

MUNICIPAL SETTING DESIGNATION APPLICATION

100 NORTH JACKSON STREET
HOUSTON, TEXAS 77002

EnSafe Project Number:
0888827870

Prepared for:



City of Houston Public Works
1002 Washington, 3rd Floor
Houston, Texas 77002

April 9, 2021

1011 Highway 6 South, Suite 325
Houston, Texas 77077
832-554-9441 | 800-588-7962



creative thinking. custom solutions.®

April 9, 2021

Mr. Mark Wooten
Municipal Setting Designation Program Coordinator
City of Houston Public Works
1002 Washington, 3rd Floor
Houston, Texas 77002

via overnight delivery

**Re: Municipal Setting Designation
100 North Jackson Street — Houston, Texas**

Dear Mr. Wooten:

Please find enclosed a City of Houston Municipal Setting Designation (MSD) application for the property located at 100 North Jackson Street in Houston, Texas (Site), the former American Engine and Grinding facility. If the City of Houston has any questions or requires additional information, please contact the undersigned at 281-543-7216 or bclevenger@ensafe.com.

Respectfully submitted,

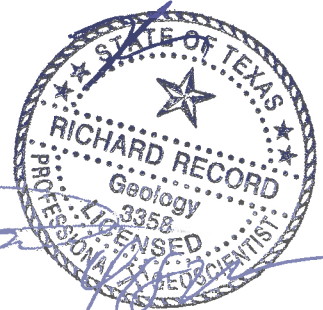
EnSafe Inc.



By: Bryan Clevenger
Sr. Environmental Scientist



Richard Record, PG
Sr. Environmental Geologist (License No. 3358)





Application for Approval of Municipal Setting Designation

APPLICANT INFORMATION

Applicant's Name: Sorensen Real Estate Company LLC
 Individual Private Entity Public Entity Non-Profit Entity Other _____
Address: 42 Robin Lake Lane, Houston, Texas 77024
(Street) (City) (State) (Zip)
Phone No.: 713 851-7767 Fax No.: _____
Email: john@industrybrewery.com

Contact Information

Name of Contact: John Sorensen
Title: Vice President
Address: 42 Robin Lake Lane, Houston, Texas 77024
(Street) (City) (State) (Zip)
Phone No.: 713 851-7767 Fax No.: _____
Email: john@industrybrewery.com

Application Preparation

Application Prepared by: Bryan Clevenger
Company: EnSafe, Inc.
Address: 1011 Highway 6 South, Houston, Texas 77077
(Street) (City) (State) (Zip)
Phone No.: 281 543-7216 Fax No.: _____
Email: bclevenger@ensafe.com

SITE INFORMATION

Site HCAD No(s): 1401400010001

Site Name: 100 North Jackson Street Property

Site Size: 0.47-acres

Site Address: 100 North Jackson Street, Houston, TX 77002
(Street) (City) (State) (Zip)

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

Owner: Sorensen Real Estate Company LLC

Owner Address: 42 Robin Lake Lane, Houston, Texas 77024
(Street) (City) (State) (Zip)

Name of Contact: John Sorensen

Title: Vice President

Organization: Sorensen Real Estate Company LLC

Phone No.: 713 851-7767 Fax No.: _____

Email: john@industrybrewery.com

Owner: _____

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

Name of Contact: _____

Title: _____

Organization: _____

Phone No.: _____ Fax No.: _____

Email: _____

Owner: _____

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

Name of Contact: _____

Title: _____

Organization: _____

Phone No.: _____ Fax No.: _____

Email: _____

Owner: _____

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

Name of Contact: _____

Title: _____

Organization: _____

Phone No.: _____ Fax No.: _____

Email: _____

Owner: _____

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

Name of Contact: _____

Title: _____

Organization: _____

Phone No.: _____ Fax No.: _____

Email: _____

Owner: _____

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

Name of Contact: _____

Title: _____

Organization: _____

Phone No.: _____ Fax No.: _____

Email: _____

Owner: _____

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

Name of Contact: _____

Title: _____

Organization: _____

Phone No.: _____ Fax No.: _____

Email: _____

ITEM	COH Use
Executive Summary	
<p>1. Provide a legal description of the boundaries of the designated property, including metes and bounds, and a copy of the deed for the property. <u>A professional surveyor currently registered with the Texas Board of Professional Surveying must certify that all property descriptions with metes and bounds are accurate.</u></p> <p style="text-align: center;"><u>Label "Appendix A"</u> ✓</p>	
<p>2. A description of the current use and, to the extent known, the anticipated use(s) of the designated property and properties within 500 feet of the boundary of the designated property.</p> <p style="text-align: center;"><u>Label "Appendix B"</u> ✓</p>	
<p>3. A site map showing.</p> <ul style="list-style-type: none"> 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 <u>including the nearest surface water body</u> and whether the designated property is located in a floodplain or floodway, as those terms are defined in Chapter 19 of the Code of Ordinances. c. The detected area of groundwater contamination. d. The location of all soil sampling locations and all groundwater monitoring wells. e. Groundwater gradients, to the extent known, and direction of groundwater flow. f. The ingestion protective concentration level exceedence zone for each contaminant of concern, to the extent known. g. Depth to groundwater for each affected zone. <p style="text-align: center;"><u>Label "Appendix C"</u> ✓</p>	
<p>4. Provide for each contaminant of concern within the designated groundwater:</p> <ul style="list-style-type: none"> 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). <p style="text-align: center;"><u>Label "Appendix D"</u> ✓</p>	
<p>5. A table displaying the following information for each contaminant of concern, to the extent known:</p> <ul style="list-style-type: none"> a. The maximum concentration level for soil and groundwater, the ingestion protective concentration level, and the non-ingestion protective concentration level, all expressed as mg/kg for soils and mg/L for groundwater. b. The critical protective concentration level without the municipal setting designation, highlighting any exceedences. <p style="text-align: center;"><u>Label "Appendix E"</u> ✓</p>	

ITEM	COH Use Only
<p>6. 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 of who affected property owners are, and if there have been any communications. "No contact" can be an acceptable answer.</p> <p style="text-align: center;"><u>Label "Appendix F"</u> ✓</p>	
<p>7. A statement as to whether the source of the plume has been removed, the plume of contamination is stable (i.e. no change) or contracting, and the plume is delineated, <u>with the basis for that statement</u>. Please include historical sampling data.</p> <p style="text-align: center;"><u>Label "Appendix G"</u> ✓</p>	
<p>8. A statement as to whether contamination on and off the designated property <u>without</u> a Municipal Setting Designation <u>will exceed</u> a residential assessment level as defined in the Texas Risk Reduction Program or analogous residential level set by EPA, if known, and the basis for that statement.</p> <p style="text-align: center;"><u>Label "Appendix H"</u> ✓</p>	
<p>9. A statement as to whether contamination on and off the designated property <u>with</u> a Municipal Setting Designation <u>will exceed</u> a residential assessment level as defined in the Texas Risk Reduction Program or analogous residential level set by EPA, if known, and the basis for that statement.</p> <p style="text-align: center;"><u>Label "Appendix I"</u> ✓</p>	
<p>10. Identification of the points of origin of the contamination, to the extent known. <u>Please list the Potentially Responsible Party (PRP), if unknown, state unknown. (applications without the PRP listed will be deemed incomplete)</u></p> <p style="text-align: center;"><u>Label "Appendix J"</u> ✓</p>	
<p>11. Environmental regulatory actions, litigation, and plume identification.</p> <ul style="list-style-type: none"> a. A description of any environmental regulatory actions that have been taken within the past five years in connection with the designated property, to the extent known. b. A description of any litigation that has taken place within the past five years in connection with the designated property, to the extent known. c. A statement as to whether there are any other remediation activities by the applicant, or any other party or agency, which are not listed in the application. d. A statement as to which contamination plume and groundwater zone the applicant is including in the MSD. <p style="text-align: center;"><u>Label "Appendix K"</u> ✓</p>	
<p>12. A listing of all existing state or EPA registrations, permits, and identification numbers that applies to the designated property.</p> <p style="text-align: center;"><u>Label "Appendix L"</u> ✓</p>	

ITEM	COH Use Only
<p>13. Provide evidence that the designated property is currently or has previously been under the oversight of the TCEQ or the United States Environmental Protection Agency, as required by the Texas Health & Safety Code § 361.8065(c)(2)(A), and a description of the status of the designated property in the program (the program application number is sufficient evidence). Also, include the state or federal cleanup project manager's name.</p> <p style="text-align: center;"><u>Label "Appendix M"</u> ✓</p>	
<p>14. A summary of any environmental site assessment reports filed with TCEQ regarding any site investigations or response actions that are planned, ongoing or completed related to the designated property.</p> <p style="text-align: center;"><u>Label "Appendix N"</u> ✓</p>	
<p>15. A statement as to whether any public drinking water supply system exists that satisfies the requirements of Chapter 341 of the Texas Health and Safety Code and that supplies or is capable of supplying drinking water to the designated property and property within one-half mile of the designated property and the identity of each supply system.</p> <p style="text-align: center;"><u>Label "Appendix O"</u> ✓</p>	
<p>16. The name and address of each owner or operator of a water well registered or permitted by the state or the Houston-Galveston Subsidence District that is located within five miles of the boundary of the designated property, along with a map showing the location of each well and, to the extent known, a notation of whether each well is used for potable water. Well logs <u>must</u> be included in the electronic copy of the application, but should not be included in the hard copies. (An accompanying electronic excel file with mailing information should be included with your application.)</p> <p style="text-align: center;"><u>Label "Appendix P"</u> ✓</p>	
<p>17. The name and address of each retail public utility, as defined in section 13.002 of the Texas Water Code that owns or operates a groundwater supply well within five miles of the boundary of the designated property.</p> <p style="text-align: center;"><u>Label "Appendix Q"</u> ✓</p>	
<p>18. A listing of each municipality, other than the city of Houston, with a corporate limit within one-half mile of the boundary of the designated property.</p> <p style="text-align: center;"><u>Label "Appendix R"</u> ✓</p>	
<p>19. A listing of each municipality, other than the city of Houston, that owns or operates a groundwater supply well within five miles of the boundary of the designated property.</p> <p style="text-align: center;"><u>Label "Appendix S"</u> ✓</p>	
<p>20. A listing of owners of real property within 2,500 ft. of the boundary of the designated property as indicated by the most recent appraisal district records. Please Note: This requirement may include real property outside the City of Houston. Be sure to include <u>ALL</u> properties in the 2,500 ft. boundary. (An accompanying electronic excel file with mailing information should be included with your application.)</p> <p style="text-align: center;"><u>Label "Appendix T"</u> ✓</p>	

ITEM	COH Use Only
<p>21. Form U-2012-01 signed and sealed by a licensed professional engineer or licensed professional geoscientist authorized to practice in the State of Texas with expertise in environmental remediation. (Form U-2012-01 can be found at www.houstonmsd.org under the "Forms" section on the homepage.)</p> <p>Signing and sealing Form U-2012-01 certifies:</p> <ul style="list-style-type: none"> a. The contaminants of concern from sources on the designated property or migrating from or through the designated property more likely than not [do exceed] OR [do not exceed] a non-ingestion protective concentration level on property beyond the boundaries of the designated property. (select the appropriate statement) b. All requirements of Section 47-762 of the Houston Code of Ordinances have been met, including demonstration that the groundwater contamination plume has been fully delineated and is stable or contracting in size <p style="text-align: center;"><u>Label "Appendix U"</u> ✓</p>	
<p>22. If the licensed professional engineer or licensed professional geoscientist determines that contaminants of concern from sources on the designated property are migrating from or through the designated property more likely than not do exceed a non-ingestion protective concentration level on property beyond the boundary of the designated property, then the applicant must:</p> <ul style="list-style-type: none"> a. Specify the name and address of the owner of each property. b. Send a copy of the application to the owner of the property with the notice of the public meeting. c. Provide documentation that the designated property has been included in a state or federal program that requires that the entire non-ingestion protective concentration level exceedance zone be addressed to the satisfaction of the agency administering the program, along with documentation of the estimated time period in which it is to be addressed. An example of such a program is the Texas Voluntary Cleanup Program (section 361.501 of the Texas Health and Safety Code, as may be amended from time to time). d. Provide documentation upon completion of the state or federal program showing that the non-ingestion protective concentration level exceedances have been addressed to the satisfaction of the agency administering the program. <p style="text-align: center;"><u>Label "Appendix V"</u> ✓</p>	
<p>23. Form W-2012-01 certified/signed by the applicant and any authorized representatives of the applicant(s) listed in the application. (Form W-2012-01 is attached to the end of this application and can also be found at www.houstonmsd.org under the "Forms" section on the homepage.)</p> <p style="text-align: center;"><u>Label "Appendix W"</u> ✓</p>	
<p>24. Form X-2012-01 signed by the property owner or authorized agent (if an authorized agent, you must provide the legal authorization instrument). (Form W-2012-01 is attached to the end of this application and can also be found at www.houstonmsd.org under the "Forms" section on the homepage.)</p> <p style="text-align: center;"><u>Label "Appendix X"</u> ✓</p>	
<p>25. A CD (or other devise) containing the pdf file of the application, Excel spreadsheet of water well owners and property owners for mailing notices, and the pdf file of the well log report.</p> <p style="text-align: center;"><u>Label "Appendix Y"</u> ✓</p>	

EXECUTIVE SUMMARY

The property located at 100 North Jackson Street, Houston, Texas (Site) is being redeveloped into a craft brewery. The soil and groundwater at the Site were impacted by the operations of prior owners/operators and include petroleum-related chemicals of concern (COCs). The former owner/operator, American Engine and Grinding, used the Site from 1978 until 2019 for auto repair and manufacturing. The American Engine and Grinding facility was closed and the building was removed in February 2020. The Site meets the City of Houston's Municipal Setting Designation (MSD) eligibility requirements summarized below and as detailed throughout this application.

1. **The Site has been thoroughly investigated.**

Soil at the Site has been evaluated through the installation of seventeen (17) soil borings with forty (40) soil samples collected at various depths and analyzed for COCs including volatile organic compounds, total petroleum hydrocarbons, Resource Conservation and Recovery Act 8 metals, and poly-nuclear aromatic hydrocarbons.

A total of six (6) groundwater monitoring wells were installed and sampled. Based on data from the four (4) groundwater monitoring events in April 2020, June 2020, October 2020, and January 2021, only benzene, and only in two (2) of the groundwater monitoring wells, MW-01 (ranging from 0.190 to 0.0391 milligrams per liter [mg/L]) and MW-02 (ranging from 0.0125 to 0.272 mg/L), exceeded the Texas Commission on Environmental Quality's (TCEQ's) Texas Risk Reduction Program (TRRP) Tier 1 Residential ^{GW}GW_{ING} Protective Concentration Level (ingestion PCL) of 0.005 mg/L for benzene applicable without an MSD,. All benzene concentrations were and are well below the TRRP Tier 1 Residential ^{AIR}GW_{INH-V} PCL (non-ingestion PCL) of 180 mg/L applicable with an MSD.

2. **The source of contamination has been removed.**

During the Site investigation in June 2020, a steel sump was encountered beneath the former American Engine and Grinding building. Between June and July 2020, the sump was removed along with impacted soils where the highest COC concentrations were identified at the Site. After confirmatory sampling, all soil COC concentrations at the Site were found to be below critical TRRP Tier 1 Residential PCLs, with the assumption of obtaining an MSD.

3. **The Site is enrolled in the Voluntary Cleanup Program.**

On January 14, 2021, the Site was accepted into the TCEQ's Voluntary Cleanup Program (VCP ID No. 3126) for oversight of the Site investigation and remedial activities.

4. **The groundwater plume is delineated to the ^{GW}GW_{ING} PCL.**
Benzene concentrations in monitoring wells to the north-northwest (MW-05), northeast (MW-04), southeast (MW-03), and southwest (MW-06) were all non-detect or low-level detections below the Residential ^{GW}GW_{ING} PCL.

5. **The groundwater plume is stable.**
Statistical analysis of groundwater benzene data from monitoring events in April 2020, June 2020, October 2020, and January 2021 show that groundwater benzene concentrations are stable.

Appendix A

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

A professional survey and legal description of the Site, including metes and bounds, and a copy of the deed for the property are provided in Appendix A.

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

SPECIAL WARRANTY DEED

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

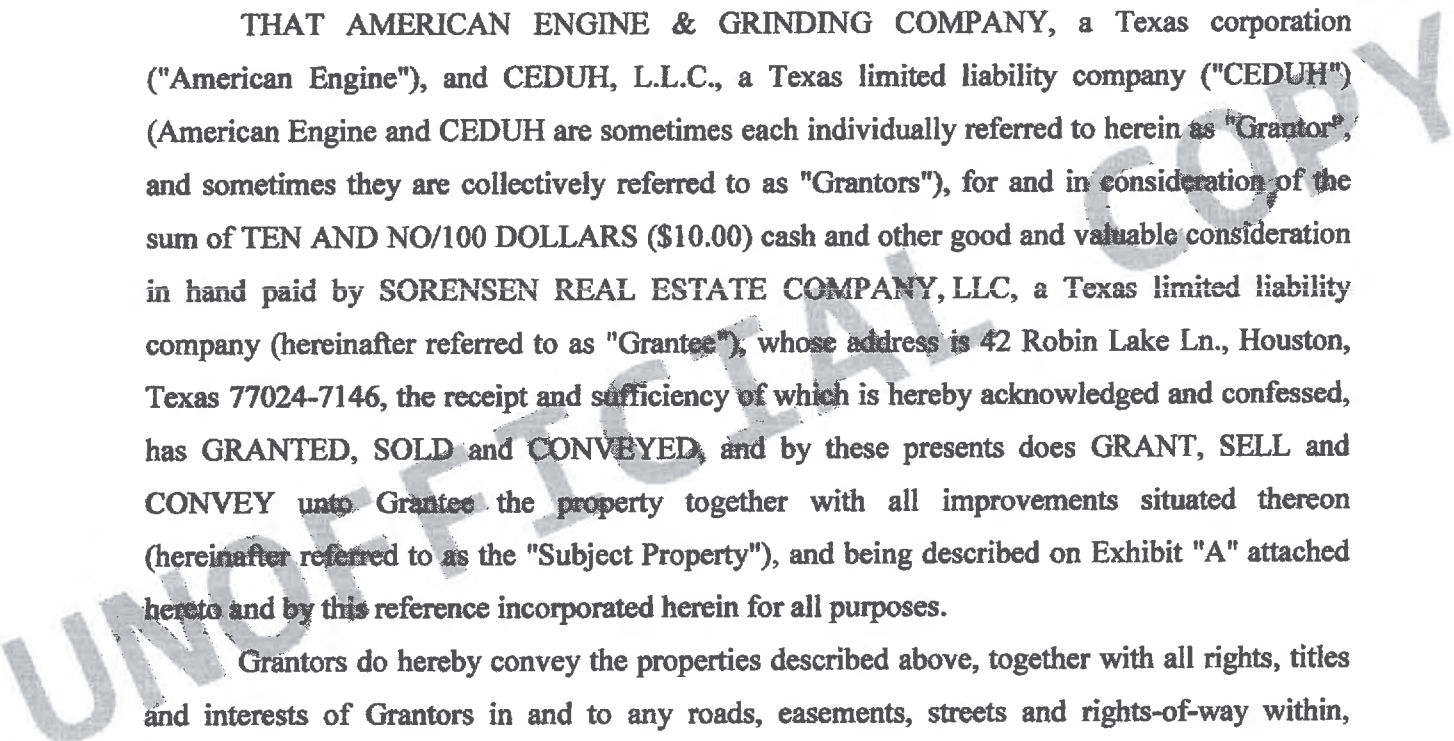
THAT AMERICAN ENGINE & GRINDING COMPANY, a Texas corporation ("American Engine"), and CEDUH, L.L.C., a Texas limited liability company ("CEDUH") (American Engine and CEDUH are sometimes each individually referred to herein as "Grantor", and sometimes they are collectively referred to as "Grantors"), for and in consideration of the sum of TEN AND NO/100 DOLLARS (\$10.00) cash and other good and valuable consideration in hand paid by SORENSEN REAL ESTATE COMPANY, LLC, a Texas limited liability company (hereinafter referred to as "Grantee"), whose address is 42 Robin Lake Ln., Houston, Texas 77024-7146, the receipt and sufficiency of which is hereby acknowledged and confessed, has GRANTED, SOLD and CONVEYED, and by these presents does GRANT, SELL and CONVEY unto Grantee the property together with all improvements situated thereon (hereinafter referred to as the "Subject Property"), and being described on Exhibit "A" attached hereto and by this reference incorporated herein for all purposes.

Grantors do hereby convey the properties described above, together with all rights, titles and interests of Grantors in and to any roads, easements, streets and rights-of-way within, adjoining, adjacent or contiguous to the Subject Property, and all condemnation awards, reservations, remainders, together with each and every right, privilege, hereditament and appurtenance in anywise incident or appertaining to the Subject Property. The term "Subject Property" shall refer to and include the property as described in this paragraph.

The conveyance is made and accepted subject to the exceptions (the "Permitted Exceptions") set forth on Exhibit "B" attached hereto and by this reference incorporated herein for all purposes.

TO HAVE AND TO HOLD the Subject Property, to the extent conveyed, subject to the Permitted Exceptions, together with all and singular the rights and appurtenances thereto in

RP-2019-41849



anywise belonging, unto Grantee and Grantee's successors and assigns forever. And each individual Grantor does hereby bind such Grantor and such Grantor's successors and assigns to warrant and forever defend all and singular the said Subject Property, to the extent conveyed, subject to the Permitted Exceptions, unto Grantee and Grantee's successors and assigns against every person whomsoever lawfully claiming or to claim the same or any part thereof, through or under Grantor, but not otherwise.

GRANTEE IS TAKING THE SUBJECT PROPERTY IN AN ARM'S-LENGTH AGREEMENT BETWEEN THE PARTIES. THE CONSIDERATION WAS BARGAINED ON THE BASIS OF AN "AS IS, WHERE IS" TRANSACTION AND REFLECTS THE AGREEMENT OF THE PARTIES THAT, EXCEPT AS SET FORTH IN THE CONTRACT FOR THE SALE OF THE SUBJECT PROPERTY BETWEEN THE GRANTORS, AS SELLER, AND GRANTEE, AS BUYER, AND IN THIS DEED, THERE ARE NO REPRESENTATIONS OR EXPRESS OR IMPLIED WARRANTIES. ALSO, EXCEPT AS SET FORTH IN THE CONTRACT, GRANTEE HAS NOT RELIED ON ANY INFORMATION OTHER THAN GRANTEE'S INSPECTION.

Taxes for the current year are hereby assumed by Grantee.

EXECUTED on this the 31st day of JANUARY, 2019.

GRANTORS:

AMERICAN ENGINE & GRINDING COMPANY,
a Texas corporation

By: Franklin Hudde
Name: Franklin Hudde
Title: President

CEDUH, L.L.C.,
a Texas limited liability company

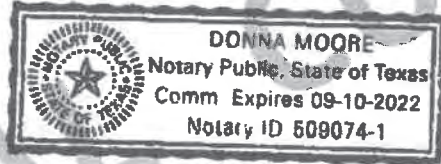
By: Franklin Hudde
Name: Franklin Hudde
Title: Manager

THE STATE OF TEXAS §
 §
COUNTY OF HARRIS §

BEFORE ME, the undersigned authority, on this day personally appeared Franklin Hudec, President of AMERICAN ENGINE & GRINDING COMPANY, a Texas corporation, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he/she executed the same for the purposes and consideration therein expressed and in the capacity therein set forth.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 31st day of JANUARY, 2019.

Donna Moore
NOTARY PUBLIC IN AND FOR
THE STATE OF TEXAS

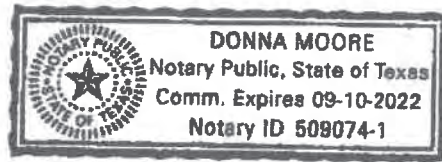


THE STATE OF TEXAS §
 §
COUNTY OF HARRIS §

BEFORE ME, the undersigned authority, on this day personally appeared Franklin Hudec Manager of CEDUH, L.L.C., a Texas limited liability company, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he/she executed the same for the purposes and consideration therein expressed and in the capacity therein set forth.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 31st day of JANUARY, 2019.

Donna Moore
NOTARY PUBLIC IN AND FOR
THE STATE OF TEXAS



AFTER RECORDING RETURN TO:

Sorensen Real Estate Company, LLC
42 Robin Lake Ln.
Houston, Texas 77024-7146

3147722_1

NP-ZU19-4 1049

EXHIBIT "A"
Subject Property

ALL OF UNRESTRICTED RESERVE "A", BLOCK ONE (1), OF INDUSTRY BREWERY, A SUBDIVISION IN HARRIS COUNTY, TEXAS, ACCORDING TO THE MAP OR PLAT THEREOF RECORDED UNDER FILM CODE No. 686021 OF THE MAP RECORDS OF HARRIS COUNTY, TEXAS.

UNOFFICIAL COPY

EXHIBIT "B"
Permitted Exceptions

1. Restrictive covenants contained in the instruments recorded under Film Code No. 686021 of the Map Records of Harris County, Texas.
2. Controlled access road which denies direct access to Highway 59 North and requires removal of improvements, as set forth in Clerk's File No. N479779 of the Real Property Records of Harris County Texas.
3. Controlled access road which denies direct access to Highway 59 North as set forth in Clerk's File No. N638183 of the Real Property Records of Harris County, Texas.
4. Any rights, easements, interests or claims which may exist by reason of or reflected by the following facts show on the survey dated June 7, 2018 by Michael Hall RPLS 5765, Civil-Surv Project No. CS 18076:
 - a. Gas line paint strips found along the southwesterly property line.
 - b. Air conditioning unit encroachment along the northwesterly property line.
 - c. Fences do not follow property lines as shown on survey.
 - d. Metal building extending .03' outside property line.

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RP-2019-41849
Pages 6
01/31/2019 02:15 PM
e-Filed & e-Recorded in the
Official Public Records of
HARRIS COUNTY
DIANE TRAUTMAN
COUNTY CLERK
Fees \$32.00

RECORDERS MEMORANDUM

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

Any provision herein which restricts the sale, rental, or use of the described real property because of color or race is invalid and unenforceable under federal law.

THE STATE OF TEXAS
COUNTY OF HARRIS

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



Diane Trautman

COUNTY CLERK
HARRIS COUNTY, TEXAS

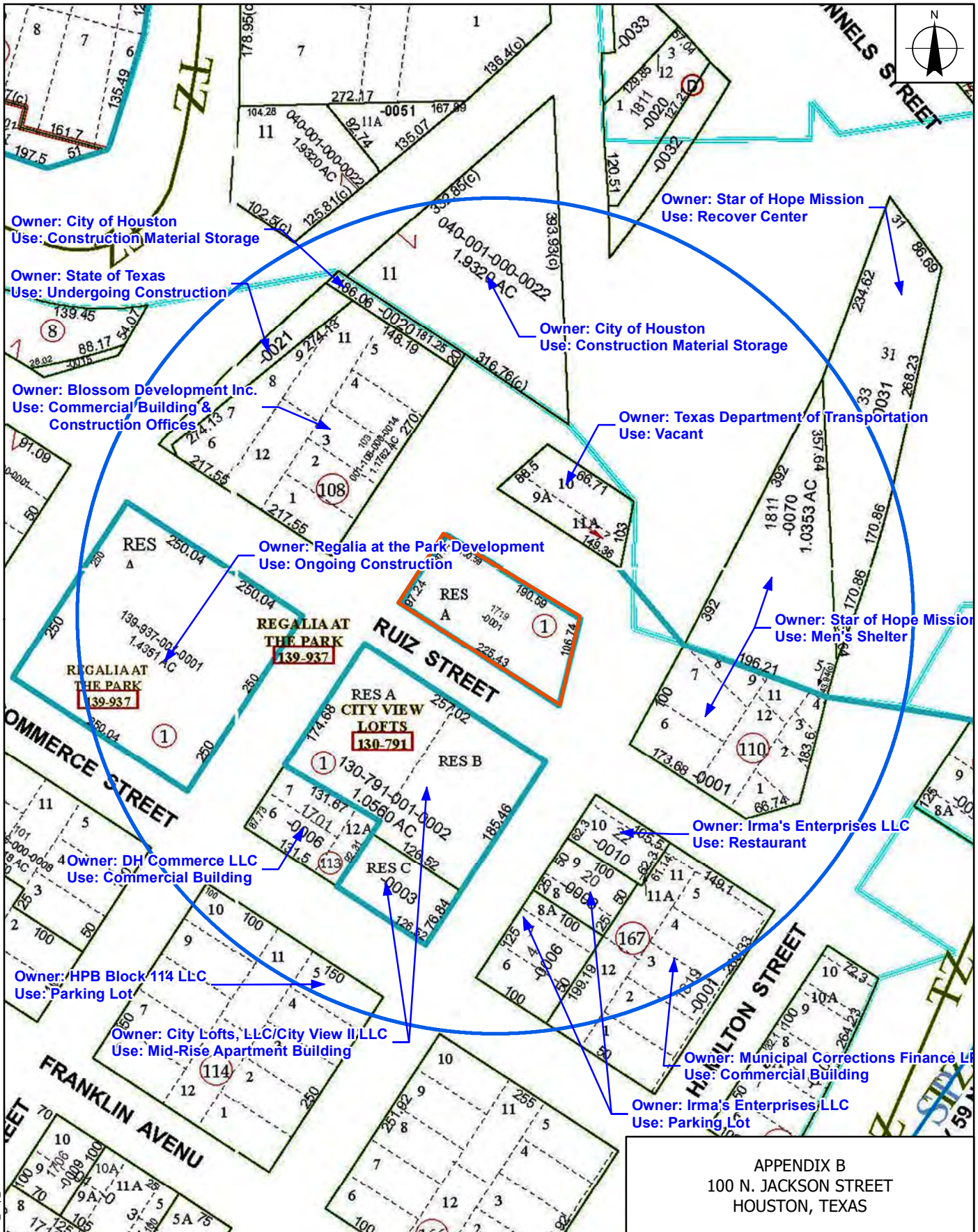
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Appendix B

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

The Site is currently undergoing re-development for commercial use as a craft brewery. Surrounding property usage within five hundred (500) feet of the Site include commercial buildings, parking lots, storage lots, vacant lots, apartment buildings, a men's shelter, and City of Houston and Texas Department of Transportation properties. A map depicting surrounding area property usages within five hundred (500) feet of the Site is also provided in this Appendix B.



LEGEND

- 500-FOOT RADIUS
- APPROXIMATE SUBJECT PROPERTY BOUNDARY

NAD 1983 STATE PLANE
TEXAS SOUTH CENTRAL FEET

0 80 160

SCALE IN FEET

REQUESTED BY:	BC
DRAWN BY:	MS
DATE:	3/12/2021
PROJECT:	0888827870

APPENDIX B
100 N. JACKSON STREET
HOUSTON, TEXAS

ENSAFE
Creative thinking. Custom solutions.
800.588.7962 | www.ensafe.com

X:\Industry\Brewery\Panel_Map_v2.mxd

Appendix C

A Site map showing:

- a. **The location of the designated property.**
Appendix C-A (*see also*, Appendix B)
- 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.**
Appendix C-B
- c. **The detected area of groundwater contamination.**
Appendix C-C
- d. **The location of all soil sampling locations and all groundwater monitoring wells.**
Appendix C-D
- e. **Groundwater gradients, to the extent known, and direction of groundwater flow.**
Appendix C-E
- f. **The ingestion protective concentration level exceedance zone for each contaminant of concern, to the extent known.**
Appendix C-F
- g. **Depth to groundwater for each affected zone.**
Appendix C-G



I:\CAD PROJECTS\Industry Brewery\22870\Plans\22870_8001_INDUSTRY BREWERY_TX.dwg

APPENDIX C-A
100 N. JACKSON STREET
HOUSTON, TEXAS

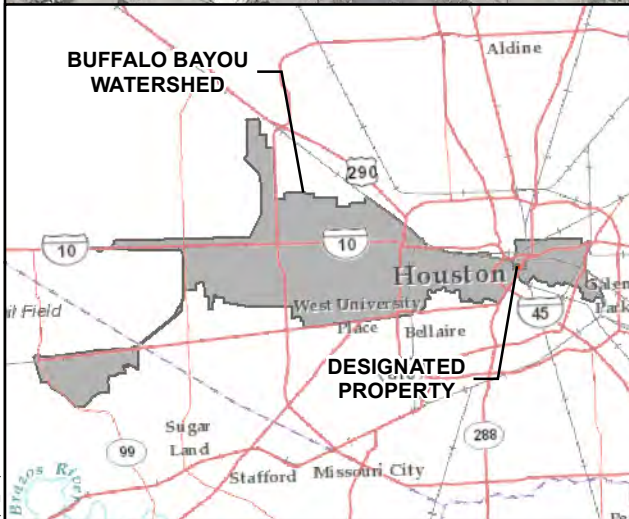
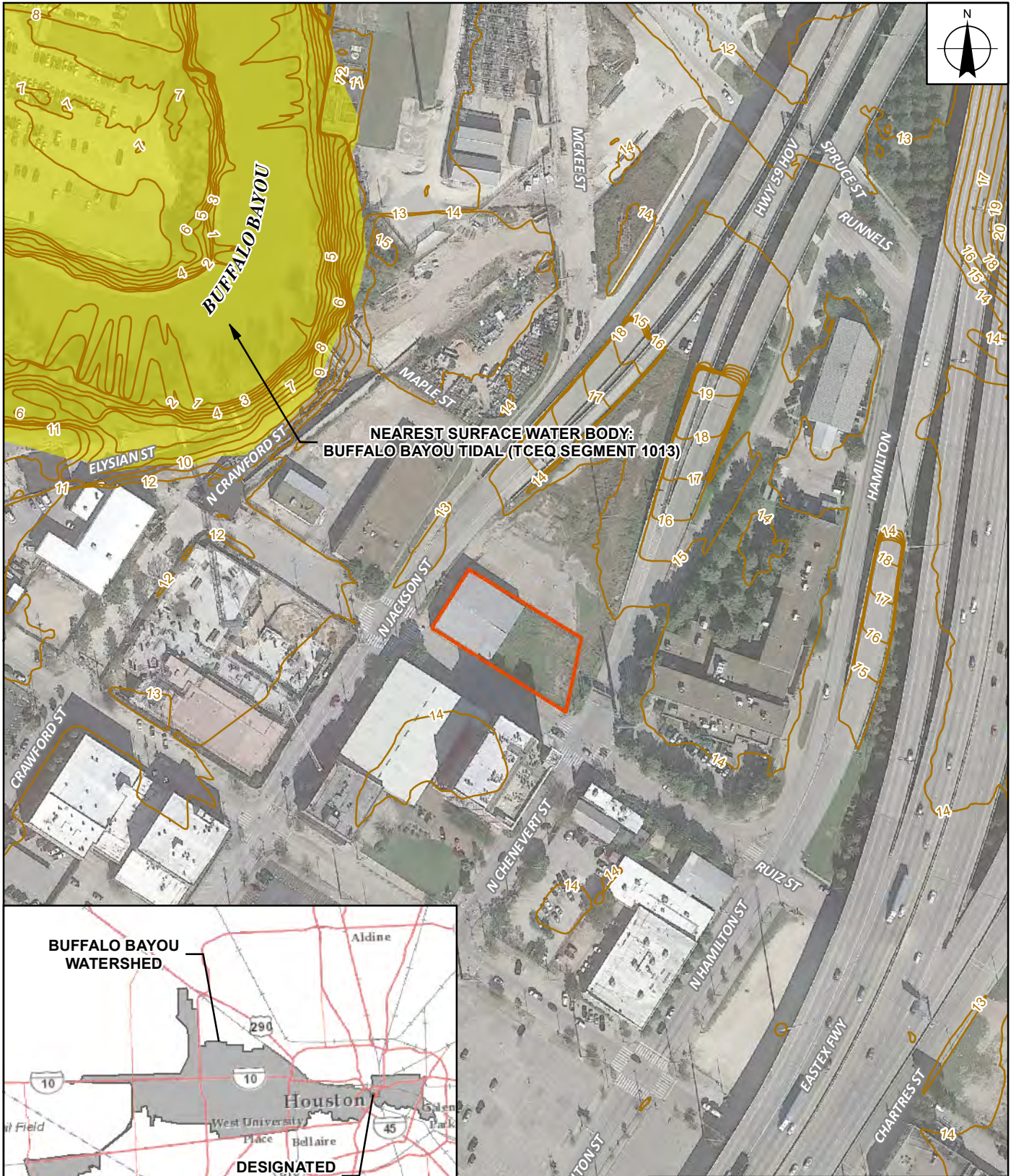
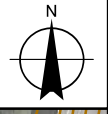
LEGEND
— APPROXIMATE DESIGNATED PROPERTY BOUNDARY

NAD 1983 STATE PLANE
TEXAS SOUTH CENTRAL FEET
0 50 100
SCALE IN FEET

REQUESTED BY: JM
DRAWN BY: KMB
DATE: 3/24/2021
PROJECT: 0888827870

ENSAFE
Creative thinking. Custom solutions.
800.588.7962 | www.ensafe.com

Source: Google Earth Pro Imagery Date: May 9, 2020



APPENDIX C-B
100 N. JACKSON STREET
HOUSTON, TEXAS

LEGEND

- CONTOURS
- 100-YEAR FLOOD PLAIN
- DESIGNATED PROPERTY

NAD 1983 STATE PLANE
TEXAS SOUTH CENTRAL FEET

0 80 160

SCALE IN FEET

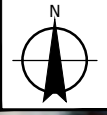
REQUESTED BY:	BC
DRAWN BY:	MS
DATE:	3/12/2021
PROJECT:	0888827870



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I:\CAD PROJECTS\Industry Brewery\22870\Plans\27870_8003_GW_BENZENE_INDUSTRY BREWERY_TX.dwg



MW-05

BENZENE
 10/12/2020 <0.0000941
 01/08/2021 **0.000221**

MW-04

BENZENE
 10/12/2020 **0.000155**
 01/08/2021 **0.000237**

MW-01

BENZENE
 4/9/2020 0.0241
 6/9/2020 0.0391
 10/12/2020 0.0190
 01/08/2021 0.0344

MW-03

BENZENE
 4/9/2020 <0.000331
 6/9/2020 **0.000106**
 10/12/2020 <0.0000941
 01/08/2021 **0.000216**

MW-02

BENZENE
 4/9/2020 0.0125
 6/9/2020 0.115
 10/12/2020 0.272
 01/08/2021 0.115

MW-06

BENZENE
 10/12/2020 <0.0000941
 01/08/2021 <0.0000941

APPENDIX C-C
 100 N. JACKSON STREET
 HOUSTON, TEXAS

LEGEND

APPROXIMATE DESIGNATED PROPERTY BOUNDARY

PERMANENT GROUNDWATER MONITORING WELL

REMOVED MONITORING WELL LOCATION

NOTE:
 ALL VALUES ARE IN MILLIGRAM PER LITER (mg/L).

NAD 1983 STATE PLANE
 TEXAS SOUTH CENTRAL FEET

0 30 60

SCALE IN FEET

REQUESTED BY: BC

DRAWN BY: CC

DATE: 3/23/2021

PROJECT: 0888827870

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APPENDIX C-D
 100 N. JACKSON STREET
 HOUSTON, TEXAS

LEGEND

- ▬ APPROXIMATE DESIGNATED PROPERTY BOUNDARY
- ⊕ PERMANENT GROUNDWATER MONITORING WELL
- SOIL BORING LOCATION
- REMOVED STEEL SUMP

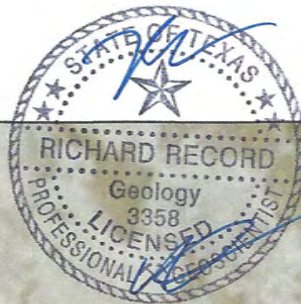
NAD 1983 STATE PLANE
 TEXAS SOUTH CENTRAL FEET

0 30 60

SCALE IN FEET

REQUESTED BY:	JM
DRAWN BY:	KMB
DATE:	3/24/2021
PROJECT:	0888827870

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**APPENDIX C-E1
APRIL 2020
GROUNDWATER GRADIENT MAP
INDUSTRY BREWERY
100 N. JACKSON STREET
HOUSTON, TEXAS**

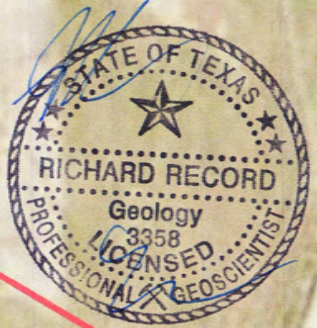
LEGEND

- APPROXIMATE SUBJECT PROPERTY BOUNDARY
- ◆ 4-FOOT PERMANENT GROUNDWATER MONITORING WELL
- 10-FOOT SOIL BORING LOCATION
- POTENTIOMETRIC SURFACE CONTOURS
- GROUNDWATER FLOW DIRECTION

NAD 1983 STATE PLANE
TEXAS FEET
0 20 40
SCALE IN FEET

REQUESTED BY:	BC	ENSAFE <small>Creative thinking. Custom solutions. 800.588.7962 www.ensafe.com</small>
DRAWN BY:	JT	
DATE:	5/08/2020	
PROJECT:	0888827009	

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APPENDIX C-E2
JUNE 2020
GROUNDWATER GRADIENT MAP
INDUSTRY BREWERY
100 N. JACKSON STREET
HOUSTON, TEXAS

I:\CAD PROJECTS\Industry Brewery\27349\Plans\27349_B001_GW GRADIENT_INDUSTRY BREWERY_TX.dwg

LEGEND

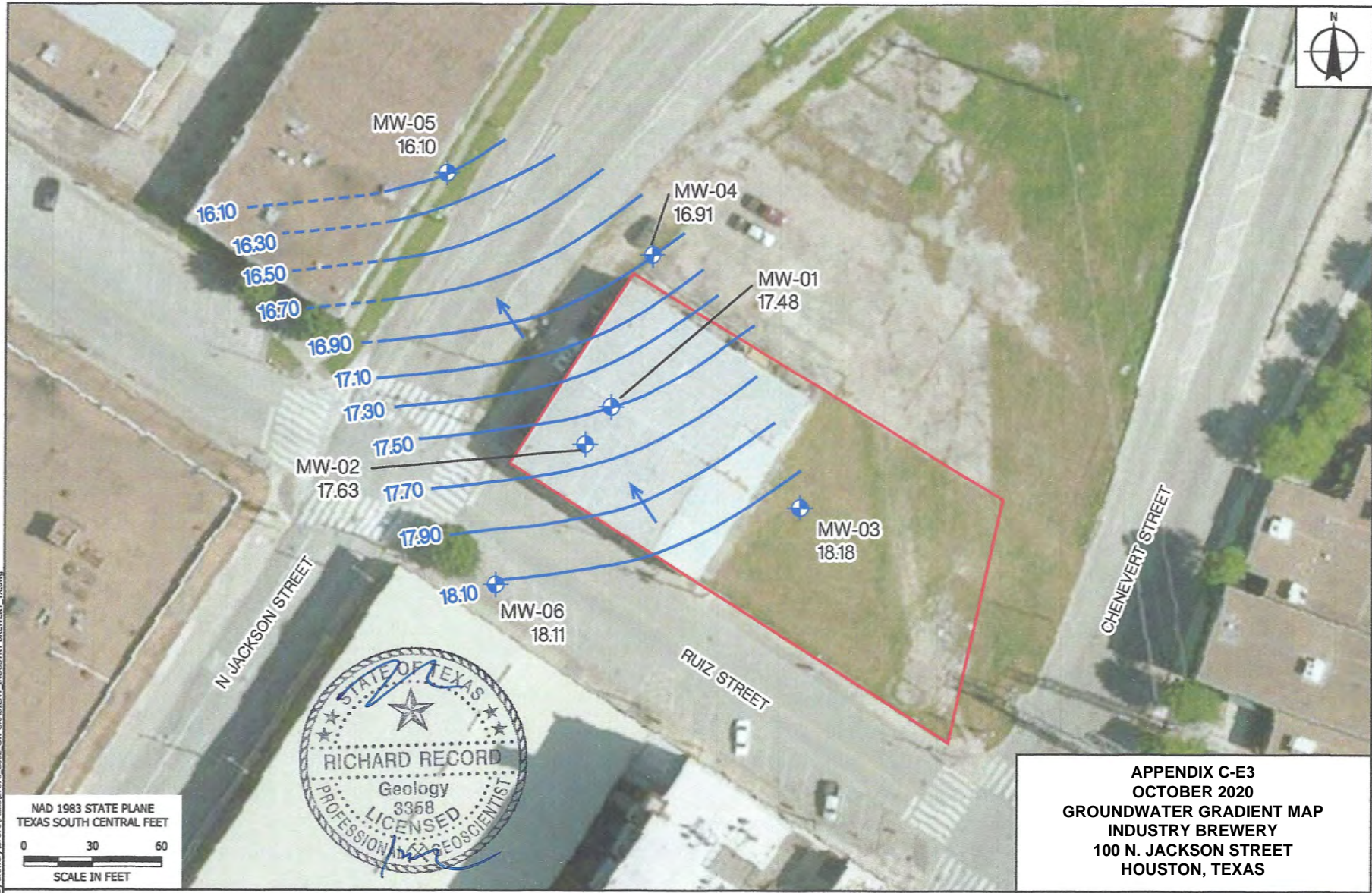
- ▬ APPROXIMATE SUBJECT PROPERTY BOUNDARY
- ↗ POTENTIOMETRIC SURFACE CONTOURS
- ➔ GROUNDWATER FLOW DIRECTION
- ◆ 40-FOOT PERMANENT GROUNDWATER MONITORING WELL
- 10-FOOT SOIL BORING LOCATION

NAD 1983 STATE PLANE
 TEXAS SOUTH CENTRAL FEET
 0 20 40
 SCALE IN FEET

REQUESTED BY:	JM
DRAWN BY:	KMB
DATE:	7/22/2020
PROJECT:	0888827349

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NAD 1983 STATE PLANE
TEXAS SOUTH CENTRAL FEET

0 30 60
SCALE IN FEET

APPENDIX C-E3
OCTOBER 2020
GROUNDWATER GRADIENT MAP
INDUSTRY BREWERY
100 N. JACKSON STREET
HOUSTON, TEXAS

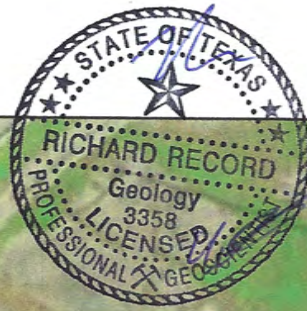
LEGEND

- APPROXIMATE SUBJECT PROPERTY BOUNDARY
- POTENTIOMETRIC SURFACE CONTOURS (DASHED WHERE INFERRED)
- PERMANENT GROUNDWATER MONITORING WELL
- GROUNDWATER FLOW DIRECTION

REQUESTED BY: BC
DRAWN BY: CC
DATE: 11/02/2020
PROJECT: 0888827870

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NAD 1983 STATE PLANE
TEXAS SOUTH CENTRAL FEET

SCALE IN FEET

APPENDIX C-E4
JANUARY 2021
GROUNDWATER GRADIENT MAP
INDUSTRY BREWERY
100 N. JACKSON STREET
HOUSTON, TEXAS

LEGEND

- APPROXIMATE SUBJECT PROPERTY BOUNDARY
- PERMANENT GROUNDWATER MONITORING WELL
- POTENTIOMETRIC SURFACE CONTOURS (DASHED WHERE INFERRED)
- GROUNDWATER FLOW DIRECTION

REQUESTED BY:	BC
DRAWN BY:	CC
DATE:	1/22/2021
PROJECT:	0888827870

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I:\CAD_PROJECTS\Industry Brewery\27870\Plans\27870_GW_GRADIENT_INDUSTRY BREWERY_TX.dwg

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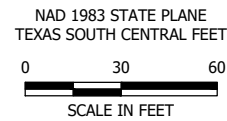
I:\CAD PROJECTS\Industry Brewery\21970\Plans\21970_6005_SITE MAP_INDUSTRY BREWERY_TX.dwg

LEGEND

- APPROXIMATE DESIGNATED PROPERTY BOUNDARY
- ESTIMATED BENZENE GROUNDWATER INGESTION PATHWAY PROTECTIVE CONCENTRATION LEVEL EXCEEDANCE (PCLE) ZONE
- ⊕ PERMANENT GROUNDWATER MONITORING WELL
- ⊗ REMOVED MONITORING WELL LOCATION

NOTE:

TEXAS RISK REDUCTION PROGRAM TIER 1 RESIDENTIAL ^{GW}GW_{ING} PROTECTIVE CONCENTRATION LEVEL FOR BENZENE IS 0.005 MILLIGRAMS PER LITER
 WITH A MUNICIPAL SETTING DESIGNATION, THERE IS NO PCLE ZONE



APPENDIX C-F
 100 N. JACKSON STREET
 HOUSTON, TEXAS

REQUESTED BY: JM
 DRAWN BY: KMB
 DATE: 3/24/2021
 PROJECT: 0888827870

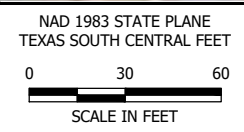
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Source: Google Earth Pro Imagery Date: May 9, 2020



APPENDIX C-G1
 GEOLOGIC CROSS SECTION MAP
 100 N. JACKSON STREET
 HOUSTON, TEXAS

LEGEND	
	APPROXIMATE DESIGNATED PROPERTY BOUNDARY
	PERMANENT GROUNDWATER MONITORING WELL
	REMOVED MONITORING WELL LOCATION
	10-FOOT SOIL BORING



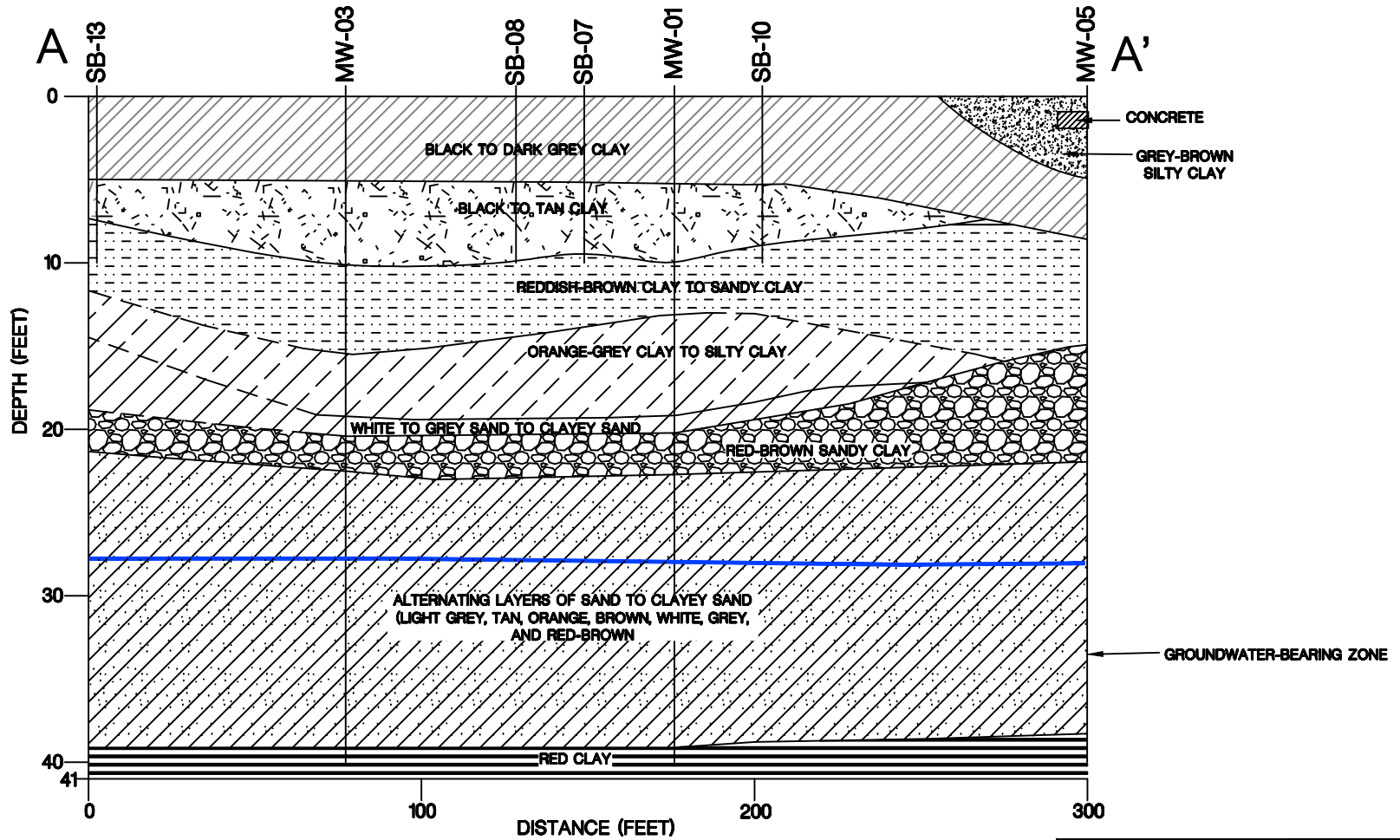
REQUESTED BY:	JM
DRAWN BY:	KMB
DATE:	3/29/2021
PROJECT:	0888827870

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Source: Google Earth Pro Imagery Date: May 9, 2020

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HORIZONTAL SCALE: 1" = 50'

LEGEND

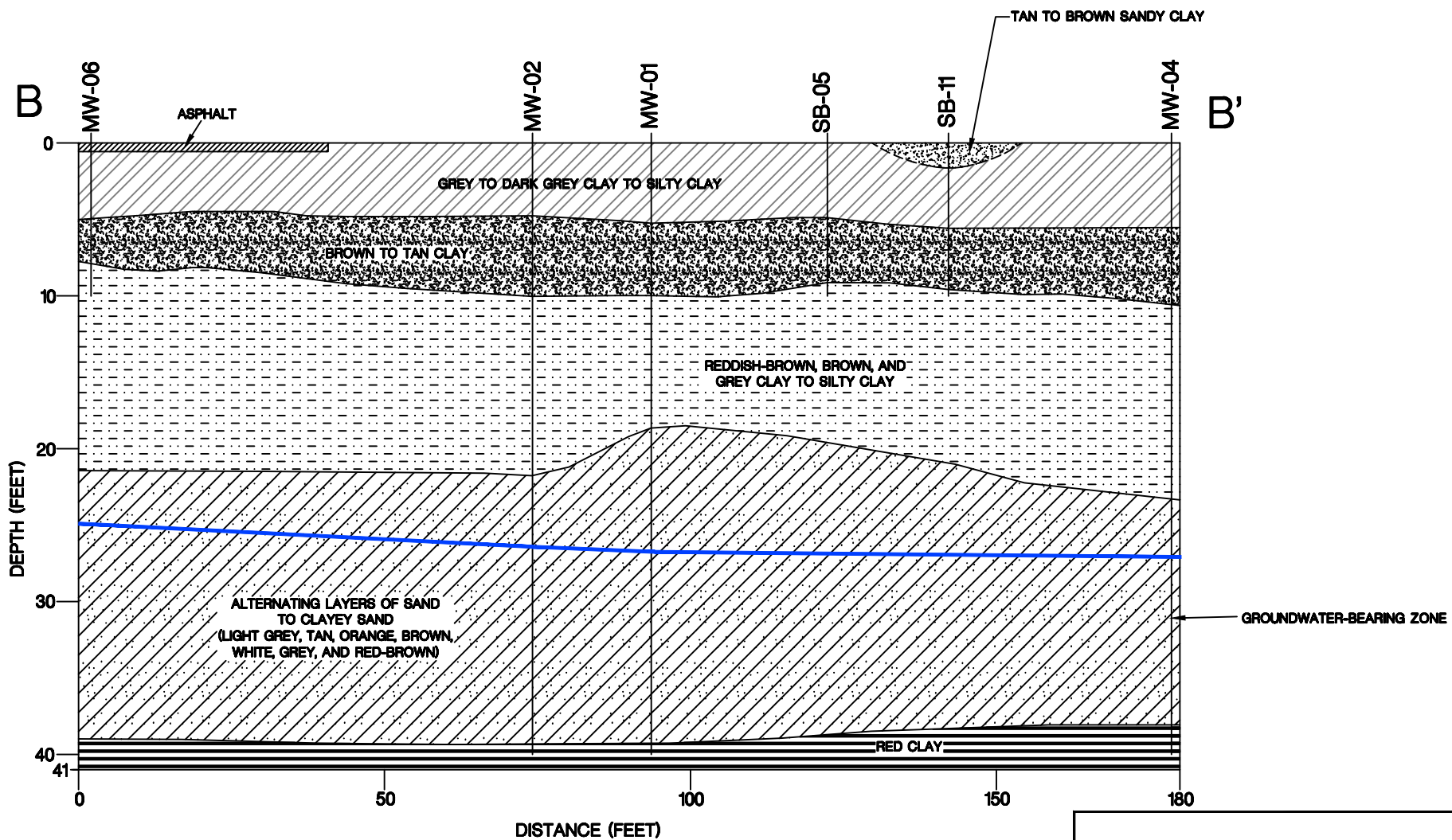
- | | | | |
|-------------------------|----------------------------------|--|--------------------------------|
| CONCRETE | BLACK TO TAN CLAY | WHITE TO GREY SAND TO CLAYEY SAND | RED CLAY |
| GREY-BROWN SILTY CLAY | REDDISH-BROWN CLAY TO SANDY CLAY | RED-BROWN SANDY CLAY | MEASURED STATIC DEPTH TO WATER |
| BLACK TO DARK GREY CLAY | ORANGE-GREY CLAY TO SILTY CLAY | ALTERNATING LAYERS OF SAND TO CLAYEY SAND (LIGHT GREY, TAN, ORANGE, BROWN, WHITE, GREY, AND RED-BROWN) | |

APPENDIX C-G2
100 N. JACKSON STREET
HOUSTON, TEXAS

REQUESTED BY: JM
DRAWN BY: KMB
DATE: 3/23/2021
PROJECT: 0888827870

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HORIZONTAL SCALE: 1" = 25'

LEGEND

- ASPHALT
- GREY TO DARK GREY CLAY TO SILTY CLAY
- ALTERNATING LAYERS OF SAND TO CLAYEY SAND (LIGHT GREY, TAN, ORANGE, BROWN, WHITE, GREY, AND RED-BROWN)
- TAN TO BROWN SANDY CLAY
- BROWN TO TAN CLAY
- RED CLAY
- REDDISH-BROWN, BROWN, AND GREY CLAY TO SILTY CLAY
- MEASURED STATIC DEPTH TO WATER

APPENDIX C-G3
100 N. JACKSON STREET
HOUSTON, TEXAS

REQUESTED BY:	JM	 <small>Creative thinking. Custom solutions.</small> 800.588.7962 www.ensafe.com
DRAWN BY:	KMB	
DATE:	3/23/2021	
PROJECT:	0888827870	

Appendix D

Provide for each contaminant of concern within the designated groundwater:

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

Based on data from four (4) groundwater monitoring events in April 2020, June 2020, October 2020, and January 2021, only benzene, and only in groundwater monitoring wells MW-01 (ranging from 0.190 to 0.0391 milligrams per liter [mg/L]) and MW-02 (ranging from 0.0125 to 0.272 mg/L), exceeds the TRRP Tier 1 Residential ^{GW}GW_{ING} PCL (ingestion PCL) of 0.005 mg/L for benzene applicable without an MSD. All benzene concentrations are well below the TRRP Tier 1 Residential ^{AIR}GW_{INH-V} PCL (non-ingestion PCL) of 180 mg/L applicable with an MSD.

Benzene is less dense than water (floats on water), is slightly soluble in water, and migrates downgradient in the dissolved phase. Benzene concentrations in the downgradient monitoring well to the north-northwest (MW-05), and in side- and up-gradient monitoring wells to the north-northeast (MW-04), southeast (MW-03), and southwest (MW-06) were all non-detect or at low-level detections below the Residential ^{GW}GW_{ING} PCL. The horizontal extent of the ingestion protective concentration level exceedance zone is depicted in Appendix C-F.

The benzene-impacted groundwater-bearing unit consists of interbedded layers of saturated to moist sand, clayey sand, and sandy clay extending from approximately 22 feet below ground surface (bgs) to approximately 40 feet bgs. A unit of red clay underlies the groundwater-bearing unit and acts as a barrier to vertical migration of the benzene-impacted groundwater. The groundwater-bearing unit is depicted in Appendix C-G.

Appendix E

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

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

Cumulative data tables displaying the concentration levels of COCs in soil and groundwater (including maximum concentration levels), the ingestion PCLs, the non-ingestion PCLs, and the critical PCLs with and without the MSD, highlighting any exceedances are provided in Tables 1-8.

Table 1
 Summary of VOCs in Soil
 100 N. Jackson Street — Houston, Texas
 Concentrations in milligrams per kilogram (mg/kg)

Sample ID	Depth (feet bgs)	Sample Date	1,1-Dichloroethene	1,2,3-Trimethylbenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	1,4-Dichlorobenzene	2-Butanone (MEK)	4-Methyl-2-Pentanone (MIBK)	Acetone	Benzene	Chlorobenzene	Chloroform	dis-1,2-Dichloroethene	Ethylbenzene	Isopropylbenzene	Methyl tert-butyl ether	Naphthalene	n-Butylbenzene	n-Propylbenzene	p-Isopropyltoluene	sec-Butylbenzene	Styrene	Toluene	Xylene (Total)	
Excavated/Removed																										
SB-01/MW-01 (1-3)	1-3	4/6/2020	<0.000612 U	<0.00141 U	<0.00142 U	<0.00132 U	<0.00241 U	0.021 BJ	<0.0122 U	<0.0168 U	<0.000489 U	<0.000701 U	<0.000508 U	<0.000844 U	<0.000648 U	<0.00106 U	<0.000361 U	<0.00382 U	<0.0047 U	<0.00144 U	<0.00285 U	<0.00309 U	<0.00334 U	<0.00153 U	<0.00585 U	
SB-2/ MW-02 (6-8)	6-8	4/6/2020	<0.0114 U	23.2	68.2	15.9	0.0579 J	<0.286 U	0.794	0.367 J	14.5	0.0389 J	0.047 BJ	<0.00677 U	153	7.57	<0.00675 U	637	2.19	14.4	1.66	1.36	<0.0625 U	4.3	339	
SB-03/MW-03 (0-2)	0-2	4/7/2020	<0.000697 U	<0.00182 U	<0.00182 U	<0.0023 U	<0.000805 U	<0.073 U	<0.00262 U	<0.042 U	<0.000537 U	<0.000241 U	<0.00118 U	<0.000844 U	<0.000848 U	<0.000489 U	<0.000402 U	<0.00561 U	<0.00604 U	<0.00109 U	<0.00293 U	<0.00331 U	<0.000263 U	<0.00149 U	0.00135 J	
SB-04 (0-2)	0-2	4/6/2020	<0.000625 U	<0.00144 U	<0.00145 U	<0.00135 U	<0.00246 U	<0.0156 U	<0.0125 U	<0.0171 U	0.00221	<0.000716 U	<0.000519 U	<0.000862 U	0.000765 J	<0.00108 U	<0.000369 U	<0.0039 U	<0.0048 U	<0.00147 U	<0.00291 U	<0.00316 U	<0.00341 U	<0.00156 U	<0.00597 U	
SB-05 (0-2)	0-2	4/6/2020	<0.000661 U	<0.00152 U	<0.00153 U	<0.00143 U	<0.0026 U	0.0365 B	<0.0132 U	<0.0181 U	0.000532 J	<0.000757 U	<0.000548 U	<0.000912 U	<0.0007 U	<0.00114 U	<0.00039 U	<0.00412 U	<0.00507 U	<0.00156 U	<0.00308 U	<0.00334 U	<0.00361 U	<0.00165 U	<0.00632 U	
SB-06 (2-4)	2-4	4/6/2020	<0.000638 U	0.629	1.21	0.393	<0.00251 U	0.021 BJ	<0.0128 U	0.0342	1.87	<0.000731 U	0.00214 BJ	<0.00088 U	6.82	0.394	<0.000376 U	11.2	0.0346	0.301	0.161	0.0307	<0.00348 U	0.0463	4.45	
SB-06 (8-10)	8-10	4/6/2020	<0.00494 U	3.51	7.34	2.55	<0.0195 U	<0.124 U	<0.0988 U	<0.135 U	42.6	<0.00566 U	0.0201 BJ	<0.00682 U	22.1	0.86	<0.00292 U	61.7	0.225	2.13	0.267	0.15	<0.027 U	26.4	53.4	
SB-08 (0-2)	0-2	4/7/2020	<0.000721 U	0.00908	0.00924	<0.00238 U	<0.000833 U	<0.0756 U	<0.00271 U	<0.0434 U	0.00188	<0.00025 U	<0.00123 U	<0.000874 U	0.00668	0.00388	<0.000417 U	0.224	<0.00625 U	0.00438 J	<0.00304 U	<0.00343 U	<0.000273 U	0.00179 J	0.0161	
SB-07 (2-4)	2-4	4/6/2020	<0.000661 U	0.0602	0.127	0.0392	<0.0026 U	0.0275 BJ	<0.0132 U	<0.0181 U	1.16	<0.000757 U	<0.000548 U	<0.000912 U	5.23	0.0259	<0.00039 U	1.72	<0.00507 U	0.0161	0.00564 J	<0.00334 U	<0.00361 U	0.0309	0.914	
SB-09 (2-4)	2-4	4/7/2020	<0.000739 U	<0.00193 U	<0.00193 U	<0.00244 U	<0.000854 U	<0.0774 U	<0.00278 U	<0.0445 U	<0.000569 U	<0.000256 U	<0.00126 U	<0.000895 U	<0.000899 U	<0.000518 U	<0.000427 U	<0.00595 U	<0.0064 U	<0.00116 U	<0.00311 U	<0.00351 U	<0.000279 U	<0.00159 U	<0.00107 U	
SB-01/MW-01 (6-8)	6-8	4/6/2020	<0.000642 U	<0.00148 U	<0.00149 U	<0.00139 U	<0.00253 U	0.0209 BJ	<0.0128 U	<0.0176 U	0.000873 J	<0.000736 U	<0.000533 U	<0.000886 U	<0.000681 U	<0.00111 U	<0.000379 U	<0.00401 U	<0.00493 U	<0.00152 U	<0.00299 U	<0.00325 U	<0.00351 U	<0.00161 U	<0.00614 U	
SB-02/ MW-02 (14-16)	14-16	4/6/2020	0.0169 J	5.41	11.3	3.81	<0.0193 U	<0.123 U	0.323	<0.134 U	4.2	<0.00562 U	0.0138 BJ	<0.0158 U	22.1	1.54	<0.00289 U	121	0.522	3.72	0.347	0.348	0.215	12	48.1	
SB-03/MW-03 (5-7)	5-7	4/7/2020	<0.000786 U	<0.00205 U	<0.00205 U	<0.00259 U	<0.000908 U	<0.0824 U	<0.00296 U	<0.0474 U	<0.000606 U	<0.000272 U	<0.00134 U	<0.000952 U	<0.000956 U	<0.000551 U	<0.000454 U	<0.00633 U	<0.00681 U	<0.00123 U	<0.00331 U	<0.00374 U	<0.000297 U	<0.00169 U	<0.00114 U	
SB-04 (7-9)	7-9	4/6/2020	<0.000638 U	<0.00147 U	<0.00148 U	<0.00138 U	<0.00251 U	<0.016 U	<0.0128 U	<0.0175 U	0.000632 J	<0.000731 U	<0.00053 U	<0.000881 U	<0.000677 U	<0.0011 U	<0.000377 U	<0.00398 U	<0.0049 U	<0.00151 U	<0.00297 U	<0.00323 U	<0.00348 U	<0.0016 U	<0.0061 U	
SB-05 (5-7)	5-7	4/6/2020	<0.000664 U	<0.00139 U	<0.0014 U	<0.0013 U	<0.00238 U	0.0249 BJ	<0.0121 U	<0.0166 U	0.000483 U	<0.000692 U	<0.000501 U	<0.000834 U	<0.00064 U	<0.00104 U	<0.000356 U	<0.00377 U	<0.00464 U	<0.00143 U	<0.00282 U	<0.00306 U	<0.0033 U	<0.00151 U	<0.00578 U	
SB-07 (5-7)	5-7	4/6/2020	<0.000623 U	<0.00143 U	0.00161 J	<0.00135 U	<0.00245 U	0.0168 BJ	<0.0125 U	<0.0171 U	0.00255	<0.000714 U	<0.000517 U	<0.00086 U	0.00244 J	<0.00108 U	<0.000368 U	0.0432	<0.00478 U	<0.00147 U	<0.0029 U	<0.00315 U	<0.0034 U	<0.00156 U	0.00599 J	
SB-08 (5-7)	5-7	4/7/2020	<0.000762 U	<0.00199 U	<0.00199 U	<0.00251 U	<0.00088 U	<0.0798 U	<0.00287 U	<0.0459 U	<0.000587 U	<0.000264 U	<0.00129 U	<0.000923 U	<0.000926 U	<0.000534 U	<0.00044 U	<0.00613 U	<0.0066 U	<0.00119 U	<0.00321 U	<0.00362 U	<0.000288 U	<0.00163 U	0.00127 J	
SB-09 (6-8)	6-8	4/7/2020	<0.000716 U	<0.00187 U	<0.00187 U	<0.00236 U	<0.000827 U	<0.075 U	<0.00269 U	<0.0431 U	<0.000552 U	<0.000248 U	<0.00122 U	<0.000867 U	<0.000871 U	<0.000502 U	<0.000414 U	<0.00577 U	<0.0062 U	<0.00112 U	<0.00301 U	<0.0034 U	<0.000271 U	<0.00154 U	0.00132 J	
SB-10 (0-5)	0-5	4/7/2020	<0.000797 U	<0.00208 U	<0.00208 U	<0.00263 U	<0.000921 U	<0.0835 U	<0.003 U	<0.048 U	<0.000614 U	<0.000276 U	<0.00135 U	<0.000966 U	<0.00097 U	<0.000559 U	<0.00046 U	<0.00642 U	<0.00691 U	<0.00125 U	<0.00335 U	<0.00379 U	<0.000301 U	<0.00171 U	<0.00116 U	
SB-10 (5-7)	5-7	4/7/2020	<0.000764 U	<0.00199 U	<0.00199 U	<0.00252 U	<0.000883 U	<0.0801 U	<0.00288 U	<0.046 U	<0.000589 U	<0.000265 U	<0.0013 U	<0.000926 U	<0.00093 U	<0.000536 U	<0.000441 U	<0.00616 U	<0.00662 U	<0.0012 U	<0.00322 U	<0.00363 U	<0.000289 U	<0.00164 U	<0.00111 U	
SB-11 (0-2)	0-2	4/6/2020	<0.000639 U	<0.00147 U	<0.00148 U	<0.00138 U	<0.00252 U	<0.016 U	<0.0128 U	<0.0175 U	<0.000511 U	<0.000732 U	<0.00053 U	<0.000881 U	<0.000677 U	<0.0011 U	<0.000377 U	<0.00398 U	<0.0049 U	<0.00151 U	<0.00298 U	<0.00323 U	<0.00349 U	<0.0016 U	<0.00611 U	
SB-11 (5-7)	5-7	4/6/2020	<0.000605 U	<0.00139 U	<0.0014 U	<0.00131 U	<0.00239 U	0.0266 BJ	<0.0121 U	<0.0166 U	0.000523 J	<0.000694 U	<0.000503 U	<0.000836 U	0.00085 J	<0.00105 U	<0.000357 U	<0.00378 U	<0.00465 U	<0.00143 U	<0.00282 U	<0.00306 U	<0.00331 U	<0.00151 U	<0.00579 U	
SB-12 (0-2)	0-2	4/7/2020	<0.000732 U	<0.00191 U	<0.00191 U	<0.00242 U	<0.000846 U	<0.0767 U	<0.00275 U	<0.0441 U	<0.000564 U	<0.000254 U	<0.00124 U	<0.000887 U	<0.000891 U	<0.000514 U	<0.000423 U	<0.0059 U	<0.00634 U	<0.00115 U	<0.00308 U	<0.00348 U	<0.000277 U	<0.00157 U	0.00244 J	
SB-12 (5-7)	5-7	4/7/2020	<0.000747 U	<0.00195 U	<0.00195 U	<0.00246 U	<0.000863 U	<0.0782 U	<0.00281 U	<0.045 U	<0.000575 U	<0.000259 U	<0.00127 U	<0.000904 U	<0.000908 U	<0.000524 U	<0.000431 U	<0.00601 U	<0.00647 U	<0.00117 U	<0.00314 U	<0.00355 U	<0.000282 U	<0.0016 U	<0.00108 U	
SB-13 (1-3)	1-3	4/7/2020	<0.000751 U	<0.00196 U	<0.00196 U	<0.00248 U	<0.000867 U	<0.0787 U	<0.00282 U	<0.0452 U	<0.000578 U	<0.00026 U	<0.00128 U	<0.000909 U	<0.000913 U	<0.000526 U	<0.000434 U	<0.00605 U	<0.0065 U	<0.00118 U	<0.00316 U	<0.00357 U	<0.000284 U	<0.0016 U	<0.00109 U	
SB-13 (5-7)	5-7	4/7/2020	<0.000788 U	<0.00205 U	<0.00205 U	<0.0026 U	<0.00091 U	<0.0826 U	<0.00296 U	<0.0475 U	<0.000607 U	<0.000273 U	<0.00134 U	<0.000954 U	<0.000958 U	<0.000553 U	<0.000455 U	<0.00635 U	<0.00683 U	<0.00124 U	<0.00332 U	<0.00374 U	<0.000298 U	<0.00169 U	<0.00114 U	
SB-14 (0-2)	0-2	4/7/2020	<0.000779 U	<0.00203 U	<0.00203 U	<0.00257 U	<0.000899 U	<0.0816 U	<0.00293 U	<0.0469 U	<0.0006 U	<0.00027 U	<0.00132 U	<0.000943 U	<0.000947 U	<0.000546 U	0.000699 J	<0.00627 U	<0.00675 U	<0.00122 U	<0.00328 U	<0.0037 U	<0.000294 U	<0.00167 U	<0.00113 U	
SB-14 (5-7)	5-7	4/7/2020	<0.000761 U	<0.00198 U	<0.00198 U	<0.00251 U	<0.000878 U	<0.0797 U	<0.00286 U	<0.0458 U	<0.000586 U	<0.000264 U	<0.00129 U	<0.000921 U	<0.000925 U	<0.000533 U	<0.000439 U	<0.00612 U	<0.00659 U	<0.00119 U	<0.0032 U	<0.00361 U	<0.000287 U	<0.00163 U	<0.0011 U	
SB-15 (1-3)	1-3	4/7/2020	<0.000692 U	<0.0018 U	<0.0018 U	<0.00228 U	<0.000799 U	<0.0725 U	<0.0026 U	<0.0417 U	<0.000533 U	<0.00024 U	<0.00118 U	<0.000838 U	<0.000842 U	<0.000485 U	<0.0004 U	0.0218	<0.006 U	<0.00108 U	<0.00291 U	<0.00329 U	<0.000262 U	<0.00148 U	0.00113 J	
SB-15 (5-7)	5-7	4/7/2020	<0.00076 U	<0.00198 U	<0.00198 U	<0.00251 U	<0.000878 U	<0.0797 U	<0.00286 U	<0.0458 U	<0.000586 U	<0.000263 U	<0.00129 U	<0.000921 U	<0.000925 U	<0.000533 U	<0.000439 U	<0.00612 U	<0.00659 U	<0.00119 U	<0.0032 U	<0.00361 U	<0.000287 U			

Table 2
Summary of PAHs in Soil
100 N. Jackson Street — Houston, Texas
Concentrations in milligrams per kilogram (mg/kg)

Sample ID	Depth (feet bgs)	Sample Date	1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Dibenzofuran	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene
			Removed/Excavated																		
SB-2/ MW-02 (6-8)	6-8	4/6/2020	64.5	91.5	10.7	<0.0499 U	12.7	9.61	8.09	7.65	5.71	2.51	9.6	0.795	1.48	32.8	17.4	3.7	657	79.7	45
SB-06 (8-10)	8-10	4/6/2020	26.8	34.7	6.25	<0.0027 U	3.99	3.57	2.64	1.94	0.985	0.486	3.27	0.347	0.383	6.39	5.79	0.771	95.8	21	9.24
SB-15 (1-3)	1-3	4/7/2020	<0.00513 U	<0.00498 U	<0.00239 U	0.00547 J	0.0041 J	0.0179	0.0184	0.0255	0.017	0.00873	0.0158	0.00378 J	<0.00234 U	0.0316	<0.00234 U	0.017	0.00725 J	0.0182	0.029
SB-17 (2-4)	2-4	6/5/2020	<0.00618 U	<0.00588 U	<0.00288 U	<0.00297 U	<0.00316 U	<0.00238 U	<0.00246 U	0.0025 J	<0.00244 U	<0.00296 U	<0.00319 U	<0.00237 U	<0.00293 U	0.00378 J	<0.00282 U	<0.00249 U	<0.00561 U	<0.00318 U	0.00366 J
SB-17 (6-8)	6-8	6/5/2020	<0.00612 U	<0.00582 U	<0.00285 U	0.033	<0.00313 U	<0.00236 U	0.00337 J	0.00334 J	0.128	<0.00293 U	<0.00316 U	<0.00234 U	<0.0029 U	<0.00309 U	<0.00279 U	0.0294	<0.00556 U	<0.00315 U	<0.00273 U
SOUTH WALL (4-6)	4-6	6/16/2020	1.58	2.36	0.134	<0.00258 U	0.0708	0.142	0.115	0.116	0.0864	0.0334	0.121	0.0132	0.024	0.44	0.148	0.0605	14.1	1.16	0.692
SW CORNER (12-14)	12-14	6/17/2020	<0.00575 U	<0.00547 U	<0.00268 U	<0.00277 U	<0.00294 U	0.0156	0.0142	0.0183	0.00941	0.00553 J	0.014	0.00264 J	<0.00273 U	0.0279	<0.00262 U	0.00813	0.0223 J	0.0131	0.022
W SIDE WALL (6-8)	6-8	6/17/2020	0.887	1.26	0.287	<0.00247 U	0.483	0.573	0.436	0.458	0.328	0.107	0.564	0.0494	0.0506	2.15	0.654	0.215	4.08	3.99	2.54
WEST CENTER FLOOR (6-8)	6-8	6/17/2020	2.64 V	3.93 V	0.27 J	<0.00268 U	0.205 J	0.327 J	0.287 J	0.315 J	0.212 J	0.0726 J	0.324 J	0.0407	0.0438	1.07 V	0.324 J	0.15 J	20.6 V	2.41 V	1.29 V
EAST SIDE WALL (6-8)	6-8	6/30/2020	<0.00538 U	<0.00512 U	<0.00251 U	<0.00259 U	<0.00276 U	<0.00207 U	<0.00215 U	<0.00183 U	<0.00212 U	<0.00258 U	<0.00278 U	<0.00206 U	<0.00255 U	<0.00272 U	<0.00246 U	<0.00217 U	<0.00489 U	<0.00277 U	<0.0024 U
NORTH BOTTOM (8-10)	8-10	6/30/2020	0.353	0.491	0.0843	<0.0026 U	0.102	0.0977	0.0871	0.0814	0.06	0.0225	0.0892	0.00873	0.0109	0.303	0.142	0.0407	1.54	0.728	0.393
Tier 1 RES^{10T} SOIL_{COM} (CRITICAL PCL WITH MSD)			150	250	3,000	3,800	18,000	41	4.1	42	1,800	420	4,100	4	270	2,300	2,300	42	220	1,700	1,700
Tier 1 RES^{GW} SOIL_{LING} (CRITICAL PCL WITHOUT MSD)			2.9	17	240	410	6,900	130	7.6	440	46,000	4,500	11,000	15	33	1,900	300	1,300	31	420	1,100

Table 3
Summary of Metals in Soil
100 North Jackson Street — Houston, Texas
Concentrations in milligrams per kilogram (mg/kg)

Sample ID	Depth (feet bgs)	Sample Date	Arsenic	Barium	Cadmium	Chromium, Total	Lead	Mercury	Selenium	Silver
Excavated/Removed										
SB-01/MW-01 (1-3)	1-3	4/6/2020	4.69	292	<0.306 U	26.7	17.2	<0.022 U	<1.22 U	<0.612 U
SB-02/ MW-02 (6-8)	6-8	4/6/2020	1.62 J	113	<0.286 U	12.1	7.6	<0.0206 U	<1.14 U	<0.572 U
SB-03/MW-03 (0-2)	0-2	4/7/2020	<1.15 U	112	<0.287 U	16	26.2	0.199	<1.15 U	<0.575 U
SB-04 (0-2)	0-2	4/6/2020	8.78	196	0.856	17.6	460	0.479	1.67 J	<0.625 U
SB-05 (0-2)	0-2	4/6/2020	2.93	249	<0.33 U	30.8	15.9	<0.0238 U	<1.32 U	<0.661 U
SB-06 (2-4)	5-7	4/6/2020	<1.28 U	233	<0.319 U	27.5	13.5	<0.023 U	<1.28 U	<0.638 U
SB-06 (8-10)	8-10	4/6/2020	4.08	194	<0.309 U	23.8	10.3	<0.0222 U	<1.24 U	<0.618 U
SB-07 (2-4)	2-4	4/6/2020	4.76	203	0.368 J	19.9	489	0.062	<1.32 U	<0.661 U
SB-08 (0-2)	0-2	4/7/2020	6.26	177	<0.298 U	18.9	158	0.0535	<1.19 U	0.739 J
SB-09 (2-4)	2-4	4/7/2020	<1.22 U	136	<0.305 U	20.7	8.21	<0.022 U	<1.22 U	<0.61 U
SB-01/MW-01 (6-8)	6-8	4/6/2020	10.7	173	<0.321 U	25	14.3	<0.0231 U	<1.28 U	<0.642 U
SB-02/ MW-02 (14-16)	14-16	4/6/2020	3.38	37.6	<0.289 U	10.1	6.09	<0.0208 U	<1.16 U	<0.578 U
SB-03/MW-03 (5-7)	5-7	4/7/2020	<1.3 U	203	<0.324 U	25.1	7.52	<0.0234 U	<1.3 U	<0.649 U
SB-04 (7-9)	7-9	4/6/2020	6.91	155	<0.319 U	30.7	14.9	<0.023 U	<1.28 U	<0.638 U
SB-05 (5-7)	5-7	4/6/2020	2.87	250	<0.302 U	16.7	6.18	<0.0217 U	1.31 J	<0.604 U
SB-07 (5-7)	5-7	4/6/2020	<1.25 U	110	0.332 J	11.2	6.83	<0.0224 U	<1.25 U	<0.623 U
SB-08 (5-7)	5-7	4/7/2020	1.27 J	298	<0.314 U	29.1	8.47	<0.0226 U	<1.26 U	<0.629 U
SB-09 (6-8)	6-8	4/7/2020	<1.18 U	127	<0.295 U	18.1	4.46	<0.0213 U	<1.18 U	<0.591 U
SB-10 (0-5)	0-5	4/7/2020	<1.32 U	274	<0.329 U	30.1	9.54	<0.0237 U	<1.32 U	<0.658 U
SB-10 (5-7)	5-7	4/7/2020	<1.26 U	128	<0.315 U	24	4.84	<0.0227 U	<1.26 U	<0.631 U
SB-14 (0-2)	0-2	4/7/2020	<1.28 U	129	<0.321 U	24.6	8.77	<0.0231 U	<1.28 U	<0.642 U
SB-11 (0-2)	0-2	4/6/2020	2.88	423	<0.319 U	27.9	11.2	<0.023 U	<1.28 U	<0.639 U
SB-11 (5-7)	5-7	4/6/2020	2.77	171	<0.303 U	27.4	7.08	<0.0218 U	1.58 J	<0.605 U
SB-12 (0-2)	0-2	4/7/2020	4.54	179	0.351 J	25.5	387	0.627	<1.21 U	<0.604 U
SB-12 (5-7)	5-7	4/7/2020	<1.23 U	385	<0.308 U	24.5	10.4	<0.0222 U	<1.23 U	<0.616 U
SB-13 (1-3)	1-3	4/7/2020	<1.24 U	113	<0.31 U	16.9	11.4	0.0232 J	<1.24 U	<0.619 U
SB-13 (5-7)	5-7	4/7/2020	<1.3 U	62	<0.325 U	22.2	6.51	<0.0234 U	<1.3 U	<0.65 U
SB-14 (5-7)	5-7	4/7/2020	<1.25 U	211	<0.314 U	24.2	7.14	<0.0226 U	<1.25 U	<0.627 U
SB-15 (1-3)	1-3	4/7/2020	1.62 J	183	<0.286 U	17.1	60.5	0.0906	<1.14 U	<0.571 U
SB-15 (5-7)	5-7	4/7/2020	7.65	403	<0.314 U	29.1	18.3	<0.0226 U	<1.25 U	<0.627 U
SB-16 (0-2)	0-2	4/7/2020	3.68	314	<0.309 U	21.3	76.4	0.634	<1.23 U	<0.617 U
SB-16 (5-7)	5-7	4/7/2020	<1.24 U	123	<0.311 U	23.5	10	<0.0224 U	<1.24 U	<0.622 U
Tier 1 RES ^{TO}SOIL_{COM} (CRITICAL PCL WITH MSD)			24	8,100	52	33,000	500	3.6	310	97
Tier 1 RES ^{GW}SOIL_{ING} / TSBC (CRITICAL PCL WITHOUT MSD)			5.9	440	1.5	2,400	15	2.1	2.3	0.48

Notes:
mg/kg= milligrams per kilogram
bgs= below ground surface
NE = Not established
U = Results are nondetected for the analyte
B = The analyte was found in the associated blank.
J= Result is less than the method quantification limit (MQL) but greater than or equal to the adjusted sample detection limit (SDL) and the concentration is an approximate value.
Bold value indicates detected value for that analyte
Bold and shaded results indicate an exceedance of the Texas Specific Soil background concentrations or the Texas Risk Reduction Program (TRRP) Protective Concentration Levels (PCLs) for Tier 1 Res ^{GW}Soil_{ing} / TSBC = Less conservative value of the Tier 1 Residential PCL for Soil to Groundwater Ingestion Class 1 & 2 Groundwater at 0.5-acre site or the Texas Specific Soil Background Concentrations
Tier 1 Res ^{TO}Soil_{comb} = Tier 1 Residential surface soil PCL for combined soil ingestion, dermal contact, inhalation of volatiles and particulates at 0.5-acre site.
Maximum Concentration Level of Chemical of Concern Exceeding PCL

Table 4
Summary of Total Petroleum Hydrocarbons in Soil
100 North Jackson Street — Houston, Texas
Concentrations in milligrams per kilogram (mg/kg)

Sample ID	Depth (feet bgs)	Sample Date	TPH - C6-C12	TPH - > C12-C28	TPH - > C28-C35	TPH - Total C6-C35
Removed/Excavated						
SB-01/MW-01 (1-3)	1-3	4/6/2020	<18.3 U	<18.3 U	<18.3 U	<18.3 U
SB-02/ MW-02 (6-8)	6-8	4/6/2020	2200	1460	78.8	3740
SB-03/MW-03 (0-2)	0-2	4/7/2020	<17.2 U	<17.2 U	<17.2 U	<17.2 U
SB-04 (0-2)	0-2	4/6/2020	<18.7 U	<18.7 U	<18.7 U	<18.7 U
SB-05 (0-2)	0-2	4/6/2020	<19.8 U	<19.8 U	<19.8 U	<19.8 U
SB-06 (2-4)	5-7	4/6/2020	191	196	26.1 J	414
SB-06 (8-10)	8-10	4/6/2020	371	357	26.8 J	755
SB-07 (2-4)	2-4	4/6/2020	<19.8 U	<19.8 U	<19.8 U	<19.8 U
SB-08 (0-2)	0-2	4/7/2020	<17.9 U	<17.9 U	<17.9 U	<17.9 U
SB-09 (2-4)	2-4	4/7/2020	<18.3 U	<18.3 U	<18.3 U	<18.3 U
SB-01/MW-01 (6-8)	6-8	4/6/2020	<19.3 U	<19.3 U	<19.3 U	<19.3 U
SB-02/ MW-02 (14-16)	14-16	4/6/2020	202	71.6	<17.3 U	274
SB-03/MW-03 (5-7)	5-7	4/7/2020	<19.5 U	<19.5 U	<19.5 U	<19.5 U
SB-04 (7-9)	7-9	4/6/2020	<19.1 U	<19.1 U	<19.1 U	<19.1 U
SB-05 (5-7)	5-7	4/6/2020	<18.1 U	<18.1 U	<18.1 U	<18.1 U
SB-07 (5-7)	5-7	4/6/2020	<18.7 U	<18.7 U	<18.7 U	<18.7 U
SB-08 (5-7)	5-7	4/7/2020	<18.9 U	<18.9 U	<18.9 U	<18.9 U
SB-09 (6-8)	6-8	4/7/2020	<17.7 U	<17.7 U	<17.7 U	<17.7 U
SB-10 (0-5)	0-5	4/7/2020	<19.7 U	<19.7 U	<19.7 U	<19.7 U
SB-10 (5-7)	5-7	4/7/2020	<18.9 U	<18.9 U	<18.9 U	<18.9 U
SB-14 (0-2)	0-2	4/7/2020	<19.3 U	<19.3 U	<19.3 U	<19.3 U
SB-11 (0-2)	0-2	4/6/2020	<19.2 U	<19.2 U	<19.2 U	<19.2 U
SB-11 (5-7)	5-7	4/6/2020	<18.2 U	<18.2 U	<18.2 U	<18.2 U
SB-12 (0-2)	0-2	4/7/2020	<18.1 U	<18.1 U	<18.1 U	<18.1 U
SB-12 (5-7)	5-7	4/7/2020	<18.5 U	<18.5 U	<18.5 U	<18.5 U
SB-13 (1-3)	1-3	4/7/2020	<18.6 U	<18.6 U	<18.6 U	<18.6 U
SB-13 (5-7)	5-7	4/7/2020	<19.5 U	<19.5 U	<19.5 U	<19.5 U
SB-14 (5-7)	5-7	4/7/2020	<18.8 U	<18.8 U	<18.8 U	<18.8 U
SB-15 (1-3)	1-3	4/7/2020	<17.1 U	20.4 J	<17.1 U	20.4 J
SB-15 (5-7)	5-7	4/7/2020	<18.8 U	<18.8 U	<18.8 U	<18.8 U
SB-16 (0-2)	0-2	4/7/2020	<18.5 U	<18.5 U	<18.5 U	<18.5 U
SB-16 (5-7)	5-7	4/7/2020	<18.7 U	<18.7 U	<18.7 U	<18.7 U
SB-17 (2-4)	2-4	6/5/2020	<20.6 U	<20.6 U	<20.6 U	<20.6 U
SB-17 (6-8)	6-8	6/5/2020	<20.4 U	<20.4 U	<20.4 U	<20.4 U
SOUTH WALL (4-6)	4-6	6/17/2020	<19.2 U	<19.2 U	<19.2 U	<19.2 U
SW CORNER (12-14)	12-14	6/17/2020	629	386	45.5 J	1060
W SIDE WALL (6-8)	6-8	6/16/2020	151	37.8 J	<17.9 U	189
WEST CENTER FLOOR (6-8)	6-8	6/17/2020	55.8 J	23.4 J	<18.6 U	79.3
EAST SIDE WALL (6-8)	6-8	6/30/2020	<18 U	<18 U	<18 U	<18 U
NORTH BOTTOM (8-10)	8-10	6/30/2020	<18.1 U	<18.1 U	<18.1 U	<18.1 U
Tier 1 RES^{TOT}SOIL_{COM} (CRITICAL PCL WITH MSD)			1,600	2,300	2,300	NE
Tier 1 RES^{GW}SOIL_{ING} (CRITICAL PCL WITHOUT MSD)			65	200	200	NE

Notes:

mg/kg= milligrams per kilogram

bgs= below ground surface

NE = Not established

U = Results are nondetected for the analyte

J= Result is less than the method quantification limit (MQL) but greater than or equal to the adjusted sample detection limit (SDL) and the concentration is an approximate value.

Bold value indicates detected value for that analyte

Bold and shaded results indicate an exceedance of the Texas Risk Reduction Program (TRRP) Protective Concentration Levels (PCLs) for Residential or Commercial/Industrial Tier 1 Soil 0.5-acre source area.

Table 5
Summary of Volatile Organic Compounds in Groundwater
100 N. Jackson Street — Houston, Texas
Concentrations in milligrams per liter (mg/L)

Sample ID	Sample Date	Benzene	cis-1,2-Dichloroethene	Ethylbenzene	Isopropyl ether	Isopropylbenzene	Naphthalene	n-Propylbenzene	Toluene	Xylene (Total)
MW-01	4/9/2020	0.0241	0.00624	0.0058	0.00452	0.000887 J	0.0297	0.000499 J	0.000534 J	0.0066
MW-01	6/9/2020	0.0391	---	0.00854	---	---	---	---	0.00126	0.00991
MW-01	10/12/2020	0.0190	---	0.0108	---	---	---	---	0.00971	0.0181
MW-01	1/8/2021	0.0344	---	0.0176	---	---	---	---	0.00457	0.0254
MW-02	4/9/2020	0.0125	<0.00026 U	0.00189	<0.00032 U	<0.000326 U	0.00502	<0.000349 U	0.00114	0.00414
MW-02	6/9/2020	0.115	---	0.0193	---	---	---	---	0.0018	0.0168
MW-02	10/12/2020	0.272	---	0.0193	---	---	---	---	0.0296	0.0497
MW-02	1/8/2021	0.115	---	0.0216	---	---	---	---	0.0143	0.0317
MW-03	4/9/2020	<0.000331 U	<0.00026 U	<0.000384 U	<0.00032 U	<0.000326 U	<0.001 U	<0.000349 U	<0.000412 U	<0.00106 U
MW-03	6/9/2020	0.000106 J	---	<0.000137 U	---	---	---	---	<0.000278 U	<0.000174 U
MW-03-D	6/9/2020	<0.0000941 U	---	<0.000137 U	---	---	---	---	<0.000278 U	<0.000174 U
MW-03	10/12/2020	<0.0000941 U	---	<0.000137 U	---	---	---	---	<0.000278 U	<0.000174 U
MW-03	1/8/2021	0.000216 J	---	<0.000137 U	---	---	---	---	<0.000278 U	0.000575 J
MW-04	10/12/2020	0.000155 J	---	<0.000137 U	---	---	---	---	<0.000278 U	<0.000174 U
MW-04	1/8/2021	0.000237 J	---	<0.000137 U	---	---	---	---	<0.000278 U	0.000323 J
MW-05	10/12/2020	<0.0000941 U	---	<0.000137 U	---	---	---	---	<0.000278 U	0.000494 J
MW-05	1/8/2021	0.000221 J	---	<0.000137 U	---	---	---	---	<0.000278 U	0.000973 J
MW-05-D	1/8/2021	0.000202 J	---	<0.000137 U	---	---	---	---	<0.000278 U	0.000811 J
MW-06	10/12/2020	<0.0000941 U	---	<0.000137 U	---	---	---	---	<0.000278 U	<0.000174 U
MW-06	1/8/2021	<0.0000941 U	---	<0.000137 U	---	---	---	---	<0.000278 U	0.000230 J
Tier 1 RES^{AIR}GW_{INH-V} (CRITICAL PCL WITH MSD)		180	1,200	30,000	20,000	4,400	320	6,000	64,000	10,000
Tier 1 RES^{GW}GW_{ING} (CRITICAL PCL WITHOUT MSD)		0.005	0.07	0.7	2.4	2.4	0.49	0.98	1	10

Notes:
mg/L= milligrams per Liter
VOCs= Volatile organic compounds
PST = Petroleum Storage Tank
U = Results are nondetected for the analyte
J= Result is less than the method quantification limit (MQL) but greater than or equal to the adjusted sample detection limit (SDL) and the concentration is an approximate value.

--- = Not sampled for analyte.

Bold value indicates detected value for that analyte
Bold and shaded results indicate an exceedance of the Texas Risk Reduction Program (TRRP) Protective Concentration Levels (PCLs) for Residential or Commercial/Industrial Tier 1 Groundwater 0.5-acre source area.

Tier 1 Res^{GW}GW_{ING} = Tier 1 Residential PCL for Groundwater Ingestion Class 1 & 2 Groundwater at 0.5-acre site.

Tier 1 Res^{AIR}GW_{INH-V} = Tier 1 Residential groundwater PCL for inhalation of volatiles and particulates at 0.5-acre site.

Maximum Concentration Level of Chemical of Concern Exceeding PCL

Table 6
Summary of Polynuclear Aromatic Hydrocarbons in Groundwater
100 N. Jackson Street — Houston, Texas
Concentrations in milligrams per liter (mg/L)

Sample ID	Sample Date	1-Methylnaphthalene	Acenaphthene	Anthracene	Benzo(a)anthracene	Benzo(b)fluoranthene	Dibenzofuran	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene
SB-02/MW-02	4/9/2020	0.000099 J	0.000104	0.0000483 J	0.0000154 BJ	0.00000319 J	0.00000874 BJ	0.000129	0.000111	0.0000213 BJ	0.000154	0.000144
Tier 1 RES^{AIR}GW_{INH-V} (CRITICAL PCL WITH MSD)		NE	NE	NE	3,000	2,400	NE	NE	NE	320	NE	NE
Tier 1 RES^{GW}GW_{ING} (CRITICAL PCL WITHOUT MSD)		0.031	1.5	7.3	0.0091	0.0091	0.098	0.98	0.98	0.49	0.73	0.73

Notes:

mg/L= milligrams per Liter

NE = Not established

PAH s= Polynuclear aromatic hydrocarbons

PST = Petroleum Storage Tank

U = Results are nondetected for the analyte

B = The analyte was found in the associated blank.

J= Result is less than the method quantification limit (MQL) but greater than or equal to the adjusted sample detection limit (SDL) and the concentration is an approximate value.

Bold value indicates detected value for that analyte

Bold and shaded results indicate an exceedance of the Texas Risk Reduction Program (TRRP) Protective Concentration Levels (PCLs) for Residential or Commercial/Industrial Tier 1 Groundwater 0.5-acre source area.

Tier 1 Res^{GW}GW_{ING} = Tier 1 Residential PCL for Groundwater Ingestion Class 1 & 2 Groundwater at 0.5-acre site.

Tier 1 Res^{AIR}GW_{INH-V} = Tier 1 Residential groundwater PCL for inhalation of volatiles and particulates at 0.5-acre site.

Table 7
Summary of Metals in Groundwater
100 N. Jackson Street — Houston, Texas
Concentrations in milligrams per liter (mg/L)

Sample ID	Sample Date	Arsenic	Arsenic, Dissolved	Barium	Barium, Dissolved	Chromium, Total	Chromium, Dissolved	Lead	Lead, Dissolved	Selenium	Selenium, Dissolved
SB-01/MW-01	4/9/2020	0.00787 J	0.00623 J	0.12	0.116	<0.005 U	<0.005 U	<0.00295 U	<0.00295 U	<0.00735 U	<0.00735 U
SB-02/MW-02	4/9/2020	<0.0044 U	0.00584 J	0.103	0.099	<0.005 U	<0.005 U	<0.00295 U	<0.00295 U	<0.00735 U	<0.00735 U
SB-03/MW-03	4/9/2020	0.00678 J	0.00488 J	0.131	0.0759	0.0162	<0.005 U	0.0161**	<0.00295 U	<0.00735 U	<0.00735 U
Tier 1 Res ^{AIR}GW_{INH-V} (CRITICAL PCL WITH MSD)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tier 1 Res ^{GW}GW_{ING} (CRITICAL PCL WITHOUT MSD)		0.01	0.01	2	2	0.1	0.1	0.015	0.015	0.05	0.05

Notes:

mg/L= milligrams per Liter

U = Results are nondetected for the analyte

J= Result is less than the method quantification limit (MQL) but greater than or equal to the adjusted sample detection limit (SDL) and the concentration is an approximate value.

Bold value indicates detected value for that analyte

Bold and shaded results indicate an exceedance of the Texas Risk Reduction Program (TRRP) Protective Concentration Levels (PCLs) for Residential or Commercial/Industrial Tier 1 Groundwater 0.5-acre source area.

Tier 1 Res ^{GW}GW_{ING} = Tier 1 Residential PCL for Groundwater Ingestion Class 1 & 2 Groundwater at 0.5-acre site.

Tier 1 Res ^{AIR}GW_{INH-V} = Tier 1 Residential groundwater PCL for inhalation of volatiles and particulates at 0.5-acre site.

** Due to high turbidity, both total and dissolved metals were analyzed. Dissolved lead does not exceed the PCL.

Table 8
Summary of Total Petroleum Hydrocarbons in Groundwater
100 N. Jackson Street — Houston, Texas
Concentrations in milligrams per liter (mg/L)

Sample ID	Sample Date	TPH - > C12-C28	TPH - > C28-C35	TPH - C6-C12	TPH - Total C6-C35
MW-01	4/9/2020	<0.600 U	<0.600 U	<0.600 U	<0.600 U
MW-02	4/9/2020	<0.600 U	<0.600 U	<0.600 U	<0.600 U
MW-03	4/9/2020	<0.600 U	<0.600 U	<0.600 U	<0.600 U
Tier 1 RES^{AIR}GW_{INH-V} (CRITICAL PCL WITH MSD)		0.98	0.98	0.98	0.98
Tier 1 RES^{GW}GW_{ING} (CRITICAL PCL WITHOUT MSD)		2.9	2.9	2.9	2.9

Notes:

mg/L= milligrams per Liter

U = Results are nondetected for the analyte

J= Result is less than the method quantification limit (MQL) but greater than or equal to the adjusted sample detection limit (SDL) and the concentration is an approximate value.

Bold value indicates detected value for that analyte

Bold and shaded results indicate an exceedance of the Texas Risk Reduction Program (TRRP) Protective Concentration Levels (PCLs) for Residential or Commercial/Industrial Tier 1 Groundwater 0.5-acre source area.

Tier 1 Res^{GW}GW_{ING} = Tier 1 Residential PCL for Groundwater Ingestion Class 1 & 2 Groundwater at 0.5-acre site.

Tier 1 C/I^{GW}GW_{ING} = Tier 1 Commercial/Industrial PCL for Groundwater Ingestion Class 1 & 2 Groundwater at 0.5-acre site.

Appendix F

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

The groundwater plume may extend slightly beneath the City of Houston rights of way (North Jackson Street and Ruiz Street) as depicted in Appendix C-F; however, no impacts are present across Jackson Street or Ruiz Street from the Site. The groundwater plume does not extend beneath any additional properties.

The extent of the groundwater plume and its relation to the City of Houston rights of way were discussed in a preliminary meeting with Mr. Mark Wooten on February 4, 2021.

Appendix G

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

The source of the groundwater plume has been removed.

During the Site investigation and remedial activities, in June 2020, a steel sump was encountered beneath the former American Engine and Grinding building. Between June and July 2020, the sump was removed along with all impacted soils. A photolog is provided in Appendix G-A.

The plume contamination is stable.

Statistical analysis of groundwater benzene data from the four (4) monitoring events (April 2020, June 2020, October 2020, and January 2021) demonstrate that benzene concentrations in groundwater are stable. A Mann-Kendall Statistical Evaluation Summary Table and supporting worksheets are provided in Appendix G-b.

The plume is delineated.

Benzene concentrations in monitoring wells to the north-northwest (MW-05), northeast (MW-04), southeast (MW-03), and southwest (MW-06) were all non-detect or at low-level detections below the Residential ^{GW}GW_{ING} PCL. The plume extent and delineation are depicted in Appendix C-F.

Appendix G-a
100 North Jackson Street
Houston, Texas



Photo 1: View of SB-02/MW-02 and the west portion of the Site prior to soil removal (facing southeast).



Photo 2: View of a sump encountered during soil removal on the west portion of the Site (facing southeast).

Appendix G-a
100 North Jackson Street
Houston, Texas



Photo 3: View of the removed sump and soil stockpile (facing southwest).



Photo 4: View of a pipe connected to the sump and oily staining north of SB-02/MW-02 (facing northeast).

Appendix G-a
100 North Jackson Street
Houston, Texas



Photo 5: View of the removed pipe (facing southeast).



Photo 6: View of excavation near SB-02/MW-02 prior to its removal (facing north).

Appendix G-b
Mann-Kendall Statistical Evaluation Summary Table
Chemical: Benzene

Well ID	Dataset size	MK Statistic	Data Trend Direction	Confidence Level (%)	If No Trend, Stable?	Change Rate (mg/L per day)	Most Recent Sample Date	Concentration (mg/L) of Most Recent Sample	Notes
MW-01	4	0	No Trend	NA	Yes (CV=0.316)	NA	01/08/21	0.0344	Above PCL in 4 of 4 samples
MW-02	4	3	No Trend	NA	Yes (CV=0.833)	NA	01/08/21	0.115	Above PCL in 4 of 4 samples
MW-03	4	3	No Trend	NA	Yes (CV=0.766)	NA	01/08/21	0.000216	Two detections of 0.000216 (Estimated) and 0.000106 (Estimated) mg/L

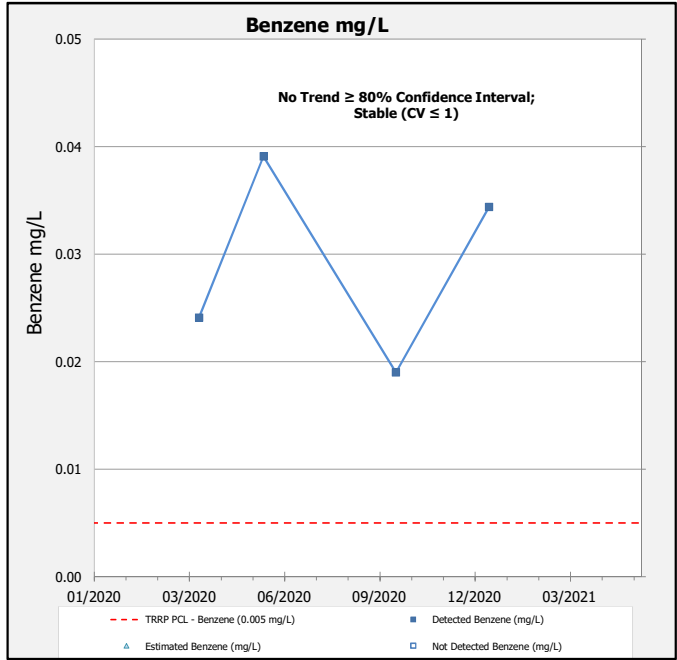
Notes:
mg/L - Milligrams per Liter
PCL - Protective Concentration Level
NA - Not Applicable
CV - Coefficient of variation (standard deviation divided by mean)

Mann-Kendall Statistical Worksheet

Site: 100 N Jackson Street

Well: MW-01; Chemical: Benzene

Event Number	Sample Date	Benzene	
		Concentration (mg/L)	Detected (Yes/No/Est.)
1	4/9/2020	0.0241	Yes
2	6/9/2020	0.0391	Yes
3	10/12/2020	0.019	Yes
4	1/8/2021	0.0344	Yes
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			



General Statistics	
Number of Rounds (n)	4
Number of Non-Detects	0
Number of Tied Groups	0
Minimum Concentration (mg/L)	0.019
Maximum Concentration (mg/L)	0.0391
Average Concentration (mg/L)	0.0
Standard Deviation (mg/L)	0.009
Coefficient of Variation (CV)	0.316
Date/Concentration Error Check	No Errors Detected

Trend in Data at Specified Confidence Intervals	
Trend ≥ 80%	No Trend
Trend ≥ 90%	No Trend
Trend ≥ 95%	No Trend
Stability Test (If No Trend ≥ 80% Confidence Interval)	CV ≤ 1 STABLE
Trend Summary	No Trend ≥ 80% Confidence Interval; Stable (CV ≤ 1)

Mann-Kendall Test	
Mann Kendall Statistic (S)	0
Standardized Value of S	0.000
Approximate p-value* (Probability of No Trend)	0.500
Approximate Significance Level (1-p-value)	0.500
Tabulated p-value** (Probability of No Trend)	0.625
Confidence Interval of Trend from Tabulated p-value	37.5%

Notes:
 Workbook modified from Wisconsin DNR 4400-215 (out of circulation)
 Green Cells - user input
 Est. - Estimated (e.g., J-flagged data)
 CV - Coefficient of Variation = (Standard Deviation divided by Mean)
 N/A - Not applicable
 TRRP PCL - Texas Risk Reduction Program Protective Concentration Level
 mg/L - Milligrams Per Liter
 *Approximate p-value/approximate Significance Level calculated using normal approximation test (Gilbert, 1987)
 **Tabulated probability values from Hollander and Wolfe (1973)

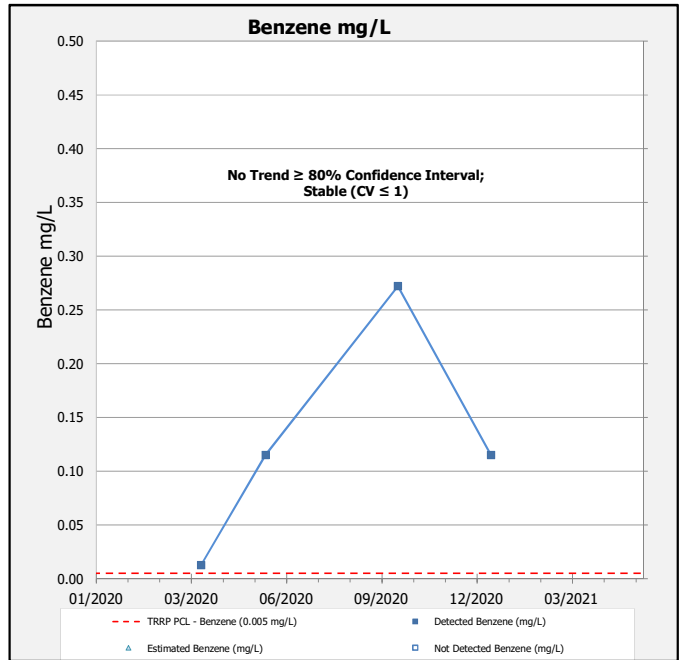
Site Name	Unknown
Data Entry By	GLH
Date Worksheet Completed	1/20/2021
Concentration Units	mg/L

Mann-Kendall Statistical Worksheet

Site: 100 N Jackson Street

Well: MW-02; Chemical: Benzene

Event Number	Sample Date	Benzene	
		Concentration (mg/L)	Detected (Yes/No/Est.)
1	4/9/2020	0.0125	Yes
2	6/9/2020	0.115	Yes
3	10/12/2020	0.272	Yes
4	1/8/2021	0.115	Yes
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			



General Statistics	
Number of Rounds (n)	4
Number of Non-Detects	0
Number of Tied Groups	1
Minimum Concentration (mg/L)	0.0125
Maximum Concentration (mg/L)	0.272
Average Concentration (mg/L)	0.1
Standard Deviation (mg/L)	0.107
Coefficient of Variation (CV)	0.833
Date/Concentration Error Check	No Errors Detected

Trend in Data at Specified Confidence Intervals	
Trend ≥ 80%	No Trend
Trend ≥ 90%	No Trend
Trend ≥ 95%	No Trend
Stability Test (If No Trend ≥ 80% Confidence Interval)	CV ≤ 1 STABLE
Trend Summary	No Trend ≥ 80% Confidence Interval; Stable (CV ≤ 1)

Mann-Kendall Test	
Mann Kendall Statistic (S)	3
Standardized Value of S	0.722
Approximate p-value* (Probability of No Trend)	0.765
Approximate Significance Level (1-p-value)	0.235
Tabulated p-value range** (Probability of No Trend)	0.167 < p < 0.375
Confidence Interval of Trend Range from Tabulated p-value	62.5-83.3%

Notes:
 Workbook modified from Wisconsin DNR 4400-215 (out of circulation)
 Green Cells - user input
 Est. - Estimated (e.g., J-flagged data)
 CV - Coefficient of Variation = (Standard Deviation divided by Mean)
 N/A - Not applicable
 TRRP PCL - Texas Risk Reduction Program Protective Concentration Level
 mg/L - Milligrams Per Liter
 *Approximate p-value/approximate Significance Level calculated using normal approximation test (Gilbert, 1987)
 **Tabulated probability values from Hollander and Wolfe (1973)

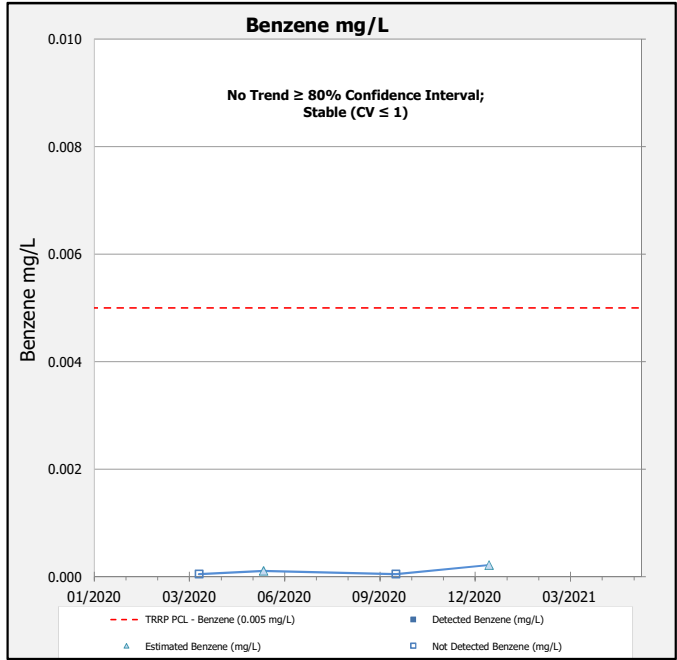
Site Name	Unknown
Data Entry By	GLH
Date Worksheet Completed	1/20/2021
Concentration Units	mg/L

Mann-Kendall Statistical Worksheet

Site: 100 N Jackson Street

Well: MW-03; Chemical: Benzene

Event Number	Sample Date	Benzene	
		Concentration (mg/L)	Detected (Yes/No/Est.)
1	4/9/2020	0.00004705	No
2	6/9/2020	0.000106	Estimated
3	10/12/2020	0.00004705	No
4	1/8/2021	0.000216	Estimated
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			



General Statistics	
Number of Rounds (n)	4
Number of Non-Detects	2
Number of Tied Groups	1
Minimum Concentration (mg/L)	0.00004705
Maximum Concentration (mg/L)	0.000216
Average Concentration (mg/L)	0.0
Standard Deviation (mg/L)	0.000
Coefficient of Variation (CV)	0.766
Date/Concentration Error Check	No Errors Detected

Trend in Data at Specified Confidence Intervals	
Trend ≥ 80%	No Trend
Trend ≥ 90%	No Trend
Trend ≥ 95%	No Trend
Stability Test (If No Trend ≥ 80% Confidence Interval)	CV ≤ 1 STABLE
Trend Summary	No Trend ≥ 80% Confidence Interval; Stable (CV ≤ 1)

Mann-Kendall Test	
Mann Kendall Statistic (S)	3
Standardized Value of S	0.722
Approximate p-value* (Probability of No Trend)	0.765
Approximate Significance Level (1-p-value)	0.235
Tabulated p-value range** (Probability of No Trend)	0.167 < p < 0.375
Confidence Interval of Trend Range from Tabulated p-value	62.5-83.3%

Notes:
 Workbook modified from Wisconsin DNR 4400-215 (out of circulation)
 Green Cells - user input
 Est. - Estimated (e.g., J-flagged data)
 CV - Coefficient of Variation = (Standard Deviation divided by Mean)
 N/A - Not applicable
 TRRP PCL - Texas Risk Reduction Program Protective Concentration Level
 mg/L - Milligrams Per Liter
 *Approximate p-value/approximate Significance Level calculated using normal approximation test (Gilbert, 1987)
 **Tabulated probability values from Hollander and Wolfe (1973)

Site Name	Unknown
Data Entry By	GLH
Date Worksheet Completed	1/20/2021
Concentration Units	mg/L

Appendix H

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

Based on data from the four (4) groundwater monitoring events in April 2020, June 2020, October 2020, and January 2021, benzene in groundwater monitoring wells MW-01 and MW-02 exceeds the TRRP Tier 1 Residential ^{GW}ING PCL (ingestion PCL) for benzene, which is the critical Residential PCL without the MSD in place.