020	< 0.0020	< 0.010	< 0.010	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0020	< 0.0020
cis-1,2-Dichloroethene	**0.07**	**1,200**	**0.006**	< 0.0005	< 0.0025	< 0.0025	**0.005**	**0.0068**	**0.0055**	**0.0061**	**0.0061**	**0.0051**	**0.0052**	**0.0036 J**	**0.0056**	**0.0051**	**0.0035 J**
Ethylbenzene *	**0.7**	**16,000**	< 0.005	< 0.0005	< 0.0011	< 0.0011	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0011	< 0.0011
Tetrachloroethene	**0.005**	**500**	< 0.005	< 0.0005	< 0.0017	< 0.0017	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0017	< 0.0017
Toluene *	**1.0**	**64,000**	< 0.005	< 0.0005	< 0.0010	< 0.0010	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0010	< 0.0010
trans-1,2-Dichloroethene	**0.1**	**770**	< 0.005	< 0.0005	< 0.0010	< 0.0010	< 0.005	< 0.005	**0.00093 J**	< 0.0006	**0.00071 J**	**0.00071 J**	**0.00074 J**	< 0.0005	**0.00064 J**	< 0.0010	< 0.0010
Trichloroethene	**0.005**	**120**	**0.006**	< 0.0005	< 0.0011	< 0.0011	**0.0011 J**	**0.0019 J**	**0.0015 J**	< 0.0007	**0.00075 J**	**0.0009 J**	**0.00084 J**	< 0.0005	**0.00091 J**	**0.0011 J**	< 0.0010
Vinyl chloride	**0.002**	**3.0**	**0.012**	< 0.0005	< 0.0010	< 0.0010	**0.0054**	**0.0099**	**0.0081**	**0.0055**	**0.0079**	**0.0055**	**0.0054**	**0.0025**	**0.0078**	**0.0053**	**0.0045**
Xylenes, Total *	**10.0**	**10,000**	< 0.015	< 0.001	< 0.0031	< 0.0031	< 0.015	< 0.015	< 0.015	< 0.015	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0031	< 0.0031

NOTE: COC concentrations above the SDL are shown in **BOLD**
COC concentrations exceeding the Tier 1 Residential Protective Concentration Level (PCL) are shown in **SHADED BOLD**.
* - Constituent associated with offsite LPST facility and not an onsite COC
J - concentration detected betweeen the SDL and the method quantitation limit (MQL) and is an estimated value.
< - not detected at concentrations above the indicated sample detection limit (SDL)
MTBE - methyl tertiary butyl ether
TCEQ - Texas Commission on Environmental Quality
EPA - Environmental Protection Agency
NA - Analyte not analyzed

TABLE E5
SUMMARY OF COCs in GROUNDWATER- Onsite Wells - VOCs
Former Halliburton Geophysical Service Facility (Carmax)
Houston, Texas
VCP No. 525

Analyte	Tier 1 $^{GW}GW_{ing}$ Critical PCL without MSD mg/L	Tier 1 $^{Air}GW_{inh-v}$ Critical PCL with MSD mg/L	Maximum Concentration (ONSITE) mg/L	MW-15 04/22/05 mg/L	MW-15 06/08/06 mg/L	MW-15 2/2/07 mg/L	MW-15 9/20/07 mg/L	MW-15 5/22/08 mg/L	MW-15 9/11/08 mg/L	MW-15 12/4/08 mg/L	MW-15 2/2/10 mg/L	MW-15 10/26/10 mg/L	MW-15 6/29/11 mg/L	MW-15 6/15/12 mg/L	MW-17 04/22/05 mg/L	MW-17 06/08/06 mg/L	MW-17 2/2/07 mg/L
Volatile Organic Compounds (EPA 8260B)																	
1,1-Dichloroethane	**4.9**	**43,000**	**0.340**	**0.019**	**0.040**	**0.037**	**0.340**	**0.27**	**0.110**	**0.070**	**0.220**	**0.22**	**0.17**	**0.17**	**0.021**	**0.012**	**0.011**
1,1-Dichloroethene	**0.007**	**1,700**	**0.330**	**0.059**	**0.120**	**0.130**	**0.330**	**0.30**	**0.18**	**0.16**	**0.220**	**0.26**	**0.20**	**0.20**	**0.061**	**0.032**	**0.032**
1,2-Dichloroethane	**0.005**	**33**	< 0.005	< 0.005	< 0.005	< 0.0005	**0.0046** J	**0.0035** J	**0.0016** J	**0.0010** J	**0.0028** J	**0.0026** J	**0.0022** J	**0.0018** J	< 0.005	< 0.005	< 0.0005
Benzene	**0.005**	**180**	< 0.0050	< 0.005	< 0.005	< 0.005	< 0.005	**0.0007** J	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0010	< 0.0010	< 0.005	< 0.005	< 0.005
2-Butanone (MEK)	**15**	**1,000,000**	< 0.010	< 0.010	< 0.010	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0020	< 0.0020	< 0.010	< 0.010	< 0.0008
cis-1,2-Dichloroethene	**0.07**	**1,200**	**0.026**	**0.0014** J	**0.002** J	**0.0054**	**0.021**	**0.026**	**0.025**	**0.0088**	**0.018**	**0.012**	**0.018**	**0.027**	**0.014**	**0.0019** J	**0.0017** J
Ethylbenzene	**0.7**	**16,000**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0011	< 0.0005	< 0.0011	< 0.0011	< 0.005	< 0.005	< 0.005
Tetrachloroethene	**0.005**	**500**	< 0.005	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0017	< 0.0017	**0.0064**	**0.00089** J	**0.0011** J
Toluene	**1.0**	**64,000**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0010	< 0.0010	< 0.005	< 0.005	< 0.005
trans-1,2-Dichloroethene	**0.1**	**770**	< 0.005	< 0.005	< 0.005	**0.001** J	< 0.0006	**0.0042** J	**0.0035** J	**0.0013** J	**0.0029** J	**0.0017** J	**0.0025** J	**0.0033** J	< 0.005	< 0.005	< 0.0006
Trichloroethene	**0.005**	**120**	**0.033**	**0.001** J	**0.0018** J	**0.0049** J	**0.020**	**0.033**	**0.030**	**0.006**	**0.018**	**0.0081**	**0.016**	**0.021**	**0.0031** J	< 0.005	**0.00094** J
Vinyl chloride	**0.002**	**3.0**	**0.020**	< 0.002	< 0.002	**0.0039**	**0.020**	**0.014**	**0.0033**	**0.0043**	**0.013**	**0.016**	**0.0092**	**0.010**	< 0.002	< 0.002	< 0.0006
Xylenes, Total	**10.0**	**10,000**	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0031	< 0.0031	< 0.015	< 0.015	< 0.015

NOTE: COC concentrations above the SDL are shown in **BOLD**
COC concentrations exceeding the Tier 1 Residential Protective Concentration Level (PCL) are shown in **SHADED BOLD**.

* - Constituent associated with offsite LPST facility and not an onsite COC

J - concentration detected betweeen the SDL and the method quantitation limit (MQL) and is an estimated value.

< - not detected at concentrations above the indicated sample detection limit (SDL)

MTBE - methyl tertiary butyl ether

TCEQ - Texas Commission on Environmental Quality

EPA - Environmental Protection Agency

NA - Analyte not analyzed

TABLE E5
SUMMARY OF COCs in GROUNDWATER- Onsite Wells - VOCs
Former Halliburton Geophysical Service Facility (Carmax)
Houston, Texas
VCP No. 525

Analyte	Tier 1 $^{GW}GW_{Ing}$ Critical PCL without MSD mg/L	Tier 1 $^{Air}GW_{Inh-v}$ Critical PCL with MSD mg/L	Maximum Concentration (ONSITE) mg/L	MW-17 9/20/07 mg/L	MW-17 5/22/08 mg/L	MW-17 9/1708 mg/L	MW-17 12/4/08 mg/L	MW-17 2/2/10 mg/L	MW-17 10/26/10 mg/L	MW-17 6/29/11 mg/L	MW-17 6/14/12 mg/L	MW-19 04/22/05 mg/L	MW-19 06/08/06 mg/L	MW-19 01/31/07 mg/L	MW-19 9/20/07 mg/L	MW-19 5/22/08 mg/L	MW-19 9/11/08 mg/L	MW-19 12/5/08 mg/L
Volatile Organic Compounds (EPA 8260B)																		
1,1-Dichloroethane	**4.9**	**43,000**	**0.340**	**0.0022 J**	**0.0085**	**0.0035 J**	**0.0031 J**	**0.023**	**0.0034 J**	**0.0031 J**	**0.0021 J**	**0.0024 J**	**0.0025 J**	**0.0009 J**	**0.001 J**	**0.020**	**0.008**	**0.012**
1,1-Dichloroethene	**0.007**	**1,700**	**0.330**	**0.0038 J**	**0.024**	**0.011**	**0.0088**	**0.064**	**0.0088**	**0.0077**	**0.0051**	**0.0061**	**0.0071**	**0.0026 J**	**0.0033 J**	**0.075**	**0.030**	**0.042**
1,2-Dichloroethane	**0.005**	**33**	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0010	< 0.0010	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Benzene	**0.005**	**180**	< 0.0050	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0010	< 0.0010	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
2-Butanone (MEK)	**15**	**1,000,000**	< 0.010	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0020	< 0.0020	< 0.010	< 0.010	< 0.0008	< 0.0008	< 0.0005	< 0.0005	< 0.0005
cis-1,2-Dichloroethene	**0.07**	**1,200**	**0.026**	< 0.0005	**0.0021 J**	< 0.0005	< 0.0005	**0.0032 J**	**0.00054 J**	< 0.0025	< 0.0025	**0.0024 J**	**0.0022 J**	**0.0032 J**	**0.0041 J**	**0.020**	**0.011**	**0.015**
Ethylbenzene	**0.7**	**16,000**	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0011	< 0.0011	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005
Tetrachloroethene	**0.005**	**500**	< 0.005	< 0.0005	**0.0028 J**	**0.0007 J**	< 0.0006	**0.0028 J**	**0.00077 J**	< 0.0017	< 0.0017	< 0.005	< 0.005	< 0.0005	< 0.00043	**0.0039 J**	**0.0011 J**	**0.0015 J**
Toluene	**1.0**	**64,000**	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0010	< 0.0010	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005
trans-1,2-Dichloroethene	**0.1**	**770**	< 0.005	< 0.0006	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0010	< 0.0010	< 0.005	< 0.005	< 0.0006	< 0.00063	< 0.0005	< 0.0005	< 0.0005
Trichloroethene	**0.005**	**120**	**0.033**	< 0.0007	**0.0011 J**	< 0.0007	< 0.0007	**0.0024 J**	< 0.0005	< 0.0011	< 0.0011	< 0.005	< 0.005	< 0.0007	< 0.0007	**0.0042 J**	**0.0021 J**	**0.0023 J**
Vinyl chloride	**0.002**	**3.0**	**0.020**	< 0.0006	< 0.0005	< 0.0005	< 0.0005	**0.0011 J**	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.0006	< 0.00079	**0.0011 J**	< 0.0006	< 0.0006
Xylenes, Total	**10.0**	**10,000**	< 0.015	< 0.015	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.001	< 0.001	< 0.001

NOTE: COC concentrations above the SDL are shown in **BOLD**
COC concentrations exceeding the Tier 1 Residential Protective Concentration Level (PCL) are shown in **SHADED BOLD**.

* - Constituent associated with offsite LPST facility and not an onsite COC

J - concentration detected betweeen the SDL and the method quantitation limit (MQL) and is an estimated value.

< - not detected at concentrations above the indicated sample detection limit (SDL)

MTBE - methyl tertiary butyl ether

TCEQ - Texas Commission on Environmental Quality

EPA - Environmental Protection Agency

NA - Analyte not analyzed

TABLE E5
SUMMARY OF COCs in GROUNDWATER- Onsite Wells - VOCs
Former Halliburton Geophysical Service Facility (Carmax)
Houston, Texas
VCP No. 525

Analyte	Tier 1 $^{GW}GW_{ing}$ Critical PCL without MSD mg/L	Tier 1 $^{Air}GW_{inh-v}$ Critical PCL with MSD mg/L	Maximum Concentration (ONSITE) mg/L	MW-19 2/2/10 mg/L	MW-19 10/27/10 mg/L	MW-19 6/29/11 mg/L	MW-19 6/14/12 mg/L	MW-20 04/22/05 mg/L	MW-20 06/08/06 mg/L	MW-20 2/2/07 mg/L	MW-20 9/20/07 mg/L	MW-20 5/22/08 mg/L	MW-20 9/10/08 mg/L	MW-20 12/4/08 mg/L	MW-20 2/2/10 mg/L	MW-20 10/26/10 mg/L	MW-20 6/29/11 mg/L	MW-20 6/15/12 mg/L
Volatile Organic Compounds (EPA 8260B)																		
1,1-Dichloroethane	**4.9**	**43,000**	**0.340**	**0.0016 J**	**0.0049 J**	**0.0084**	< 0.0005	**0.017**	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0011	< 0.0011
1,1-Dichloroethene	**0.007**	**1,700**	**0.330**	**0.0054**	**0.011**	**0.002**	< 0.0005	**0.026**	< 0.005	< 0.0006	< 0.0006	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0013	< 0.0013
1,2-Dichloroethane	**0.005**	**33**	< 0.005	< 0.0005	< 0.0005	< 0.0010	< 0.0010	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0010	< 0.0010
Benzene	**0.005**	**180**	< 0.0050	< 0.0005	< 0.0005	< 0.0010	< 0.0010	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0010	< 0.0010
2-Butanone (MEK)	**15**	**1,000,000**	< 0.010	< 0.0008	< 0.0008	< 0.0020	< 0.0020	< 0.010	< 0.010	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0020	< 0.0020
cis-1,2-Dichloroethene	**0.07**	**1,200**	**0.026**	**0.0043 J**	**0.017**	**0.017**	< 0.0005	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025
Ethylbenzene	**0.7**	**16,000**	< 0.005	< 0.0005	< 0.0005	< 0.0011	< 0.0011	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0011	< 0.0011
Tetrachloroethene	**0.005**	**500**	< 0.005	< 0.0006	**0.00074 J**	**0.0039 J**	< 0.0005	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0017	< 0.0017
Toluene	**1.0**	**64,000**	< 0.005	< 0.0005	< 0.0005	< 0.0010	< 0.0010	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0010	< 0.0010
trans-1,2-Dichloroethene	**0.1**	**770**	< 0.005	< 0.0005	< 0.0005	< 0.0010	< 0.0010	< 0.005	< 0.005	< 0.0006	< 0.0006	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0010	< 0.0010
Trichloroethene	**0.005**	**120**	**0.033**	< 0.0005	**0.0017 J**	**0.002 J**	< 0.0005	**0.00094 J**	< 0.005	< 0.0007	< 0.0007	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0011	< 0.0011
Vinyl chloride	**0.002**	**3.0**	**0.020**	< 0.0005	< 0.0005	< 0.0010	< 0.0010	< 0.002	< 0.002	< 0.0006	< 0.0006	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0010	< 0.0010
Xylenes, Total	**10.0**	**10,000**	< 0.015	< 0.001	< 0.001	< 0.0031	< 0.0031	< 0.015	< 0.015	< 0.015	< 0.015	< 0.001	< 0.001	< 0.001	< 0.001	< 0.015	< 0.0031	< 0.0031

NOTE: COC concentrations above the SDL are shown in **BOLD**
COC concentrations exceeding the Tier 1 Residential Protective Concentration Level (PCL) are shown in **SHADED BOLD**.

* - Constituent associated with offsite LPST facility and not an onsite COC

J - concentration detected betweeen the SDL and the method quantitation limit (MQL) and is an estimated value.

< - not detected at concentrations above the indicated sample detection limit (SDL)

MTBE - methyl tertiary butyl ether

TCEQ - Texas Commission on Environmental Quality

EPA - Environmental Protection Agency

NA - Analyte not analyzed

TABLE E5
SUMMARY OF COCs in GROUNDWATER- Onsite Wells - VOCs
Former Halliburton Geophysical Service Facility (Carmax)
Houston, Texas
VCP No. 525

Analyte	Tier 1 $^{GW}GW_{ing}$ Critical PCL without MSD mg/L	Tier 1 $^{Air}GW_{inh-v}$ Critical PCL with MSD mg/L	Maximum Concentration (ONSITE) mg/L	MW-23 2/2/10 mg/L	MW-23 10/26/10 mg/L	MW-23 6/29/11 mg/L	MW-23 6/14/12 mg/L
Volatile Organic Compounds (EPA 8260B)							
1,1-Dichloroethane	**4.9**	**43,000**	**0.340**	**0.00074** J	**0.00085** J	< 0.0011	< 0.0011
1,1-Dichloroethene	**0.007**	**1,700**	**0.330**	**0.0073**	**0.0077**	**0.0050**	**0.0066**
1,2-Dichloroethane	**0.005**	**33**	< 0.005	< 0.0005	< 0.0005	< 0.0010	< 0.0010
Benzene	**0.005**	**180**	< 0.0050	< 0.0005	< 0.0005	< 0.0010	< 0.0010
2-Butanone (MEK)	**15**	**1,000,000**	< 0.010	< 0.0008	< 0.0008	< 0.0020	< 0.0020
cis-1,2-Dichloroethene	**0.07**	**1,200**	**0.026**	< 0.0005	< 0.0005	< 0.0025	< 0.0025
Ethylbenzene	**0.7**	**16,000**	< 0.005	< 0.0005	< 0.0005	< 0.0011	< 0.0011
Tetrachloroethene	**0.005**	**500**	< 0.005	< 0.0006	< 0.0006	< 0.0017	**0.0027** J
Toluene	**1.0**	**64,000**	< 0.005	< 0.0005	< 0.0005	< 0.0010	< 0.0010
trans-1,2-Dichloroethene	**0.1**	**770**	< 0.005	< 0.0005	< 0.0005	< 0.0010	< 0.0010
Trichloroethene	**0.005**	**120**	**0.033**	< 0.0005	< 0.0005	< 0.0011	< 0.0011
Vinyl chloride	**0.002**	**3.0**	**0.020**	< 0.0005	< 0.0005	< 0.0010	< 0.0010
Xylenes, Total	**10.0**	**10,000**	< 0.015	< 0.001	< 0.001	< 0.0031	< 0.0031

NOTE: COC concentrations above the SDL are shown in **BOLD**
COC concentrations exceeding the Tier 1 Residential Protective Concentration Level (PCL) are shown in **SHADED BOLD**.

* - Constituent associated with offsite LPST facility and not an onsite COC
J - concentration detected betweeen the SDL and the method quantitation limit (MQL) and is an estimated value.
< - not detected at concentrations above the indicated sample detection limit (SDL)
MTBE - methyl tertiary butyl ether
TCEQ - Texas Commission on Environmental Quality
EPA - Environmental Protection Agency
NA - Analyte not analyzed

TABLE E5
SUMMARY OF COCs in GROUNDWATER- Offsite Wells - VOCs
Former Halliburton Geophysical Service Facility (Carmax)
Houston, Texas
VCP No. 525

Analyte	Tier 1 $^{GW}GW_{Ing}$ Critical PCL without MSD mg/L	Tier 1 $^{Air}GW_{Inh-v}$ Critical PCL with MSD mg/L	Maximum Concentration (OFFSITE) mg/L	MW-11 04/22/05 mg/L	MW-11 06/08/06 mg/L	MW-11 01/31/07 mg/L	MW-11 9/20/07 mg/L	MW-11 5/23/08 mg/L	MW-11 9/18/08 mg/L	MW-11 12/5/08 mg/L	MW-11 2/2/10 mg/L	MW-11 10/27/10 mg/L	MW-11 6/29/11 mg/L	MW-11 6/14/12 mg/L	MW-12 01/31/07 mg/L	MW-12 5/27/08 mg/L	MW-12 9/18/08 mg/L	MW-12 12/5/08 mg/L
Volatile Organic Compounds (EPA 8260B)																		
1,1-Dichloroethane	**4.9**	**43,000**	**0.380**	**0.077**	**0.022**	**0.0094**	**0.046**	**0.083**	**0.040**	**0.130**	**0.160**	**0.38**	**0.31**	**0.11**	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1-Dichloroethene	**0.007**	**1,700**	**0.55**	**0.29**	**0.095**	**0.050**	**0.110**	**0.19**	**0.13**	**0.25**	**0.36**	**0.55**	**0.43**	**0.18**	< 0.0006	**0.0010 J**	**0.0015 J**	**0.0011 J**
1,2-Dichloroethane	**0.005**	**33**	**1.0**	**0.0014 J**	< 0.005	< 0.0005	**0.00079 J**	**0.0013 J**	**0.0006 J**	**0.0016 J**	**0.0024 J**	**0.0038 J**	**0.0045 J**	**0.0045 J**	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Benzene	**0.005**	**180**	**4.9**	< 0.0010	< 0.005	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	-----	< 0.0005	< 0.0010	< 0.0010	< 0.005	< 0.0005	< 0.0005	< 0.0005
2-Butanone (MEK)	**15**	**1,000,000**	**0.011**	< 0.010	< 0.010	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0020	< 0.0020	< 0.0008	< 0.0008	< 0.0008	< 0.0008
cis-1,2-Dichloroethene	**0.07**	**1,200**	**0.036**	**0.011**	**0.010**	**0.015**	**0.031**	**0.012**	**0.0059**	**0.016**	**0.0140**	**0.028**	**0.025**	**0.017**	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Ethylbenzene	**0.7**	**16,000**	**1.2**	< 0.0011	< 0.005	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	-----	< 0.0005	< 0.0011	< 0.0011	< 0.005	< 0.0005	< 0.0005	< 0.0005
Tetrachloroethene	**0.005**	**500**	**0.0046 J**	**0.0042 J**	**0.0014 J**	**0.0042 J**	**0.00063 J**	**0.0013 J**	**0.0009 J**	**0.0013 J**	**0.0017 J**	**0.0034 J**	**0.0029 J**	< 0.0005	< 0.0005	< 0.0006	< 0.0006	< 0.0006
Toluene	**1.0**	**64,000**	**1.6**	< 0.0010	< 0.005	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	-----	< 0.0005	< 0.0010	< 0.0010	< 0.005	< 0.0005	< 0.0005	< 0.0005
trans-1,2-Dichloroethene	**0.1**	**770**	**0.0057**	**0.0023 J**	**0.0026 J**	**0.003 J**	**0.0048 J**	**0.0029 J**	**0.0017 J**	**0.0038 J**	**0.0033 J**	**0.0030 J**	**0.0039 J**	**0.0030 J**	< 0.0006	< 0.0005	< 0.0005	< 0.0005
Trichloroethene	**0.005**	**120**	**0.053**	**0.034**	**0.020**	**0.026**	**0.043**	**0.02**	**0.0084**	**0.024**	**0.023**	**0.014**	**0.025**	**0.015**	< 0.0007	< 0.0005	< 0.0005	< 0.0005
Vinyl chloride	**0.002**	**3.0**	**0.018**	< 0.002	< 0.002	**0.0019 J**	**0.0049**	**0.0052**	**0.0021**	**0.0072**	**0.011**	**0.016**	**0.018**	**0.006**	< 0.0006	< 0.0005	< 0.0005	< 0.0005
Xylenes	**10.0**	**10,000**	**2.2**	< 0.0031	< 0.015	< 0.015	< 0.015	< 0.001	< 0.001	< 0.001	-----	< 0.001	< 0.0031	< 0.0031	< 0.0150	< 0.001	< 0.001	< 0.001

NOTE: COC concentrations above the SDL are shown in **BOLD**
COC concentrations exceeding the Tier 1 Residential Protective Concentration Level (PCL) are shown in **SHADED BOLD**.

* - Constituent associated with offsite LPST facility and not an onsite COC
J - concentration detected betweeen the SDL and the method quantitation limit (MQL) and is an estimated value.
< - not detected at concentrations above the indicated sample detection limit (SDL)
MTBE - methyl tertiary butyl ether
TCEQ - Texas Commission on Environmental Quality
EPA - Environmental Protection Agency
NA - Analyte not analyzed

TABLE E5
SUMMARY OF COCs in GROUNDWATER- Offsite Wells - VOCs
Former Halliburton Geophysical Service Facility (Carmax)
Houston, Texas
VCP No. 525

Analyte	Tier 1 $^{GW}GW_{ing}$ Critical PCL without MSD mg/L	Tier 1 $^{Air}GW_{inh-v}$ Critical PCL with MSD mg/L	Maximum Concentration (OFFSITE) mg/L	MW-18 04/22/05 mg/L	MW-18 06/08/06 mg/L	MW-18 01/31/07 mg/L	MW-18 9/20/07 mg/L	MW-18 5/23/08 mg/L	MW-18 9/18/08 mg/L	MW-18 12/5/08 mg/L	MW-18 2/2/10 mg/L	MW-18 10/26/10 mg/L	MW-18 6/29/11 mg/L	MW-18 6/15/12 mg/L	MW-21 5/23/08 mg/L	MW-21 9/17/08 mg/L	MW-21 12/4/08 mg/L	MW-21 2/2/10 mg/L
Volatile Organic Compounds (EPA 8260B)																		
1,1-Dichloroethane	**4.9**	**43,000**	**0.380**	**0.035**	**0.031**	**0.0097**	**0.021**	**0.026**	**0.024**	**0.023**	**0.082**	**0.23**	**0.27**	**0.24**	< 0.0005	< 0.0005	< 0.0005	< 0.0005
1,1-Dichloroethene	**0.007**	**1,700**	**0.55**	**0.13**	**0.110**	**0.032**	**0.051**	**0.066**	**0.077**	**0.071**	**0.170**	**0.44**	**0.42**	**0.34**	**0.0007 J**	< 0.0005	< 0.0005	< 0.0005
1,2-Dichloroethane	**0.005**	**33**	**1.0**	< 0.005	< 0.005	< 0.0005	< 0.0005	**0.00070 J**	**0.00051 J**	< 0.0005	**0.0012 J**	**0.0033 J**	**0.0038 J**	**0.0027 J**	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Benzene	**0.005**	**180**	**4.9**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	-----	< 0.0005	< 0.0010	< 0.0010	< 0.0005	< 0.0005	< 0.0005	-----
2-Butanone (MEK)	**15**	**1,000,000**	**0.011**	< 0.010	< 0.010	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0020	< 0.0020	< 0.0008	< 0.0008	< 0.0008	< 0.0008
cis-1,2-Dichloroethene	**0.07**	**1,200**	**0.036**	**0.016**	**0.023**	**0.0085**	**0.018**	**0.025**	**0.027**	**0.036**	**0.019**	**0.027**	**0.021**	**0.029**	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Ethylbenzene	**0.7**	**16,000**	**1.2**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	-----	< 0.0005	< 0.0011	< 0.0011	< 0.0005	< 0.0005	< 0.0005	-----
Tetrachloroethene	**0.005**	**500**	**0.0046 J**	**0.0046 J**	**0.0036 J**	< 0.0005	< 0.0005	< 0.0006	**0.0007 J**	< 0.0006	**0.00063 J**	**0.0021 J**	**0.0020 J**	< 0.0005	< 0.0006	< 0.0006	< 0.0006	< 0.0006
Toluene	**1.0**	**64,000**	**1.6**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	-----	< 0.0005	< 0.0010	< 0.0010	< 0.0005	< 0.0005	< 0.0005	-----
trans-1,2-Dichloroethene	**0.1**	**770**	**0.0057**	**0.0054**	**0.0057**	**0.0017 J**	**0.0027 J**	**0.0044 J**	**0.0044 J**	**0.0056**	**0.0042 J**	**0.0047 J**	**0.0041 J**	**0.0053**	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Trichloroethene	**0.005**	**120**	**0.053**	**0.053**	**0.051**	**0.015**	**0.023**	**0.045**	**0.042**	**0.046**	**0.033**	**0.032**	**0.024**	**0.042**	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Vinyl chloride	**0.002**	**3.0**	**0.018**	< 0.002	< 0.002	**0.0018 J**	**0.0032**	**0.0036**	**0.0031**	**0.0035**	**0.0077**	**0.015**	**0.014**	**0.015**	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Xylenes	**10.0**	**10,000**	**2.2**	< 0.015	< 0.015	< 0.015	< 0.015	< 0.001	< 0.001	< 0.001	-----	< 0.001	< 0.0031	< 0.0031	< 0.001	< 0.001	< 0.001	-----

NOTE: COC concentrations above the SDL are shown in **BOLD**
COC concentrations exceeding the Tier 1 Residential Protective Concentration Level (PCL) are shown in **SHADED BOLD**.

* - Constituent associated with offsite LPST facility and not an onsite COC
J - concentration detected betweeen the SDL and the method quantitation limit (MQL) and is an estimated value.
< - not detected at concentrations above the indicated sample detection limit (SDL)
MTBE - methyl tertiary butyl ether
TCEQ - Texas Commission on Environmental Quality
EPA - Environmental Protection Agency
NA - Analyte not analyzed

TABLE E5
SUMMARY OF COCs in GROUNDWATER- Offsite Wells - VOCs
Former Halliburton Geophysical Service Facility (Carmax)
Houston, Texas
VCP No. 525

Analyte	Tier 1 $^{GW}GW_{ing}$ Critical PCL without MSD mg/L	Tier 1 $^{Air}GW_{inh-v}$ Critical PCL with MSD mg/L	Maximum Concentration (OFFSITE) mg/L	MW-21 10/26/10 mg/L	MW-21 6/29/11 mg/L	MW-21 6/14/12 mg/L	MW-22 5/23/08 mg/L	MW-22 9/18/08 mg/L	MW-22 12/5/08 mg/L	MW-22 2/2/10 mg/L	MW-22 10/26/10 mg/L	MW-22 6/29/11 mg/L	MW-22 6/14/12 mg/L
Volatile Organic Compounds (EPA 8260B)													
1,1-Dichloroethane	**4.9**	**43,000**	**0.380**	**0.00072 J**	< 0.0011	< 0.0011	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0011	< 0.0011
1,1-Dichloroethene	**0.007**	**1,700**	**0.55**	< 0.0005	< 0.0013	**0.0025 J**	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0013	< 0.0013
1,2-Dichloroethane	**0.005**	**33**	**1.0**	< 0.0005	< 0.0010	< 0.0010	< 0.0005	**0.32**	**0.11**	**0.710**	**1.0**	**0.79**	**0.67**
Benzene	**0.005**	**180**	**4.9**	< 0.0005	< 0.0010	< 0.0010	**1.8**	**1.4**	**0.23**	-----	**4.9**	**4.4**	**4.1**
2-Butanone (MEK)	**15**	**1,000,000**	**0.011**	< 0.0008	< 0.0020	< 0.0020	**0.011**	**0.0043 J**	< 0.0008	< 0.0008	< 0.0008	< 0.0020	< 0.0020
cis-1,2-Dichloroethene	**0.07**	**1,200**	**0.036**	< 0.0005	< 0.0025	< 0.0025	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025
Ethylbenzene	**0.7**	**16,000**	**1.2**	< 0.0005	< 0.0011	< 0.0011	**0.53**	**0.39**	**0.099**	-----	**1.2**	**1.0**	**0.760**
Tetrachloroethene	**0.005**	**500**	**0.0046 J**	< 0.0006	< 0.0017	< 0.0017	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0017	< 0.0017
Toluene	**1.0**	**64,000**	**1.6**	< 0.0005	< 0.0010	< 0.0010	**1.2**	**0.33**	**0.013**	-----	**1.6**	**0.480**	**0.670**
trans-1,2-Dichloroethene	**0.1**	**770**	**0.0057**	< 0.0005	< 0.0010	< 0.0010	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0010	< 0.0010
Trichloroethene	**0.005**	**120**	**0.053**	< 0.0005	< 0.0011	< 0.0011	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0011	< 0.0011
Vinyl chloride	**0.002**	**3.0**	**0.018**	< 0.0005	< 0.0010	< 0.0010	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0010	< 0.0010
Xylenes	**10.0**	**10,000**	**2.2**	< 0.001	< 0.0031	< 0.0031	**1.5**	**0.41**	**0.018**	-----	**2.2**	**1.4**	**1.3**

NOTE: COC concentrations above the SDL are shown in **BOLD**
COC concentrations exceeding the Tier 1 Residential Protective Concentration Level (PCL) are shown in **SHADED BOLD**.
* - Constituent associated with offsite LPST facility and not an onsite COC
J - concentration detected betweeen the SDL and the method quantitation limit (MQL) and is an estimated value.
< - not detected at concentrations above the indicated sample detection limit (SDL)
MTBE - methyl tertiary butyl ether
TCEQ - Texas Commission on Environmental Quality
EPA - Environmental Protection Agency
NA - Analyte not analyzed

TABLE E6
SUMMARY OF COCs in GROUNDWATER - METALS
Former Halliburton Geophysical Service Facility (Carmax)
Houston, Texas
VCP No. 525

Analyte	Tier 1 $^{GW}GW_{Ing}$ Critical PCL without MSD mg/L	Tier 1 $^{Air}GW_{Inh-v}$ Critical PCL with MSD mg/L	Maximum Concentration (ONSITE) mg/L	MW-2 11/21/97 mg/L	MW-2A 11/21/97 mg/L	MW-3 11/21/97 mg/L	MW-5 11/21/97 mg/L	MW-6A 11/21/97 mg/L	MW-8 11/21/97 mg/L	MW-9 11/21/97 mg/L
METALS										
Arsenic	**0.01**	**-----**	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Barium	**2.0**	**-----**	**1.38**	**0.481**	**0.483**	**1.38**	**0.430**	**1.25**	**0.420**	**1.12**
Cadmium	**0.005**	**-----**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Chromium	**0.1**	**-----**	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Lead	**0.015**	**-----**	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Mercury	**0.002**	**7.3**	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Selenium	**0.05**	**-----**	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Silver	**0.12**	**-----**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005

NOTE: MW-1, MW-4, MW-6 and MW-7 were destroyed during construction activities in 1996. MW-6A replaced MW-6.

J - concentration detected betweeen the SDL and the method quantitation limit (MQL) and is an estimated value.

< - not detected at concentrations above the indicated sample detection limit (SDL)

TCEQ - Texas Commission on Environmental Quality

EPA - Environmental Protection Agency

NA - Analyte not analyzed

TABLE E7
SUMMARY OF COCs in GROUNDWATER- HISTORICAL(1998 - 2004) - VOCs
Former Halliburton Geophysical Service Facility (Carmax)
Houston, Texas
VCP No. 525

Analyte	Tier 1 $^{GW}GW_{ing}$ Critical PCL without MSD mg/L	Tier 1 $^{Air}GW_{inh-v}$ Critical PCL with MSD mg/L	CAS No.	MW-2 7/17/96 mg/L	MW-2 10/15/96 mg/L	MW-2 11/21/97 mg/L	MW-2 6/5/98 mg/L	MW-2 5/5/99 mg/L	MW-2 5/11/00 mg/L	MW-2 10/3/00 mg/L	MW-2 12/20/01 mg/L	MW-2 8/20/03 mg/L	MW-2 12/23/03 mg/L	MW-2 4/8/04 mg/L	MW-2A 10/15/96 mg/L	MW-2A 11/21/97 mg/L	MW-2A 12/20/01 mg/L	MW-2A 8/20/03 mg/L	MW-2A 12/23/03 mg/L	MW-2A 4/8/04 mg/L	MW-3 7/17/96 mg/L
Volatile Organic Compounds (EPA 8260B)																					
1,1-Dichloroethane	**4.9**	**43,000**	75-34-3	**0.273**	**0.359**	**0.197**	**0.218**	**0.162**	**0.099**	**0.180**	**0.100**	**0.074**	**0.027**	**0.085**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	**0.007**
1,1-Dichloroethene	**0.007**	**1,700**	75-35-4	**0.376**	**0.621**	**0.238**	**0.358**	**0.229**	**0.140**	**0.220**	**0.130**	**0.110**	**0.031**	**0.120**	**0.023**	**0.017**	**0.041**	**0.0028 J**	**0.0038 J**	**0.013**	< 0.001
cis-1,2-Dichloroethene	**0.07**	**1,200**	156-59-2	< 0.005	< 0.005	**0.005**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001	**0.0024 J**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	**0.005**	**500**	127-18-4	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	**0.005**	**120**	79-01-6	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vinyl chloride	**0.002**	**3.0**	75-01-4	**0.015**	**0.0180**	**0.011**	**0.027**	**0.008**	**0.0077**	**0.025**	**0.0076**	**0.0064**	< 0.001	**0.0057**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001

NOTE: COC concentrations above the SDL are shown in **BOLD**
COC concentrations exceeding the Tier 1 Residential Protective Concentration Level (PCL) are shown in **SHADED BOLD**.
* - Constituent associated with offsite LPST facility and not an onsite COC
J - concentration detected betweeen the SDL and the method quantitation limit (MQL) and is an estimated value.
< - not detected at concentrations above the indicated sample detection limit (SDL)
TCEQ - Texas Commission on Environmental Quality
EPA - Environmental Protection Agency

TABLE E7
SUMMARY OF COCs in GROUNDWATER- HISTORICAL(1998 - 2004) - VOCs
Former Halliburton Geophysical Service Facility (Carmax)
Houston, Texas
VCP No. 525

Analyte	Tier 1 $^{GW}GW_{ing}$ Critical PCL without MSD mg/L	Tier 1 $^{Air}GW_{inh-v}$ Critical PCL with MSD mg/L	CAS No.	MW-3 10/15/96 mg/L	MW-3 11/21/97 mg/L	MW-3 6/5/98 mg/L	MW-3 5/5/99 mg/L	MW-3 5/11/00 mg/L	MW-3 12/20/01 mg/L	MW-3 8/20/03 mg/L	MW-3 12/23/03 mg/L	MW-3 4/8/04 mg/L	MW-5 10/15/96 mg/L	MW-5 11/21/97 mg/L	MW-5 6/5/98 mg/L	MW-5 5/5/99 mg/L	MW-5 5/11/00 mg/L	MW-5 12/20/01 mg/L	MW-5 8/20/03 mg/L	MW-5 12/23/03 mg/L	MW-5 4/8/04 mg/L
Volatile Organic Compounds (EPA 8260B)																					
1,1-Dichloroethane	**4.9**	**43,000**	75-34-3	**0.009**	**0.008**	< 0.001	< 0.001	< 0.001	**0.0053**	**0.0055**	**0.0033** J	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,1-Dichloroethene	**0.007**	**1,700**	75-35-4	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
cis-1,2-Dichloroethene	**0.07**	**1,200**	156-59-2	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	**0.005**	**500**	127-18-4	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	**0.005**	**120**	79-01-6	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vinyl chloride	**0.002**	**3.0**	75-01-4	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001

NOTE: COC concentrations above the SDL are shown in **BOLD**
COC concentrations exceeding the Tier 1 Residential Protective Concentration Level (PCL) are shown in **SHADED BOLD**.
* - Constituent associated with offsite LPST facility and not an onsite COC
J - concentration detected betweeen the SDL and the method quantitation limit (MQL) and is an estimated value.
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TCEQ - Texas Commission on Environmental Quality
EPA - Environmental Protection Agency

TABLE E7
SUMMARY OF COCs in GROUNDWATER- HISTORICAL(1998 - 2004) - VOCs
Former Halliburton Geophysical Service Facility (Carmax)
Houston, Texas
VCP No. 525

Analyte	Tier 1 $^{GW}GW_{ing}$ Critical PCL without MSD mg/L	Tier 1 $^{Air}GW_{inh-v}$ Critical PCL with MSD mg/L	CAS No.	MW-6A 11/21/97 mg/L	MW-6A 6/5/98 mg/L	MW-6A 5/5/99 mg/L	MW-6A 5/11/00 mg/L	MW-6A 12/20/01 mg/L	MW-6A 8/20/03 mg/L	MW-6A 12/23/03 mg/L	MW-6A 4/8/04 mg/L	MW-8 10/15/96 mg/L	MW-8 11/21/97 mg/L	MW-8 6/5/98 mg/L	MW-8 5/5/99 mg/L	MW-8 5/11/00 mg/L	MW-8 12/20/01 mg/L	MW-8 8/20/03 mg/L	MW-8 12/23/03 mg/L	MW-8 4/8/04 mg/L
Volatile Organic Compounds (EPA 8260B)																				
1,1-Dichloroethane	**4.9**	**43,000**	75-34-3	**0.005**	< 0.001	< 0.001	< 0.001	< 0.001	**0.0085**	**0.0054**	**0.0047** J	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,1-Dichloroethene	**0.007**	**1,700**	75-35-4	**0.097**	**0.092**	**0.070**	**0.047**	**0.030**	**0.049**	**0.037**	**0.043**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
cis-1,2-Dichloroethene	**0.07**	**1,200**	156-59-2	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	**0.0028** J	**0.0018** J	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	**0.005**	**500**	127-18-4	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	**0.005**	**120**	79-01-6	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vinyl chloride	**0.002**	**3.0**	75-01-4	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	**0.0035**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001

NOTE: COC concentrations above the SDL are shown in **BOLD**
COC concentrations exceeding the Tier 1 Residential Protective Concentration Level (PCL) are shown in **SHADED BOLD**.
* - Constituent associated with offsite LPST facility and not an onsite COC
J - concentration detected betweeen the SDL and the method quantitation limit (MQL) and is an estimated value.
< - not detected at concentrations above the indicated sample detection limit (SDL)
TCEQ - Texas Commission on Environmental Quality
EPA - Environmental Protection Agency

TABLE E7
SUMMARY OF COCs in GROUNDWATER- HISTORICAL(1998 - 2004) - VOCs
Former Halliburton Geophysical Service Facility (Carmax)
Houston, Texas
VCP No. 525

Analyte	Tier 1 $^{GW}GW_{Ing}$ Critical PCL without MSD mg/L	Tier 1 $^{Air}GW_{Inh-v}$ Critical PCL with MSD mg/L	CAS No.	MW-9 11/21/97 mg/L	MW-9 6/5/98 mg/L	MW-9 5/5/99 mg/L	MW-9 5/11/00 mg/L	MW-9 12/20/01 mg/L	MW-9 8/20/03 mg/L	MW-9 12/23/03 mg/L	MW-9 4/8/04 mg/L	MW-10 11/18/98 mg/L	MW-10 5/5/99 mg/L	MW-10 5/11/00 mg/L	MW-10 12/20/01 mg/L	MW-10 8/20/03 mg/L	MW-10 12/23/03 mg/L	MW-10 4/8/04 mg/L	MW-12 5/5/99 mg/L	MW-12 5/11/00 mg/L	MW-12 10/3/00 mg/L
Volatile Organic Compounds (EPA 8260B)																					
1,1-Dichloroethane	**4.9**	**43,000**	75-34-3	**0.065**	**0.098**	**0.104**	**0.250**	**0.170**	**0.190**	**0.170**	**0.110**	**0.043**	**0.055**	< 0.001	< 0.001	**0.0032 J**	**0.0030 J**	**0.0048**	< 0.001	< 0.001	< 0.001
1,1-Dichloroethene	**0.007**	**1,700**	75-35-4	**0.062**	**0.119**	**0.105**	**0.150**	**0.140**	**0.180**	**0.130**	**0.089**	**0.259**	**0.352**	**0.013**	< 0.001	**0.025**	< 0.001	**0.029**	< 0.001	< 0.001	< 0.001
cis-1,2-Dichloroethene	**0.07**	**1,200**	156-59-2	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	**0.0043 J**	**0.0043 J**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	**0.005**	**500**	127-18-4	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	**0.011**	< 0.001	< 0.001
Trichloroethene	**0.005**	**120**	79-01-6	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vinyl chloride	**0.002**	**3.0**	75-01-4	**0.006**	**0.010**	< 0.001	**0.0035**	**0.0068**	**0.011**	**0.0072**	**0.0059**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001

NOTE: COC concentrations above the SDL are shown in **BOLD**
COC concentrations exceeding the Tier 1 Residential Protective Concentration Level (PCL) are shown in **SHADED BOLD**.
* - Constituent associated with offsite LPST facility and not an onsite COC
J - concentration detected betweeen the SDL and the method quantitation limit (MQL) and is an estimated value.
< - not detected at concentrations above the indicated sample detection limit (SDL)
TCEQ - Texas Commission on Environmental Quality
EPA - Environmental Protection Agency

TABLE E7
SUMMARY OF COCs in GROUNDWATER- HISTORICAL(1998 - 2004) - VOCs
Former Halliburton Geophysical Service Facility (Carmax)
Houston, Texas
VCP No. 525

Analyte	Tier 1 $^{GW}GW_{ing}$ Critical PCL without MSD mg/L	Tier 1 $^{Air}GW_{inh-v}$ Critical PCL with MSD mg/L	CAS No.	MW-12 12/20/01 mg/L	MW-12 8/20/03 mg/L	MW-12 12/23/03 mg/L	MW-12 4/8/04 mg/L	MW-13 5/11/00 mg/L	MW-13 12/20/01 mg/L	MW-13 8/20/03 mg/L	MW-13 12/23/03 mg/L	MW-13 4/8/04 mg/L	MW-14 5/11/00 mg/L	MW-14 12/20/01 mg/L	MW-14 8/20/03 mg/L	MW-14 12/23/03 mg/L	MW-14 4/8/04 mg/L
Volatile Organic Compounds (EPA 8260B)																	
1,1-Dichloroethane	**4.9**	**43,000**	75-34-3	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	**0.0065**	**0.0036 J**	< 0.001	**0.083**	**0.230**	**0.290**	**0.240**	**0.210**
1,1-Dichloroethene	**0.007**	**1,700**	75-35-4	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	**0.0023 J**	**0.0028 J**	< 0.001	**0.100**	**0.260**	**0.380**	**0.310**	**0.240**
cis-1,2-Dichloroethene	**0.07**	**1,200**	156-59-2	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	**0.010**	**0.018**	**0.017**	**0.015**
Tetrachloroethene	**0.005**	**500**	127-18-4	< 0.001	**0.0023 J**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	**0.00092 J**	< 0.001	< 0.001
Trichloroethene	**0.005**	**120**	79-01-6	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	**0.012**	**0.014**	**0.019**
Vinyl chloride	**0.002**	**3.0**	75-01-4	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	**0.0038**	**0.005**	**0.002 J**	**0.0037**

NOTE: COC concentrations above the SDL are shown in **BOLD**
COC concentrations exceeding the Tier 1 Residential Protective Concentration Level (PCL) are shown in **SHADED BOLD**.
* - Constituent associated with offsite LPST facility and not an onsite COC
J - concentration detected betweeen the SDL and the method quantitation limit (MQL) and is an estimated value.
< - not detected at concentrations above the indicated sample detection limit (SDL)
TCEQ - Texas Commission on Environmental Quality
EPA - Environmental Protection Agency

TABLE E7
SUMMARY OF COCs in GROUNDWATER- HISTORICAL(1998 - 2004) - VOCs
Former Halliburton Geophysical Service Facility (Carmax)
Houston, Texas
VCP No. 525

Analyte	Tier 1 $^{GW}GW_{ing}$ Critical PCL without MSD mg/L	Tier 1 $^{Air}GW_{inh-v}$ Critical PCL with MSD mg/L	CAS No.	MW-15 12/20/01 mg/L	MW-15 8/20/03 mg/L	MW-15 12/23/03 mg/L	MW-15 4/8/04 mg/L	MW-16 12/20/01 mg/L	MW-16 8/20/03 mg/L	MW-16 12/23/03 mg/L	MW-16 4/8/04 mg/L
Volatile Organic Compounds (EPA 8260B)											
1,1-Dichloroethane	**4.9**	**43,000**	75-34-3	**0.009**	**0.059**	**0.023**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1,1-Dichloroethene	**0.007**	**1,700**	75-35-4	**0.022**	**0.170**	**0.086**	**0.009**	< 0.001	< 0.001	< 0.001	< 0.001
cis-1,2-Dichloroethene	**0.07**	**1,200**	156-59-2	< 0.001	**0.0019 J**	**0.0014 J**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	**0.005**	**500**	127-18-4	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	**0.005**	**120**	79-01-6	< 0.001	**0.0031 J**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vinyl chloride	**0.002**	**3.0**	75-01-4	< 0.001	**0.0031**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001

NOTE: COC concentrations above the SDL are shown in **BOLD**
COC concentrations exceeding the Tier 1 Residential Protective Concentration Level (PCL) are shown in **SHADED BOLD**.
* - Constituent associated with offsite LPST facility and not an onsite COC
J - concentration detected betweeen the SDL and the method quantitation limit (MQL) and is an estimated value.
< - not detected at concentrations above the indicated sample detection limit (SDL)
TCEQ - Texas Commission on Environmental Quality
EPA - Environmental Protection Agency

APPENDIX F – OFFSITE PLUME

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

The onsite VOC plumes do not extend beyond the limits of the designated MSD property (Figure C4).

The offsite VOC plume extends beneath the Bintliff Street right-of-way (ROW) (Figure C4). In the pre-application meeting, the City of Houston was made aware of the issue. No formal notification has been submitted.

The offsite VOC plume has been delineated to the TRRP ingestion PCLs; however, it is unknown whether the offsite COC exceedences in the groundwater extend beyond the Bintliff Drive ROW. During preparation of a Response Action Plan for the site in 2009, the TCEQ requested concurrence from the offsite property owner located at 6800 Bintliff Drive (on the west side of Bintliff Drive) to include this property in the Plume Management Zone (PMZ) and to install a monitoring well on this property. Terracon made several attempts to obtain concurrence from the offsite property owner; however, the offsite property owner rejected inclusion in the PMZ and denied permission to install a groundwater monitoring well. As an alternative, permission to install monitoring wells on the former Target property located west of the 6800 Bintliff Drive property was obtained. Monitoring wells MW-21 and MW-22 were installed on the former Target property in the entrance drive and immediately adjacent to the west side of the 6800 Bintliff Drive property (Figure E1). The COCs 1,1-DCE, TCE, and VC were not detected at concentrations above laboratory SDLs in the groundwater samples collected from these two monitoring wells. The petroleum hydrocarbon constituents and 1,2-DCA detected in monitoring MW-22 are associated with the former Target Tune & Lube facility and not considered further in this application.

APPENDIX G – PLUME STABLILITY

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

Currently, there are three discrete groundwater COC plumes with PCLE Zones: two onsite plumes and one offsite plume. The onsite eastern plume consists of 1,1-DCE and VC PCLE Zones and the onsite western plume consists of 1,1-DCE, VC, and TCE PCLE Zones). The offsite plume beneath the Bintliff Drive ROW consists of 1,1-DCE, VC, and TCE PCLE Zones (Figures C4 and C7). The known extent of the COC PCLE Zones in the offsite plume is limited to beneath Bintliff Drive and the associated City of Houston ROW since the adjacent property owner refused to access to allow further delineation of the offsite groundwater plume; however, groundwater samples from an offsite monitoring well (MW-22) installed immediately adjacent and downgradient to the offsite property was not found to contain COCs in the groundwater above laboratory sample detection limits (SDLs).

The two onsite plumes were formerly one plume containing 1,1-DCE, VC, and TCE exceedences as well as associated TCE daughter products. However, after removal of the potential onsite sources, the natural attenuation of TCE into its associated daughter/breakdown products over time resulted in an overall decrease in COC concentrations and the separation of the initial single onsite groundwater plume into two groundwater plumes. The relatively flat groundwater gradient also allowed natural attenuation to proceed at a rate relatively equal to the groundwater flow velocity which allowed the plumes to stabilize. The off-site plume beneath Bintliff Drive may be associated with a release from the historical site operations; however, the degradation pathway and concentrations of chlorinated solvents present in the off-site plume appear significantly different from the on-site plumes indicating possible comingling with similar COCs released from an unknown offsite source.

The groundwater plumes have been delineated horizontally and vertically to Ingestion PCLs. The onsite sources of contamination have not been present for approximately 15 years. Based on evaluation of groundwater sampling data collected during consecutive groundwater monitoring events for 14 years between 1998 and 2012, the overall groundwater plume is stable or decreasing and the COCs are undergoing natural attenuation (dechloronization and bioremediation). The attached concentration versus time graphs (Graphs G1 to G7) for representative monitoring wells show the trends for each COC with PCL exceedences in the groundwater plumes. Natural attenuation processes affect groundwater chemistry such that when concentrations of the parent COC (TCE) are decreasing or stable, there is often corresponding temporary concentration increases in associated daughter products (e.g., 1,1-DCE and VC) (Graphs G6 and G7). Seasonal groundwater level fluctuations or fluctuations due to severe weather conditions such as drought or tropical storms can also influence COC concentrations.

Petroleum hydrocarbons (benzene, toluene, ethylbenzene) and 1,2-DCA have been detected at concentrations above TRRP Ingestion PCLs in the groundwater samples collected from monitoring well MW-22 between May 2008 and June 2012. The petroleum hydrocarbons and 1,2-DCA are associated with the former Target Tune & Lube facility located approximately 80 feet west of Carmax's off-site monitoring well MW-22. *Since the petroleum hydrocarbons and 1,2-DCA detected in the offsite monitoring well MW-22 are not associated with an onsite source and these COCs are not included in the designated MSD boundary, there is no further discussion of these constituents in this MSD Application. However, the analytical results for the offsite groundwater investigation are included on Figure F1 and Table F5 for informational purposes. The offsite petroleum hydrocarbon and 1,2-DCA concentrations in the groundwater also do not exceed non-ingestion PCLs..*

In summary, site characteristics which support a MSD for the site include the following:

1. Groundwater sampling data obtained over the past 14 years have provided sufficient concentration trend and plume stability data to confirm and demonstrate that the COC PCLE Zones are stable and/or reducing in size;

2. The groundwater plumes have been vertically and horizontally defined to TCEQ ingestion PCLs;

3. The overall relatively low concentrations of the COCs in the groundwater have not exceeded TCEQ non-ingestion PCLs for the past 14 years;

4. Soil PCLE zones have not been identified at the site;

5. A relatively flat hydraulic gradient which has allowed additional time for natural attenuation to occur and decreased the potential for migration beyond the PCLE zones;

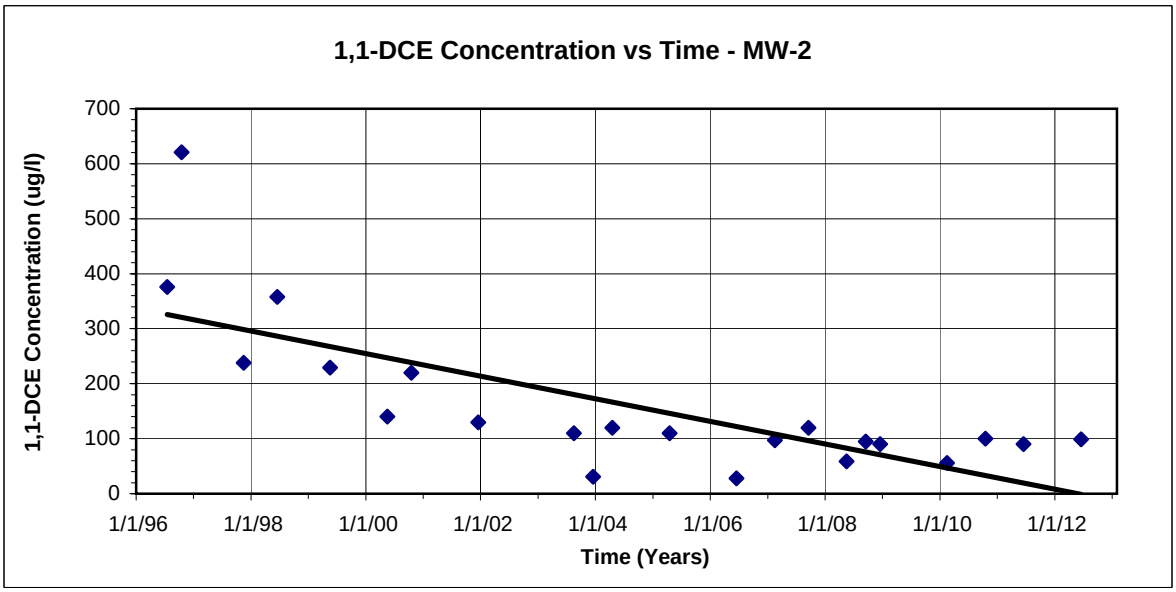
6. Removal of the potential onsite sources for the COCs in the groundwater approximately 15 years ago;

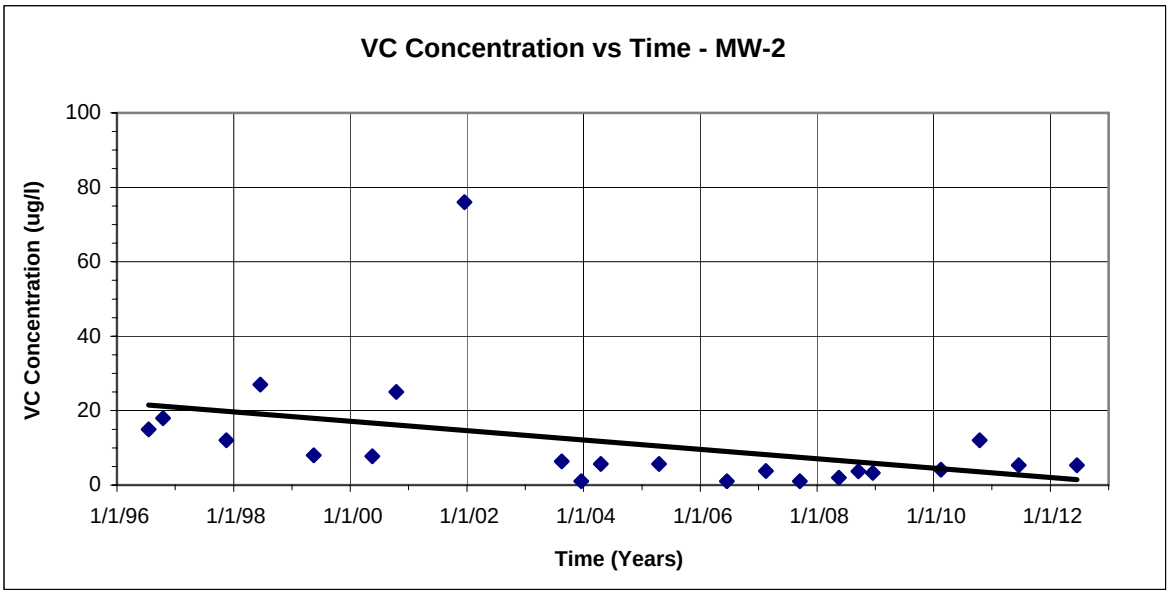
7. No potential receptors are present within or near the PCLE zones which are or are potentially threatened by exposure to the affected groundwater.

8. The site and surrounding properties have access to a municipal water system (City of Houston). The water well search identified the closest public supply well approximately 0.25 mile crossgradient of the designated property. However, this well is screened and produces from greater than 800 feet below ground surface and is separated from the impacted shallow groundwater at the site by an aquitard (impermeable clay layer) hundreds of feet thick.

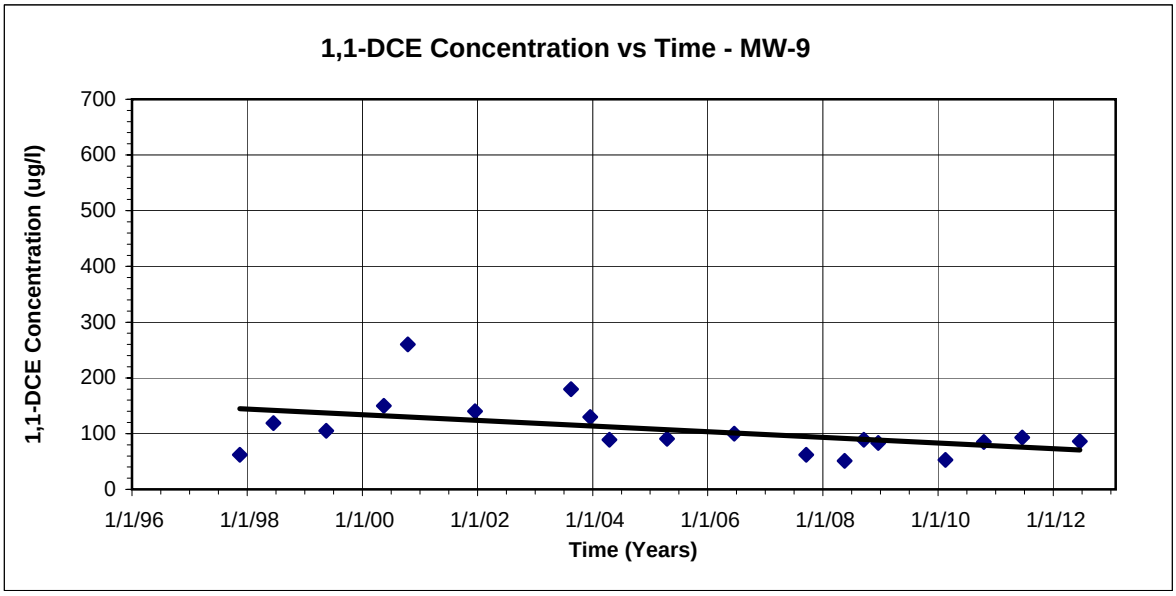
9. In 2009, a Response Action Plan (RAP) with a Plume Management Zone (PMZ) and one year of additional groundwater monitoring was approved for the site by the TCEQ, pending offsite property owner concurrence. The development of the PMZ included calculating attenuation action levels (AALs) for the COCs in monitoring wells designated as attenuation monitoring points (AMPs). The COC concentrations in the AMPs do not exceed the AALs (Table G1).

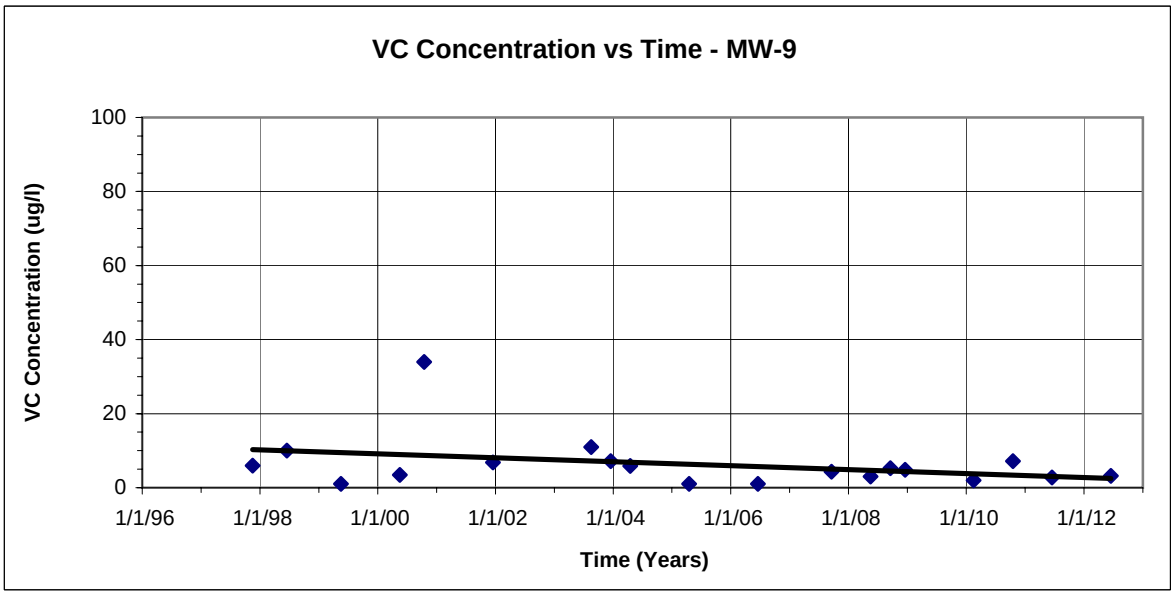
GRAPH G1
Concentration vs Time
Onsite Groundwater Plume - Representative Monitoring Wells)



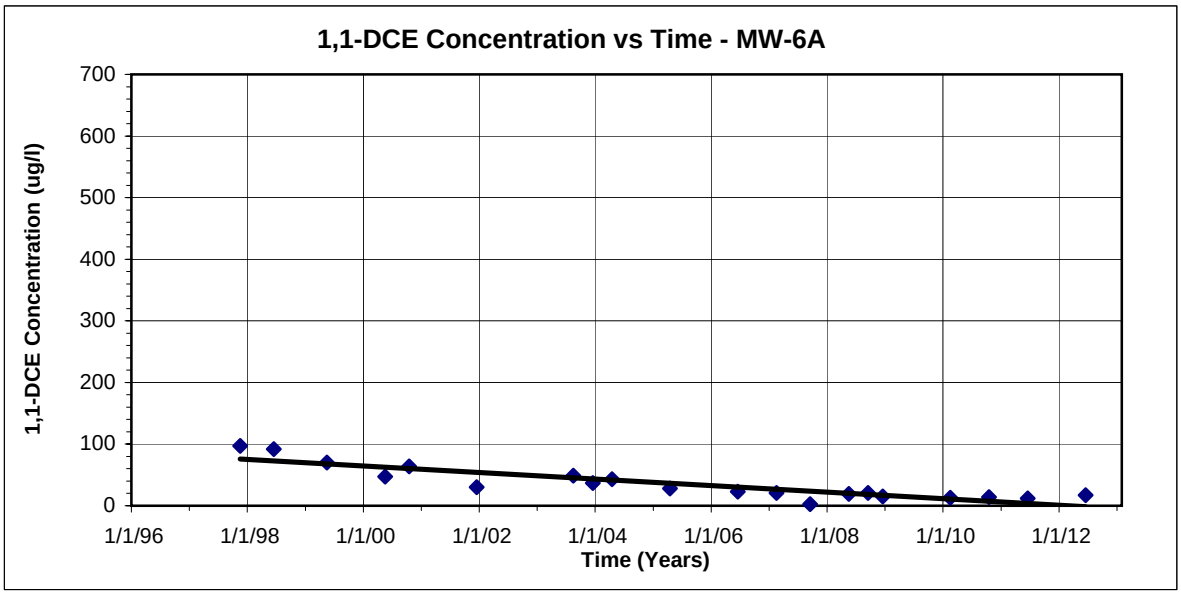


GRAPH G2
Concentration vs Time
Onsite Groundwater Plume - Representative Monitoring Wells

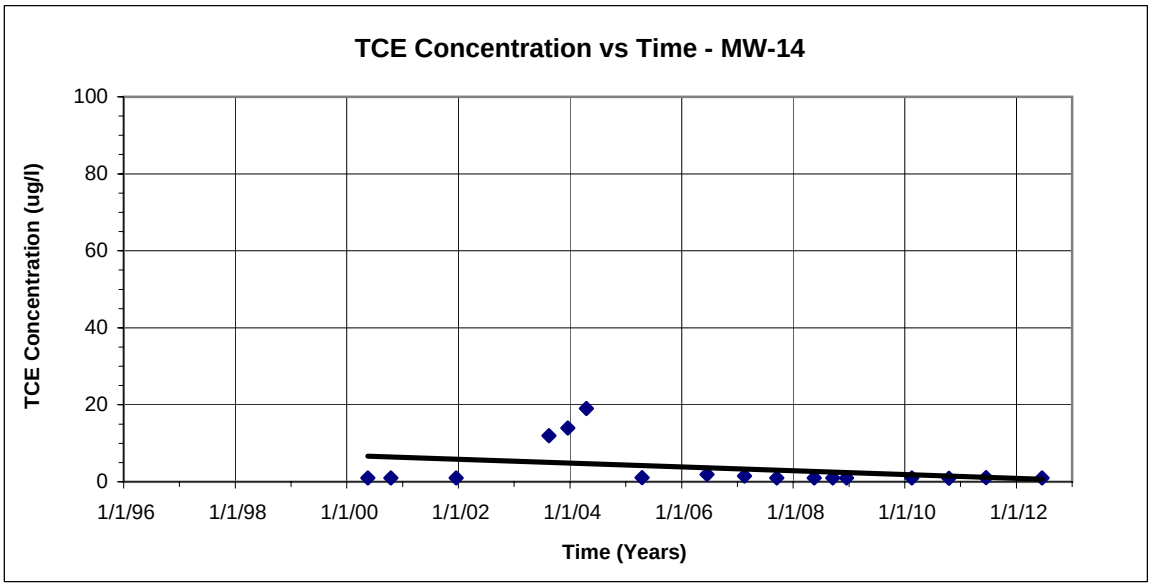


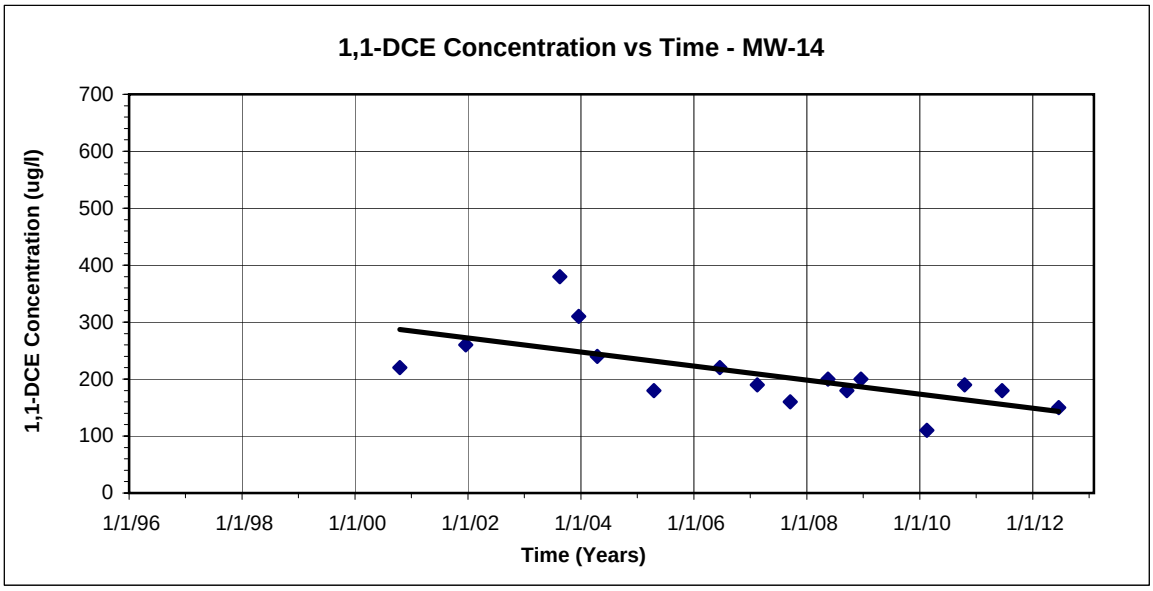


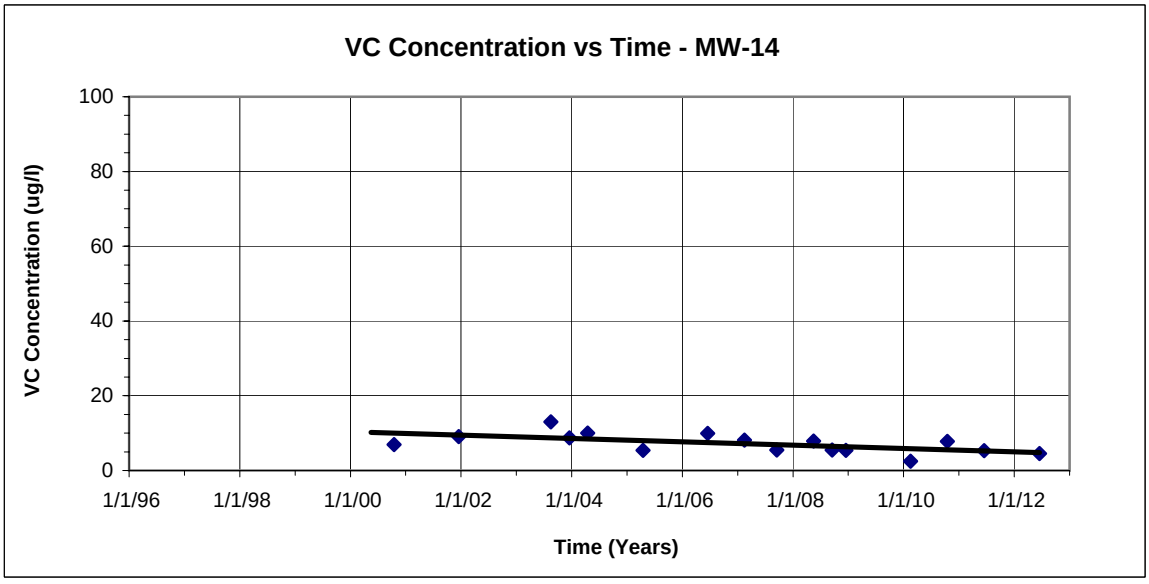
GRAPH G3
Concentration vs Time
Onsite Groundwater Plume - Representative Monitoring Wells



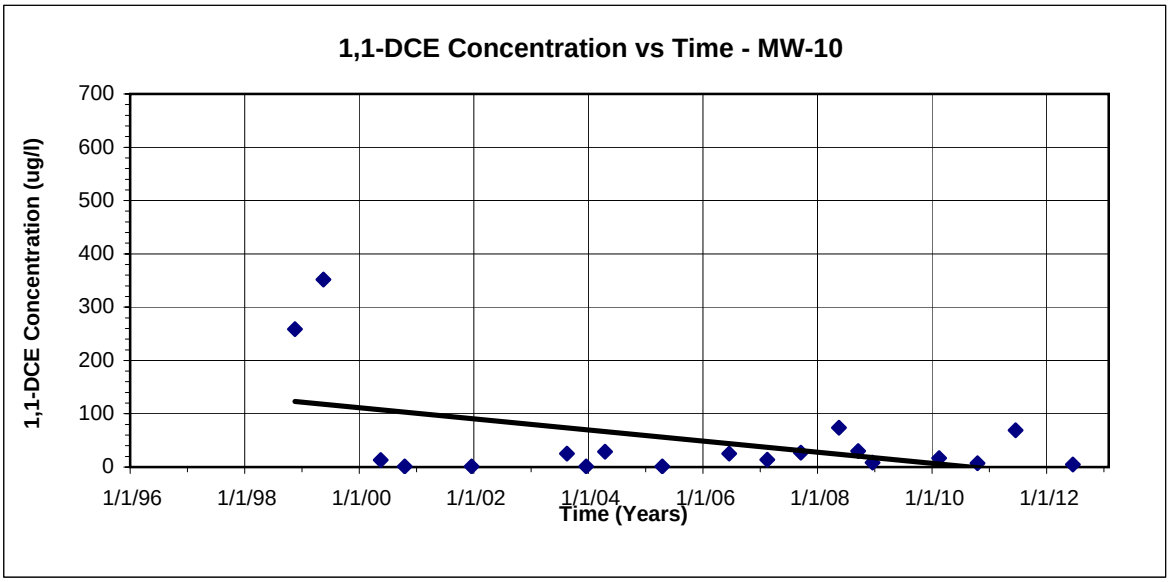
GRAPH G4
Concentration vs Time
Onsite Groundwater Plume - Representative Monitoring Wells



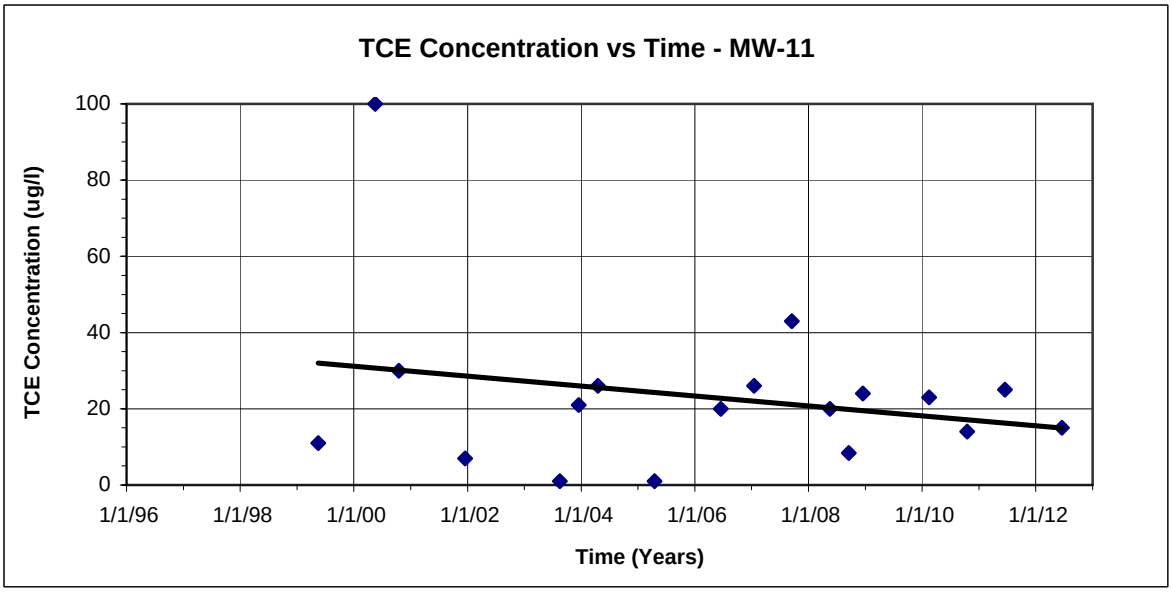


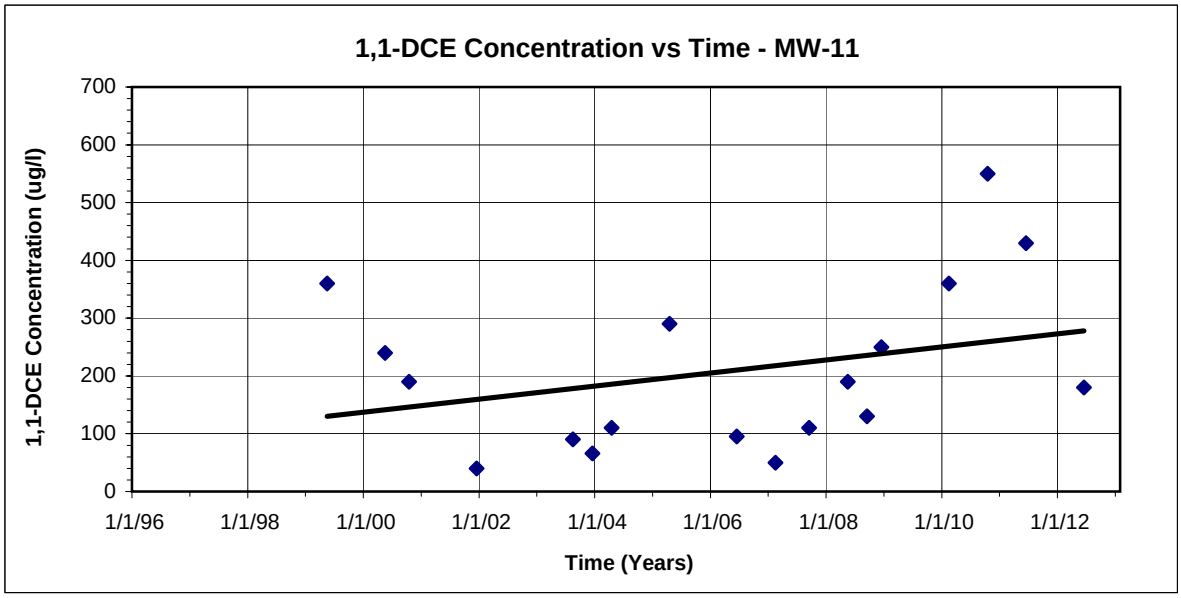


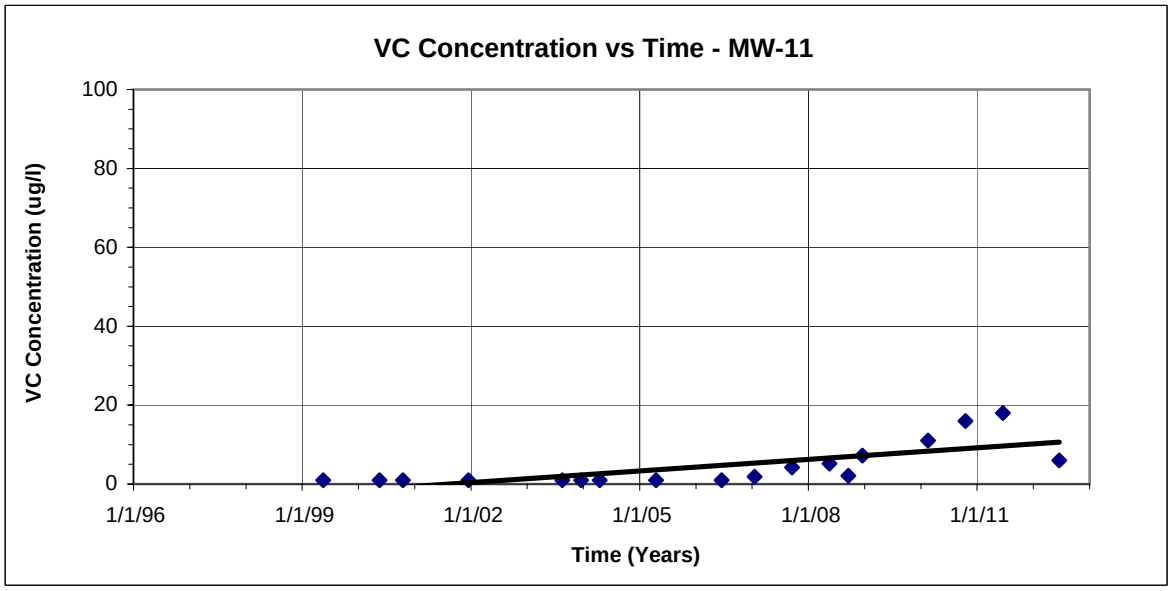
GRAPH G5
Concentration vs Time
Onsite Groundwater Plume - Representative Monitoring Wells



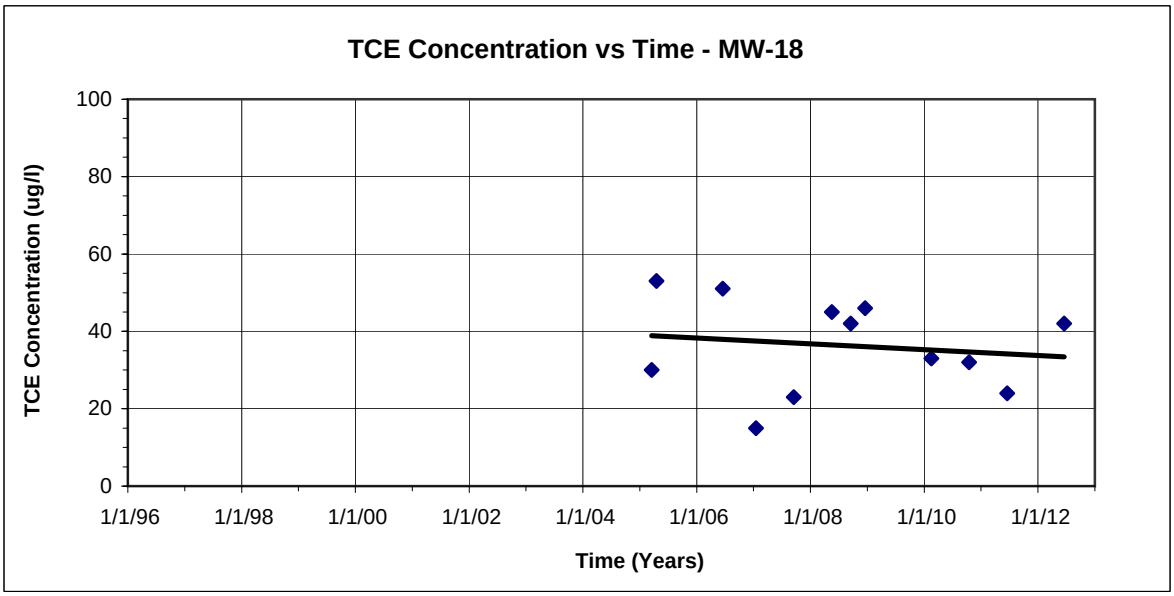
GRAPH G6
Concentration vs Time
Onsite Groundwater Plume - Representative Monitoring Wells

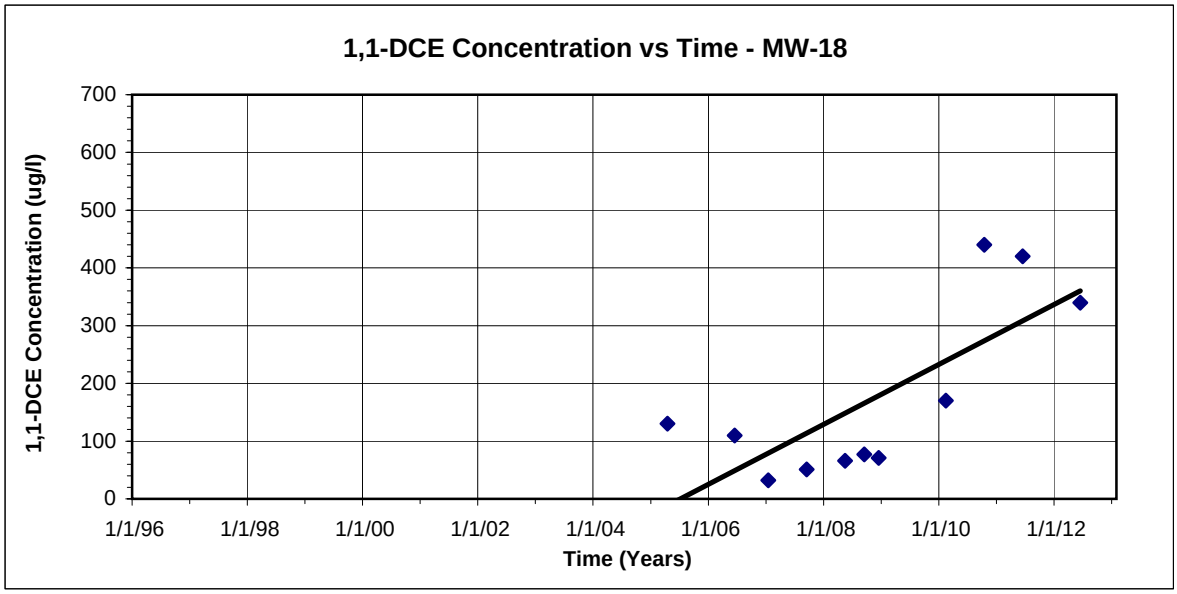






GRAPH G7
Concentration vs Time
Onsite Groundwater Plume - Representative Monitoring Wells





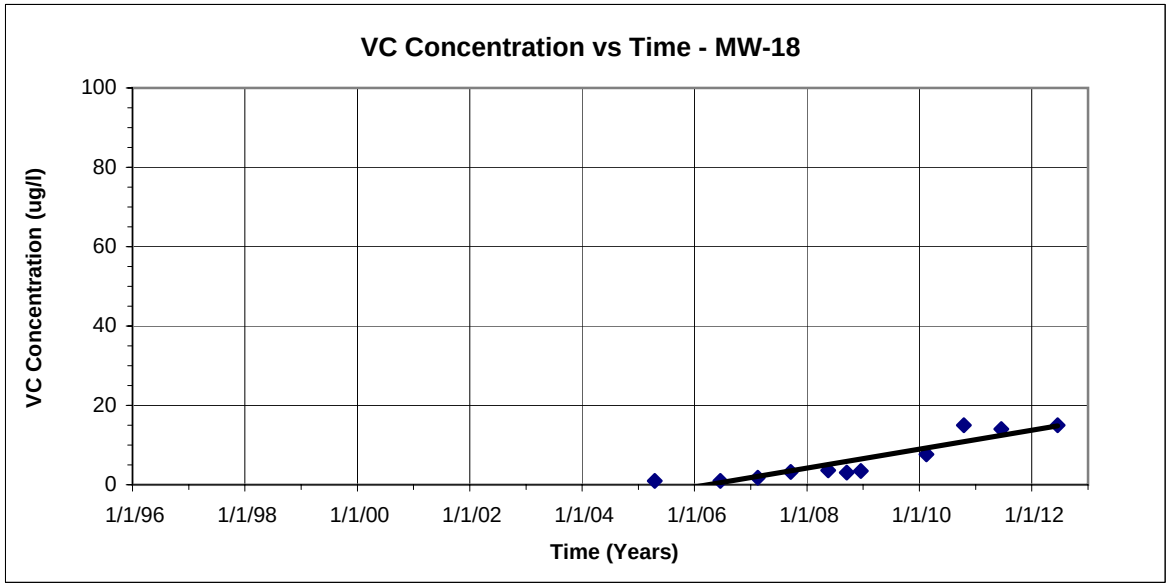


TABLE G1
GROUNDWATER ATTENUATION ACTION POINTS and POINTS OF EXPOSURE
Former Halliburton Geophysical Service Facility (Carmax)
6909 Southwest Freeway, Houston, Texas
VCP No. 525

(concentrations in milligrams per liter (mg/l))

Monitor Well	RAP Well ID	Sample Date	VOCs (EPA 8260B)					
			1,1-Dichloroethene (1,1-DCE)	1,1-DCE AAL	Trichloroethene (TCE)	TCE AAL	Vinyl chloride (VC)	VC AAL
MW-9	AMP West Plume	2/2/10	**0.053**	**7.19**	<0.0005	**0.005**	**0.002 J**	**0.045**
		10/26/10	**0.085**		<0.0005		**0.0072**	
		6/29/11	**0.093**		<0.0011		**0.0028**	
		6/15/12	**0.086**		<0.0005		**0.0032**	
MW-2	AMP West Plume	2/2/10	**0.056**	**2.84**	<0.0005	**0.005**	**0.0041**	**0.029**
		10/26/10	**0.10**		<0.0005		**0.012**	
		6/29/11	**0.090**		<0.0011		**0.0053**	
		6/15/12	**0.099**		<0.0005		**0.0053**	
MW-6A	AMP West Plume	2/2/10	**0.013**	**0.092**	<0.0005	**0.005**	**0.0017 J**	**0.006**
		10/26/10	**0.014**		<0.0005		**0.0011 J**	
		6/29/11	**0.012**		<0.0011		<0.0020	
		6/15/12	**0.017**		<0.0005		<0.0020	
MW-20	AMP West Plume	2/2/10	<0.0005	**0.007**	<0.0005	**0.005**	<0.0005	**0.002**
		10/26/10	<0.0005		<0.0005		<0.0005	
		6/29/11	<0.0013		<0.0011		<0.0010	
		6/15/12	<0.0005		<0.0005		<0.0020	
MW-14	AMP East Plume	2/2/10	**0.110**	**3.64**	<0.0005	**0.048**	**0.0025**	**0.029**
		10/26/10	**0.190**		**0.00091 J**		**0.0078**	
		6/29/11	**0.180**		**0.0011 J**		**0.0053**	
		6/15/12	**0.150**		<0.0005		**0.0045**	
MW-15	AMP East Plume	2/2/10	**0.220**	**1.64**	**0.018**	**0.035**	**0.013**	**0.021**
		10/26/10	**0.260**		**0.0081**		**0.016**	
		6/29/11	**0.200**		**0.016**		**0.0092**	
		6/15/12	**0.200**		**0.021**		**0.010**	
MW-10	AMP East Plume	2/2/10	**0.017**	**0.40**	<0.0005	**0.018**	<0.0005	**0.011**
		10/26/10	**0.0072**		<0.0005		<0.0005	
		6/29/11	**0.069**		**0.0020 J**		<0.0010	
		6/14/12	**0.0049**		<0.0005		<0.0020	

TABLE G1
GROUNDWATER ATTENUATION ACTION POINTS and POINTS OF EXPOSURE
Former Halliburton Geophysical Service Facility (Carmax)
6909 Southwest Freeway, Houston, Texas
VCP No. 525

(concentrations in milligrams per liter (mg/l))

Monitor Well	RAP Well ID	Sample Date	VOCs (EPA 8260B)					
			1,1-Dichloroethene (1,1-DCE)	1,1-DCE AAL	Trichloroethene (TCE)	TCE AAL	Vinyl chloride (VC)	VC AAL
MW-11	AMP East Plume	2/2/10	**0.360**	**1.10**	**0.023**	**0.122**	**0.011**	**0.025**
		10/26/10	**0.550**		**0.014**		**0.016**	
		6/29/11	**0.430**		**0.025**		**0.018**	
		6/14/12	**0.180**		**0.015**		**0.006**	
MW-18	AMP East Plume	2/2/10	**0.17**	**0.60**	**0.033**	**0.081**	**0.0077**	**0.018**
		10/26/10	**0.44**		**0.032**		**0.015**	
		6/29/11	**0.420**		**0.024**		**0.014**	
		6/15/12	**0.340**		**0.042**		**0.015**	
MW-22	POE East Plume	2/2/10	<0.0005	**0.007**	<0.0005	**0.005**	<0.0005	**0.002**
		10/26/10	<0.0005		<0.0005		<0.0005	
		6/29/11	<0.0013		<0.0011		<0.0010	
		6/14/12	<0.0005		<0.0005		<0.0020	
MW-23	POE West Plume	2/2/10	**0.0073**	**0.007**	<0.0005	**0.005**	<0.0005	**0.002**
		10/26/10	**0.0077**		<0.0005		<0.0005	
		6/29/11	**0.0050**		<0.0011		<0.0010	
		6/14/12	**0.0066**		<0.0005		<0.0020	

Notes: Values shown in **bold** exceed the sample detection limit (SDL)
Values shown in **bold and shaded** exceed the AAL

AAL - attenuation action level
AMP - attenuation monitoring point
:POE - point of exposure
VOCs - volatile organic compounds
EPA - United States Environmental Protection Agency
MQL - method quantitation limit
< - not detected at concentrations above the indicated laboratory SDL
J - estimated concentration detected between the SDL and the MQL